An Investigation into

THE RECOVERY OF NI AND CU FROM THE JUNIOR LAKE B4-7 ZONE

prepared for

LANDORE RESOURCES

Project 11365-001 – Final Report
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NOTE:
This report refers to the samples as received.

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Executive Summary

Two ore composites, originating from the Junior Lake B4-7 Zone, were received at the SGS Lakefield site in September, 2006. The composites were identified as Junior Lake B4-7 Zone Met-C and Met-D composites.

The ½ drill core was staged-crushed and blended to produce 2-kg flotation charges for metallurgical testing. Representative sub-samples were extracted for a Bond ball mill grindability test and head sample analysis. The results of the head sample analysis for the two composites are shown in Table 1.

Table 1: Head Assays – B4-7 Zone Met-C and Met-D Composites

Sample		Ni, %	Cu, %	S, %	Co, %	Pt, g/t	Pd, g/t	Au, g/t
B4-7 Zone	Composite C	0.93	0.59	36.0	0.08	0.15	0.91	0.03
	Composite D	0.93	0.59	34.4	0.12	0.12	0.65	0.08

The grindability test yielded a Bond work index for the Met-C and Met-D composites of 8.2 kWh/t and 8.7 kWh/t, respectively. These low indices were somewhat expected as the two composites consisted almost entirely of sulphide minerals, which are much softer than most silicate gangue minerals.

A Rapid Mineral Scan (RMS) and microprobe analysis were carried out on a sample of the Met-D composite. The two Junior Lake B4-7 composites were massive sulphides ore samples with a very high Pyrrhotite:Pentlandite ratio. Almost 85% of the ore consisted of pyrrhotite and only 6% chalcopyrite and pentlandite. Approximately 45-55% of the nickel is contained in pyrrhotite. Pentlandite occurs as coarser grains and fine flames within a pyrrhotite matrix.

A series of twelve bulk rougher and bulk cleaner flotation tests were carried out on the two composites. The flotation program was performed to develop a preliminary understanding of the flotation response of this ore and to identify metallurgical challenges.

While a good copper recovery of 85-95% was achieved in all scoping tests, the nickel recovery was disappointing. The combination of a high pyrrhotite content and the presence of pentlandite flames resulted in nickel recoveries to concentrate of only 25-35%. In terms of Pt, Pd, and Co

recovery, the flotation data shows strong relationships between the recovery of Cu and Pd, Ni and Pt as well as Ni and Co.

The preliminary metallurgical test program completed to-date suggests that it will be difficult to upgrade the B4-7 Zone ore to a saleable concentrate. Further, the tailings of the B4-7 ore would consist primarily of pyrrhotite and special attention has to be given to the potential acid-generating qualities of the stream.

The following metallurgical program is recommended for the next phase of testing to develop a better understanding of the mineralogy, to evaluate alternative process options, and to optimise the current flotation conditions:

- Joint review of the available drilling data by a Landore Resources geologist and a metallurgist to identify suitable composites for testing and to identify zones of potentially problematic ore;
- Additional Bond ball and rod mill grindability tests to quantify the variability in ore hardness;
- Evaluate the option to treat the deposit as a Cu and PGM deposit i.e. employ a highly selective rougher flotation at a high pH to produce a saleable Cu concentrate (the nickel would be lost to the tails together with the pyrrhotite);
- Comprehensive assessment of flotation variables (primary and regrind, pH, flotation reagents);
- Preliminary settling and filtration tests on tailings and concentrate samples;
- Preliminary environmental testing of tailings and effluents.
- Micro-probe analysis on a number of composites to quantify the variance of nickel content in the pyrrhotite;
- Quantify the amount of pyrite present in the ore to aid in concentrate grade forecasts as pyrite would report to the Cu-Ni-separation feed and ultimately to the nickel concentrate.

Introduction

Scoping-level metallurgical testing on two composites from the Junior Lake Zone B4-7 Zone was conducted at the SGS Lakefield site between September 2006 and February 2007. The work comprised four (4) batch rougher tests and eight (8) batch cleaner tests.

The testwork was carried out to provide a basic understanding of the flotation response of the Junior Lake B4-7 ore. Flowsheet optimization was outside the scope of the test program and should be performed as part of a more comprehensive program in the future.

All metallurgical testing was executed by Rory Guest, under the guidance of Oliver Peters (project manager). The results were reported to Mr. Jim Garber and Mr. Bill Humphries of Landore Resources as they became available.

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Testwork Summary

1. Sample Receipt and Description

A total of four (4) pails containing ½ drill core, originating from the Junior Lake B4-7 Zone, were received at the SGS Lakefield site on September 19, 2006 and September 21, 2006. The first shipment comprising three pails arrived at SGS on September 19, 2006 and was given the sample receipt number 2602839. The fourth pail arrived on September 21, 2006 and was given the sample receipt number 2602875. The sample was identified as Junior Lake B4-7 Zone Met-C and Met-D samples. The Met-C and Met-D samples were cross-referenced to the Junior Lake B4-7 Zone diamond drill holes DDH 0403-92 (DDH 0403-07 twin) and DDH 0403-90 (DDH 0403-10 twin), respectively.

Upon arrival, the sample was weighed. The total sample mass of 103 kg was deemed sufficient to complete the proposed metallurgical test program on the two composites. Sample selection was performed by Landore Resources without the input of SGS Minerals Services. Therefore, no statement can be made about the representativeness of the sample.

2. Project Deliverables

The primary objective of the metallurgical test program was to develop an initial understanding of the flotation response of the Junior Lake B4-7 Zone ore. A list of project deliverables is shown below:

- Limited characterisation of the chemical, physical, and mineralogical properties of the ore;
- Assessment of the rougher and cleaner flotation response of the two composites;
- Identification of metallurgical challenges including recommendations for future metallurgical testing.

3. Sample Preparation

The sample as-received consisted of ½ drill core. In the first processing stage, each composite was crushed to ¼" in a jaw crusher followed by a cone crusher. A 6-kg sub-sample of each

composite was riffled out and crushed separately to minus 6 mesh for Bond ball mill grindability testing.

The remainder of the sample was stage-crushed in a roll crusher to minus 10 mesh. In order to minimise the generation of fines, the crushed product was screened on a 10 mesh screen, and only the oversize was returned to the crusher. In a final step, the minus 10 mesh ore was blended in a rotary splitter and split into 2-kg flotation charges.

The sample preparation flowsheet is shown in Figure 1.

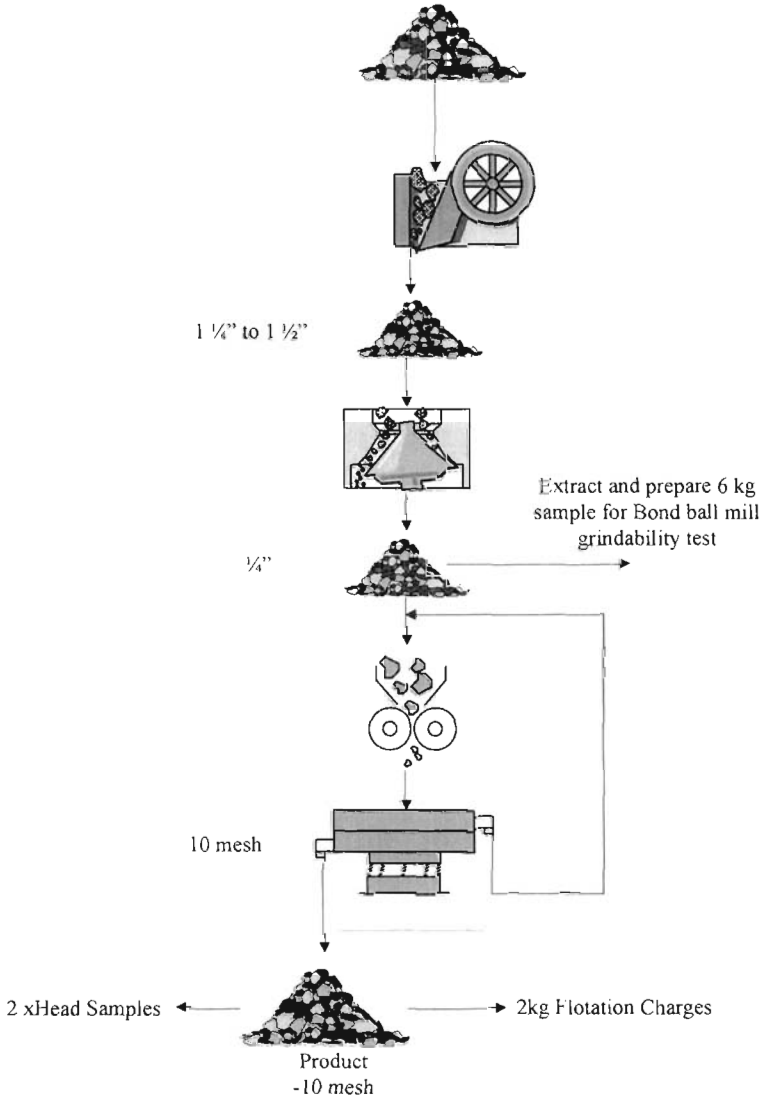


Figure 1: Sample Preparation Flowsheet

4. Sample Characterisation

4.1. Head Assays

Representative head samples from each composite were extracted during sample preparation and submitted for chemical analysis. The results are shown in Table 2 and include ICP scan results to identify deleterious elements in the ore. Based on this limited analysis, it appears that all trace elements that typically create environmental concerns and/or are subject to smelter penalties are close or below the detection limits. The slightly lower Fe and S concentration as well as higher concentration of elements typically contained in gangue minerals (Mg, K, Na), suggests that the Met-D composite contains a slightly higher percentage of gangue minerals. Note that Pt, Pd, and Au assays were carried out in triplicate and the results reported in Table 2 represent the average. Complete assay results are included in Appendix A.

Table 2: Head Assays – B4-7 Zone Met-C and Met-D Composites

Sample		Ni, %	Cu, %	S, %	MgO, %	Co, %	Pt, g/t	Pd, g/t	Au, g/t
VW Zone	Composite A	0.89	0.11	1.87	14.6	0.03	<0.02	0.08	
	Composite B	0.76	0.12	3.99	10.9	0.03	0.02	0.04	
B4-7 Zone	Composite C	0.93	0.59	36.0		0.08	0.15	0.91	0.03
	Composite D	0.93	0.59	34.4		0.12	0.12	0.65	0.08

Sample	ICP Assays, g/t									
	Ag	**Al**	**As**	**Ba**	**Be**	**Bi**	**Ca**	**Cd**	**Cr**	**Fe**
Met-C	<2	180	<30	3.5	<1	<20	7,900	<2	100	600,000
Met-D	<2	5,800	<30	34	<1	<20	9,400	<2	300	560,000
	K	**Li**	**Mg**	**Mn**	**Mo**	**Na**	**P**	**Pb**	**Sb**	**Se**
Met-C	<50	<5	34	150	<5	75	<30	<100	<10	<30
Met-D	900	13	7,400	410	<5	1,200	82	<100	<10	<30
	Sn	**Sr**	**Ti**	**Tl**	**V**	**Y**	**Zn**			
Met-C	<20	5.4	180	<30	33	<1	200			
Met-D	<20	37	450	<30	48	2	170			

4.2. Grindability

A Bond ball grindability test was carried out on both the Met-C and the Met-D composites to evaluate the grinding energy requirements.

A mesh of grind of 150 mesh (106 μm) was selected instead of the standard 100 mesh (150 μm). The finer mesh was chosen based on grind size requirements of similar ore types. It was

anticipated that a primary grind of ~75 µm (200 mesh) would be required to yield sufficient liberation between valuable sulphide minerals (pentlandite and chalcopyrite) and other sulphide and gangue minerals. As a rule of thumb, the mesh of grind for the Bond ball mill grindability test should be one standard screen size larger than the desired P_{80} of the mill discharge, which in this case was 106 µm or 150 mesh.

The grindability test yielded a Bond work index for the Met-C and Met-D composites of 8.2 kWh/t and 8.7 kWh/t, respectively. The detailed Bond ball mill grindability test results are included in Appendix B.

SGS Minerals Services maintains a database containing more than 2,000 Bond ball mill index grindability test results. In order to facilitate a comparison of the Junior Lake B4-7 Zone results with other ores tested at SGS, the Junior Lake grindability results are plotted against the database histogram in Figure 2. The graph illustrates that the Junior Lake B4-7 composites are considerably softer than the database average.

These low indices were somewhat expected as the two composites consisted almost entirely of sulphide minerals, which are much softer than most silicate gangue minerals.

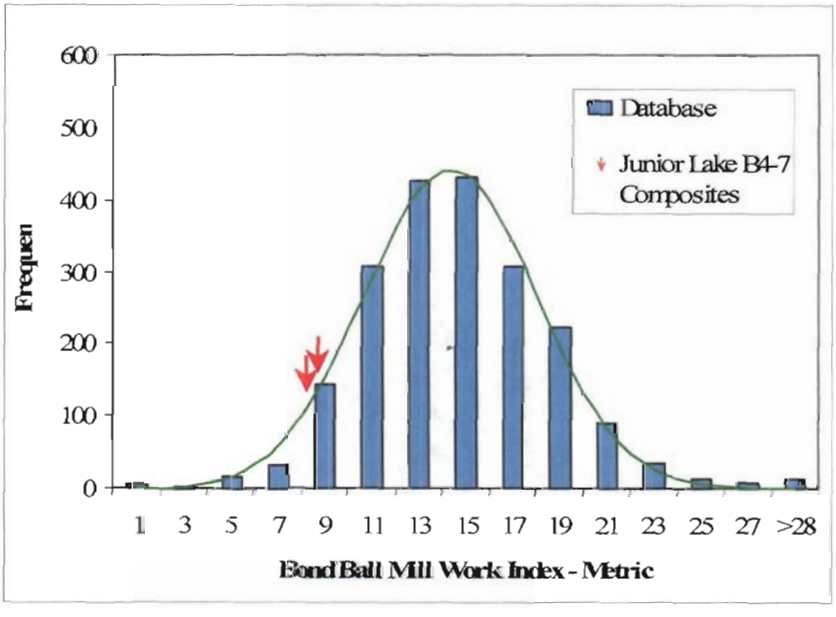


Figure 2: Junior Lake B4-7 Zone Bond Ball Mill Grindability Test Results

5. Mineralogy

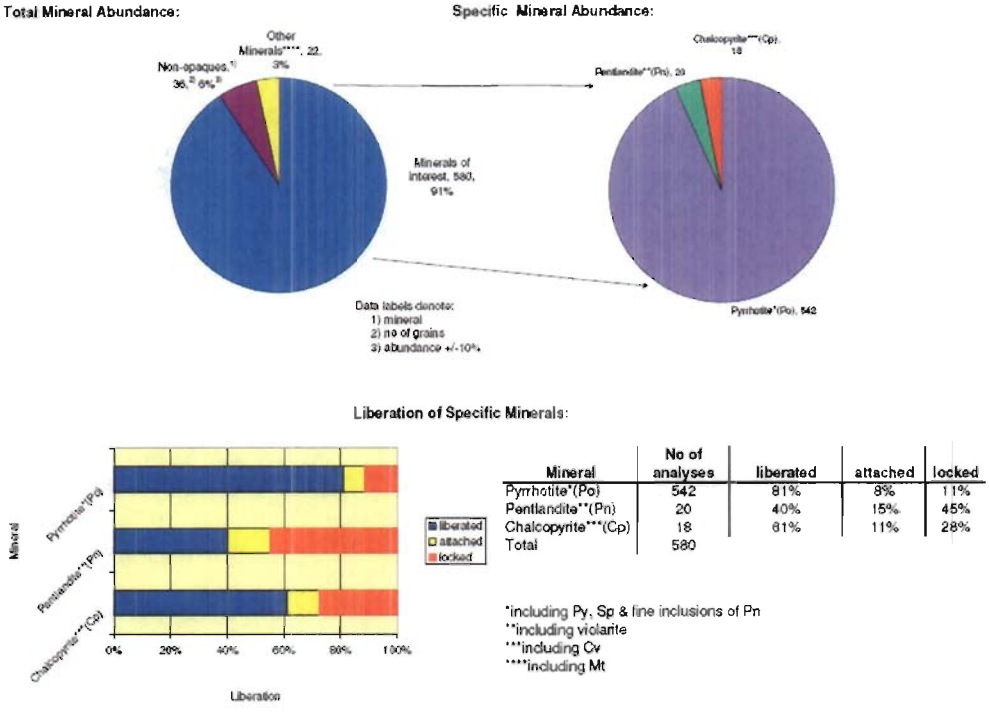
5.1. Rapid Mineral Scan

In order to develop a basic understanding of the mineralogy of the Junior Lake B4-7 ore, a rapid mineral scan (RMS) was performed on the Met-D composite. The RMS is a semi-quantitative description of mineral assemblage with manual grain counting. An X-ray diffraction analyses is included for the identification of the major minerals. Results include mineral identification, grain size range and general mineral liberation.

Petrographic and XRD examination identified pyrrhotite as the sole major mineral in the ore (>25% -75%). Pentlandite and chalcopyrite concentrations were minor at 1-5%. Other sulphide minerals in the ore included pyrite, violarite, sphalerite, and covellite. Non-opaques and magnetite concentration were quantified as moderate (5-25%) and minor (1-5%), respectively. X-ray diffraction analysis identified chlorite, amphibole, mica, dolomite, quartz, and calcite as the main gangue minerals.

Before the sample was submitted for the RMS, it was ground to 80% passing 75 microns, which is a typical grind size for this type of ore. At this grind 10-50% of the pentlandite and 50-90% of the chalcopyrite, were liberated. A manual point-counting of 638 mineral grains yielded 580 sulphide mineral grains, which represents 91%. Of the 580 sulphide mineral grains 93.4% were pyrrhotite and only 6.6% pentlandite and chalcopyrite. Pentlandite occurs as relatively coarse grains, as well as fine pentlandite flames.

Liberation of the chalcopyrite of 61% was significantly better compared to pentlandite, which only yielded 40% liberation. This lower degree of liberation is related to the fact that a significant amount of the pentlandite was present as fine flames embedded in a pyrrhotite matrix. These pentlandite flames are only a few microns in size and are deemed almost unrecoverable by means of flotation. A summary of the mineral abundance and liberation data is shown in Figure 3. The complete RMS report is included in Appendix D.



Mineral	No of analyses	liberated	attached	locked
Pyrrhotite*(Po)	542	81%	8%	11%
Pentlandite**(Pn)	20	40%	15%	45%
Chalcopyrite***(Cp)	18	61%	11%	28%
Total	580			

Figure 3: Mineral Abundance and Liberation of Specific Minerals

5.2. Microprobe Analysis

The actual chemical composition of sulphide minerals within an ore often deviate from the stoichiometric composition, in that elements are substituted by others. This is particularly the case with pyrrhotite, which has Ni, Cu, and Co as common impurities.

Microprobe analysis was performed on a sample of the B4-7 Zone Met-D composite to determine the chemical composition of pyrrhotite, pentlandite, and silicates. The results are summarised in Table 3. Although the average nickel content in the pyrrhotite of 0.466% is only moderate, the large amount of pyrrhotite contained in the ore translates to 45-55% nickel deportment into the pyrrhotite. The nickel content in silicate gangue minerals is negligible as attested by the chemical composition of the silicates shown in Table 4.

Table 3: Chemical Composition of Pyrrhotite and Pentlandite in the Met-D Composite

Mineral		Content, %			
		Ni	Cu	Fe	S
Pyrrhotite (163 Points)	Average	0.466	0.019	61.2	38.1
	StdDev	0.054	0.033	0.3	0.3
Pentlandite (36 Points)	Average	35.5		30.3	34.5
	StdDev	1.11		0.91	0.35

Table 4: Chemical Composition of the Silicate Minerals in the Met-D Composite

Element	Al_2O_3	CaO	Cr_2O_3	FeO	K_2O	MgO
Content (%)	7.824	9.678	0.059	10.089	0.141	14.299
Element	MnO	Na_2O	NiO	SiO_2	TiO_2	
Content (%)	0.231	1.828	0.042	52.617	0.139	

6. Flotation Testing

6.1. Mill Calibration

Mill calibration tests were carried out to establish the grind time required in a lab mill to obtain a specific grind size. Four grind times of 18, 25, 29, and 36 minutes were selected for the Met-C composite, which produced a P_{80} mill discharge ranging from 63 microns and 131 microns. Grind times for the Met-D composite were 18, 25, and 29 minutes and produced a grind size of P_{80}=84 microns to P_{80}=126 microns. The results of the seven mill calibration grinds for the two composites are depicted in Figure 4.

The detailed size distribution analysis reports for the seven grinds are included in Appendix C.

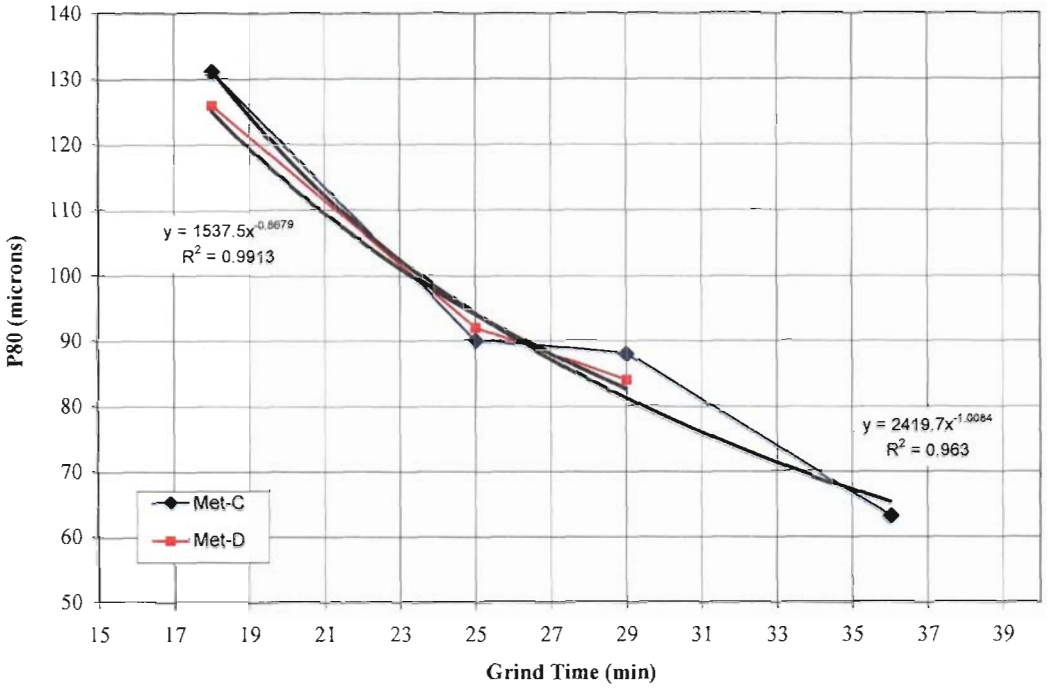


Figure 4: Mill Calibration Curve

6.2. Bulk Rougher

A sample of the Met-D composite was subjected to a rougher flotation test with four incremental rougher concentrates to provide a first indication of the flotation response of the Junior Lake B4-7 Zone ore. The selected collector and frother were PAX and DF250, respectively, which are commonly used in sulphide ore flotation circuits. The chosen grind time of 33 minutes produced a grind size of P_{80}=63 microns, which was slightly finer than the targeted 70 microns.

The Cu and Ni rougher grade recovery curves for the rougher tests F1-F3 and F6 are depicted in Figure 5 and Figure 6, respectively. While the Cu recovery was >99.5% after the fourth incremental concentrate in test F1, the concentrate grades were poor throughout the entire flotation test. The same applies to the Ni grade recovery curve. At the end of 16 minutes of rougher flotation the Ni rougher concentrate grade was only 1.06% at 94.7% recovery. The lack of flotation selectivity is also reflected in the mass pull to the rougher concentrate which was 68% and 82% after 12 minutes and 16 minutes of flotation, respectively. Detailed metallurgical mass balances are included in Appendix E.

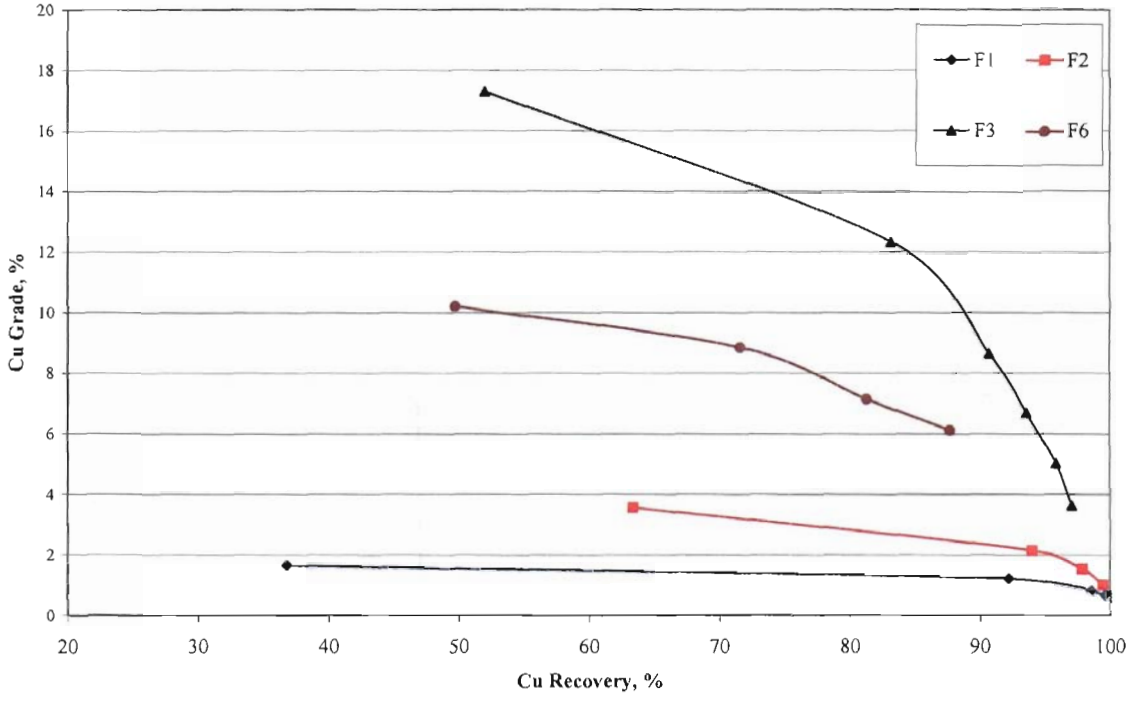


Figure 5: Cu Rougher Grade-Recovery Curve for Met-D Composite (F1-F4)

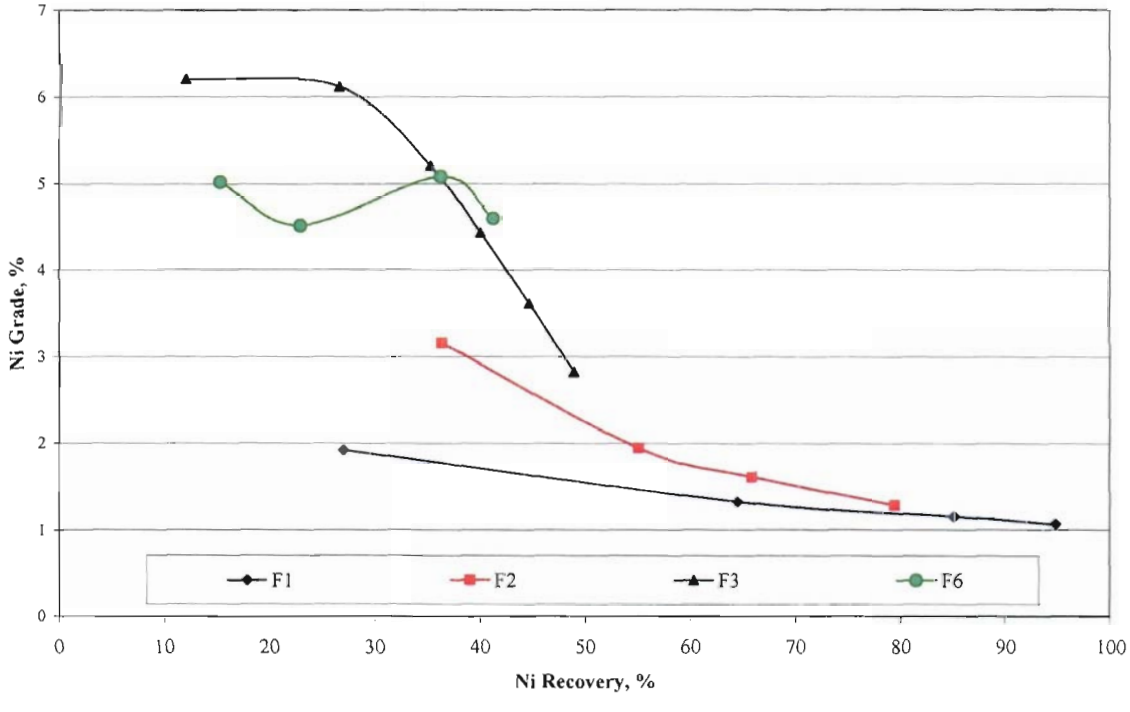


Figure 6: Ni Rougher Grade-Recovery Curves for Met-D Composite (F1–F4)

In an effort to improve selectivity, the pH was increased to 9.4 in the second rougher flotation test (F2). Although the selectivity improved slightly in the first two incremental rougher concentrates, the Cu and Ni grade recovery curves of tests F1 and F2 merged towards the end of the two rougher tests. Despite a lower mass pull of 57.5%, the Ni and Cu rougher concentrate grades were still poor.

The lime dosage to the grinding mill and the flotation pH was further increased in test F3 and the primary grind time was reduced to 29 minutes, which resulted in a grind size of P_{80}=75 microns. The increased lime dosage improved the flotation selectivity significantly as attested by the Ni and Cu grade recovery curves shown in Figure 5 and Figure 6, respectively. While the Cu recovery remained high at >95%, the Ni recovery decreased to less than 50%. Since the ore contains a large amount of pyrrhotite, it was postulated that the Ni losses are the result of Ni deportment into pyrrhotite. The results of the microprobe analysis that was performed at a later date and that was summarised in section 5.2 supports this initial postulation. Based on the assumption that all sulphur that is not associated with chalcopyrite or pentlandite is tied up in pyrrhotite, the calculated pyrrhotite:pentlandite (Po:Pn) ratio is almost 50:1. Note that the mineralogical analysis has identified a number of other sulphur containing minerals and, therefore, the actual Po:Pn ratio is somewhat lower. Nevertheless, the Po:Pn ratio significantly exceeds ratios found in other sulphide deposits. Ores with a Po:Pn ratio of >15 often create metallurgical challenges as it is difficult to depress the large quantities of pyrrhotite.

As the pyrrhotite depression improved from test F1 to F3 the pentlandite flotation kinetics decreased. The kinetics curves for chalcopyrite, pentlandite, and pyrrhotite, which are included in the flotation mass balances in Appendix E, clearly illustrate this.

The use of a combination of sodium metabisulfite (SMBS) and triethylenetetramine (TETA) has shown to yield a very high selectivity between pyrrhotite and pentlandite for other nickel ores[1]. Test F6 employed this reagent combination. 42% of the nickel and 87.7% of the copper reported to the rougher concentrate at a grade of 4.6% and 6.1%, respectively. As expected SMBS and TETA was successful in depressing pyrrhotite and only 6.4% of the pyrrhotite reported to the rougher concentrate. The Po:Pn selectivity for the four bulk rougher tests are shown in Figure 7.

[1] *S. Kelebek, C. Tukel, "The effect of sodium metabisulfite and triethyleneteramine system on pentlandite-pyrrhotite separation", Journal of Mineral Processing, 57 (1999), 135-152*

The sulphur grade of the rougher concentrate was still 39.0% and, therefore, the majority of the dilution was iron sulphides. Although regrinding and cleaning of the rougher concentrate may reject some of this dilution, it would result in further nickel losses. Considering the fact that test F3 produced only slightly lower rougher concentrate grades at similar recoveries, the SMBS and TETA reagents were not tested further due to the health hazards associated with TETA.

Since the ore contains a number of different sulphides, other sulphide minerals besides pyrrhotite may have contributed to the concentrate dilution. A mineralogical analysis of the concentrate will have to be carried out to quantify the percentages of the various sulphide minerals that are contained in the concentrate.

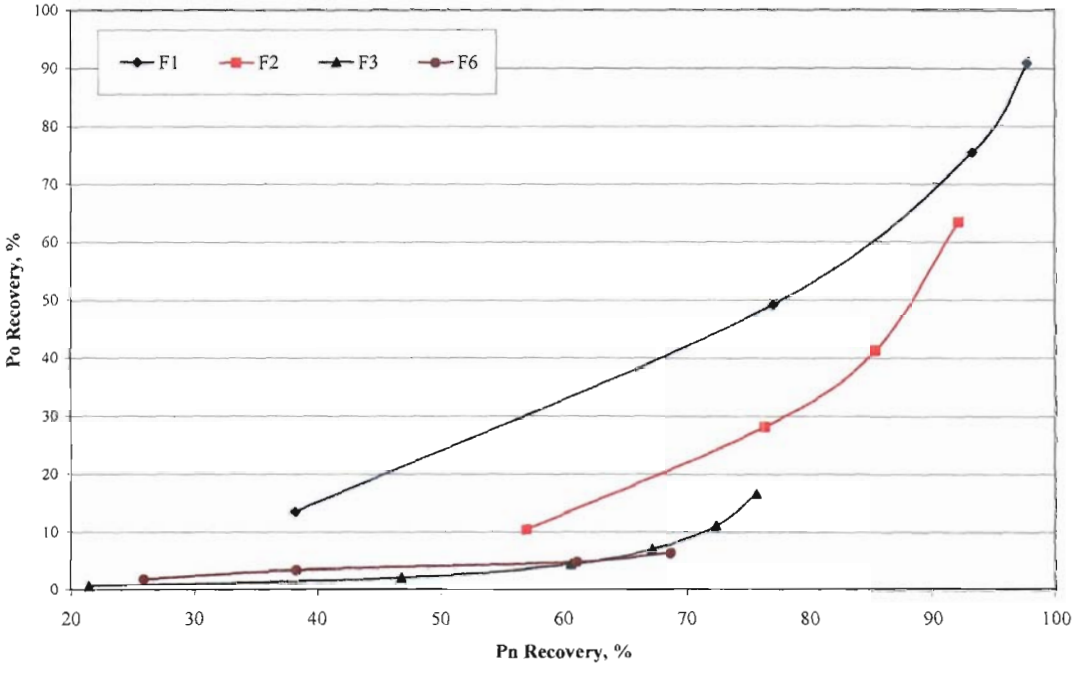


Figure 7: Rougher Po-Pn Selectivity

6.3. Bulk Cleaner

The lime addition to the primary grind was raised to 750 g in the first bulk cleaner test, F4. The rougher concentrate was reground for 20 minutes to liberate middlings and locked minerals. Cleaning was performed at a pH of 10.2 to depress any pyrrhotite that was present in the rougher concentrate. Since the proposed Junior Lake VW flowsheet was used as the base-case flowsheet for the Junior Lake B4-7 Zone, the rougher was broken down into a primary and secondary

stage[2]. The primary rougher concentrate reports directly to the Cu/Ni separation, while the secondary rougher concentrate is subjected to a cleaning stage prior to Cu/Ni separation (Figure 8). This flotation strategy proved to be unsuccessful as the both the Cu and Ni grades of the primary rougher concentrate were well below saleable levels (11.0% Cu, 4.76% Ni). Further, upgrading of the secondary rougher concentrate in the single cleaning stage proved difficult. Although the pyrrhotite depression was quite successful (less than 10% reported to the primary rougher concentrate and the cleaner concentrate), the large amount of pyrrhotite contained in the ore diluted the concentrate to combined Ni+Cu grades of only 10% for the primary rougher and cleaner concentrate. While Cu recovery remained high at >95%, the nickel recovery dropped to 42%. Taking into account the results of the RMS, this low Ni recovery was to be expected.

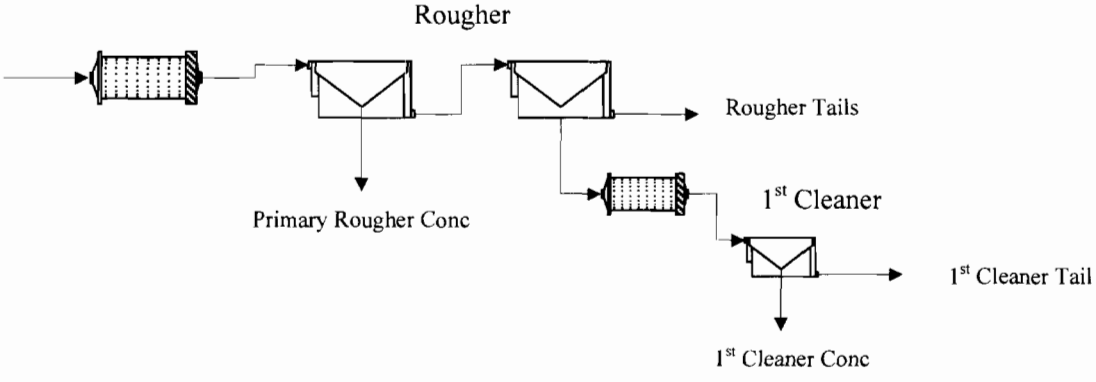


Figure 8: Flowsheet Bulk Cleaner Test F4

Since the RMS results were not available at the time that test F4 was carried out, another possibility considered for the high nickel losses was the high pH of 11.2 of the primary mill discharge. Hence, test F5 used a reduced lime addition to the mill of only 450 g/t. Despite these changes, the nickel recovery remained at ~40%.

Tests F7 and F8 used two different regrind times to evaluate the impact of grind size on cleaner concentrate grade and recovery of the Met-D composite. The same conditions were applied to the Met-C composite in tests F9 and F10. The Cu Cleaner grade-recovery curves and the Ni+Cu vs Ni grade-recovery curves for the four tests are depicted in Figure 9 and Figure 10, respectively. Based on the results Met-D responded better to the longer regrind time, whereas the Met-C composite produced superior results for the shorter regrind time.

[2] *LR-11366-001 "An Investigation into the Recovery of Ni and Cu from the Junior Lake Zone VW Deposit", Final Report, November 7, 2006*

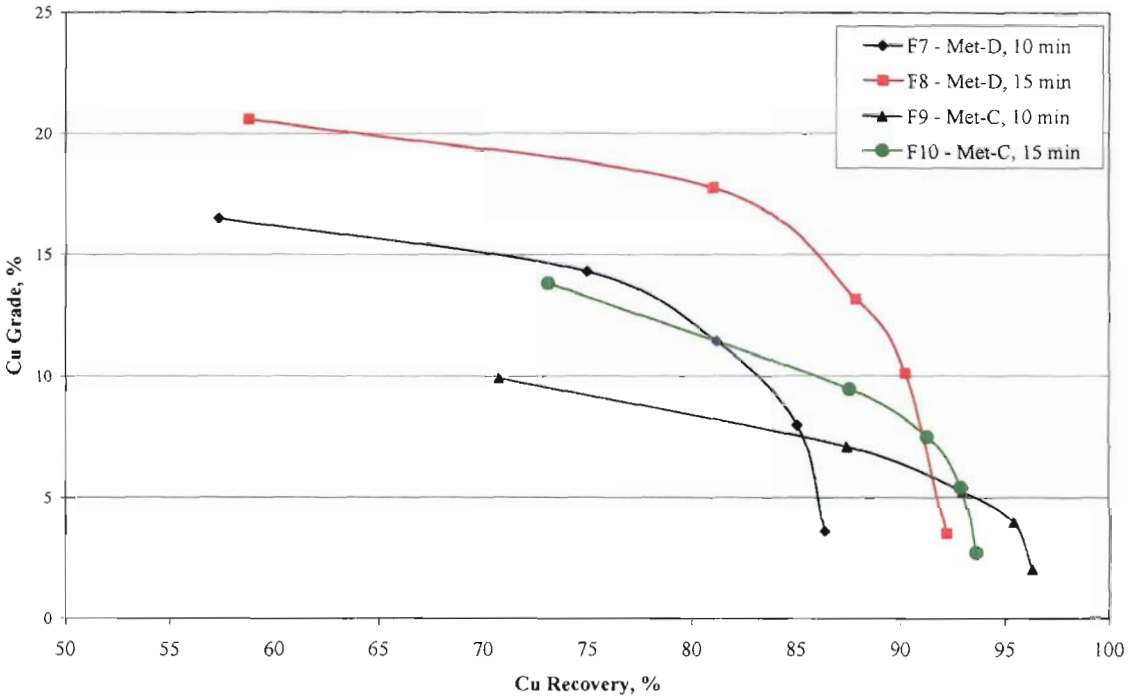


Figure 9: Cu Cleaner Grade-Recovery Curves

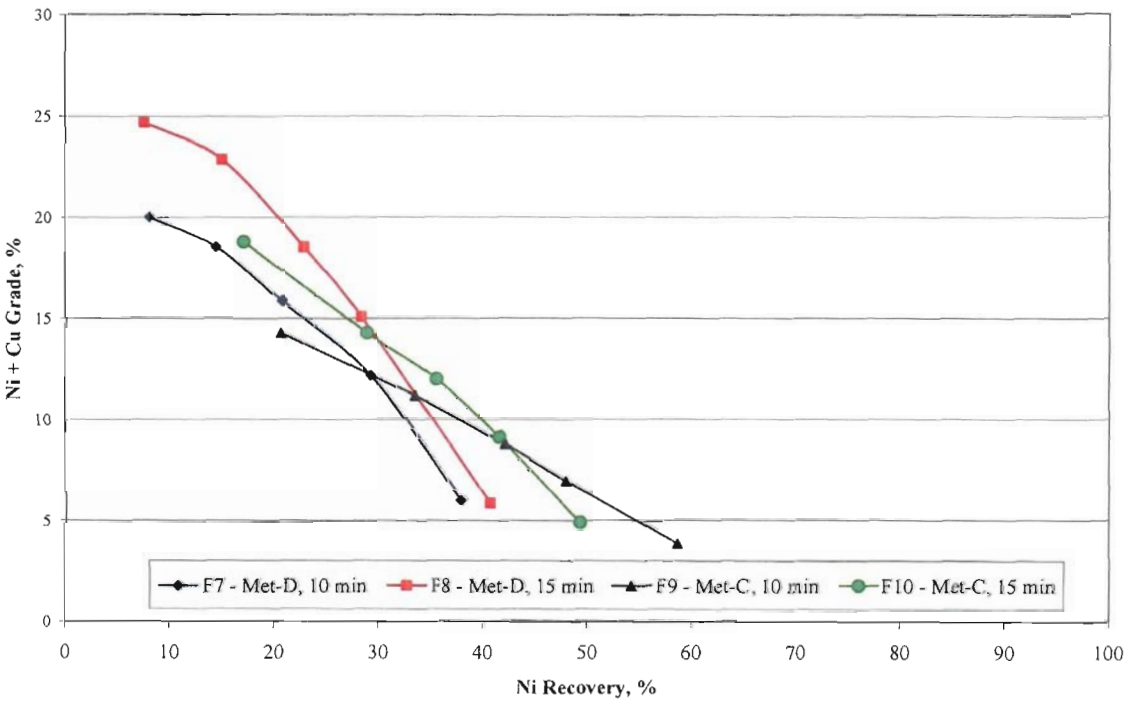


Figure 10: Ni+Cu Grade versus Ni Cleaner Recovery Curves

6.4. Flotation of Pt, Pd, and Co

In terms of Pt, Pd, and Co, the recovery of the three elements is plotted versus the Cu and Ni recovery in Figure 11. The data shows strong relationships between the recovery of Cu and Pd, Ni and Pt as well as Ni and Co. Although only a limited number of flotation tests have been carried out to-date, these relationships are expected to remain valid for an optimised flowsheet. The same relationships between Cu, Ni, Pt, Pd, and Co are commonly observed in other Ni-Cu sulphide deposits.

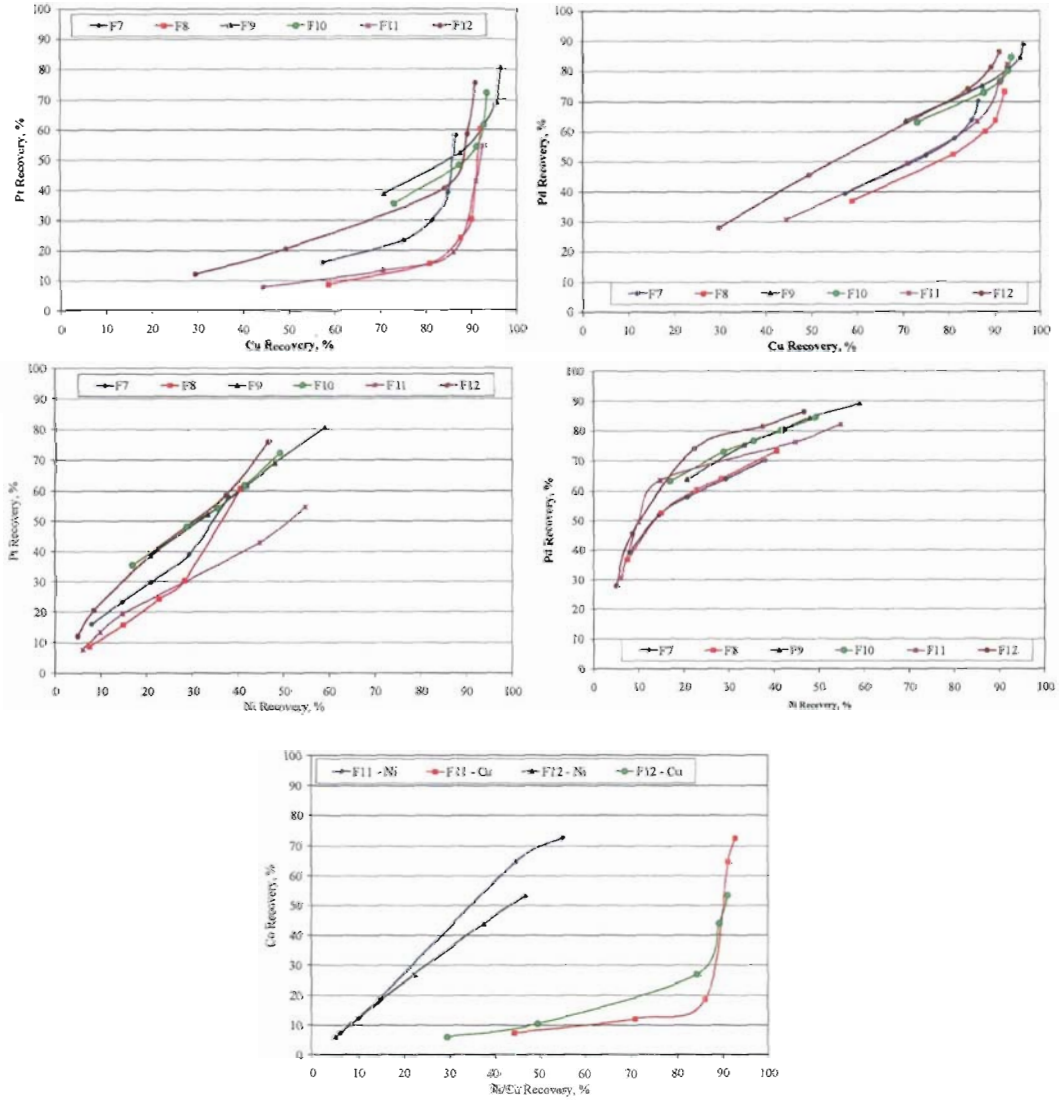


Figure 11: Pd, Pt, and Co Recovery vs Ni and Cu Recovery

7. Conclusions and Recommendations

A series of twelve bulk rougher and bulk cleaner flotation tests were carried out on two composites of the Junior Lake B4-7 zone. The flotation program was performed to develop a preliminary understanding of the flotation response of this ore and to identify metallurgical challenges.

The two Junior Lake B4-7 composites were massive sulphide ore samples with a very high Po:Pn ratio. While a good copper recovery of 85-95% was achieved in all scoping tests, the nickel recovery was disappointing with <50% reporting to the final concentrate. The low Ni recovery can be attributed to the following two factors:

- Although the pyrrhotite contained only a moderate amount of nickel (~0.4%), the abundance of pyrrhotite in the B4-7 ore corresponded to an overall nickel deportment to pyrrhotite, of 45% to 55%. Since the flowsheet aimed to discard the pyrrhotite to the tailings stream, half of the nickel contained in the ore will be lost with the pyrrhotite;
- A significant amount of nickel is tied up as pentlandite flames within the pyrrhotite matrix. These flames cannot be liberated at a practical mill grind size. Even if the flames are liberated, their flotation kinetics are very slow and, therefore, the majority of the flames tend to report to the tailings.

The combination of these two factors results in a theoretic nickel recovery to concentrate of only 25-35%, which is in agreement with the preliminary flotation results.

Despite aggressive flotation conditions, final bulk concentrate grades were below saleable grades. The low concentrate grades are attributed to the difficulties to depress pyrrhotite and/or the presence of other sulphides in the concentrate that are not depressed at suitable nickel flotation conditions. While a good pyrrhotite:pentlandite selectivity was achieved in a number of tests (less than 10% in the rougher), the large amount of pyrrhotite in the ore resulted in high dilution levels.

Since the tailings of the B4-7 ore would consist primarily of pyrrhotite, special attention has to be given to their environmental impact. Based on former experience, the tailings will be highly acid generating. It is anticipated that tailings treatment will increase treatment costs substantially and will have a noticeable impact on the economic feasibility of the project.

The preliminary metallurgical test program completed to-date suggests that it will be difficult to upgrade the B4-7 Zone ore to a saleable concentrates. The Cu concentrate grades obtained in the

two scoping level Cu-Ni separation tests do not constitute a saleable Cu concentrate. However, it is postulated that grades can be improved with more aggressive Cu-Ni separation conditions (e.g. addition of NaCN to depress pentlandite, increase pH to 12.2).

The following metallurgical program is recommended for the next phase of testing to develop a better understanding of the mineralogy, to evaluate alternative process options, and to optimise the current flotation conditions:

- Joint review of the available drilling data by a Landore Resources geologist and a metallurgist to identify suitable composites for testing and to identify zones of potentially problematic ore;
- Additional Bond ball and rod mill grindability tests to quantify the variability in ore hardness;
- Evaluate the option to treat the deposit as a Cu and PGM deposit i.e. employ a highly selective rougher flotation at a high pH to produce a saleable Cu concentrate (the nickel would be lost to the tails together with the pyrrhotite);
- Comprehensive assessment of flotation variables (primary and regrind, pH, flotation reagents);
- Preliminary settling and filtration tests on tailings and concentrate samples;
- Preliminary environmental testing of tailings and effluents.
- Microprobe analysis on a number of composites to quantify the variance of nickel content in the pyrrhotite;
- Quantify the amount of pyrite present in the ore to aid in concentrate grade forecasts as pyrite would report to the Cu-Ni-separation feed and ultimately to the nickel concentrate.

Appendix A – Triplicate Analytical Results

	Head Assay, g/t		
	Pt	Pd	Au
Composite C - 1	0.14	0.97	0.03
Composite C - 2	0.08	0.80	0.03
Composite C - 3	0.24	0.96	0.03
Average	***0.15***	***0.91***	***0.0***
StdDev	*0.08*	*0.10*	*0.00*
Rel. StdDev	*0.53*	*0.10*	*0.00*

	Head Assay, g/t		
	Pt	Pd	Au
Composite D - 1	0.08	0.65	0.03
Composite D - 2	0.08	0.65	0.04
Composite D - 3	0.19	0.66	0.16
Average	***0.12***	***0.65***	***0.08***
StdDev	*0.06*	*0.01*	*0.07*
Rel. StdDev	*0.54*	*0.01*	*0.94*

Appendix B – Grindability Results

SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.: 11365-001 Product: Minus 6 Mesh Date: Nov 29 2006

Sample.: Met C Comp

Purpose: To determine the ball mill grindability of the sample in terms of a Bond work index number.

Procedure: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Test Conditions:		
	Mesh of grind:	150 mesh
	Test feed weight (700 mL):	2105 grams
	Equivalent to : 3007 kg/m^3 at Minus 6 mesh	
	Weight % of the undersize material in the ball mill feed:	9.0 %
	Weight of undersize product for 250% circulating load:	601 grams

Results: Average for Last Three Stages = **2.96g.** **251%** Circulation load

CALCULATION OF A BOND WORK INDEX

$$BWI = \frac{44.5}{P1^{0.23} \times Grp^{0.82} \times \left\{ \frac{10}{\sqrt{P}} - \frac{10}{\sqrt{F}} \right\}}$$

P1 = 100% passing size of the product	106 microns
Grp = Grams per revolution	2.96 grams
P80 = 80% passing size of product	90 microns
F80 = 80% passing size of the feed	2197 microns

BWI = **7.5** (imperial)

BWI = **8.2** (metric)

Grindability Test Data Project No.: 11365-001 Test No.: Met C Comp

Stage No.	Revs	New Feed (grams)	Undersize In Feed (grams)	Undersize To Be Ground (grams)	U'Size In Product (grams)	Undersize Product Total (grams)	Undersize Product Per Mill Rev (grams)
1	150	2,105	189	412	602	413	2.75
2	199	602	54	547	612	558	2.80
3	195	612	55	546	618	563	2.89
4	189	618	56	546	620	564	2.99
5	183	620	56	546	591	535	2.93
6	187	591	53	548	610	557	2.98
7	184	610	55	547	600	545	2.96

Average for Last Three Stages = 600g. 2.96g.

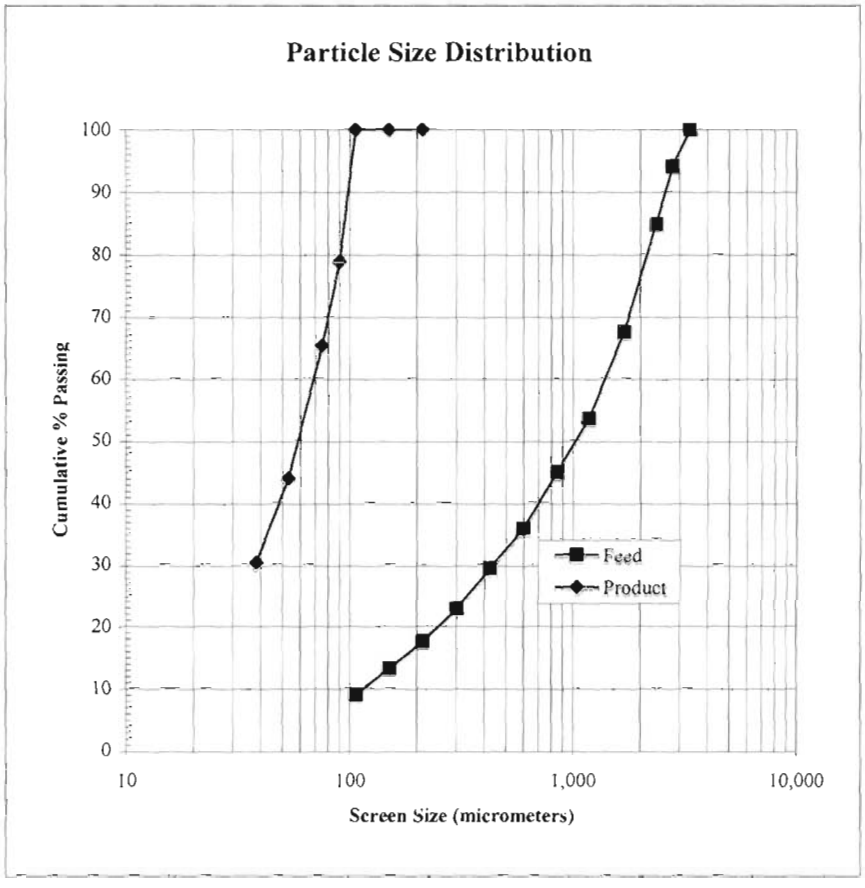
Feed K80

Mesh	Size µm	Weight grams	% Retained Individual	% Retained Cumulative	% Passing Cumulative
6	3,360	0.0	0.0	0.0	100.0
7	2,800	52.5	6.0	6.0	94.0
8	2,360	80.8	9.2	15.2	84.8
10	1,700	152.4	17.3	32.5	67.5
14	1,180	123.0	14.0	46.5	53.5
20	850	76.2	8.7	55.1	44.9
28	600	79.8	9.1	64.2	35.8
35	425	56.3	6.4	70.6	29.4
48	300	57.6	6.6	77.2	22.8
65	212	46.9	5.3	82.5	17.5
100	150	37.6	4.3	86.8	13.2
150	106	37.2	4.2	91.0	9.0
Pan	-106	79.0	9.0	100.0	0.0
Total	-	**879.3**	**100.0**	-	-
K80	**2,197**				

Product K80

Mesh	Size µm	Weight grams	% Retained Individual	% Retained Cumulative	% Passing Cumulative
65	212	0.0	0.0	0.0	100.0
100	150	0.0	0.0	0.0	100.0
150	106	0.0	0.0	0.0	100.0
170	90	57.6	21.1	21.1	78.9
200	75	37.1	13.6	34.7	65.3
270	53	58.5	21.4	56.1	43.9
400	38	37.1	13.6	69.7	30.3
Pan	-38	82.6	30.3	100.0	0.0
Total	-	272.9	**100.0**	-	-
K80	**90**				

Project No.: 11365-001 Test No.: Met C Comp



SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.: 11365-001 Product: Minus 6 Mesh Date: Nov 29 2006

Sample.: Met D Comp

Purpose: To determine the ball mill grindability of the sample in terms of a Bond work index number.

Procedure: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Test Conditions:		
	Mesh of grind:	150 mesh
	Test feed weight (700 mL):	2076 grams
	Equivalent to : 2966 kg/m^3 at Minus 6 mesh	
	Weight % of the undersize material in the ball mill feed:	8.9 %
	Weight of undersize product for 250% circulating load:	593 grams

Results: Average for Last Three Stages = **2.75g.** **251%** Circulation load

CALCULATION OF A BOND WORK INDEX

$$BWI = \frac{44.5}{P1^{0.23} \times Grp^{0.82} \times \left\{ \frac{10}{\sqrt{P}} - \frac{10}{\sqrt{F}} \right\}}$$

P1 = 100% passing size of the product	106 microns
Grp = Grams per revolution	2.75 grams
P80 = 80% passing size of product	90 microns
F80 = 80% passing size of the feed	2209 microns

BWI = **7.9** (imperial)

BWI = **8.7** (metric)

Grindability Test Data Project No.: 11365-001 Test No.: Met D Comp

Stage No.	Revs	New Feed (grams)	Undersize In Feed (grams)	Undersize To Be Ground (grams)	U'Size In Product (grams)	Undersize Product Total (grams)	Undersize Product Per Mill Rev (grams)
1	150	2,076	184	409	557	373	2.48
2	219	557	49	544	634	585	2.67
3	201	634	56	537	604	548	2.72
4	198	604	54	540	605	551	2.78
5	194	605	54	539	578	524	2.70
6	200	578	51	542	606	555	2.77
7	194	606	54	539	591	537	2.77

Average for Last Three Stages = 592g. 2.75g.

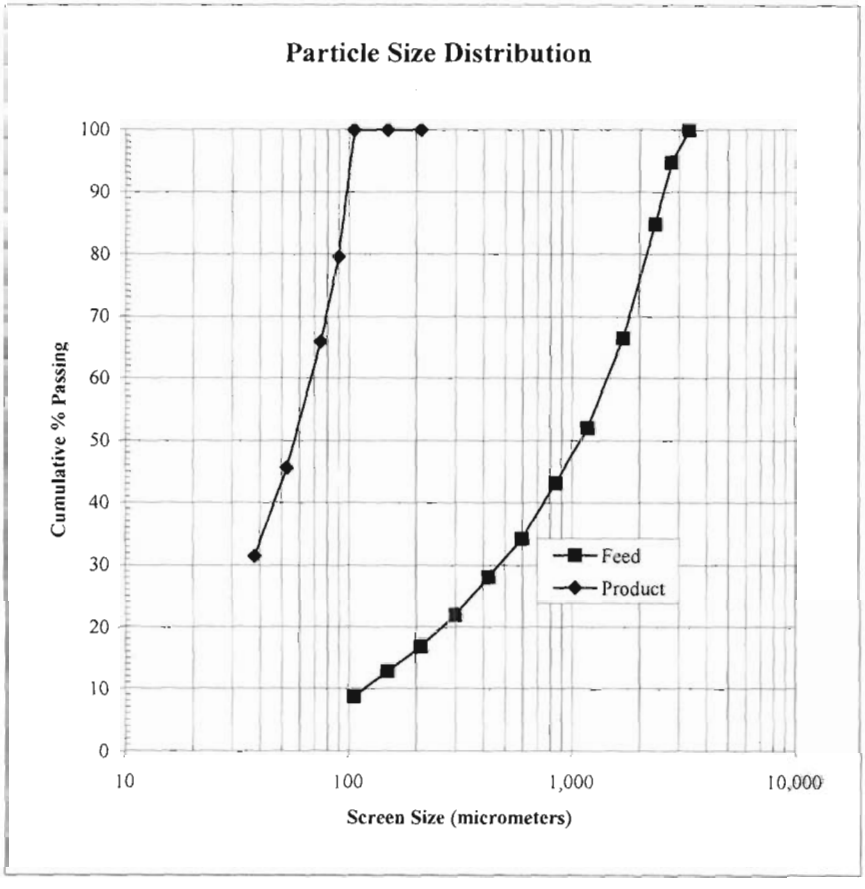
Feed K80

Mesh	Size µm	Weight grams	% Retained Individual	% Retained Cumulative	% Passing Cumulative
6	3,360	0.0	0.0	0.0	100.0
7	2,800	45.4	5.2	5.2	94.8
8	2,360	86.4	9.9	15.1	84.9
10	1,700	159.8	18.3	33.4	66.6
14	1,180	126.1	14.5	47.9	52.1
20	850	77.1	8.8	56.8	43.2
28	600	78.0	8.9	65.7	34.3
35	425	54.0	6.2	71.9	28.1
48	300	53.8	6.2	78.1	21.9
65	212	43.6	5.0	83.1	16.9
100	150	35.2	4.0	87.1	12.9
150	106	35.0	4.0	91.1	8.9
Pan	-106	77.4	8.9	100.0	0.0
Total	-	**871.8**	**100.0**	-	-
K80	**2,209**				

Product K80

Mesh	Size µm	Weight grams	% Retained Individual	% Retained Cumulative	% Passing Cumulative
65	212	0.0	0.0	0.0	100.0
100	150	0.0	0.0	0.0	100.0
150	106	0.0	0.0	0.0	100.0
170	90	40.1	20.4	20.4	79.6
200	75	26.9	13.7	34.0	66.0
270	53	40.0	20.3	54.4	45.6
400	38	27.8	14.1	68.5	31.5
Pan	-38	62.0	31.5	100.0	0.0
Total	-	196.8	**100.0**	-	-
K80	**90**				

Project No.: 11365-001 Test No.: Met D Comp



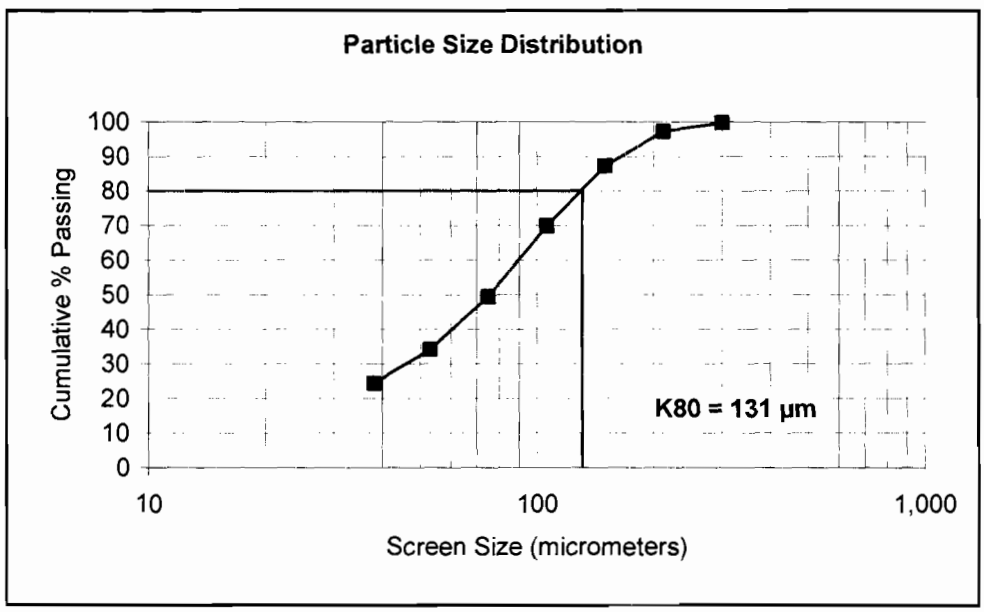
Appendix C – Mill Calibration

SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **18 Min** Test No.: **Met C Comp**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
48	300	0.5	0.3	0.3	99.7
65	212	4.3	2.5	2.8	97.2
100	150	17.2	9.9	12.7	87.3
150	106	30.0	17.4	30.1	69.9
200	75	35.3	20.4	50.5	49.5
270	53	26.5	15.3	65.8	34.2
400	38	16.9	9.8	75.6	24.4
Pan	-38	42.2	24.4	100.0	0.0
Total	-	**172.9**	100.0	-	-
K80	**131**				

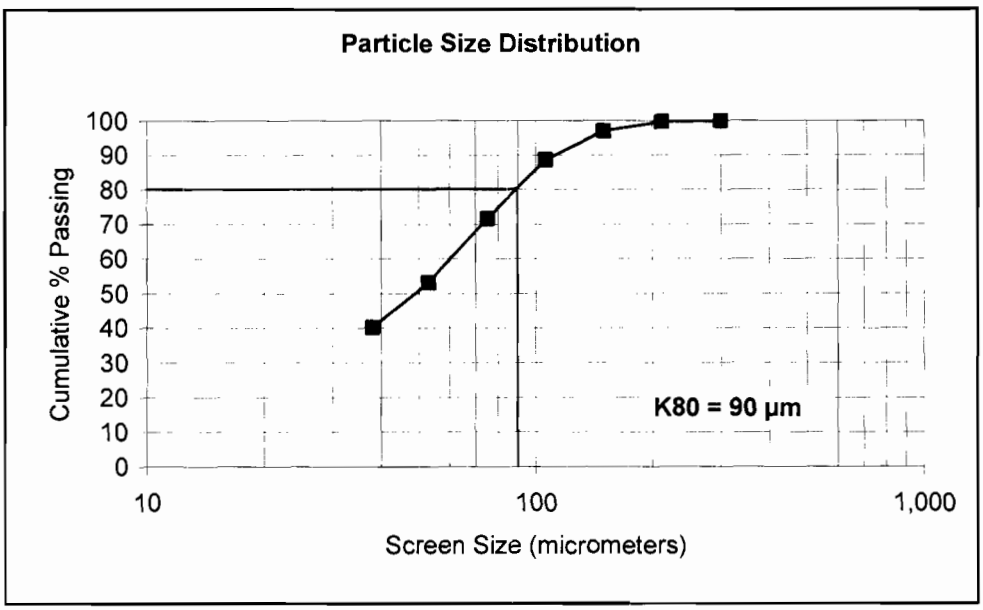


SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **25 Min** Test No.: **MET C Comp**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
48	300	0.2	0.1	0.1	99.9
65	212	0.5	0.3	0.4	99.6
100	150	4.8	2.6	3.0	97.0
150	106	15.5	8.4	11.4	88.6
200	75	31.4	17.0	28.4	71.6
270	53	33.9	18.4	46.7	53.3
400	38	24.1	13.1	59.8	40.2
Pan	-38	74.2	40.2	100.0	0.0
Total	**-**	**184.6**	100.0	**-**	**-**
K80	**90**				

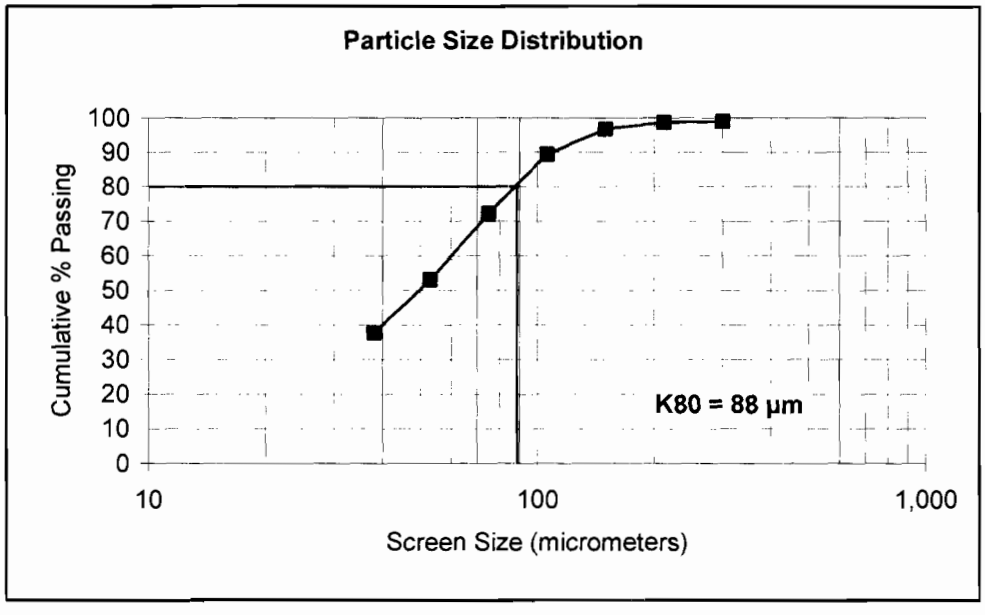


SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **29 Min** Test No.: **Met C Comp**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
48	300	1.8	1.0	1.0	99.0
65	212	0.5	0.3	1.3	98.7
100	150	3.3	1.9	3.2	96.8
150	106	12.7	7.3	10.6	89.4
200	75	29.5	17.1	27.7	72.3
270	53	33.5	19.4	47.0	53.0
400	38	26.4	15.3	62.3	37.7
Pan	-38	65.1	37.7	100.0	0.0
Total	-	**172.8**	100.0	-	-
K80	**88**				

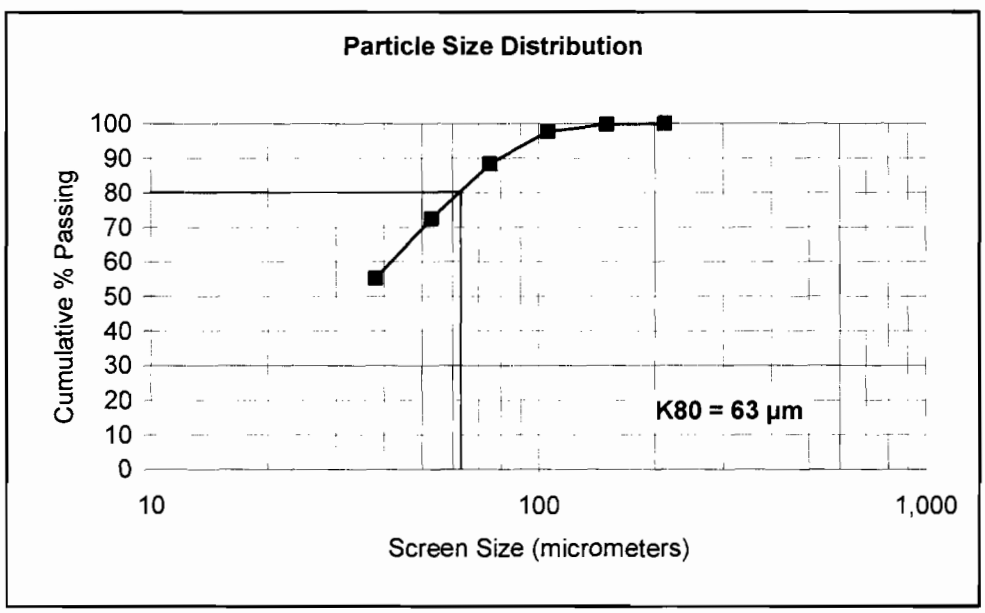


SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **36min** Test No.: **Met-C-Comp**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
65	212	0.0	0.0	0.0	100.0
100	150	0.4	0.2	0.2	99.8
150	106	3.3	2.0	2.3	97.7
200	75	15.1	9.3	11.6	88.4
270	53	25.5	15.8	27.4	72.6
400	38	28.2	17.4	44.8	55.2
Pan	-38	89.2	55.2	100.0	0.0
Total	**-**	**161.7**	100.0	-	-
K80	**63**				

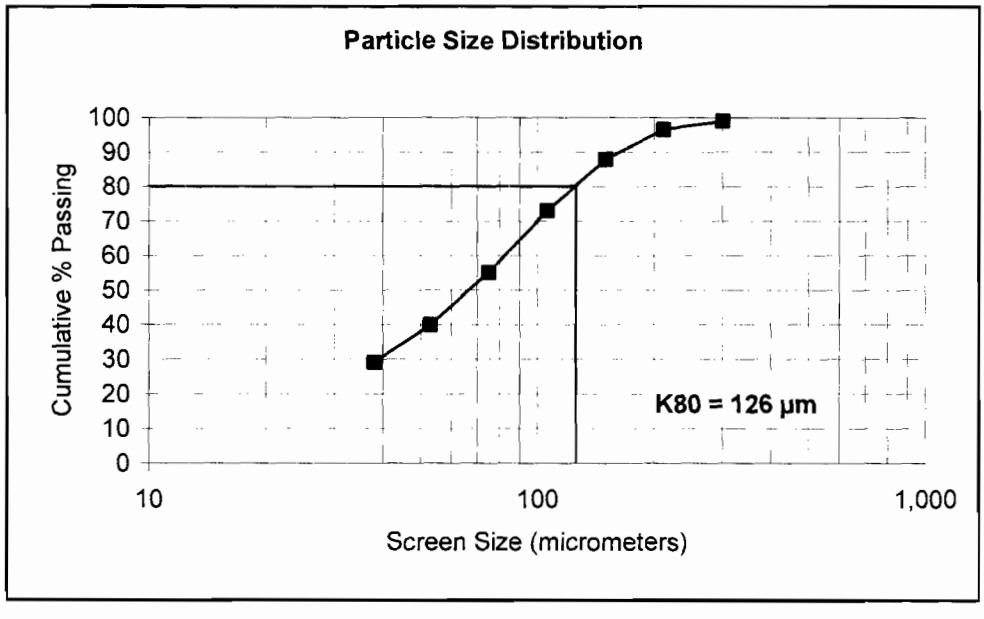


SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **18 Min** Test No.: **Met D Comp**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
48	300	1.7	1.0	1.0	99.0
65	212	3.9	2.3	3.3	96.7
100	150	14.7	8.8	12.1	87.9
150	106	24.9	14.8	27.0	73.0
200	75	30.0	17.9	44.8	55.2
270	53	25.6	15.3	60.1	39.9
400	38	18.1	10.8	70.9	29.1
Pan	-38	48.8	29.1	100.0	0.0
Total	**-**	**167.7**	100.0	**-**	**-**
K80	**126**				

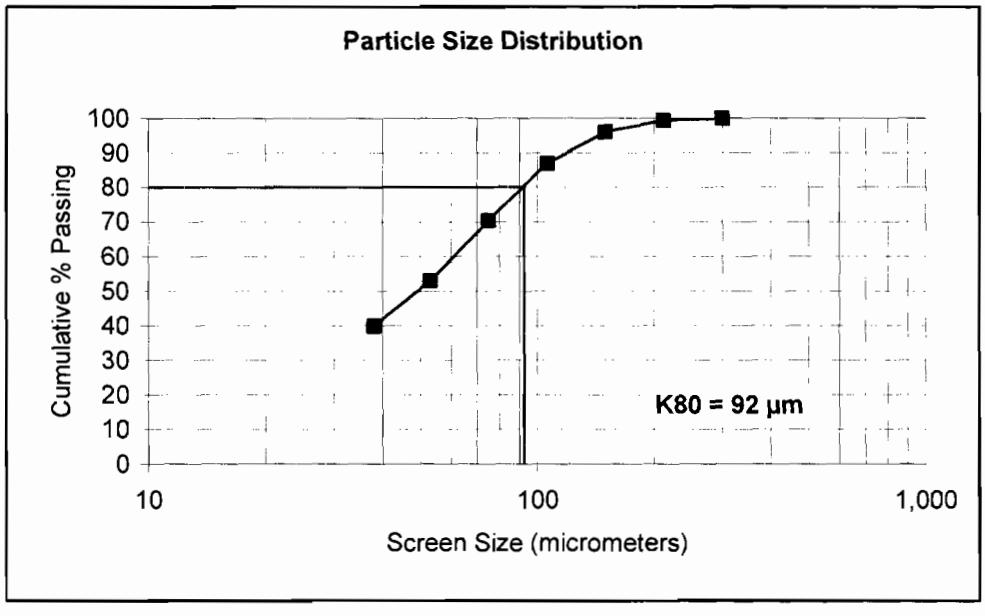


SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **25 Min** Test No.: **MET D Comp**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
48	300	0.1	0.1	0.1	99.9
65	212	1.0	0.6	0.6	99.4
100	150	5.9	3.3	3.9	96.1
150	106	16.4	9.1	13.0	87.0
200	75	29.7	16.5	29.5	70.5
270	53	31.5	17.5	47.0	53.0
400	38	23.4	13.0	60.0	40.0
Pan	-38	71.9	40.0	100.0	0.0
Total	-	**179.9**	100.0	-	-
K80	**92**				

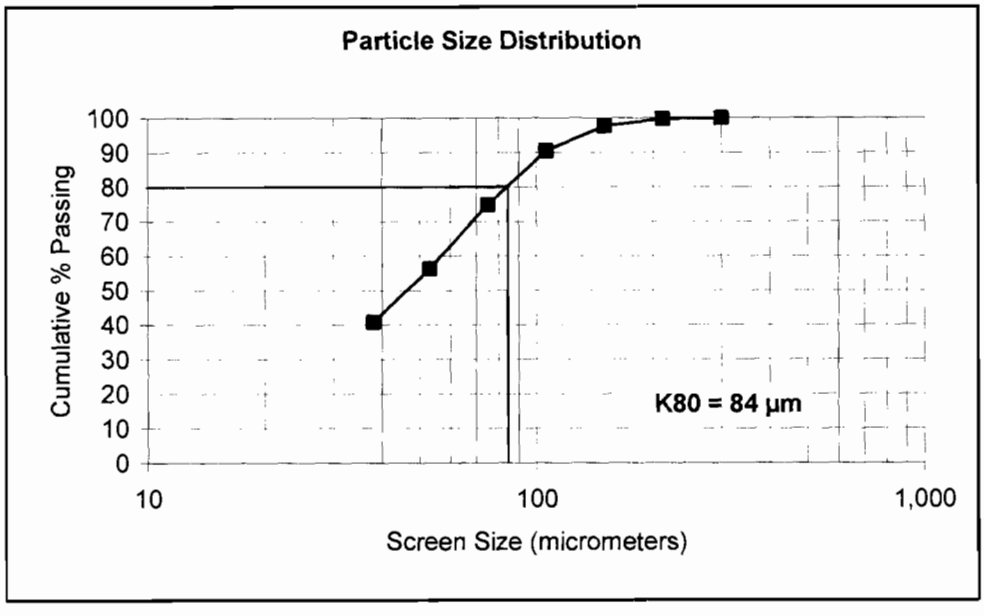


SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **29 Min** Test No.: **Met D Comp**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
48	300	0.1	0.1	0.1	99.9
65	212	0.3	0.2	0.2	99.8
100	150	3.5	2.1	2.4	97.6
150	106	11.7	7.1	9.5	90.5
200	75	25.5	15.5	25.0	75.0
270	53	30.8	18.7	43.7	56.3
400	38	25.5	15.5	59.2	40.8
Pan	-38	67.1	40.8	100.0	0.0
Total	-	**164.5**	100.0	-	-
K80	**84**				

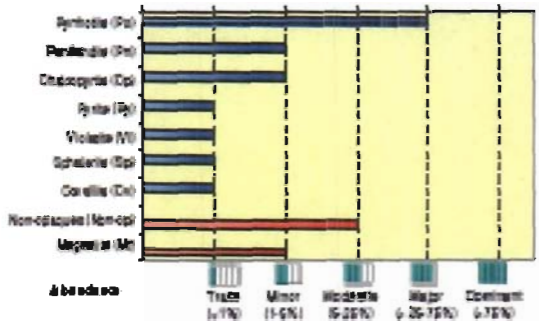


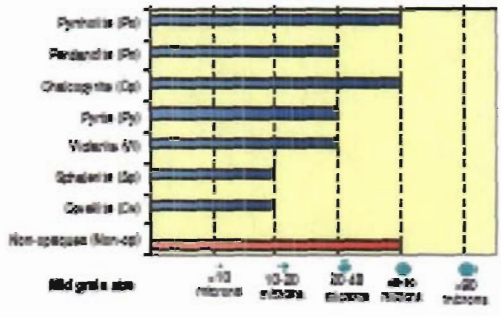
Appendix D – Rapid Mineral Scan

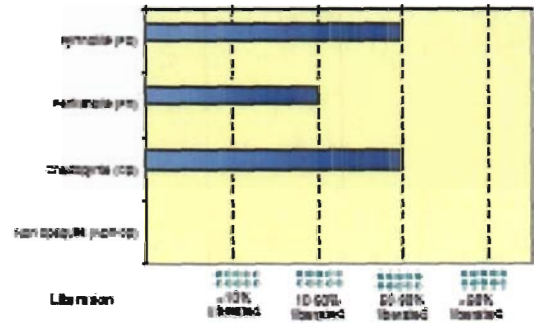
RAPID MINERAL SCAN
DATA REPORT

Sample:	Comp D	Project number:	CALR-11365-001
Date:	20 November, 2006	Client:	Landore Resources Ltd.
Mineralogist:	AC	Property:	Junior Lake VF
Size Range:	80% passing 75 µm	LIMS:	MI5014-NOV06

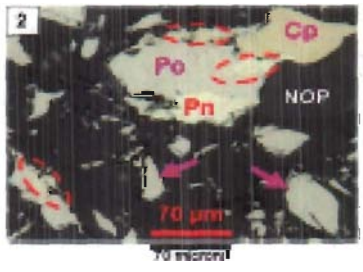
Petrographic and XRD examination:







Mineral	Association
Pyrrhotite (Po)	Po>Pn>Cp>Py>Vl>Sp>Cv
Pentlandite (Pn)	Po>Pn>Cp>Py>Vl
Chalcopyrite (Cp)	Po>Pn>Cp
Pyrite (Py)	Po>Pn>Cp>Py
Violarite (Vl)	Po>Pn>Cp>Vl
Sphalerite (Sp)	Po>Pn>Cp>Sp
Covellite (Cv)	Po>Pn>Cp>Cv



Notes: Photomicrographs of the polished section showing general appearance of different phases under reflected light:
Plate 1 showing liberated grains of pentlandite (Pn and red arrow), pyrrhotite (solid pink arrow), chalcopyrite (broken orange arrow) and composite grains of pyrrhotite-chalcopyrite-pentlandite (broken pink arrow), X100
Plate 2 showing attached grains of pyrrhotite-chalcopyrite-pentlandite Po, Cp and Pn respectively) with non-opaques (NOP), also showing flamelike pentlandite within pyrrhotite (broken red circle) and liberated pyrrhotite (pink arrow), X200

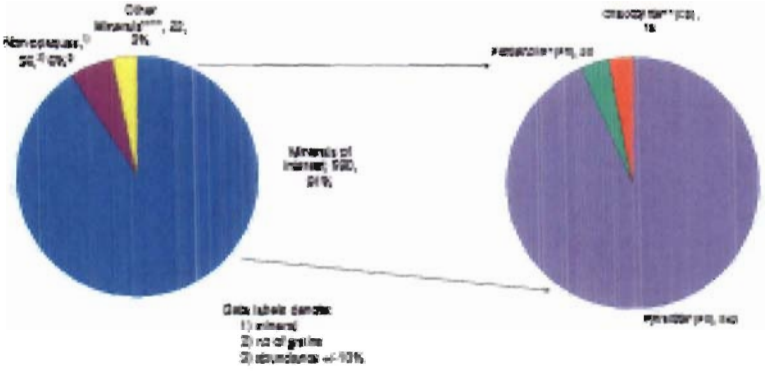
RAPID MINERAL SCAN
DATA REPORT

Sample:	Comp D	Project number:	CALR-11365-001
Date:	20 November, 2006	Client:	Landore Resources Ltd.
Mineralogist:	AC	Property:	Junior Lake VF
Size Range:	80% passing 75 µm	LIMS:	MI5014-NOV06

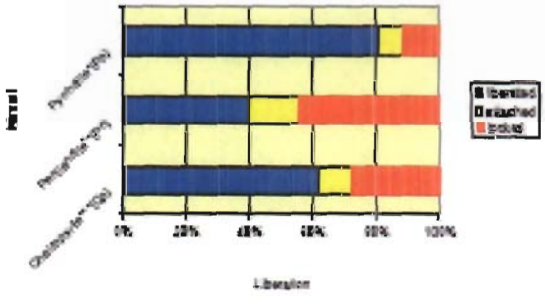
Pointcounting of principal minerals:
Manual

Total Mineral Abundance:

Specific Mineral Abundance:



Liberation of Specific Minerals:



Mineral	No of analyses	liberated	attached	locked
Pyrrhotite*(Po)	542	81%	8%	11%
Pentlandite*(Pn)	20	40%	15%	45%
Chalcopyrite**(Cp)	18	61%	11%	28%
Total	580			

*Including Py, Sp & fine inclusions of Pn
**Including violarite
***Including Cv
****Including Mt

Disclaimer:

The reader should be aware that this semi-qualitative study is designed to provide merely a broad picture of the mineralogy of the studied sample. Any numerical approximations should be treated as approximations only. Like any such study, its accuracy is subject to the representativity of the sample selected, and limited by the particle statistics inherent in such a study.

Aparup Chattopadhyay
Senior Mineralogist & Project Manager

Jos Zhou
Group Leader

Helen Dy
Report Prep Specialist

RAPID MINERAL SCAN
DATA REPORT

Sample:	Comp D	Project number:	CALR-11365-001
Date:	20 November, 2006	Client:	Landore Resources Ltd.
Mineralogist:	AC	Property:	Junior Lake VF
Size Range:	80% passing 75 µm	LIMS:	MB014-NOV06

Summary of Qualitative X-ray Diffraction Results

Sample	Crystalline Mineral Assemblage (relative proportions based on peak height)			
	Major	Moderate	Minor	Trace
Comp D 20 Minutes	pyrrhotite	chlorite, amphibole	mica, dolomite, quartz, calcite	*pentlandite, *chalcopyrite, *pyrite, *magnetite

*Tentative identification due to low concentrations, diffraction line overlap or poor crystallinity

Instrument:	Siemens D5000 diffractometer
Scan Conditions:	Co radiation, graphite monochromator, 40 kV, 30 mA, Step: 0.02 o, Step time: 1 s
Interpretations:	JCPDS / ICDD powder diffraction files. Siemens Search / Match software.
Detection Limit:	0.5-2%. Strongly dependant on crystallinity.

Interpretations do not reflect the presence of non-crystalline / amorphous compounds. Mineral proportions are based on relative peak heights and may be strongly influenced by crystallinity, structural group or preferred orientations. Interpretations and relative proportions should be accompanied by supporting petrographic and geochemical data (WRA, ICP-OES).

Mineral	Composition
Amphibole	$(Ca,Na)_{2}(Mg,Fe)_{4}Si_{8}Al(Si_{7}Al)O_{22}(OH)_{2}$
Calcite	$CaCO_{3}$
Chalcopyrite	$CuFeS_{2}$
Chlorite	$(Fe,Mg,Mn)_{5}Al(Si_{3}Al)O_{10}(OH)_{8}$
Dolomite	$CaMg(CO_{3})_{2}$
Magnetite	$Fe_{3}O_{4}$
Mica	$KMg_{3}FeAl_{2}Si_{6}AlO_{20}(OH)_{2}$
Pentlandite	$(Fe,Ni)_{9}S_{8}$
Pyrite	FeS_{2}
Pyrrhotite-5T	$Fe_{10}S_{11}$
Quartz	SiO_{2}

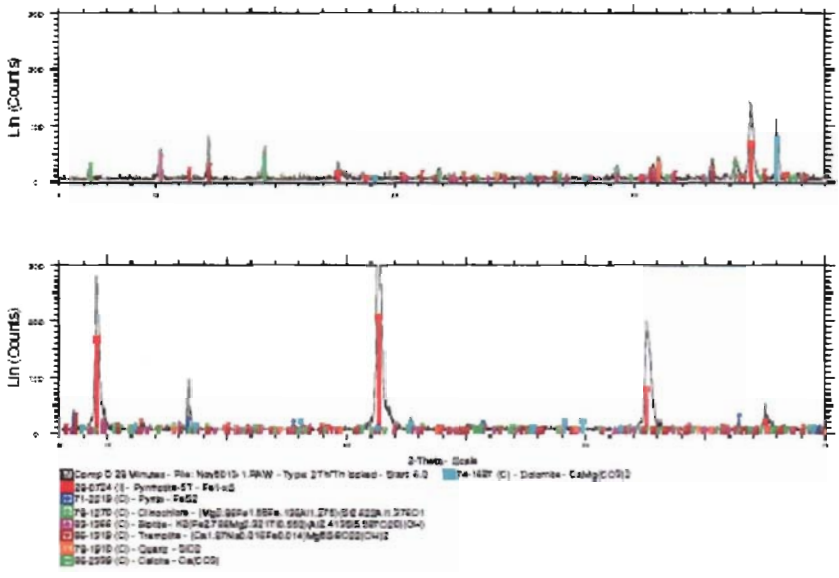
Note:

N/A

Huyun Zhou, Ph.D.
XRD Mineralogist

Aparup Chattopadhyay, Ph.D., P.Geo.
Senior Mineralogist

Comp D 29 Minutes



Appendix E – Flotation

Test: F1 **Project No.:** 11365-001 **Operator:** CC **Date:** 18-Oct-06

Purpose:

Procedure: As outlined below.

Feed: 2 kg of minus 10 mesh B4-7 Met-D Zone Composite

Grind: 33 minutes @ 65% Solids (80 % passing 75 microns) in BM-2

Conditions: Grind K80 (Rougher Tail) = 63 microns

Stage	Reagents added, g/t				Time, minutes			pH	Ep
	PAX	DF250			Grind	Cond.	Froth		
Grind	-	-			33			8.2	-240
Rougher 1	10	17.5				2	2	7.9	-170
Rougher 2	10	5				2	4	7.6	60
Rougher 3	20	2.5				2	6	7.6	50
Rougher 4	20	7.5				2	4	7.7	50
Total	*60*	*32.5*	*0*	*0*	*33*	*8*	*16*		

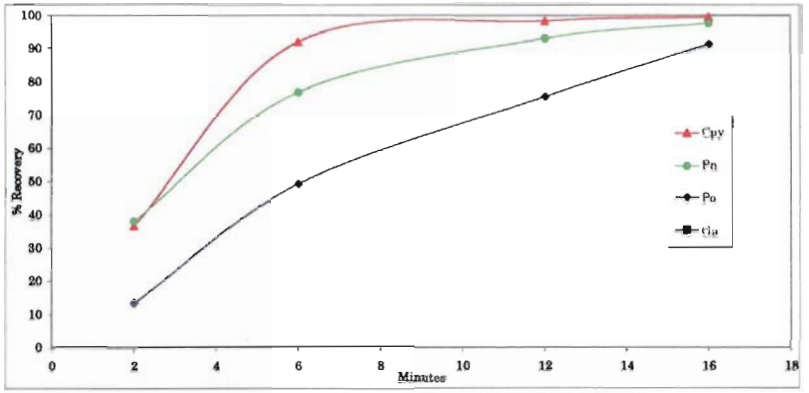
Stage	Roughers
Flotation Cell	1000g-D1
Speed: rpm	1800

	Ni	Cu	S	Fe
Pn	33.50%	0.00%	34.53%	30.29%
Po	0.47%	0.02%	38.12%	61.22%
Cpy	0.01%	34.22%	34.84%	30.57%

Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	45.0%
Pn	55.0%



Metallurgical Balance

Product	Weight		Assays, %								% Distribution								Units							
	g	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga
Rougher Conc 1	259.6	12.95	1.65	1.92	39.2	3.30	4.5	92.0	4.8	1.3	36.8	27.0	14.38	64.93	38.2	13.4	36.8	2.2	21.4	24.9	507.5	42.7	57.6	1191.7	62.4	17.1
Rougher Conc 2	638.7	31.9	1.01	1.08	40.0	0.37	1.8	99.6	3.0	4.4	55.4	37.4	36.1	17.91	38.8	35.7	55.4	17.6	32.2	34.4	1274.1	11.8	58.6	3172.4	94.0	139.7
Rougher Conc 3	464.6	23.2	0.16	0.82	39.0	0.29	1.1	100.4	0.5	1.9	6.4	20.7	25.6	10.21	16.1	26.2	6.4	5.5	3.7	19.0	903.6	6.72	24.4	2325.7	10.8	43.9
Rougher Conc 4	282.0	14.1	0.043	0.63	38.3	0.21	0.5	99.6	0.1	0.3	1.0	9.6	15.3	4.49	4.6	15.8	1.0	0.5	0.6	8.9	538.6	2.95	7.0	1401.4	1.8	3.8
Rougher Tails	360.3	18.0	0.013	0.27	17.0	0.09	0.2	44.3	0.0	55.5	0.4	5.3	8.7	2.46	2.3	9.0	0.4	125.8	0.2	4.9	305.5	1.62	3.4	795.8	0.7	996.9
Head (calc.)	2005.2	100.0	0.58	0.92	35.3	0.66	1.51	88.87	1.7	7.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**58.1**	**92.0**	**3529.3**	**65.8**	**150.9**	**8887.0**	**169.7**	**792.4**
(direct)	2000.0	100.3	0.59	0.93	34.4	0.65					98.4	98.9	102.6													

Combined Products

Product	Float	Weight	Assays, %								% Distribution								Units							Ni + Cu
	min	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	
Rougher Conc 1	2	12.9	1.7	1.92	39.2	3.30	4.5	92.0	4.8	1.3	36.8	27.0	14.4	64.9	38.2	13.4	36.8	2.2	21.4	24.9	507.5	42.7	57.6	1191.7	62.4	17.1	3.6
Rougher Conc 1-2	6	44.8	1.2	1.32	39.8	1.22	2.6	97.4	3.5	3.5	92.2	64.4	50.5	82.8	77.0	49.1	92.2	19.8	53.5	59.3	1781.6	54.5	116.2	4364.1	156.4	156.8	2 5
Rougher Conc 1-3	12	68.0	0.8	1.15	39.5	0.90	2.1	98.4	2.5	3.0	98.6	85.1	76.1	93.1	93.1	75.3	98.6	25.3	57.2	78.3	2685.2	61.2	140.5	6689.7	167.3	200.7	2.0
Rougher Conc 1-4	16	82.0	0.7	1.06	39.3	0.78	1.8	98.6	2.1	2.5	99.6	94.7	91.3	97.5	97.7	91.0	99.6	25.8	57.8	87.1	3223.8	64.2	147.5	8091.2	169.0	204.5	1.8

Test: P2 **Project No.:** 11365-001 **Operator:** CC **Date:** 18-Oct-06

Purpose:

Procedure: As outlined below.

Feed: 2 kg of minus 10 mesh B4-7 Met-D Zone Composite

Grind: 33 minutes @ 65% Solids (80 % passing 75 microns) in BM-2

Conditions: Grind K80 (Rougher Tail) = 63 microns

Stage	Reagents added, g/t				Time, minutes			pH	Ep
	Lime	SIPX	DF 250	PAX	Grind	Cond.	Froth		
Grind	150	-	-	-	33			8.2	-160
Rougher 1	125	10.0	10	-		1	2	9.0	-120
Rougher 2	130	10	10	-		1	4	9.4	0
Rougher 3	130	10	5	-		1	4	9.4	0
Rougher 4	0	0	2.5	100		1	6	8.3	30
Total	*535*	*30*	*27.5*	*100*	*33*	*4*	*16*		

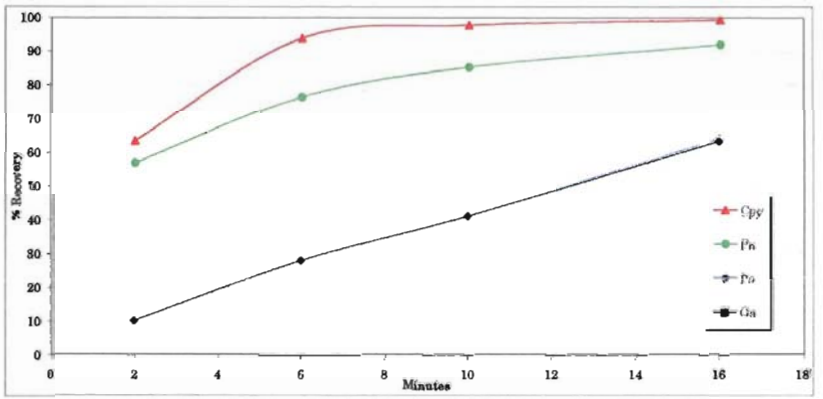
Stage	Roughers
Flotation Cell	1000g-D1
Speed: rpm	1800

	Ni	Cu	S	Fe
Pn	33.50%	0.00%	34.53%	30.29%
Po	1.47%	0.02%	36.12%	61.27%
Cpy	1.01%	34.22%	34.94%	30.57%

Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	44.2%
Pn	55.8%



Metallurgical Balance

Product	Weight		Assays, %								% Distribution								Units							
	g	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Gn	Cu	Ni	S	Pd	Pn	Po	Cpy	Gn	Cu	Ni	S	Pd	Pn	Po	Cpy	Gn
Rougher Conc 1	214.5	10.72	3.57	3.16	40.8	4.18	8.2	85.7	10.4	4.4	63.3	36.4	12.44	68.33	57.6	10.4	63.3	5.6	38.3	33.9	437.2	44.8	88.3	918.2	111.8	46.7
Rougher Conc 2	313.4	15.7	1.18	1.11	40.4	0.50	1.9	100.1	3.4	5.1	30.6	18.7	18.6	11.94	19.4	17.7	30.6	10.2	18.5	17.4	632.6	7.8	30.1	1566.9	54.0	85.2
Rougher Conc 3	235.0	11.7	0.20	0.86	38.7	0.34	1.2	99.3	0.6	1.1	3.9	16.8	12.9	6.09	9.0	13.2	3.9	4.5	2.3	10.1	454.4	3.99	13.9	1165.7	6.9	12.4
Rougher Conc 4	388.6	19.4	0.05	0.65	38.8	0.22	0.3	100.9	0.1	1.6	1.6	13.6	21.4	6.52	6.7	22.2	1.6	3.6	1.0	12.6	753.3	4.27	10.4	1958.6	2.8	30.4
Rougher Tails	850.1	42.5	0.008	0.45	29.1	0.11	0.3	75.9	0.0	23.8	0.6	20.5	35.2	7.13	7.9	36.5	0.6	120.9	0.3	19.1	1236.9	4.67	12.2	3224.8	1.0	1010.4
Head (calc.)	2001.6	100.0	0.60	0.93	35.1	0.66	1.55	88.33	1.8	8.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**60.4**	**93.1**	**3513.3**	**65.6**	**154.9**	**8833.1**	**176.5**	**835.4**
(direct)	2000.0	100.1	0.59	0.93	34.4	0.65					102.4	100.1	102.1													

Combined Products

Product	Float	Weight	Assays, %								% Distribution								Units								Ni + Cu
	min	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Gn	Cu	Ni	S	Pd	Pn	Po	Cpy	Gn	Cu	Ni	S	Pd	Pn	Po	Cpy	Gn	
Rougher Conc 1	2	10.7	3.6	3.16	40.8	4.18	8.2	85.7	10.4	4.4	63.3	36.4	12.4	68.3	57.0	10.4	63.3	5.6	38.2	33.9	437.2	44.8	88.3	918.2	111.8	46.7	6.7
Rougher Conc 1-2	6	26.4	2.2	1.94	40.6	2.60	4.3	94.2	6.3	5.6	93.9	55.1	30.4	80.3	76.4	28.1	93.9	15.8	56.7	51.2	1069.8	52.6	118.4	2485.1	165.8	131.9	1.1
Rougher Conc 1-3	10	38.1	1.6	1.61	40.0	1.49	3.5	95.8	4.5	3.8	97.8	65.9	43.1	86.4	85.4	41.3	97.8	17.3	59.1	61.3	1524.2	56.6	132.3	3656.8	172.7	144.3	3.2
Rougher Conc 1-4	16	57.5	1.0	1.29	39.6	1.06	2.3	97.5	3.1	3.0	99.4	79.5	64.8	92.9	92.1	63.5	99.4	20.9	60.1	74.0	2277.4	60.9	142.7	5609.4	175.5	174.7	2.3

Test: F3 **Project No.:** 11365-001 **Operator:** RG **Date:** 7-Nov-06

Purpose: Improve selectivity between Ni and Cu minerals and Fe sulphides

Procedure: As outlined below.

Feed: 2 kg of minus 10 mesh B4-7 Met-D Zone Composite

Grind: 29 minutes @ 65% Solids (80 % passing 75 microns) in BM-2

Conditions: Grind K80 (Rougher Tail) = 63 microns

Stage	Reagents added, g/t				Time, minutes			pH	Ep
	Lime	SIPX	DF 250	PAX	Grind	Cond.	Froth		
Grind	350	10.0	-	-	29			8.9	-250
Rougher 1	550	-	5	-		1	1	9.5	-30
Rougher 2	75	10	2.5	-		1	1.5	9.5	-30
Rougher 3	75	10	-	-		1	2	9.5	-20
Rougher 4	60	10	2.5	-		1	2	9.2	-30
Rougher 5	60	10	-	-		1	3	9.2	-30
Rougher 6	60	40	-	-		1	3	9.2	-20
Total	*1230*	*90*	*10*	*0*	*29*	*6*	*12.5*		

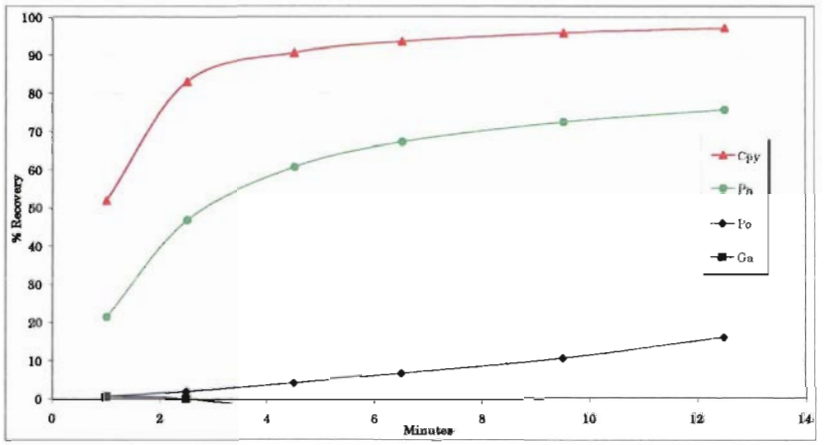
Stage	Roughers
Flotation Cell	1000g-D1
Speed: rpm	1850

	Ni	Cu	S	Fe
Pn	33.50%	0.00%	34.53%	30.29%
Po	0.47%	0.02%	38.12%	61.22%
Cpy	0.01%	34.22%	34.94%	30.57%

Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	45.2%
Pn	54.8%



Metallurgical Balance

Product	Weight		Assays, %								% Distribution								Units							
	g	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga
Rougher Conc 1	35.6	1.78	17.3	6.21	38.5	0.00	18.1	28.7	50.6	2.6	51.9	12.6	1.94	#DIV/0!	21.5	0.6	51.9	6.6	30.9	11.1	68.7	0.0	32.3	51.2	90.2	4.6
Rougher Conc 2	44.3	2.2	8.34	6.05	40.8	0.00	17.2	60.1	24.4	1.6	31.2	14.6	2.6	#DIV/0!	25.4	1.5	31.2	0.5	18.5	13.4	90.5	0.0	38.2	134.9	54.1	3.7
Rougher Conc 3	44.6	2.2	2.01	3.57	43.7	0.00	9.3	95.9	5.9	11.1	7.6	8.7	2.8	#DIV/0!	13.8	2.4	7.6	3.3	4.5	8.0	97.6	0.00	20.8	214.3	13.1	24.8
Rougher Conc 4	41.4	2.1	0.82	2.10	44.9	0.00	4.8	108.8	2.4	15.9	2.9	4.7	2.6	#DIV/0!	6.5	2.5	2.6	4.4	1.7	4.4	93.1	0.00	9.9	225.6	5.0	33.1
Rougher Conc 5	60.8	3.0	0.41	1.40	46.2	0.00	2.6	116.4	1.3	20.2	2.3	4.6	4.0	#DIV/0!	5.2	4.0	2.3	8.3	1.3	4.3	140.7	0.00	7.8	354.4	3.9	61.5
Rougher Conc 6	91.5	4.6	0.16	0.86	41.5	0.00	1.1	106.9	0.5	8.6	1.2	4.3	5.4	#DIV/0!	3.3	5.5	1.2	5.2	0.7	3.9	190.2	0.00	5.9	490.6	2.1	38.7
Rougher Tails	1678.0	84.1	0.021	0.56	34.1	0.00	0.4	88.8	0.1	10.7	3.0	51.1	80.8	#DIV/0!	24.4	83.6	3.0	121.1	1.8	47.1	2856.4	0.00	36.7	7462.3	5.2	901.8
Head (calc.)	1996.2	100.0	0.59	0.92	35.5	0.00	1.51	89.31	1.7	7.4	100.0	100.0	100.0	#DIV/0!	100.0	100.0	100.0	100.0	**59.4**	**92.1**	**3547.3**	**0.0**	**150.7**	**8931.0**	**173.6**	**744.7**
(direct)	2000.0	99.8	0.59	0.93	34.1	0.65					100.7	99.0	103.1													

Combined Products

Product	Float	Weight	Assays, %								% Distribution								Units								Ni + Cu
	min	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	
Rougher Conc 1	1	1.8	17.3	6.21	38.5	0.00	18.1	28.7	50.6	2.6	51.9	12.6	1.9	#DIV/0!	21.5	0.6	51.9	6.6	30.9	11.1	68.7	0.0	32.3	51.2	90.2	4.6	23.5
Rougher Conc 1-2	2.5	4.0	12.3	6.12	39.8	0.00	17.6	46.1	36.0	0.2	83.1	26.6	4.5	#DIV/0!	46.8	2.1	83.1	0.1	49.4	24.5	159.2	0.0	70.6	184.5	144.2	1.0	18.5
Rougher Conc 1-3	4.5	6.2	8.6	5.21	41.2	0.00	14.7	63.9	25.2	3.8	99.7	35.3	7.2	#DIV/0!	60.6	4.3	96.7	3.2	54.9	32.5	256.8	0.0	91.4	398.8	157.4	23.9	13.8
Rougher Conc 1-4	6.5	8.3	6.7	4.43	42.1	0.00	12.2	75.1	19.5	6.8	93.5	40.0	9.9	#DIV/0!	67.2	7.0	93.5	7.6	54.6	36.8	350.0	0.0	109.3	624.1	162.3	56.9	11.1
Rougher Conc 1-5	9.5	11.4	5.0	3.92	43.2	0.00	9.6	86.2	14.6	10.1	95.8	44.6	13.8	#DIV/0!	72.1	11.0	95.8	15.9	56.9	91.1	492.7	0.0	109.1	978.3	166.3	118.3	8.6
Rougher Conc 1-6	12.5	15.9	3.6	2.83	42.7	0.00	7.2	92.1	10.6	9.9	97.0	48.9	19.2	#DIV/0!	75.6	16.4	97.0	24.1	51.6	45.9	686.9	0.0	114.0	1468.8	168.4	157.1	6.4

Test: F4 **Project No.:** 11365-001 **Operator:** RG **Date** 22-Nov-06

Purpose: Improve selectivity between Ni and Cu minerals and Fe sulphides

Procedure: As outlined below.

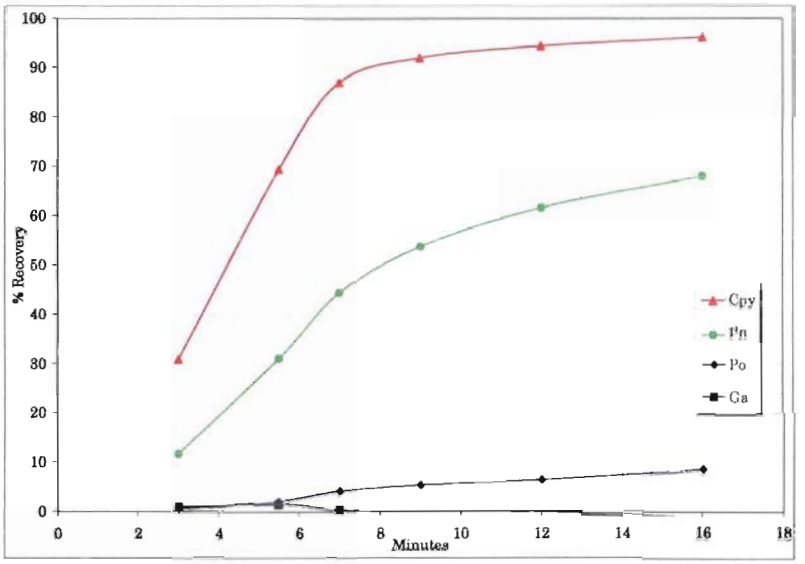
Feed: 2 kg of minus 10 mesh B4-7 Met-D Zone Composite

Grind: 32.5 minutes @ 65% Solids (80 % passing 75 microns) in BM-2; 20 minutes regrind in Pebble Mill

Conditions: Grind K80 (Rougher Tail) = 71 microns

Stage	Reagents added, g/t				Time, minutes			pH	Eh
	Lime	SIPX	DF 250		Grind	Cond.	Froth		
Grind	750	10			32.5			11.2	-300
Pri Ro 1		10	7.5			1	3	10.5	-20
Pri Ro 2		20	2.5			1	2.5	9.5	
Sec Ro 1		30				1	3	8.8	
Sec Ro 2		30	2.5			1	3	8.6	
Sec Ro 3		30				1	4	8.5	-10
Regrind	100				20			8.4	
Clnr 1							1.5	10.2	40
Clnr 2							2	10.2	
Clnr 3							3	10.2	
Clnr 4		10					4	10.2	
Total	*850*	*140*	*12.5*	*0*	*32.5*	*5*	*26*		

Stage	Roughers	Cleaners
Flotation Cell	1000g-D1	500g
Speed: rpm	1800	1500



	Ni	Cu	S	Fe
Pn	33.50%	0.00%	34.53%	30.29%
Po	0.47%	0.02%	39.12%	61.22%
Cpy	0.01%	34.22%	34.94%	30.57%

Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	43.5%
Pn	56.5%

Metallurgical Balance

Product	Weight		Assays, %								% Distribution								Units							
	g	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga
Prim. Ro Conc 1	23.7	1.19	14.5	5.23	35.9	0.00	15.1	33.7	42.4	8.8	31.1	6.9	1.28	#DIV/0!	11.9	0.5	31.1	0.8	17.3	6.2	42.9	0.0	18.1	40.2	50.6	10.5
Prim. Ro Conc 2	45.9	2.3	9.25	4.52	38.1	0.00	12.7	57.0	27.0	3.3	38.4	11.6	2.6	#DIV/0!	19.3	1.6	38.4	0.6	21.4	10.5	88.1	0.0	29.4	131.8	62.5	7.5
Cl Conc 1	40.1	2.0	4.85	3.75	42.2	0.00	16.0	83.4	14.2	-7.6	17.6	8.4	2.5	#DIV/0!	13.3	2.0	17.6	-1.2	9.8	7.6	85.2	0.00	20.3	168.4	28.6	-15.3
Cl Conc 2	24.3	1.2	2.29	4.35	41.2	0.00	11.8	85.1	6.7	-3.6	5.0	5.9	1.5	#DIV/0!	9.5	1.2	5.0	-0.4	2.8	5.3	50.4	0.00	14.4	104.1	8.2	-4.4
Cl Conc 3	21.4	1.1	1.26	4.11	40.0	0.00	11.1	85.7	3.7	-0.5	2.4	4.9	1.3	#DIV/0!	7.8	1.1	2.4	0.0	1.4	4.4	43.1	0.00	11.9	92.4	4.0	-0.5
Cl Conc 4	34.0	1.7	0.55	2.36	41.2	0.00	5.7	98.5	1.6	-5.8	1.7	4.5	2.1	#DIV/0!	6.4	2.0	1.7	-0.8	0.9	4.0	70.6	0.00	9.7	168.7	2.8	-9.9
Cl Tails	359.9	18.1	0.041	0.69	35.8	0.00	0.8	92.7	0.1	6.4	1.3	13.8	19.3	#DIV/0!	9.2	19.9	1.3	9.4	0.7	12.5	649.0	0.00	14.0	1680.5	2.2	116.2
Rougher Tails	1436.0	72.3	0.019	0.55	32.2	0.00	0.5	83.7	0.1	15.7	2.5	44.0	69.4	#DIV/0!	22.7	71.7	2.5	91.6	1.4	39.8	2329.1	0.00	34.5	6056.8	4.0	1137.8
Head (calc.)	1985.3	100.0	0.56	0.90	33.6	0.00	1.52	84.43	1.6	12.4	100.0	100.0	100.0	#DIV/0!	100.0	100.0	100.0	100.0	**55.7**	**90.4**	**3358.4**	**0.0**	**152.3**	**8442.9**	**162.8**	**1242.0**
(direct)	2000.0	99.3	0.59	0.93	34.4	0.65					94.4	97.2	97.6													

Combined Products

Product	Float	Weight	Assays, %								% Distribution								Units								Ni + Cu
	min	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	
Pri Rougher	3	1.2	14.5	5.23	35.9	0.00	15.1	33.7	42.4	8.8	31.1	6.9	1.3	#DIV/0!	11.9	0.5	31.1	0.8	17.3	6.2	42.9	0.0	18.1	40.2	50.6	10.5	12.7
Pri Rougher 1+2	5.5	3.5	11.0	4.76	37.4	0.00	13.5	49.1	32.3	5.2	69.5	18.5	3.9	#DIV/0!	31.2	2.0	69.5	1.5	38.7	16.7	130.9	0.0	47.4	172.0	113.1	18.1	16.8
Pri Ro + Cl Conc 1	7	5.5	8.8	4.33	39.1	0.00	12.3	61.6	25.6	0.5	87.0	26.9	6.4	#DIV/0!	44.5	4.0	87.0	0.2	48.3	24.3	216.2	0.0	67.7	340.4	141.7	2.8	13.2
Pri Ro + Cl Conc 1+2	9	6.7	7.6	4.38	39.5	0.00	12.2	65.9	22.2	-0.2	92.1	32.8	7.9	#DIV/0!	54.0	5.3	92.1	-0.1	51.2	29.6	266.6	0.0	82.1	444.5	149.9	-1.6	12.0
Pri Ro + Cl Conc 1+3	12	7.8	6.7	4.35	39.6	0.00	12.0	68.6	19.7	-0.3	94.5	37.7	9.2	#DIV/0!	61.8	6.4	94.5	-0.2	52.7	34.0	309.7	0.0	94.1	536.9	153.9	-2.1	11.1
Pri Ro + Cl Conc 1+4	16.0	9.5	5.6	3.99	39.9	0.00	10.9	74.0	16.4	-1.3	96.2	42.1	11.3	#DIV/0!	68.2	8.4	96.2	-1.0	53.6	38.1	380.3	0.0	103.8	705.6	156.6	-12.0	9.6

Test: F5 Project No.: 11365-001 Operator: RG Date: 5-Dec-06

Purpose: Improve selectivity between Ni & Cu minerals and Fe sulphides, repeat of F4 with lower lime addition to mill

Procedure: As outlined below.

Feed: 2 kg of minus 10 mesh B4-7 Met-D Zone Composite

Grind: 32.5 minutes @ 65% Solids (80 % passing 75 microns) in BM-2, 25 minutes regrind in Pebble Mill

Conditions: Grind K80 (Rougher Tail) = 71 microns

Stage	Reagents added, g/t				Time, minutes			pH	Eh
	Lime	SIPX	DF 250		Grind	Cond.	Froth		
Grind	450	10	-		32.5			9.2	-60
Pri Ro 1		10	5			1	1	10.0	0
Pri Ro 2		10				1	1.5	10.0	0
Sec Ro 1		20	2.5			1	3	9.2	20
Sec Ro 2		20	2.5			1	3	8.8	20
Sec Ro 3		20	2.5			1	3	8.5	40
Regrind					25				
Clnr 1		-				1	1	10.0	
Clnr 2		10				1	1	10.0	
Clnr 3		10	2.5			1	1	10.0	
Clnr 4		10				1	2.5	10.0	
Total	*450*	*90*	*12.5*	*0*	*32.5*	*5*	*11.5*		

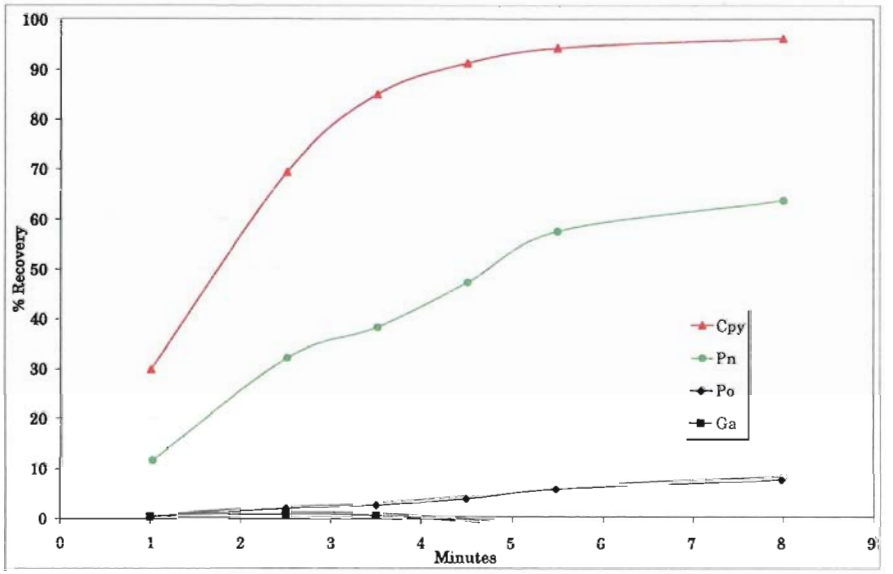
Stage	Roughers	Cleaners
Flotation Cell	1000g/T	500g
Speed: rpm	1800	1500

	Ni	Cu	S	Fe
Pn	33.50%	0.00%	34.53%	30.29%
Po	0.47%	0.02%	38.12%	61.22%
Cpy	0.01%	34.22%	34.34%	29.57%

Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	43.5%
Pn	56.5%



Metallurgical Balance

Product	Weight		Assays, %								% Distribution								Units							
	g	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga
Prim. Ro Conc 1	21.7	1.10	14.7	5.53	37.3	0.00	16.0	35.6	43.0	5.5	30.0	6.8	1.24	#DIV/0!	11.7	0.5	30.0	0.4	16.2	6.1	41.1	0.0	17.6	39.2	47.3	6.0
Prim. Ro Conc 2	46.8	2.4	8.99	4.62	38.2	0.00	13.0	57.5	26.3	3.2	39.5	12.3	2.7	#DIV/0!	29.5	1.6	39.5	0.6	21.3	11.0	90.7	0.0	30.8	136.6	62.4	7.6
Cl Conc 1	16.2	0.8	10.2	4.04	41.0	0.00	11.2	64.3	29.8	-5.2	15.5	3.7	1.8	#DIV/0!	6.1	0.6	15.5	-0.3	8.4	3.3	33.7	0.00	9.2	52.8	24.5	-4.3
Cl Conc 2	22.9	1.2	2.90	4.35	45.0	0.00	11.7	93.6	8.5	-13.7	6.2	5.7	1.6	#DIV/0!	9.0	1.3	6.2	-1.2	3.4	5.1	52.3	0.00	13.6	108.7	9.8	-15.9
Cl Conc 3	32.0	1.6	0.99	3.60	43.8	0.00	9.1	98.8	2.9	-11.1	3.0	6.6	2.2	#DIV/0!	10.1	1.9	3.0	-1.3	1.6	5.8	71.1	0.00	15.2	160.5	4.7	-18.0
Cl Conc 4	31.4	1.6	0.65	2.46	41.5	0.00	6.3	98.6	1.9	-6.5	1.9	4.4	2.0	#DIV/0!	6.3	1.9	1.9	-0.7	1.0	3.9	66.1	0.00	9.5	157.1	3.0	-10.3
Cl Tails	290.0	14.7	0.042	0.75	36.1	0.00	0.9	93.2	0.1	5.7	1.2	12.4	16.1	#DIV/0!	9.2	16.5	1.2	6.1	0.6	11.0	531.2	0.00	13.9	1371.9	1.8	83.8
Rougher Tails	1510.0	76.6	0.019	0.56	31.6	0.00	0.5	82.1	0.1	17.3	2.7	68.1	73.2	#DIV/0!	27.9	75.5	2.7	96.5	1.5	42.9	2420.9	0.00	42.4	6288.8	4.3	1327.5
Head (calc)	1971.0	100.0	0.54	0.89	32.1	0.00	1.50	83.16	1.6	13.8	100.0	100.0	100.0	#DIV/0!	100.0	100.0	100.0	100.0	54.0	89.1	3307.0	0.0	150.4	8315.5	157.8	1376.3
(direct)	2000.0	98.6	0.59	0.92	34.4	0.65					91.5	95.8	96.1													

Combined Products

Product	Float	Weight	Assays, %								% Distribution								Units								Ni + Cu
	min	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	
Pri Rougher	1	1.1	14.7	5.53	37.3	0.00	16.0	35.6	43.0	5.5	30.0	6.8	1.2	#DIV/0!	11.7	0.5	30.0	0.4	16.2	6.1	41.1	0.0	17.6	39.2	47.3	6.0	20.2
Pri Rougher 1+2	2.5	3.5	10.8	4.91	37.9	0.00	13.5	50.6	31.6	3.9	69.5	19.1	4.6	#DIV/0!	32.2	2.1	69.5	1.0	37.5	17.1	131.8	0.0	48.5	175.8	109.7	13.6	15.7
Pri Ro + Cl Conc 1	3.5	4.3	10.7	4.74	38.5	0.00	13.4	53.2	31.2	2.2	85.0	22.9	5.0	#DIV/0!	38.1	2.7	85.0	0.7	45.9	20.4	165.5	0.0	57.6	228.6	134.2	9.3	13.4
Pri Ro + Cl Conc 1 + 2	4.5	5.5	9.03	4.66	39.9	0.00	13.0	61.8	26.4	-1.2	91.2	28.5	6.6	#DIV/0!	47.4	4.1	91.2	-0.5	49.3	25.4	217.8	0.0	71.2	337.3	144.0	-6.7	12.7
Pri Ro + Cl Conc 1 - 3	5.5	7.1	7.19	4.42	40.8	0.00	12.2	70.3	21.0	-3.5	94.2	35.1	8.7	#DIV/0!	57.5	6.0	94.2	-1.8	59.9	31.3	288.9	0.0	86.4	497.8	148.7	-24.7	11.6
Pri Ro + Cl Conc 1 - 4	8.0	8.7	5.99	4.06	40.9	0.00	11.1	75.5	17.5	-4.0	96.1	39.5	10.7	#DIV/0!	63.8	7.9	96.1	-2.5	51.9	35.2	355.0	0.0	95.9	654.9	151.7	-35.0	10.0

Test: F6 **Project No.:** 11365-001 **Operator:** RG **Date:** 5-Dec-06

Purpose: Improve selectivity between Ni & Cu minerals and FE sulphides using TETA and SMBS

Procedure: As outlined below.

Feed: 2 kg of minus 10 mesh B4-7 Met-D Zone Composite

Grind: 32.5 minutes @ 65% Solids (80 % passing 75 microns) in BM-2

Conditions: Grind K80 (Rougher Tail) = 74 microns

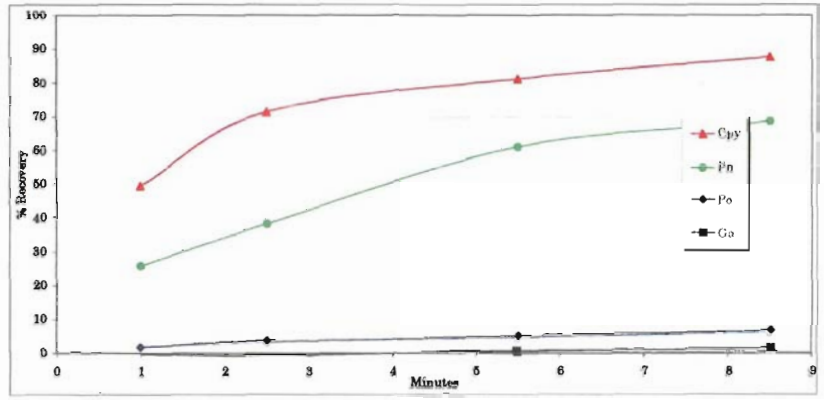
Stage	Reagents added, g/t				Time, minutes			pH	Ep
	PAX	DF250	TETA	SMBS	Grind	Cond.	Froth		
Grind	10	-			32.5				
Rougher 1	20	12.5	150	500		1	1	9.5	0
Rougher 2	0					1	1.5	9.5	
Rougher 3	20		100	500		1	3	9.5	
Rougher 4	10					1	3	9.5	
Total	*60*	*12.5*	*250*	*1000*	*32.5*	*4*	*8.5*		

Stage	Roughers
Flotation Cell	1000g-D1
Speed: rpm	1800

	Ni	Cu	S	Fe
Pn	33.50%	0.00%	34.53%	30.29%
Po	0.47%	0.02%	38.12%	61.22%
Cpy	0.01%	34.22%	34.94%	30.57%

Nickel Distribution

Po	44.1%
Pn	55.9%



Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Metallurgical Balance

Product	Weight		Assays, %								% Distribution								Units							
	g	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga
Rougher Conc 1	54.5	2.73	10.2	5.02	40.1	0.00	14.2	57.6	29.8	-1.6	49.7	15.4	3.26	#DIV/0!	26.0	1.9	49.7	-0.3	27.9	13.7	109.5	0.0	38.7	157.3	81.4	-4.3
Rougher Conc 2	36.1	1.8	6.78	3.75	40.1	0.00	10.2	72.5	19.8	-2.5	21.9	7.6	2.2	#DIV/0!	12.4	1.6	21.9	-0.4	12.3	6.8	72.6	0.0	18.4	131.1	35.8	-4.5
Rougher Conc 3	36.7	1.8	2.95	6.48	37.4	0.00	18.5	63.8	8.6	9.1	9.7	13.3	2.0	#DIV/0!	22.8	1.4	9.7	1.3	5.4	11.9	68.8	0.00	33.9	117.4	15.9	16.8
Rougher Conc 4	32.9	1.6	2.18	2.71	37.6	0.00	6.9	82.9	6.4	3.8	6.4	5.0	1.8	#DIV/0!	7.7	1.6	6.4	0.5	3.6	4.5	62.0	0.00	11.4	136.7	10.5	6.3
Rougher Tails	1835.0	92.0	0.075	0.57	33.1	0.00	0.5	85.9	0.2	13.4	12.3	58.7	90.7	#DIV/0!	31.2	93.6	12.3	98.9	6.9	52.4	3044.2	0.00	46.6	7900.8	20.2	1229.5
Head (calc)	1995.2	100.0	0.56	0.89	33.6	0.00	1.49	84.43	1.6	12.4	100.0	100.0	100.0	#DIV/0!	100.0	100.0	100.0	100.0	**56.0**	**89.3**	**3357.1**	**0.0**	**149.1**	**8443.3**	**163.8**	**1248.8**
(direct)	2000.0	99.8	0.59	0.93	34.4	0.65					95.0	96.0	97.6													

Combined Products

Product	Float	Weight	Assays, %								% Distribution								Units								Ni + Cu
	min	%	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pn	Po	Cpy	Ga	
Rougher Conc 1	1	2.7	10.2	5.02	40.1	0.00	14.2	57.6	29.8	-1.6	49.7	15.4	3.3	#DIV/0!	26.0	1.9	49.7	-0.3	27.9	13.7	109.5	0.0	38.7	157.3	81.4	-4.3	15.2
Rougher Conc 1-2	2.5	4.5	8.8	4.51	40.1	0.00	12.6	63.5	25.8	-1.9	71.6	28.0	5.4	#DIV/0!	38.3	3.4	71.6	-0.7	40.1	20.5	182.1	0.0	57.2	288.4	117.3	-8.8	13.4
Rougher Conc 1-3	5.5	6.4	7.1	5.08	39.3	0.00	14.3	63.6	20.9	1.3	81.3	36.3	7.5	#DIV/0!	61.1	4.8	81.3	0.6	45.6	32.4	250.9	0.0	91.1	405.8	133.1	8.0	12.2
Rougher Conc 1-4	8.5	8.6	6.1	4.58	39.0	0.00	12.8	67.6	17.9	1.8	87.7	41.3	9.3	#DIV/0!	68.8	6.4	87.7	1.1	49.2	36.9	312.9	0.0	102.6	542.4	143.6	14.3	10.7

Test: P7 Project No.: 11365-001 Operator: RG Date: 22-Jan-07

Purpose: Access the cleaner performance of the Met-D composite
Procedure: As outlined below
Feed: 2 kg of minus 10 mesh B4-7 Met-D Zone Composite
Grind: 29 minutes @ 65% Solids (80 % passing 75 microns) in BM-2
Conditions: Grind K80 (Rougher Tail) = 71 microns

Stage	Reagents added, g/t				Time, minutes				pH	Ep
	Lime	SIPX	DF250	PAX	Grind	Cond.		Froth		
Grind	350	10.0			29				8.9	
Rougher 1	160	-	5			1		1	9.5	
Rougher 2	100	10	2.5			1		1.5	9.5	
Rougher 3	85	10		500		1		2	9.5	
Rougher 4	90	10	2.5			1		2	9.2	
Rougher 5	20	10				1		3	9.2	
Rougher 6	35	40				1		3	9.2	
Ro Regrind					10					
1st Clnr Conc 1	160					1		2	10.2	
1st Clnr Conc 2	70		2.5			1		2	10.2	
1st Clnr Conc 3	50	10				1		2	10.2	
1st Clnr Conc 4	45	10				1		3	10.2	
Total	*1105*	*110*	*12.5*	*500*	*39*	*10*		*21.5*		

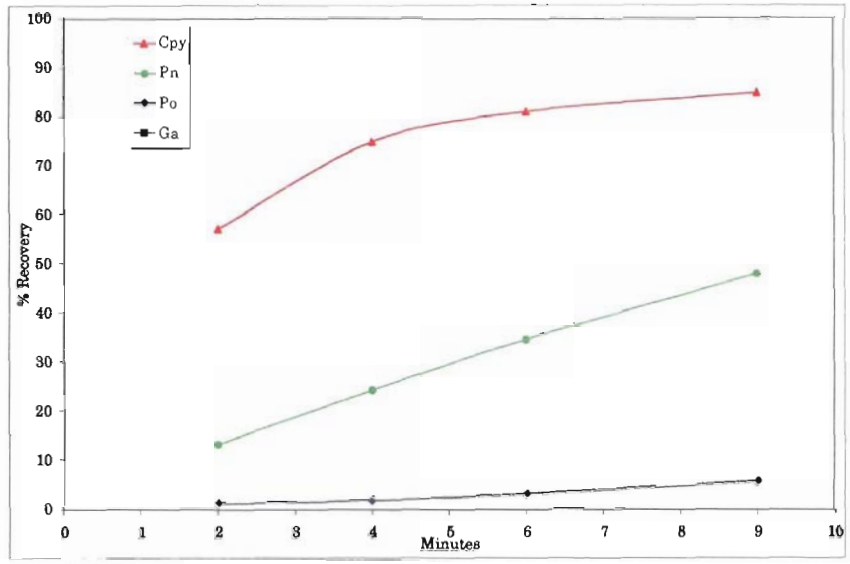
Stage	Roughers
Flotation Cell	1000g-D1
Speed: rpm	1800

	Ni	Cu	S	Fe
Pn	33.80%	0.00%	34.53%	30.29%
Po	0.47%	0.02%	38.12%	61.22%
Cpy	0.01%	34.22%	34.94%	30.67%

Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	44.4%
Pn	55.6%



Metallurgical Balance

Product	Weight		Assays, %									% Distribution									Units								
	g	%	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga
Clnr Conc 1	41.8	2.09	16.5	3.51	41.2	12.9	0.73	9.85	49.9	48.2	-7.9	67.2	8.0	2.46	39.33	15.85	13.4	1.2	57.3	-1.9	34.5	7.3	86.2	27.0	1.6	20.5	104.4	100.9	-16.5
Clnr Conc 2	21.2	1.1	10.0	5.63	42.7	8.76	0.50	16.0	69.8	29.2	-5.0	17.6	6.5	1.3	12.62	7.31	11.1	0.7	17.6	-0.6	10.6	6.0	44.3	8.7	0.7	17.0	63.4	31.0	-5.3
Clnr Conc 3	22.6	1.1	3.32	5.09	45.0	3.59	0.60	14.0	89.2	9.7	-12.8	5.2	6.2	1.5	5.92	6.68	10.3	1.1	6.2	-1.7	3.7	5.8	50.9	4.1	0.7	15.8	101.0	10.9	-14.5
Clnr Conc 4	42.8	2.1	2.08	3.73	46.9	2.91	0.44	9.7	106.3	3.2	-19.1	2.9	8.6	2.8	5.92	9.21	13.4	2.6	3.9	-3.7	2.3	7.9	99.8	4.1	0.9	20.5	226.2	6.8	-40.7
Clnr Tails	159.8	8.0	0.10	1.00	20.1	0.5	0.23	1.45	932.3	0.8	-8.5	1.3	8.7	9.2	6.29	18.88	8.1	9.3	1.3	-4.2	0.6	8.0	320.9	4.3	1.9	12.5	823.8	2.3	-36.4
Rougher Tails	1709.9	85.6	0.036	0.63	33.9	0.24	0.05	0.8	83.6	0.3	11.4	13.6	62.1	82.8	29.9	42.1	43.7	85.1	13.6	118.2	8.2	57.3	2871.3	20.5	4.3	66.9	7496.1	24.0	974.2
Head (calc)	1996.9	100.0	0.60	0.92	35.0	0.69	0.19	1.53	88.10	1.8	6.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	60.2	92.4	3503.4	68.7	16.2	153.2	8810.0	176.5	860.8
(direct)	2000.0	99.8	0.59	0.93	34.4	0.65	0.11					102.1	99.3	101.8	105.6	92.5													

Combined Products

Product	Float	Weight	Assays, %									% Distribution									Units								Ni + Cu
	min	%	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	
Clnr Conc 1	2	2.1	16.5	3.51	41.2	12.90	0.77	9.8	49.9	48.2	-7.9	57.3	8.0	2.5	39.3	15.8	13.4	1.2	57.3	-1.9	34.5	7.3	86.2	27.0	1.6	20.5	104.4	100.9	-16.5	20.9
Clnr Conc 1 & 2	4	3.2	14.3	4.22	42.4	11.30	0.75	11.9	64.2	61.8	-6.6	75.0	14.4	3.7	51.9	23.2	24.4	1.9	74.0	-2.6	45.2	13.3	130.5	35.7	2.4	37.4	167.8	112.0	-21.8	18.5
Clnr Conc 1 - 3	6	4.3	11.4	4.45	42.3	9.27	0.71	12.4	92.7	55.5	-8.5	81.2	29.7	5.2	57.9	29.8	24.8	3.1	81.2	-4.2	48.9	30.1	181.4	39.7	3.0	53.2	268.9	142.9	-36.3	15.9
Clnr Conc 1- 4	9	6.4	7.98	4.24	43.6	6.83	0.62	11.5	77.2	23.3	-12.0	95.0	29.3	8.0	63.8	39.0	48.2	5.6	85.6	-9.0	51.1	27.9	281.3	43.8	4.0	73.8	495.1	149.7	-73.1	12.2
Ro Conc		14.4	3.61	2.45	41.8	3.35	0.41	5.98	91.3	10.5	-7.9	86.4	35.9	17.2	70.1	57.9	56.3	14.8	86.4	-13.2	52.0	35.0	602.2	48.1	5.9	86.2	1356.9	152.0	-113.6	6.0

Test: PS Project No.: 11365-001 Operator: RG Date: 22-Jan-07

Purpose: Access the cleaner performance of the Met-D composite

Procedure: As outlined below.

Feed: 2 kg of minus 10 mesh B4-7 Met-D Zone Composite

Grind: 29 minutes @ 65% Solids (80 % passing 75 microns) in BM-2

Conditions: Grind K80 (Rougher Tail) = 71 microns

Stage	Reagents added, g/t				Time, minutes				pH	Ep
	Lime	SIPX	DF250	PAX	Grind	Cond.		Froth		
Grind	350	10.0			29				8.9	
Rougher 1	140	-	5			1		1	9.5	
Rougher 2	120	10	2.5			1		1.5	9.5	
Rougher 3	140	10		500		1		2	9.5	
Rougher 4	80	10	2.5			1		2	9.2	
Rougher 5	60	10				1		3	9.2	
Rougher 6	40	40				1		3	9.2	
Ro Regrind					15					
1st Clnr Conc 1	120					1		2	10.2	
1st Clnr Conc 2	60		2.5			1		2	10.2	
1st Clnr Conc 3	75	10	2.5			1		2	10.2	
1st Clnr Conc 4	35	10				1		3	10.2	
Total	*1220*	*110*	*15*	*500*	*44*	*10*		*21.5*		

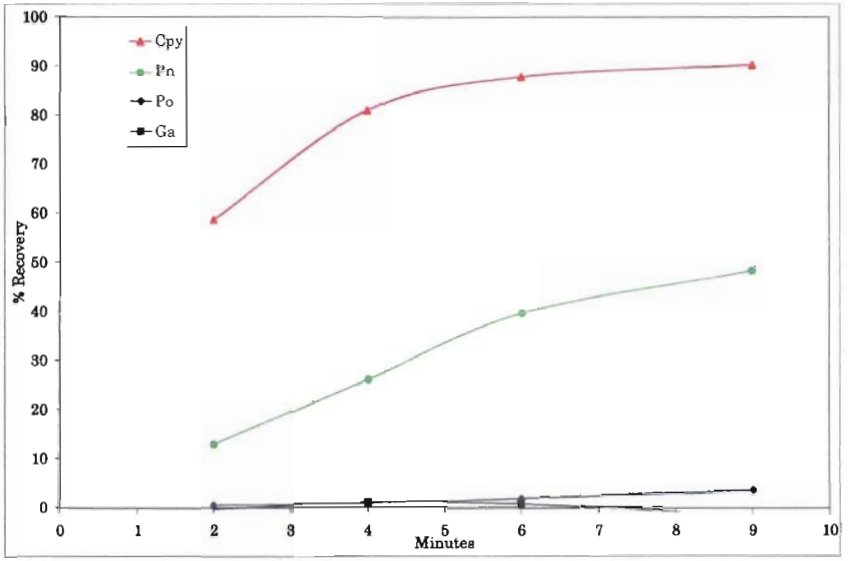
Stage	Roughers
Flotation Cell	1000g-D1
Speed: rpm	1800

	Ni	Cu	S	Fe
Pn	33.90%	0.00%	64.51%	30.29%
Po	0.47%	0.02%	38.12%	61.22%
Cpy	0.01%	34.22%	34.94%	30.57%

Assuming these sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	45.0%
Pn	55.0%



Metallurgical Balance

Product	Weight		Assays, %									% Distribution									Units								
	g	%	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga
Clnr Conc 1	32.7	1.63	20.6	4.08	38.8	15.0	0.57	11.8	29.8	60.2	-1.7	58.8	7.4	1.84	36.79	8.68	13.0	0.6	58.8	-0.3	33.6	6.7	63.4	24.5	0.9	19.2	48.6	98.3	-2.8
Clnr Conc 2	19.6	1.0	13.0	6.84	34.9	10.70	0.76	20.0	28.1	38.0	13.9	22.2	7.4	1.9	15.73	6.94	13.3	0.3	22.2	1.4	12.7	6.7	34.2	10.5	0.7	19.6	27.5	37.2	13.6
Clnr Conc 3	24.2	1.2	3.25	5.84	41.4	4.22	0.76	16.4	76.5	9.5	-2.4	6.9	7.9	1.5	7.66	8.57	13.4	1.1	6.9	-0.3	3.9	7.1	50.0	5.1	0.9	19.8	92.4	11.5	-2.8
Clnr Conc 4	25.9	1.3	1.05	3.83	46.6	1.89	0.51	10.0	105.2	3.1	-18.2	2.4	5.5	1.7	3.67	6.15	8.7	1.6	2.4	-2.3	1.4	5.0	60.3	2.4	0.7	12.9	136.0	4.0	-23.6
Clnr Tails	251.9	10.1	0.11	1.10	39.5	0.6	0.32	1.9	100.6	0.3	-2.8	1.9	12.3	11.6	9.39	30.10	12.9	11.7	1.9	-2.8	1.1	11.1	398.2	6.3	3.2	19.0	1014.5	3.2	-28.6
Rougher Tails	1698.4	84.8	0.053	0.63	33.5	0.21	0.05	0.7	86.8	0.2	12.1	7.9	59.4	82.4	26.8	39.6	38.7	84.8	7.9	104.4	4.5	53.4	2841.9	17.8	4.2	57.1	7359.0	13.1	1051.3
Head (calc)	2002.7	100.0	0.57	0.90	34.5	0.67	0.11	1.48	86.78	1.7	10.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**57.2**	**89.9**	**3447.0**	**66.6**	**10.7**	**147.6**	**8678.1**	**167.8**	**1007.1**
(direct)	2000.0	100.1	0.59	0.93	34.4	0.65	0.11					97.0	96.6	100.2	102.4	97.4														

Combined Products

Product	Float	Weight	Assays, %									% Distribution									Units									Ni + Cu
	min	%	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Pn	Po	Cpy	Ga	
Clnr Conc 1	2	1.6	20.6	4.08	38.8	15.00	0.57	11.8	29.8	60.2	-1.7	58.8	7.4	1.8	36.8	8.7	13.0	0.6	58.8	-0.3	33.6	6.7	63.4	24.5	0.9	19.2	48.6	98.3	-2.8	24.7
Clnr Conc 1 & 2	4	2.6	17.8	5.11	37.3	13.39	0.64	14.9	29.1	51.9	4.1	81.0	14.9	2.8	52.5	15.6	26.3	0.9	81.0	1.1	46.4	13.4	97.5	35.0	1.7	38.8	76.1	135.5	10.8	22.9
Clnr Conc 1 - 3	6	3.8	13.2	5.34	38.6	10.49	0.68	15.3	44.1	38.5	2.1	87.8	22.7	4.3	60.2	24.2	39.7	1.9	87.8	0.8	50.3	20.4	147.5	40.1	2.6	58.6	168.5	146.9	7.9	18.5
Clnr Conc 1 - 4	9	5.1	10.10	4.96	40.6	8.31	0.64	14.0	59.6	29.5	-3.1	90.2	28.2	6.0	63.9	30.3	48.4	3.5	90.2	-1.6	51.6	25.4	207.8	42.5	3.3	71.5	304.5	150.9	-15.6	15.1
Ro Conc		15.2	3.47	2.40	39.9	3.21	0.43	5.95	86.8	10.1	-2.9	92.1	40.6	17.6	73.2	60.4	61.3	15.2	92.1	-4.4	52.8	36.5	606.0	48.8	6.5	90.5	1319.1	154.2	-44.2	5.9

Test: F9 **Project No.:** 11365-001 **Operator:** EG **Date:** 12-Feb-07

Purpose: Access the cleaner performance of the Met-D composite
Procedure: As outlined below.
Feed: 2 kg of minus 10 mesh B4-7 Met-C Zone Composite
Grind: 29 minutes @ 65% Solids (80 % passing 75 microns) in BM-2
Conditions: Grind K80 (Rougher Tail) = 71 microns

Stage	Reagents added, g/t				Time, minutes					pH	Eh
	Lime	SIPX	DF250	PAX	Grind	Cond.			Froth		
Grind	350	10.0			29					8.9	
Rougher 1	160	-	5			1			1	9.5	
Rougher 2	100	10	2.5			1			1.5	9.5	
Rougher 3	85	10		500		1			2	9.5	
Rougher 4	90	10	2.5			1			2	9.2	
Rougher 5	70	10				1			3	9.2	
Rougher 6	35	40				1			3	9.2	
Ro Regrind					10						
1st Clnr Conc 1	100					1			2	10.2	
1st Clnr Conc 2	70		2.7			1			2	10.2	
1st Clnr Conc 3	50	10				1			2	10.2	
1st Clnr Conc 4	45	10				1			3	10.2	
Total	*1155*	*110*	*12.5*	*500*	*39*	*10*			*21.5*		

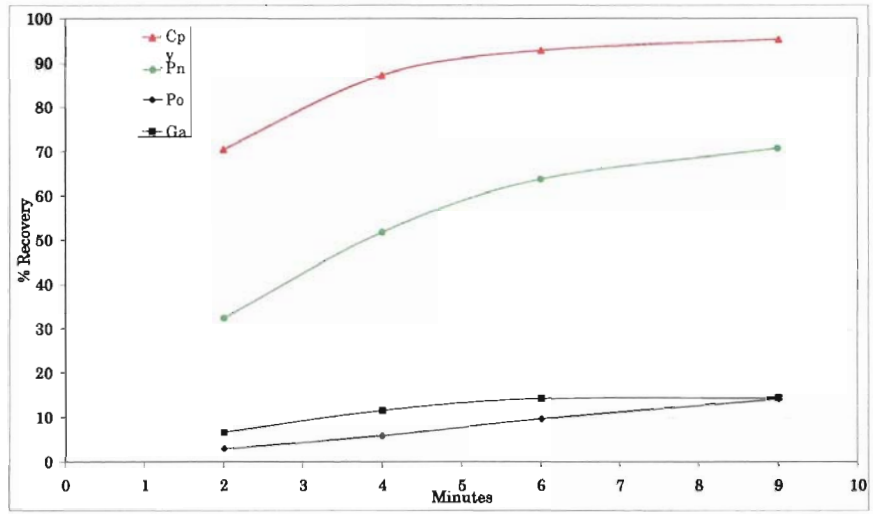
Stage	Roughers
Flotation Cell	1000g-D1
Speed: rpm	1800

	Mi	Cu	S	Fe
Po	33.96%	0.00%	34.53%	31.25%
Pn	8.47%	0.00%	38.52%	51.22%
Cpy	0.01%	34.22%	34.94%	30.67%

Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	40.3%
Pn	59.7%



Metallurgical Balance

Product	Weight		Assays, %										% Distribution										Units									
	g	%	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga
Clnr Conc 1	100.1	5.03	9.92	4.37	37.2	10.8	1.31	0.48	12.3	53.4	29.0	5.3	70.7	20.7	5.09	63.78	38.67	31.70	32.7	2.9	70.7	6.6	49.9	22.0	187.3	54.4	6.6	2.4	61.9	269.0	146.0	26.6
Clnr Conc 2	72.5	3.6	3.23	3.71	37.4	2.67	0.63	0.49	10.0	75.1	9.4	5.4	16.7	12.7	3.7	11.42	13.47	19.13	19.3	3.0	16.7	4.9	11.8	13.5	136.4	9.7	2.3	1.5	36.6	273.9	34.4	19.8
Clnr Conc 3	76.8	3.9	1.02	2.37	37.9	1.18	0.42	0.20	5.8	88.3	3.0	2.8	5.6	8.6	4.0	5.35	9.51	10.13	11.9	3.7	5.6	2.7	3.9	9.2	146.4	4.6	1.6	0.8	22.6	341.2	11.5	11.0
Clnr Conc 4	87.5	4.4	0.39	1.45	38.5	0.75	0.28	0.11	3.0	95.7	1.1	0.2	2.4	6.0	4.6	3.87	7.22	6.35	7.0	4.6	2.4	0.2	1.7	6.4	169.4	3.3	1.2	0.5	13.2	421.0	5.0	0.9
Clnr Tails	328.3	16.5	0.039	0.69	38.8	0.2	0.12	0.03	0.7	100.7	0.1	-1.5	0.9	10.7	17.4	4.65	11.62	6.50	5.7	18.1	0.9	-6.2	0.6	11.4	640.7	4.0	2.0	0.5	10.9	1663.4	1.9	-24.9
Rougher Tails	1323.0	66.5	0.039	0.66	36.1	0.14	0.05	0.03	0.7	93.6	0.1	5.6	3.7	41.3	65.2	10.9	19.5	26.2	23.4	67.7	3.7	91.8	2.6	43.9	2402.2	9.3	3.3	2.0	44.4	6233.2	7.6	371.1
Head (calc.)	1988.2	100.0	0.71	1.06	36.8	0.85	0.17	0.08	1.90	92.00	2.1	4.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**70.6**	**106.4**	**6682.4**	**85.2**	**17.1**	**7.6**	**189.6**	**9199.7**	**206.4**	**404.4**
(direct)	2000.0	99.4	0.59	0.93	36.0	0.91	0.15	0.08					119.7	114.4	102.3	99.7	113.7	95.3														

Combined Products

Product	Float	Weight	Assays, %										% Distribution										Units										Ni + Cu
	min	%	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	
Clnr Conc 1	2	5.0	9.9	4.37	37.2	10.80	1.31	0.48	12.3	53.4	29.0	5.3	70.7	20.7	5.1	63.8	38.7	31.7	32.7	2.9	70.7	6.6	49.9	22.0	187.3	54.4	6.6	2.4	61.9	269.0	146.0	26.6	14.3
Clnr Conc 1 & 2	4	8.7	7.1	4.09	37.3	7.39	1.02	0.45	11.3	62.5	20.8	5.3	87.4	33.4	8.8	75.2	52.1	50.8	52.0	5.9	87.4	11.5	61.7	35.5	323.7	64.1	8.9	3.9	98.5	542.9	180.4	46.4	11.2
Clnr Conc 1 - 3	6	12.5	5.2	3.56	37.5	5.47	0.84	0.37	9.7	70.5	15.3	4.6	93.0	42.0	12.8	80.6	61.7	61.0	63.9	9.6	93.0	14.2	65.7	44.7	470.1	68.7	10.5	4.6	121.1	884.1	191.9	57.4	8.8
Clnr Conc 1 - 4	9	16.9	3.98	3.01	37.7	4.25	0.69	0.30	7.9	77.0	11.6	3.4	95.4	48.0	17.4	84.4	68.9	67.3	70.8	14.2	95.4	14.4	67.4	51.1	639.5	72.0	11.7	5.1	134.3	1305.1	196.9	58.3	7.9
Ro Conc		33.5	2.03	1.87	38.3	2.27	0.41	0.17	4.34	88.7	5.9	1.6	96.3	58.7	34.8	89.1	80.5	73.8	76.6	32.3	96.9	8.2	68.6	62.5	1280.2	75.9	13.7	5.6	145.1	2968.5	198.8	53.3	3.9

Test: F9 **Project No.:** 11365-001 **Operator:** RG **Date** 12-Feb-07

Purpose: Access the cleaner performance of the Met-D composite
Procedure: As outlined below.
Feed: 2 kg of minus 10 mesh B4-7 Met-C Zone Composite
Grind: 29 minutes @ 65% Solids (80 % passing 75 microns) in BM-2
Conditions: Grind K80 (Rougher Tail) = 71 microns

Stage	Reagents added, g/t				Time, minutes					pH	Ep
	Lime	SIPX	DF250	PAX	Grind	Cond.			Froth		
Grind	350	10.0			29					8.9	
Rougher 1	140	-	5			1			1	9.5	
Rougher 2	120	10	2.5			1			1.5	9.8	
Rougher 3	140	10		500		1			2	9.5	
Rougher 4	80	10	2.5			1			2	9.2	
Rougher 5	60	10				1			3	9.2	
Rougher 6	40	40				1			3	9.2	
Ro Regrind					15						
1st Clnr Conc 1	120					1			2	10.2	
1st Clnr Conc 2	60		2.5			1			2	10.2	
1st Clnr Conc 3	75	10	2.5			1			2	10.2	
1st Clnr Conc 4	35	10				1			3	10.2	
Total	*1220*	*110*	*15*	*500*	*44*	*10*			*21.5*		

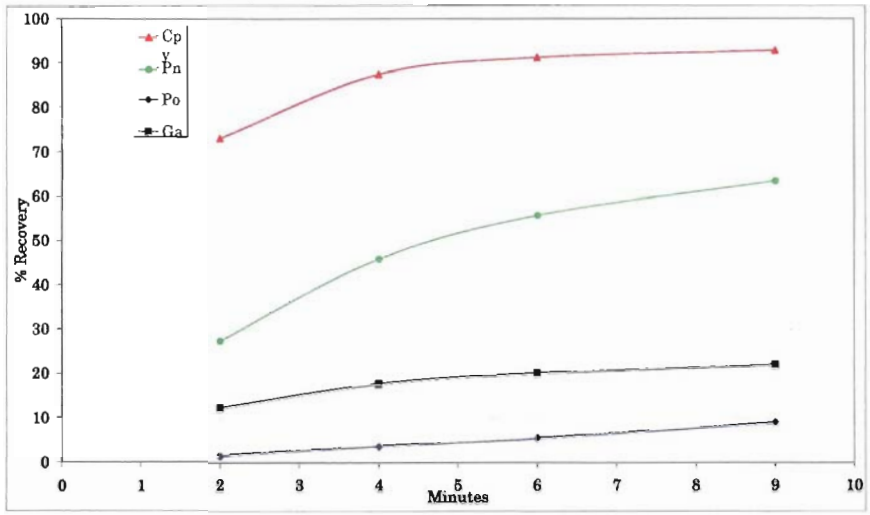
Stage	Roughers
Flotation Cell	1000g-D1
Speed: rpm	1800

	Wt	Cu	S	Fe
Po	33.90%	0.00%	34.53%	59.29%
Pn	0.67%	0.02%	32.12%	41.24%
Cpy	0.01%	34.21%	34.94%	30.67%

Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	40.4%
Pn	59.6%



Metallurgical Balance

Product	Weight		Assays, %										% Distribution										Units										
	g	%	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga
Clnr Conc 1	73.0	3.68	13.8	4.96	35.7	15.1	1.31	0.48	14.3	36.2	40.3	9.1	73.1	17.0	3.52	63.02	35.37	28.05	27.5	1.4	73.1	12.1	50.8	18.3	131.4	55.6	4.8	1.8	52.6	133.4	148.5	33.6
Clnr Conc 2	54.7	2.8	3.64	4.62	37.8	3.17	0.63	0.40	12.8	71.1	19.6	5.5	14.4	11.8	2.8	9.91	12.74	17.51	18.4	2.1	14.4	5.4	10.0	12.7	104.8	8.7	1.7	1.1	35.3	196.1	29.3	15.1
Clnr Conc 3	40.0	2.0	1.29	3.53	38.3	1.59	0.42	0.20	9.4	83.6	3.8	3.2	3.7	6.6	2.1	3.64	6.21	6.40	9.9	1.8	3.7	2.4	2.6	7.1	77.3	3.2	0.8	0.4	18.9	168.7	7.6	6.6
Clnr Conc 4	69.3	3.5	0.32	1.85	38.2	0.86	0.28	0.11	4.2	93.3	0.9	1.5	1.6	6.0	3.6	3.41	7.18	6.10	7.7	3.6	1.6	1.9	1.1	6.5	133.5	3.0	1.0	0.4	14.8	326.1	3.3	5.3
Clnr Tails	240.0	12.1	0.039	0.69	38.6	0.3	0.12	0.03	0.7	100.2	0.1	-1.0	0.7	7.8	12.5	4.53	10.65	5.76	4.2	13.0	0.7	-4.3	0.5	8.4	467.2	4.0	1.5	0.4	8.1	1212.7	1.4	-11.9
Rougher Tails	1506.0	75.9	0.059	0.72	37.1	0.18	0.05	0.03	0.8	96.0	0.2	3.0	6.4	50.8	75.5	15.5	27.8	36.2	32.3	78.2	6.4	82.4	4.5	54.7	2817.6	13.7	3.8	2.3	61.8	7290.9	13.1	228.7
Head (calc.)	1983.0	100.0	0.70	1.08	37.3	0.88	0.14	0.06	1.91	93.28	2.0	2.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**69.5**	**107.6**	**3731.2**	**88.2**	**15.6**	**6.3**	**191.5**	**9327.9**	**203.1**	**277.5**
(direct)	2000.0	99.2	0.59	0.93	36.0	0.91	0.15	0.08					117.8	115.7	103.6	96.9	90.9	78.7															

Combined Products

Product	Float	Weight	Assays, %										% Distribution										Units										Ni + Cu
	min	%	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	
Clnr Conc 1	2	3.7	13.8	4.96	35.7	15.10	1.31	0.48	14.3	36.2	40.3	9.1	73.1	17.0	3.5	63.0	35.4	28.0	27.5	1.4	73.1	12.1	50.8	18.3	131.4	55.6	4.8	1.8	52.6	133.4	148.5	33.6	18.8
Clnr Conc 1 & 2	4	6.4	9.4	4.81	36.6	9.99	1.02	0.45	13.7	51.2	27.6	7.6	87.5	28.8	6.3	72.9	48.1	45.6	45.9	3.5	87.5	17.6	60.8	31.0	235.7	64.3	6.6	2.9	88.0	329.5	177.8	48.7	14.3
Clnr Conc 1 - 3	6	8.5	7.5	4.51	37.0	7.99	0.88	0.39	12.6	58.9	21.9	6.5	91.3	35.4	8.4	76.6	54.3	52.0	55.8	5.3	91.3	19.9	63.4	38.1	312.9	67.5	7.4	3.3	106.9	498.2	185.4	55.3	12.0
Clnr Conc 1 - 4	9	12.0	5.40	3.73	37.4	5.90	0.70	0.31	10.2	69.0	15.8	5.1	92.9	41.4	12.0	80.0	61.5	58.1	63.5	8.8	92.9	21.8	64.6	44.6	446.4	70.5	8.4	3.7	121.6	824.2	188.7	60.6	9.1
Ro Conc		24.1	2.70	2.20	38.0	3.10	0.41	0.17	5.39	84.7	7.9	2.0	93.6	49.2	24.5	84.5	72.2	63.8	67.7	21.8	93.6	17.6	65.0	52.9	913.6	74.5	9.8	4.0	129.7	2037.0	190.9	48.7	4.9

Test: F11 **Project No.:** 11365-001 **Operator:** RG **Date:** 20-Feb-07

Purpose: Access the response of the Junior Lake B4-7 Zone ore to Cu/Ni Separation
Procedure: As outlined below.
Feed: 2 kg of minus 10 mesh B4-7 Met-D Zone Composite
Grind: 29 minutes @ 65% Solids (80 % passing 75 microns) in BM-2
Conditions: Grind K80 (Rougher Tail) = 71 microns

Stage	Reagents added, g/t				Time, minutes					pH	Sp
	Lime	SIPX	DF250	PAX	Grind	Cond.			Froth		
Grind	350	10.0			29					8.9	
Rougher 1	150	-	5			1			1	9.5	
Rougher 2	110	10	2.5			1			1.5	9.5	
Rougher 3	65	10		500		1			2	9.5	
Rougher 4	100	10	2.5			1			2	9.2	
Rougher 5	70	10				1			3	9.2	
Rougher 6	30	40				1			3	9.2	
Re Regrind					12						
1st Clnr Conc 1	90					1			2	10.2	
1st Clnr Conc 2	80		2.5			1			2	10.2	
1st Clnr Conc 3	75	10	2.5			1			2	10.2	
1st Clnr Conc 4	45	10				1			6	10.2	
Cu/Ni Sep Conc 1	400					1			1	12.0	
Cu/Ni Sep Conc 2	120								1	12.0	
Cu/Ni Sep Conc 3	175								2	12.0	
Total	*1860*	*110*	*15*	*500*	*41*	*11*			*25.5*		

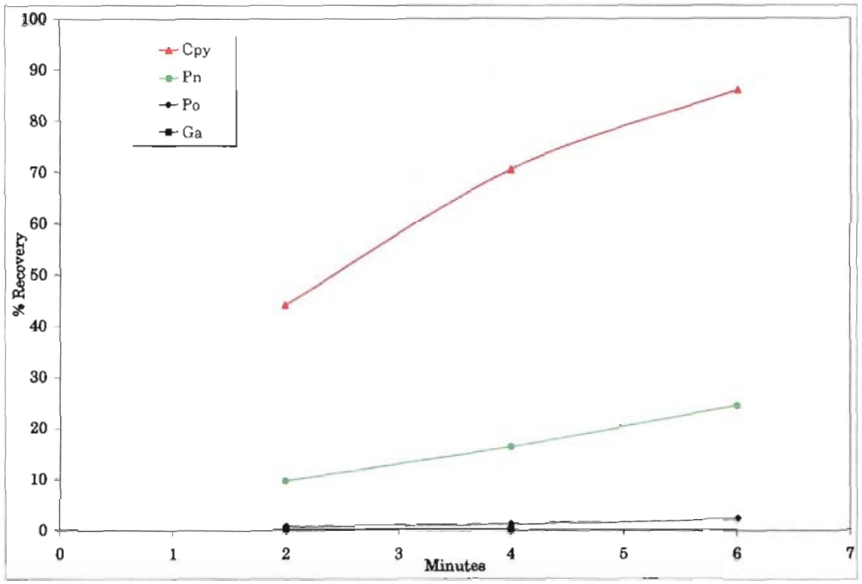
Stage	Roughers
Flotation Cell	1000g-D1
Speed: rpm	1800

	Ni	Cu	S	Fe
Pn	33.90%	0.00%	34.53%	30.29%
Po	0.47%	0.00%	38.12%	61.22%
Cpy	0.00%	34.72%	34.86%	30.42%

Assuming these sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	43.9%
Pn	56.1%



Metallurgical Balance

Product	Weight		Assays, %										% Distribution										Units									
	g	%	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga
Cu Conc 1	31.4	1.57	16.9	3.41	37.7	12.7	0.55	0.62	9.6	39.9	49.4	1.1	44.4	5.9	1.75	30.52	7.69	7.33	10.0	0.7	44.4	0.1	26.6	5.4	59.3	20.0	0.9	1.0	15.1	62.7	77.6	1.8
Cu Conc 2	19.4	0.97	16.3	3.60	38.5	12.7	0.64	0.65	10.1	42.8	47.6	0.6	26.4	3.9	1.1	18.85	5.53	4.74	6.5	0.5	26.4	0.0	15.8	3.6	37.4	12.3	0.6	0.6	9.9	41.6	46.3	0.6
Cu Conc 3	23.3	1.17	7.90	3.75	40.0	7.84	0.58	0.75	10.2	69.1	23.1	2.5	15.4	4.8	1.4	13.98	6.02	6.58	7.9	0.9	15.4	0.2	9.2	4.4	46.6	9.14	0.7	0.9	11.9	80.6	26.9	2.9
Ni Conc	204.0	10.2	0.29	2.65	41.4	0.82	0.26	0.60	6.5	98.3	0.8	5.9	4.9	30.0	12.5	12.80	23.63	46.06	44.2	11.8	4.9	5.1	3.0	27.1	422.7	8.37	2.7	6.1	66.8	1005.5	8.7	59.8
1st Clnr Tails	260.8	12.1	0.07	0.69	37.2	0.30	0.10	0.08	0.7	96.4	0.2	2.7	1.5	16.0	11.4	5.99	11.62	7.85	6.2	14.8	1.5	3.0	0.9	9.0	485.6	3.92	1.3	1.0	9.4	1258.0	2.7	35.3
Rougher Tails	1459.0	73.0	0.06	0.56	31.9	0.16	0.07	0.05	0.5	82.8	0.2	16.5	7.3	45.3	68.9	17.9	45.5	27.4	25.1	71.2	7.3	102.2	4.4	40.9	2329.6	11.68	5.1	3.7	38.0	6045.0	12.8	1206.9
(Head (calc.)	1997.9	100.0	0.60	0.90	33.8	0.65	0.11	0.13	1.51	84.93	1.7	11.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**59.9**	**90.2**	**3381.2**	**65.4**	**11.2**	**13.8**	**151.1**	**8493.4**	**174.9**	**1180.7**
(direct)	2000.0	99.9	0.59	0.93	34.4	0.65	0.12	0.12					101.5	97.0	98.3	100.6	93.6	110.9														

Combined Products

Product	Float	Weight	Assays, %										% Distribution										Units										Ni + Cu
	min	%	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	
Cu Conc 1	2	1.6	16.9	3.41	37.7	12.70	0.55	0.62	9.6	39.9	49.4	1.1	44.4	5.9	1.8	30.5	7.7	7.3	10.0	0.7	44.4	0.1	26.6	5.4	59.3	20.0	0.9	1.0	15.1	62.7	77.6	1.8	20.3
Cu Conc 1 & 2	4	2.5	16.7	3.48	38.0	12.70	0.58	0.63	9.8	41.0	48.7	0.5	70.8	9.8	2.9	49.4	13.2	12.1	16.5	1.2	70.8	0.1	42.4	8.9	96.6	32.3	1.5	1.6	25.0	104.2	123.9	1.2	20.2
Cu Conc 1 - 3	6	3.7	13.9	3.57	38.6	11.17	0.58	0.67	10.0	49.8	40.7	0.5	86.2	14.7	4.2	63.3	19.2	18.6	24.4	2.2	86.2	0.1	51.6	13.2	143.3	41.4	2.2	2.5	36.9	184.9	150.8	1.7	17.5
1st Clnr Conc		13.5	3.92	2.89	40.7	3.58	0.35	0.62	7.4	85.5	11.5	4.4	91.2	44.7	16.7	76.1	42.9	64.7	68.6	14.6	91.2	5.2	54.6	40.3	566.0	49.8	4.8	8.6	103.7	1190.3	159.4	61.5	6.8
Re Conc		27.0	2.06	1.83	39.0	1.99	0.23	0.36	4.19	90.8	6.0	1.0	92.7	54.7	31.1	82.1	54.5	72.6	74.9	28.8	92.7	2.2	55.5	49.3	1051.6	53.7	6.1	9.7	113.1	2448.3	162.1	26.2	3.9

Test: F12 **Project No.:** 11365-001 **Operator:** RG **Date:** 20-Feb-07

Purpose: Access the response of the Junior Lake B4-7 Zone ore to Cu/Ni Separation

Procedure: As outlined below.

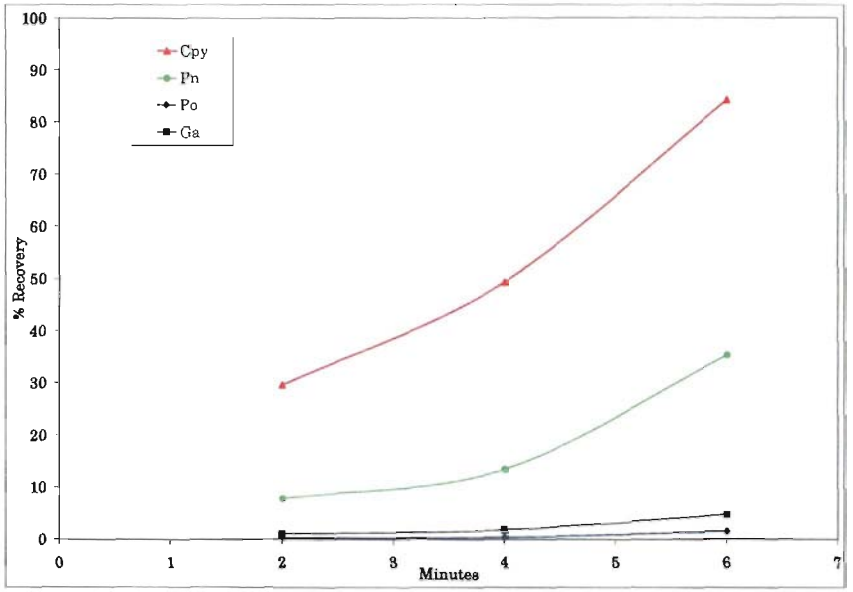
Feed: 2 kg of minus 10 mesh B4-7 Met-C Zone Composite

Grind: 29 minutes @ 65% Solids (80 % passing 75 microns) in BM-2

Conditions: Grind K80 (Rougher Tail) = 71 microns

Stage	Reagents added, g/t				Time, minutes					pH	Sp
	Lime	SIPX	DF250	PAX	Grind	Cond.			Froth		
Grind	350	10.0			29					8.9	
Rougher 1	160	-	5			1			1	9.5	
Rougher 2	90	10	2.5			1			1.5	9.5	
Rougher 3	80	10		500		1			2	9.5	
Rougher 4	80	10	2.5			1			2	9.2	
Rougher 5	90	10				1			3	9.2	
Rougher 6	40	40				1			3	9.2	
Ro Regrind					12						
1st Clnr Conc 1	110					1			2	10.2	
1st Clnr Conc 2	75		2.5			1			2	10.2	
1st Clnr Conc 3	60	10	2.5			1			2	10.2	
1st Clnr Conc 4	65	10				1			3	10.2	
Cu/Ni Sep Conc 1	365					1			1	12.0	
Cu/Ni Sep Conc 2	130								1	12.0	
Cu/Ni Sep Conc 3	110								2	12.0	
Total	*1805*	*110*	*15*	*500*	*41*	*11*			*25.5*		

Stage	Roughers
Flotation Cell	1000g D1
Speed: rpm	1800



	Ni	Cu	S	Fe
Pn	33.93%	0.00%	34.33%	32.25%
Po	0.47%	0.01%	39.12%	61.20%
Cpy	0.01%	34.57%	34.94%	30.57%

Assuming three sulphides contain all Cu, Ni & S
Formulas are given below, given element assays:

Nickel Distribution

Po	38.7%
Pn	61.3%

Metallurgical Balance

Product	Weight		Assays, %										% Distribution										Units									
	g	%	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga
Cu Conc 1	21.6	1.08	19.1	4.76	35.4	22.6	1.83	0.57	13.9	21.8	55.8	8.5	29.7	4.9	1.10	27.89	12.09	6.03	7.9	0.3	29.7	1.0	20.7	5.2	38.3	24.5	2.0	0.6	15.0	23.6	60.4	9.2
Cu Conc 2	15.0	0.75	18.3	4.92	35.1	20.6	1.83	0.59	14.4	22.5	53.5	9.6	19.7	3.5	0.8	17.65	8.40	4.33	5.7	0.2	19.7	0.8	13.8	3.7	26.4	15.5	1.4	0.4	10.8	16.5	40.2	7.3
Cu Conc 3	46.7	2.34	10.4	6.18	35.7	10.7	1.41	0.72	17.9	40.2	30.4	11.5	34.9	13.8	2.4	28.54	20.14	16.46	21.9	1.1	34.9	2.9	24.3	14.5	83.5	25.01	3.3	1.7	41.9	94.1	71.1	26.9
Ni Conc	108.8	5.5	0.63	2.90	36.8	1.19	0.54	0.32	7.5	84.1	1.8	6.5	4.9	15.1	5.8	7.40	17.97	17.04	21.4	5.3	4.9	3.9	3.4	15.8	200.6	6.49	2.9	1.7	40.8	458.7	10.0	35.6
1st Clnr Tails	214.9	10.8	0.12	0.89	35.4	0.40	0.25	0.09	1.4	90.5	0.4	7.7	1.9	9.2	10.9	4.91	17.09	9.47	7.9	11.2	1.9	9.0	1.3	9.6	381.2	4.31	2.8	1.0	15.0	974.9	3.8	83.0
Rougher Tails	1588.9	79.6	0.078	0.70	34.6	0.15	0.05	0.06	0.8	89.3	0.2	9.6	8.9	53.4	79.1	13.6	24.3	46.7	35.3	81.9	3.9	82.5	6.2	55.7	2754.4	11.94	4.0	4.8	67.4	7112.7	18.1	762.6
Head (calc.)	1995.9	100.0	0.70	1.04	34.8	0.88	0.16	0.10	1.91	86.81	2.0	9.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**69.7**	**104.4**	**3484.4**	**67.7**	**16.4**	**10.2**	**190.9**	**8680.8**	**203.7**	**924.5**
(direct)	2000.0	99.8	0.59	0.93	36.0	0.91	0.15	0.08					118.1	112.3	96.8	96.4	109.2	127.9														

Combined Products

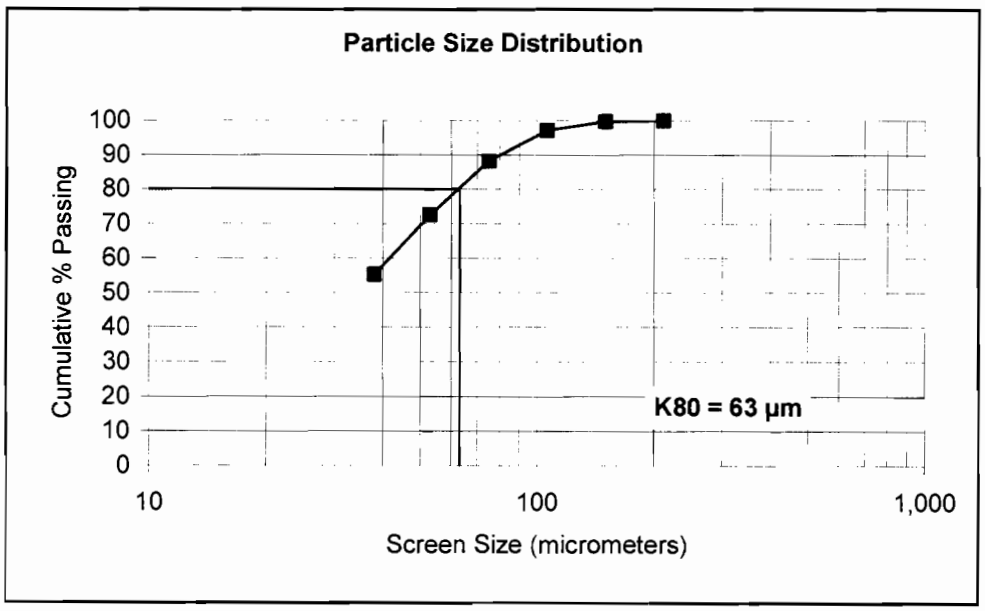
Product	Float	Weight	Assays, %										% Distribution										Units										Ni + Cu
	min	%	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	Cu	Ni	S	Pd	Pt	Co	Pn	Po	Cpy	Ga	
Cu Conc 1	2	1.1	19.1	4.76	35.4	22.60	1.83	0.57	13.9	21.8	55.8	8.5	29.7	4.9	1.1	27.9	12.1	6.0	7.9	0.3	29.7	1.0	20.7	5.2	38.3	24.5	2.0	0.6	15.0	23.6	60.4	9.2	23.9
Cu Conc 1 & 2	4	1.8	18.8	4.83	35.3	21.78	1.83	0.58	14.1	22.1	54.9	8.9	49.4	8.5	1.9	45.5	20.5	10.4	13.5	0.5	49.4	1.8	34.4	8.8	64.7	39.9	3.4	1.1	25.8	40.5	100.6	16.4	23.6
Cu Conc 1 - 3	6	4.2	14.1	5.58	35.5	15.57	1.59	0.66	16.2	32.3	41.1	10.4	84.3	22.3	4.3	74.1	40.6	26.8	35.5	1.6	84.3	4.7	58.8	23.3	148.2	65.0	6.7	2.7	67.7	134.6	171.7	43.3	19.7
1st Clnr Conc		9.6	6.46	4.06	36.2	7.42	1.00	0.47	11.3	61.6	18.9	8.2	89.2	37.5	10.0	81.5	58.6	43.9	56.8	6.8	89.2	8.5	62.2	39.1	348.8	71.5	9.6	4.5	108.5	593.3	181.7	79.0	10.5
Ro Conc		20.4	3.11	2.39	35.8	3.72	0.61	0.27	6.06	76.9	9.1	7.9	91.1	46.6	20.9	86.4	75.7	53.3	64.7	18.1	91.1	17.5	63.5	48.7	730.0	75.8	12.4	5.6	123.5	1568.2	185.5	161.9	5.5

SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **Ro Tails** Test No.: **F1**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
65	212	0.0	0.0	0.0	100.0
100	150	0.3	0.3	0.3	99.7
150	106	2.5	2.5	2.8	97.2
200	75	9.0	9.0	11.8	88.2
270	53	15.6	15.6	27.4	72.6
400	38	17.4	17.4	44.8	55.2
Pan	-38	55.2	55.2	100.0	0.0
Total	-	**100.0**	100.0	-	-
K80	**63**				

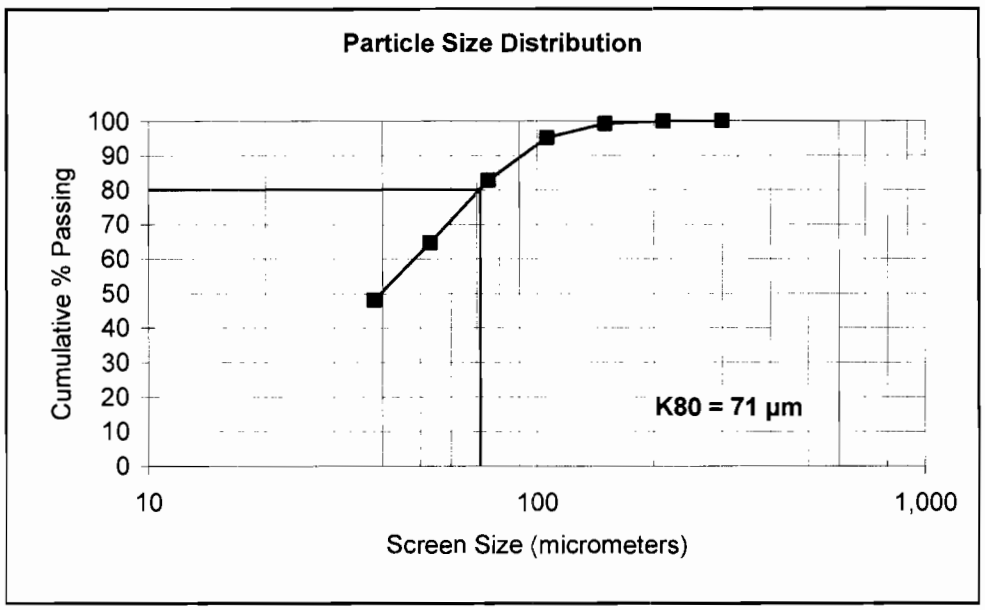


SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **Ro Tail** Test No.: **F4**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
48	300	0.0	0.0	0.0	100.0
65	212	0.2	0.1	0.1	99.9
100	150	1.2	0.7	0.8	99.2
150	106	7.1	4.1	4.9	95.1
200	75	21.3	12.2	17.1	82.9
270	53	31.6	18.2	35.3	64.7
400	38	28.9	16.6	51.9	48.1
Pan	-38	83.7	48.1	100.0	0.0
Total	**-**	**174.0**	100.0	-	-
K80	**71**				

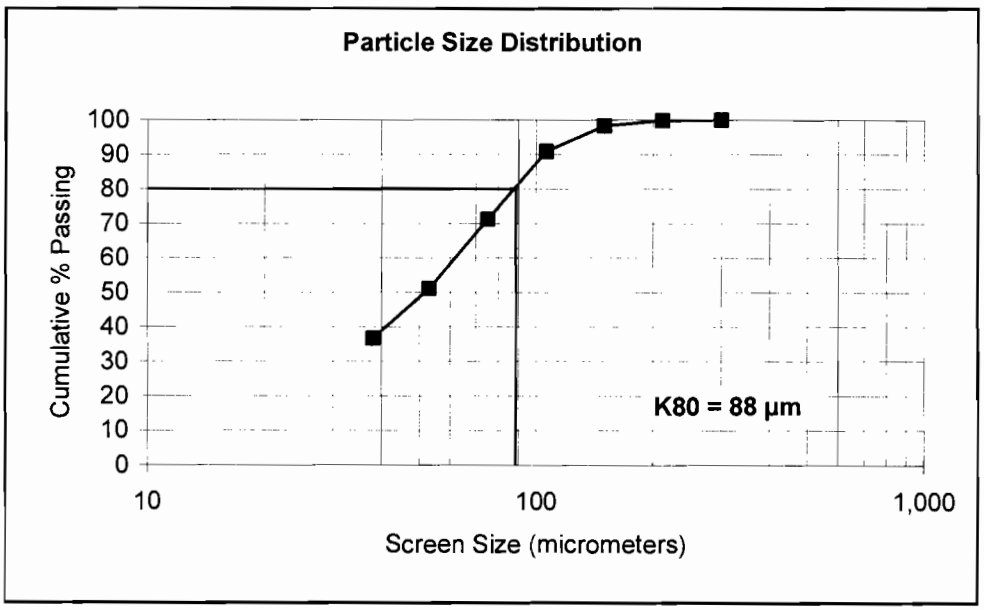


SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **Ro Tail** Test No.: **F9**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
48	300	0.0	0.0	0.0	100.0
65	212	0.4	0.2	0.2	99.8
100	150	2.8	1.5	1.7	98.3
150	106	14.1	7.5	9.2	90.8
200	75	36.9	19.6	28.8	71.2
270	53	37.9	20.1	48.9	51.1
400	38	27.2	14.4	63.3	36.7
Pan	-38	69.1	36.7	100.0	0.0
Total	**-**	**188.4**	100.0	**-**	**-**
K80	**88**				



SGS Minerals Services
Size Distribution Analysis

Project No.
11365-001

Sample: **Ro Tail** Test No.: **F10**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
48	300	0.0	0.0	0.0	100.0
65	212	0.3	0.2	0.2	99.8
100	150	3.0	1.6	1.8	98.2
150	106	13.9	7.6	9.4	90.6
200	75	31.9	17.4	26.7	73.3
270	53	35.9	19.5	46.2	53.8
400	38	27.4	14.9	61.2	38.8
Pan	-38	71.4	38.8	100.0	0.0
Total	-	**183.8**	100.0	-	-
K80	**87**