

Memorandum

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To: Andrew Johnstone
Company: Proto Resources
From: Justin Watson
Copy: Stefan Mujdrica
Date: 7 February 2008
Project: 7110: Barnes Nickel Laterite
Subject: High level overview of drillhole spacing

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Snowden Mining Industry Consultants (Snowden) were engaged by Proto Resources & Investment Limited (Proto) to carry out a high review of the historic data and mineral resource associated with the Barnes Hill Nickel Deposit in central northern Tasmania. The purpose of the review was to provide Proto with a drilling program strategy to provide confidence in the Barnes Hill Nickel Deposit mineral resource.

1 INFORMATION

The following information has been provided to Snowden by Proto for review:

- Barnes Hill Nickel Laterite proposed 2007 sampling, EL17/2006, July 2007; Andrew Johnstone.
- Barnes Hill stock exchange announcement: "Proto signs financing & development agreement with Metals Finance Corporation"; 2 August 2007.
- Threatened flora assessment at proposed drill holes & Phytophthora management strategy. September 2007; Northbarker Ecosystem Services.
- Proto Resource & Investments prospectus 2006.
- Electronic data in the following directories:

- [-] Barnes_Hill_Proto
 - [+] BH_ADMINISTRATION
 - BH_CADASTRA
 - BH_DRILLING
 - BH_GEOCHEM
 - BH_GEOLOGY
 - BH_MAGNETICS
 - BH_Ni_OCC
 - BH_PICS
 - [-] BH_RESOURCE
 - Drilling dig from map
 - Veg dig from map
 - [-] BH_SATELITE
 - ASTER
 - QUICK_BIRD_60CM
 - BH_TENEMENTS

Historical reports containing useful information were found within the folder "BH_ADMINISTRATION\Historical_Data_Sorted".

Drilling, assaying and logging data for the Allegiance Mining aircore drillholes S003 to SD124 (122 excel spreadsheets) were contained within the "BH_DRILLING" folder. Also contained within this folder was the file "HOLE DATA_66.xls" which contained a listing of all the collar co-ordinates associated with these drillholes. An additional file "Beaconsfield_Drill_Logs.xls" contained within "BH_ADMINISTRATION\Historical_Data_Sorted\Jervois Mining Work 2001-2004" also contains all assays and logging data associated with the Allegiance Mining drilling program and the re-logging work completed by Jervois Mining.

The "BH_RESOURCE" folder contains the developed resource blocks for Barnes Hill and Scotts Hill.

Proto sent electronic data by email (dated 10 Dec 2007) within a zip file: "Proto_Barnes_Hill_4_Snowden_12_07.zip". This zip file contained Barnes Hill drillhole data and resource blocks and Scott Hill resource blocks within MapInfo format.

2 EXPLORATION HISTORY / SUMMARY

A summary of previous exploration has been developed based on the sorted historical data and documentation supplied by Proto Resources (Table 1).

Table 1 highlights that a significant amount of previous work has been completed over the Nickel / Cobalt laterites around Beaconsfield in Tasmania. A number of phases of mapping, drilling and metallurgical testwork have been completed by various companies.

Table 1: Summary of historic exploration

Date	Company	Report	Comments
1955-1956	Ben Lomond Mining		Reconnaissance sampling completed to identify Ni rich clays above Serpentinites.
1958	Consolidated Zinc	Consolidated Zinc 1958.pdf	Enterprise Exploration Company Pty Ltd completed 1958 exploration report. Initial mapping identified garnierite bearing serpentine in a 4000ft by 2500ft. Auger drilling completed on 3 lines south of Barnes Hill. Holes were 100ft apart over a distance of 1400ft, 1700ft and 2400ft. Sample recovery excellent and all holes except 2 were finished at the bedrock contact. Grade and thicknesses varied from each line of drilling. Average grades ranged from 0.4% to 0.96% Ni and thicknesses varied from less than 5 ft to 9ft. Other smaller areas were also identified and an additional 6 lines of auger drillholes were completed. Nickel laterite profile thinner (4 to 6 ft) and of lower grade (0.2% Ni)
1965-1967	BHP	BHP_Final Report_1967.pdf	Regional and detailed mapping was completed. Airbourne and ground magnetic surveys. Geochemical sampling. 1 diamond drillcore hole drilled at Scotts Hill to 673 ft to investigate magnetic anomaly - intersected magnetite (no sulphide mineralisation). A series of pits were completed on 17 separate lines within the 'Chromite Gravels'. BHP concluded the laterites near Andersons Creek were of low grade and not worthy of development.
1967-1968	King Island Scheelite	King Island Scheelite Limited_Evaluation Report_1968.pdf King Island Scheelite Limited_Annual Report_1968.pdf	17 diamond drillholes completed. Assay analyses were completed by Minex in Melbourne. A possible reserve of 7.0 to 11.0 Mt assaying 1.03% Ni was estimated. Mineralogical study completed and the nickel bearing phases were identified. Nickel is disseminated through a variety of mineral phases and physical beneficiation is not practical. Identification of different domains laterally (Scotts Hill / Mount Vulcan / Barnes Hill) and throughout the profile (Laterite Zone / Transitional Serpentinite Zone / Bleached Serpentinite Zone / Fresh Zone). Transition zone was found to have highest nickel values. Enrichment in nickel occurs at the base of the weathering profile. Mineralogy identified serpentine, garnierite, chlorite, chromite, picotite, hematite and limonite. Beneficiation tests were also completed (H2SO4 leach tests, size analysis of ore, size analysis of residue of H2SO4 leach, Caustic soda recovery, ammonia recovery, Nicaro process. Nicaro process was suitable with 67.7% recovery. Mineralogy was determined using Xray diffraction (XRD).
1969	King Island Scheelite	King Island Scheelite Limited_Annual Report_1969.pdf	Additional 20 diamond drill holes completed. Four ore locations delineated (Scotts Hill, Mount Vulcan, Barnes Hill and Barnes Hill south). Resource estimate of 6.0Mt at 1.04% Ni and 0.06%Co at a 0.7% Ni cutoff. Analysis for Ni, Co, Cr, Al2O3, CaO, MgO, SiO2 and FeO was completed. Analyses were completed by the Launceston Laboratories of the Tasmanian department of Mines.
1971 - 1972	Allstate Exploration		15 core holes completed. Trenching also completed.
1969-1981	Northern Chromite		Chromium production on western flank of Barnes Hill. Drilling completed at Rifle Range
1988	Placeco Australia	Placeco Australi_Annual Report_1988pdf.pdf	Rock chip samples taken from Barnes Hill, Dans Hill and Mt Vulcan areas.
1997-2000	Allegiance Mining	Allegiance Mining_Annual Report_1997.pdf	Completed 549m of RAB (aircore) drilling in 51 holes. Drilling contractor was Tas Diamond Driller Pty Ltd. All holes were vertical. 1.0m samples. All samples were weighed. 9 holes at Scotts Hill, 8 holes Mt Vulcan, 17 holes Barnes Hill, and 17 holes at Barnes Hill South.
		Allegiance Mining_Final Report_Aptil 2000.pdf	RC drilling program of 65 holes totalling 492m. Updated resource in March 1998 of 12Mt at 0.94% Ni and 0.05% Co
2001 - 2005	Jervois Mining	Jervois Mining_Annual Report_March 2002.pdf Jervois Mining_Annual Report_March 2003.pdf Jervois Mining_Annual Report_March 2004.pdf Jervois Mining_Final Report_March 2005.pdf	Aircore holes relogged to standardised format. Check assaying was completed on pulps from the Allegiance aircore holes S001 to S051. Composite bulk samples for limonite, saprolite and weathered serpentinite lithologies for the Barnes Hill region and the Scotts Hill / Mount Vulcan regions were collected for metallurgical testing. Resource estimate re-done based on lithological domains.
2007	Proto Resources & Investmants Ltd		

3 REVIEW

This initial review is focussed on ascertaining an understanding of the work previously completed at Beaconsfield and reviewing the current datasets available. This high level review is not a detailed interrogation of the available digital data. Instead the review has been undertaken with the aim of obtaining a general understanding of the deposit so that a recommendation can be made on future drilling requirements.

3.1 DRILLHOLE DATA VALIDATION

Proto Resources supplied Snowden with a series of MS Excel spreadsheets within the folder “BH_Drilling” (Figure 1). Each spreadsheet contained a geological log and associated assays for a given drillhole. The drillholes present were S003 through to S120 (excluding S001, S002, and S052) and SD121, SD121A, SD122, SD123 and SD124. A total of 122 separate Excel spreadsheets were present. A combined Excel spreadsheet (“Beaconsfield_Drill_Logs.xls”) which included S001 and S002 was found in folder “\BH_ADMINISTRATION\Historical_Data_Sorted\Jervois Mining Work”.

No digital datasets for any other historic drilling programs were reviewed by Snowden.

The logging and assay data contained within the combined Excel spreadsheet (“Beaconsfield_Drill_Logs.xls”) was copied and formatted into a standardised CSV format which was amenable to upload into Snowden’s Supervisor and Minesight software systems. Two separate CSV files were generated (assay.csv and collar.csv). The development of the assay file included the generation of separate numeric lithology and area codes so that statistical analysis could be completed on separate lithological zones in each of the resource areas. A summary of the numeric codes applied is contained within Table 2:

Figure 1: Excel data files containing drilling, logging and assay data

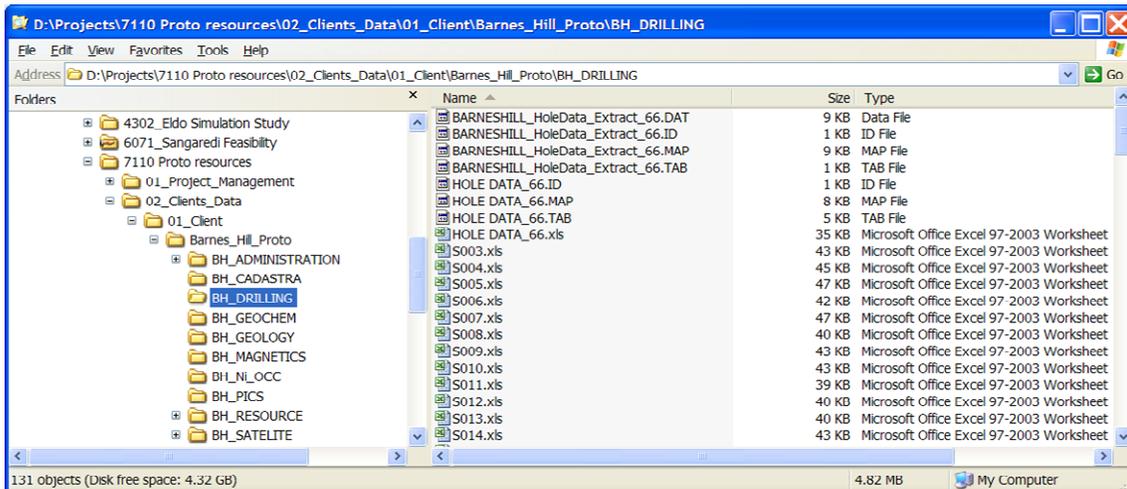


Table 2: Numeric lithology and area codes

Logged Lithology	Numeric Lithology Code	Area	Numeric Area Code
Soil	1	Barnes Hill	1
Haematitic clay	2	Barnes Hill South	2
Limonitic clay	3	Mount Vulcan	3
Clay	4	Scotts Hill	4
Saprolite	5		
Weathered Sediments	9		
Fresh Sediments	10		
Weathered Serpentine	19		
Fresh Serpentine	20		
Magnesite	30		
Conglomerate	40		

Following the import of the supplied dataset Snowden completed a series of checks on the dataset. A summary of Snowden's findings is listed below:

- A number of drillholes within the dataset have the same collar co-ordinates. Refer to "**7110_Proto Resources_Data Validation_Snowden Workbooks.xlsx**" for further details.
- The accuracy of drillhole collar co-ordinates were noted to be of a low precision. Typically northing, easting, and elevation were recorded to the nearest metre. No checks have been completed against an accurate topography surface. Snowden recommend this be completed.
- The assay dataset contains grade intervals which exceed the interval length (Figure 3). A single grade has been assigned across multiple intervals. Snowden recommend that the 'from' and 'to' intervals be amended within the dataset to accurately define the true sample length. Refer to "**7110_Proto Resources_Data Validation_Snowden Workbooks.xlsx**" for details.
- The dataset has a Mn% column which holds ppm values.

Snowden recommend that Proto Resources complete further validation on the current dataset. Furthermore Snowden understand that a significant amount of historic drilling and pitting has been completed. Snowden recommend that this data be obtained, validated and added to the database for future review.

3.2 SAMPLING

The sampling techniques are not described; details of core or hole sizes. Snowden recommend that this data be added to the database. Snowden have noted that sample weights have been stored within the Excel spreadsheets.

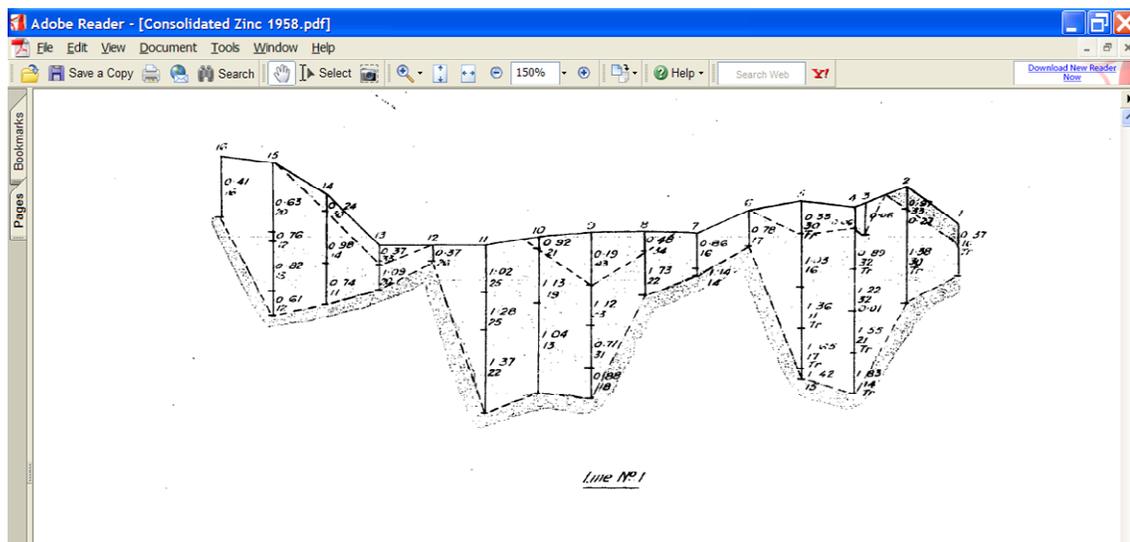
3.3 DENSITY

From Snowden's review no evidence of any work completed on dry bulk *in situ* density has been sited. Snowden has noted the use of a default dry bulk *in situ* density value of 1.8 g/cm³ in resource estimation across all lithologies. The use of a 1.8 g/cm³ value for dry bulk *in situ* density does not seem to have been substantiated with technical data and investigation. Snowden recommend that this be completed. Snowden also recommends that bulk *in situ* density samples be taken and analysed through the entire profile to ascertain whether any significant variation in density present.

3.4 GRADE AND THICKNESS VARIATION

A review of drilldata has shown significant grade and thickness variation between drillholes. Interpretations based on 100ft drillhole data by Consolidated Zinc highlight the potential local grade and thickness variation present within the deposit (Figure 3).

Figure 2: Sectional Interpretation based on 100ft drilling – Consolidated Zinc (1958)



Analysis of the Allegiance Mining drillhole dataset (124 drillholes) supplied by Proto Resources also show significant variation in grade and thickness (Figures 3 and 4). Figure 3 illustrates significant grade and thickness variation between drillholes which are 150 m apart. Also note that significant grade variation from sample to sample within a drillhole can occur. Figure 4 illustrates the increase in grade typically encountered as you get lower in the weathered profile.

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Figure 3: Oblique section showing grade and thickness variation between drillholes S077, S047 and S040 in the Barnes Hill region

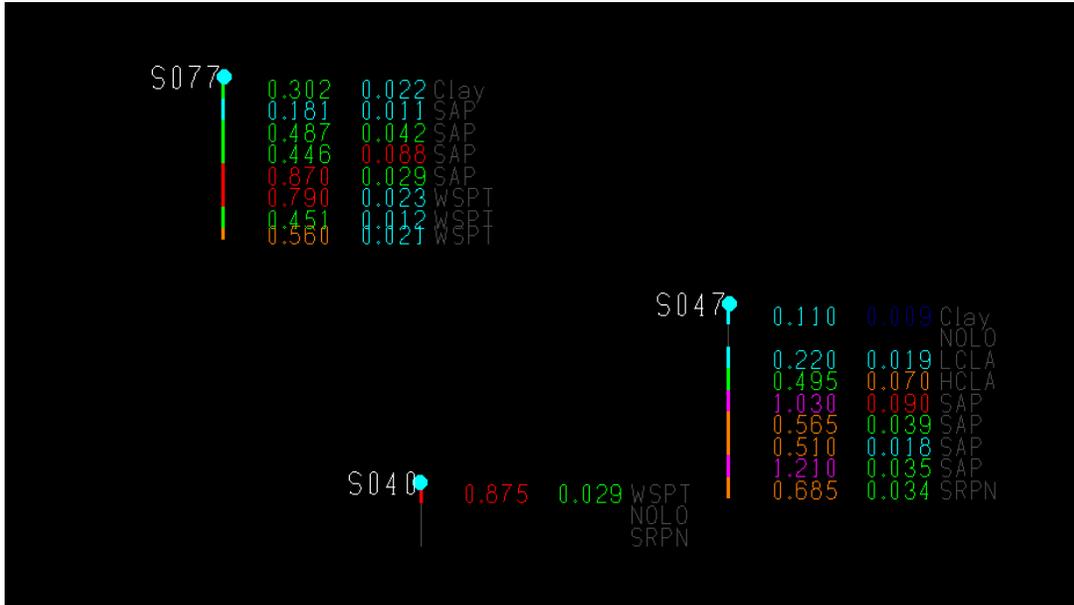
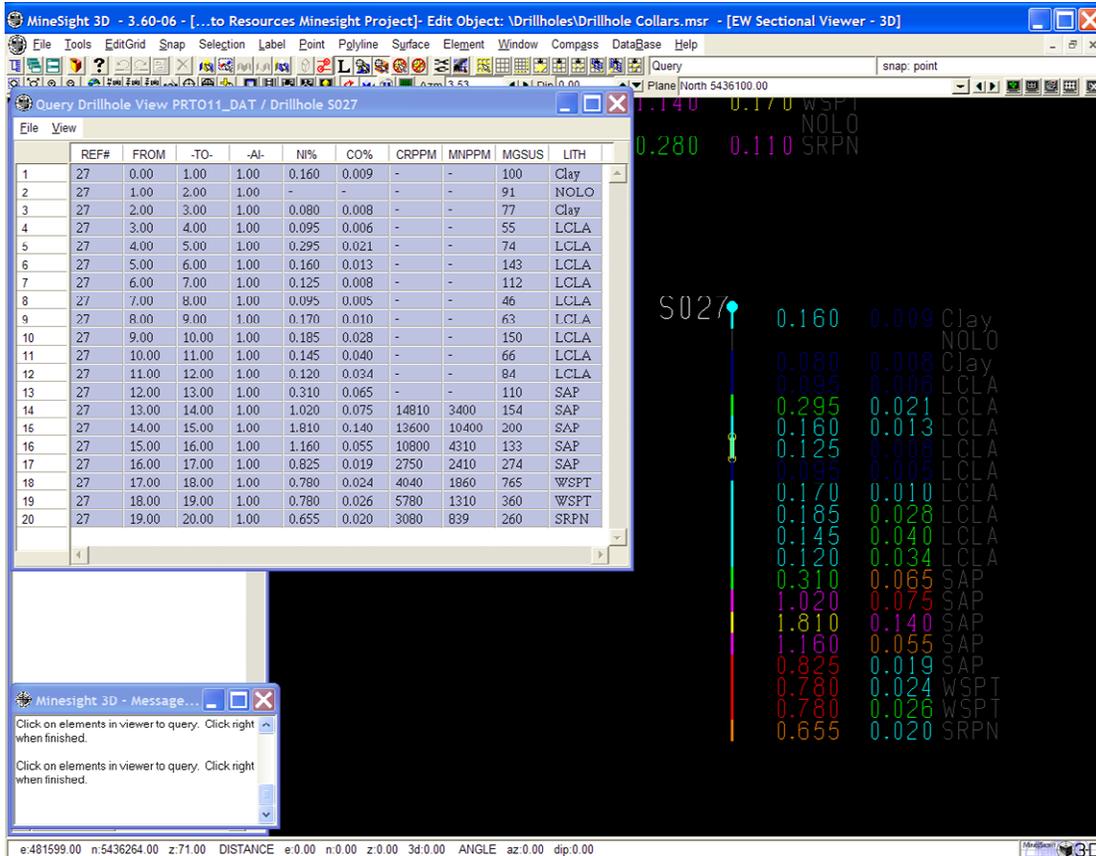


Figure 4: Sectional View of drillhole S027 showing the typical enrichment of nickel and cobalt in the saprolite zone near the base of the weathered profile



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3.5 STATISTICAL ANALYSIS

Statistical analysis was completed based on geological logging (lithological codes) and by area (Table 3). The statistical review clearly highlights an increase in nickel and cobalt grades in the saprolite zone.

Table 3: Statistical summary by lithology per area – weighted by sample length

Area: 1 (Barnes Hill)

Lithology Code	Lithology	Element	Samples	No Assay	Minimum	Maximum	Mean	Std. Devn.	Co. of Variation
2	Haematitic Clay	Ni%	39	0	0.01	0.84	0.13	0.15	1.09
		Co%	39	0	0.00	0.09	0.01	0.01	1.00
3	Limonitic Clay	Ni%	74	0	0.03	0.85	0.23	0.16	0.71
		Co%	74	0	0.00	0.16	0.03	0.04	1.10
4	Clay	Ni%	47	5	0.00	0.64	0.15	0.14	0.94
		Co%	47	5	0.00	0.10	0.02	0.02	1.27
5	Saprolitic Clay	Ni%	211	2	0.06	2.66	0.82	0.52	0.64
		Co%	211	2	0.00	0.28	0.07	0.05	0.77
19	Weathered Serpentinite	Ni%	60	9	0.06	1.33	0.58	0.32	0.54
		Co%	60	9	0.01	0.08	0.02	0.02	0.64
20	Serpentinite	Ni%	43	9	0.12	1.07	0.34	0.19	0.57
		Co%	43	9	0.01	0.16	0.02	0.02	0.97

Area: 3 Mount Vulcan

Lithology Code	Lithology	Element	Samples	Rejected	Minimum	Maximum	Mean	Std. Devn.	Co. of Variation
2	Haematitic Clay	Ni%	20	0	0.03	0.39	0.11	0.09	0.84
		Co%	20	0	0.00	0.28	0.03	0.06	1.97
3	Limonitic Clay	Ni%	32	0	0.05	0.85	0.20	0.16	0.81
		Co%	32	0	0.00	0.27	0.05	0.06	1.07
4	Clay	Ni%	4	0	0.04	0.23	0.14	0.08	0.54
		Co%	4	0	0.01	0.07	0.03	0.03	0.93
5	Saprolitic Clay	Ni%	57	0	0.07	1.81	0.63	0.40	0.63
		Co%	57	0	0.01	0.20	0.06	0.04	0.60
19	Weathered Serpentinite	Ni%	37	0	0.21	1.24	0.63	0.30	0.47
		Co%	37	0	0.01	0.06	0.03	0.01	0.44
20	Serpentinite	Ni%	11	0	0.23	0.67	0.34	0.14	0.41
		Co%	11	0	0.01	0.07	0.03	0.02	0.81

Area: 4 Scotts Hill

Lithology Code	Lithology	Element	Samples	Rejected	Minimum	Maximum	Mean	Std. Devn.	Co. of Variation
2	Haematitic Clay	Ni%	39	0	0.03	0.30	0.14	0.08	0.56
		Co%	39	0	0.00	0.32	0.04	0.05	1.37
3	Limonitic Clay	Ni%	40	1	0.06	0.34	0.16	0.08	0.49
		Co%	40	1	0.01	0.32	0.06	0.07	1.09
4	Clay	Ni%	26	0	0.05	0.35	0.15	0.09	0.62
		Co%	26	0	0.00	0.31	0.04	0.07	1.59
5	Saprolitic Clay	Ni%	87	0	0.07	1.37	0.49	0.28	0.57
		Co%	87	0	0.01	0.50	0.07	0.07	0.99
19	Weathered Serpentinite	Ni%	41	1	0.05	1.28	0.33	0.26	0.79
		Co%	41	1	0.01	0.52	0.04	0.08	2.13
20	Serpentinite	Ni%	27	0	0.01	0.58	0.19	0.15	0.77
		Co%	27	0	0.00	0.06	0.02	0.01	0.66

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The Barnes Hill region has the best Ni grades with an average of 0.82% contained within the saprolitic clay zone. The Scotts Hill region shows the lowest Ni grade but interestingly the cobalt grade has stayed relatively constant. Note that the average grades listed in Table 3 are lower than those quoted in the resource estimate below. This is a cause for concern and further investigation is warranted to clarify the mineral resource quoted.

3.6 RESOURCES

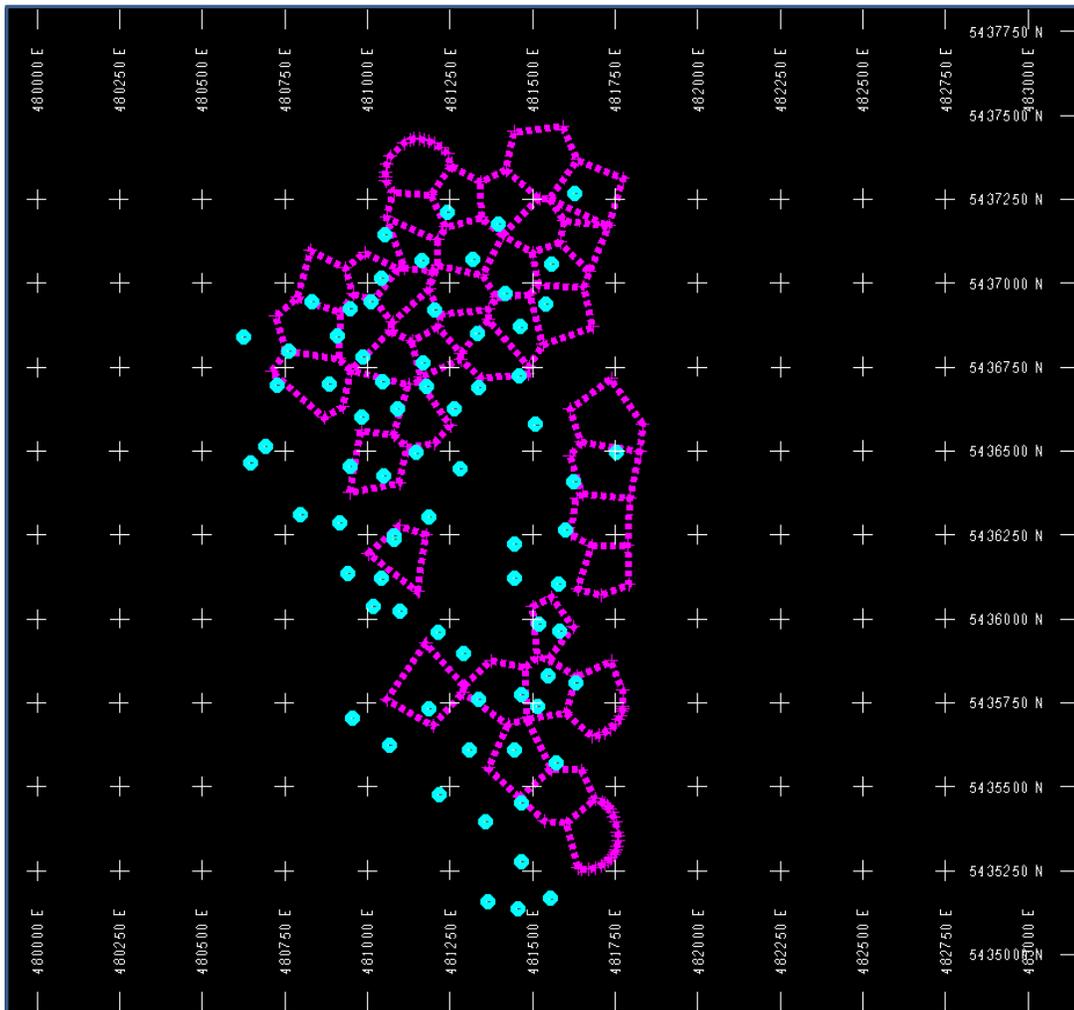
An Indicated resource of 12.4Mt at 0.83% Ni and 0.07% Co has been quoted by Proto within the internal document **Barnes Hill March 07.pdf** dated the 5th March 2007 (Figure 5). This estimate has been derived via polygonal methods from the Allegiance and King Island Scheelite drillhole datasets.

Figure 5: March 2007 resource Estimate for the Barnes Hill Nickel Deposit

Lithology	Ni %	Co %	Tonnes	%Ni Equivalent	Percentage		
					Tonnes	Ni	Co
Hematite	0.63	0.12	167657	1.05	1.3%	1.0%	2.3%
Limonite	0.39	0.12	794699	0.81	6.4%	3.0%	11.3%
Saprolite	0.88	0.07	9213728	1.13	73.8%	77.7%	75.9%
Weathered Serpentinite	0.82	0.04	2301870	0.96	18.5%	18.3%	10.5%
Totals	0.83	0.07	12477955	1.07			

A review of the supplied resource blocks against the drillhole data indicates that a number of blocks do not contain drillhole data (Figure 6). Questions subsequently arise how the resource blocks have been derived and whether Snowden have all the drillhole data used for resource estimation.

Figure 6: Barnes Hill Resource Blocks and associated drilling – Plan View



Comment has been made that the current resource estimate is at an Indicated status. Snowden consider this a very optimistic classification as a more than 25% variation in grade and tonnage is currently considered possible due to the high grade and thickness variability present within the deposit.

3.7 PLANNED DRILLING /DRILL SPACING

The current drill spacing across the deposit is variable and has not been completed on a standard set of grid lines. The current drill spacing varies from approximately 100 m to 150 m. Snowden considers that this drill spacing, and associated supporting data (i.e. sample QAQC, drilling techniques, etc), is inadequate to define the average grade and tonnage of this deposit and to justify the current classification of the current mineral resource. A drill spacing of 50 m by 50 m is initially recommended by Snowden. Furthermore it is recommended that Proto Resources complete 2 lines (one near east-west and one near north-south) of close spaced drilling (10m spacing) over the main portion of the deposit to investigate the true grade and thickness variation present within the deposit. This information will be valuable in justifying a drill grid spacing for resource classification, and will help in understanding the scale of grade control required for the deposit.

The 50 m by 50 m drill design illustrated in Figure 7 contains 862 drillholes. Snowden recommends that the drilling program begins within the northern portion of the deposit starting with the close spaced drill hole (10 m apart) lines as indicated within Figure 7. The following stages are recommended:

- Stage 1: Drill the two lines with close spaced drilling; drillholes 10 m apart. Review the geology and mineralisation and refine the drill spacing for Stage 2.
- Stage 2: Snowden recommends drilling the Barnes Hill Nickel Deposit on a 50 m by 50 m grid starting within the northern portion of the deposit (approximately 300 holes). However, this drill spacing may be changed depending on the results/observations obtained from Stage 1. Once the northern portion has been drilled re-evaluate the geology and mineralisation results and determine whether the drill spacing is adequate.
- Stage 3: Complete drilling at the Barnes Hill Nickel Deposit on the recommended drill spacing. At this stage Snowden would recommend a 50 m by 50 m grid but this may change once reviews are completed from Stages 1 and 2.

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Figure 7: Barnes Hill region showing a possible example of 50m x 50m drilling grid and planned infill drilling lines.

