

**PRELIMINARY ASSESSMENT OF TWO  
METALLURGICAL COMPOSITES FROM  
THE BAM EAST GOLD DEPOSIT**

**KM5238**

**FINAL REPORT**

December 20, 2016

Work Performed on Behalf of Landore Resources Inc.

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KM5238

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## **1.0 Introduction**

The BAM East Gold deposit is located in Landore's Junior Lake property in northwestern Ontario. Bulk samples were provided for the test program in the form of 28 samples of crushed rock weighing a total of about 66 kilograms.

The preliminary assessment was designed to assess the metallurgical response of the mineralized samples from the BAM East Gold deposit, and to provide a determination of the gold feed grade. Two composites were formed with instructions from the client: Composite 1 and Composite 2. The test program included an assessment for gold recovery through combined gravity concentration and cyanidation leaching. The two composites were assessed for the following:

- Chemical characteristics of the feed.
- Potential for gravity recovery of gold from Composite 1 and Composite 2 at a nominal primary grind sizing of 75 $\mu$ m K<sub>80</sub>.
- Cyanidation leach response of the gravity tails for the two composites.

The brief metallurgical test program commenced in early December 2016 and was completed by mid-December 2016. A technical report followed shortly after completion of the test work.

The following report summarizes the key technical points of the metallurgical test program. Individual test results, along with supporting data, can be found in any one of the following appendices:

Appendix I – Sample Origin

Appendix II – Metallurgical Test Data

Appendix III – Particle Sizing Data

Appendix IV – Special Data

## **2.0 Properties of the Composites**

Chemical composition was measured for selected samples. These important parameters that have an impact on process design are discussed further in the following subsections.

### **2.1 Chemical Content**

Using standard chemical assaying techniques, the chemical compositions of the two composites were determined. A summary of the results is shown in Table 1.

**TABLE 1**  
**CHEMICAL CONTENT DATA**

Sample	Assays	
	Au – g/tonne	TOC - percent
Composite 1	1.54	0.02
Composite 2	2.34	0.03

Notes: a) Au denotes gold assay by fire assay method, and reflects average of duplicate head cuts.  
b) TOC indicates total organic carbon content.

Considerable variability in the gold content of duplicate head cuts by fire assay was measured, even with repeat assays. Coarse gold grains were suspected. For future gold head assay determinations, a screen metallic method is recommended. Total organic carbon content was low at between 0.02 and 0.03 percent for the two composites.

### **3.0 Metallurgical Test Program**

The metallurgical test program consisted of gravity separation followed by cyanidation bottle roll leach tests on gravity tails for Composite 1 and Composite 2. The objective of the testing was to complete a preliminary assessment of the two composites for gold recovery by combined gravity concentration followed by cyanidation leaching of the gravity tails at a single primary grind sizing of 75 $\mu$ m K<sub>80</sub> specified by the client.

#### **3.1 Gravity Concentration**

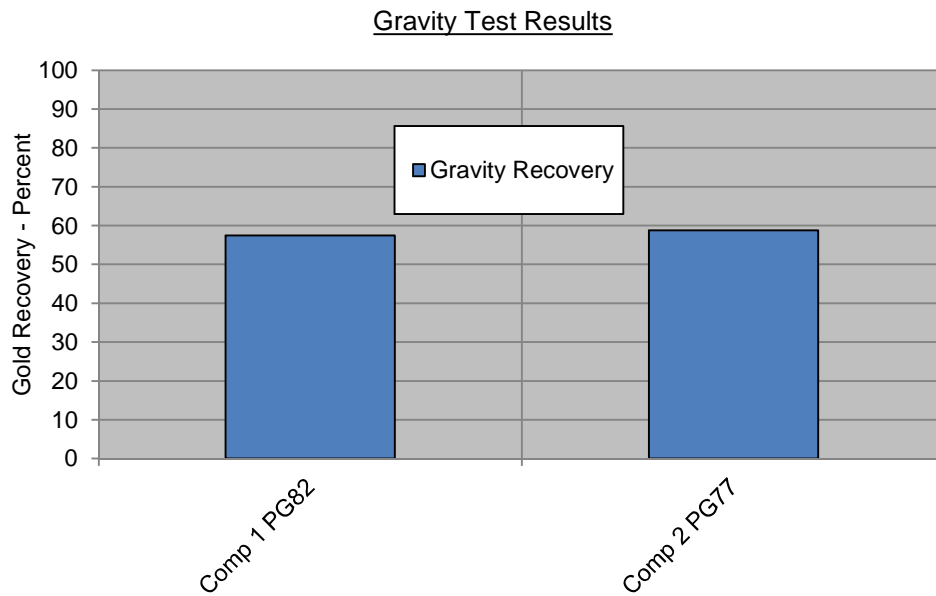
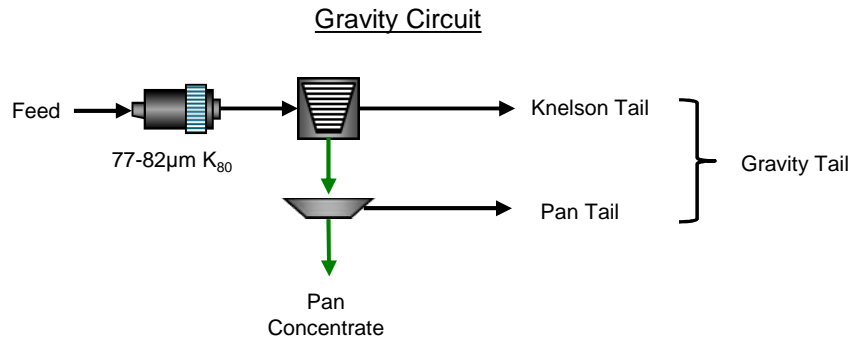
Gravity separation tests with a Knelson separator and panning of the Knelson concentrate were performed on the entire mass of both Composite 1 (12 kg) and Composite 2 (45 kg) to assess the potential for gold recovery to a gravity concentrate. For Composite 2, the Knelson cone was emptied after each batch of 12 kilograms was introduced. The pan tails was re-introduced to the Knelson tails for cyanidation leach testing. A summary of the flowsheet and test results are shown in Figure 1.

Feed gold recovery to the pan concentrate\* ranged between 58 and 59 percent for Composite 1 and Composite 2. Between 0.02 and 0.03 percent of the feed mass was recovered to the pan concentrates grading between 3,687 and 6,977 g/tonne gold. In our experience, these results would indicate that the composites were amenable to gravity gold concentration methods.

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\* The Knelson concentrate was hand panned to achieve a mass recovery that is somewhat more representative of a Knelson unit operating in a concentrator.

**FIGURE 1**  
**GRAVITY FLOWSHEET AND TEST CONDITIONS**



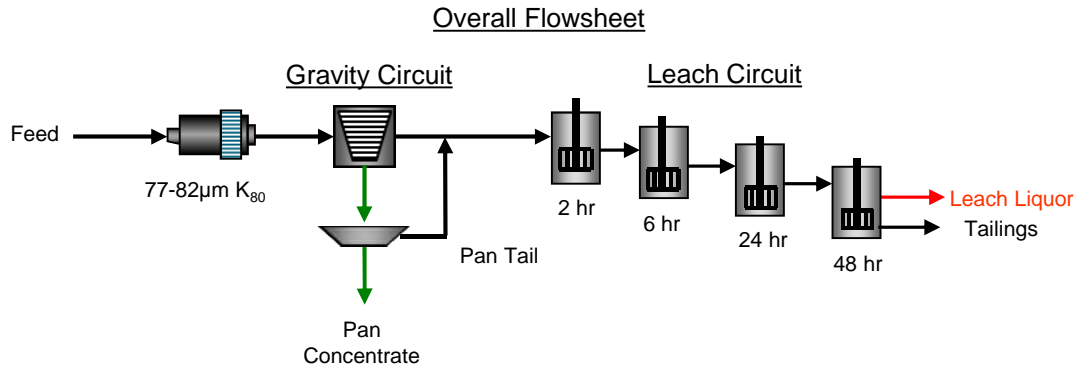
Note: PG above denotes primary grind sizing in µm K<sub>80</sub>.

### 3.2 Combined Gravity and Cyanidation Leach Test Results

Cyanidation leach bottle roll tests on the combined gravity tail were performed on Composite 1 and Composite 2 to measure overall gold extraction. The combined Knelson and pan tail was subjected to cyanidation bottle roll leaching for 48 hours at a sodium cyanide concentration of 1,000 ppm with interval sampling at 6, 24 and 48 hours. Bottle roll tests were repeated twice for Composite 1, and four times for Composite 2 at the request of the client. The slurry was sparged with oxygen, and the pH was maintained to a target of 11.0 during the cyanidation leach test with lime. Test flowsheet and test results are presented in Figure 2. The following comments relate to the test data:

- Combined gold recovery by gravity concentration followed by cyanidation leach extraction of the gravity tail averaged about 98 percent for the two composites tested.
  
- Gold leach kinetics recorded for all tests at a nominal primary grind sizing of 75 $\mu$ m K<sub>80</sub> were rapid, with close to peak gold extraction measured at the first sampling interval at 6 hours. Sodium cyanide consumption averaged 0.1 kg/tonne and lime consumption averaged 0.3 kg/tonne over the tests completed.
  
- A feed grade of 2.0 g/tonne gold was calculated for both Composite 1 and Composite 2 based on the overall test results.

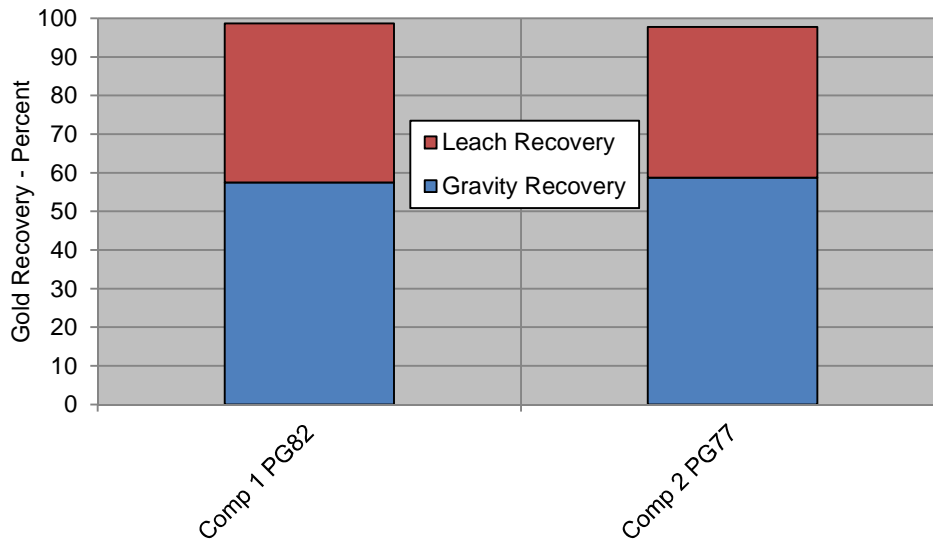
**FIGURE 2**  
**OVERALL FLOWSHEET AND TEST CONDITIONS**



Cyanidation Leach Test Results

Test	Composite	Grind Size (µm K80)	Calc. Leach Feed Au (g/tonne)	Gold Extraction Percent	Consumption - kg/tonne	
					NaCN	Lime
3	1	82	1.00	96.0	0.1	0.3
4	2	77	0.78	96.2	0.1	0.3
5	1	82	0.93	97.9	0.1	0.3
6	2	77	0.78	94.2	0.1	0.3
7	2	77	0.81	94.5	0.1	0.3
8	2	77	0.82	93.9	0.1	0.3

Combined Gold Recovery



Overall Gravity and Leach Results

Composite	Pan Con Gold Grade, g/tonne	Gravity Gold Recovery - percent	Leach Gold Extraction - percent	Overall Results	
				Overall Gold Extraction - percent	Calc. Gold Feed Grade to Gravity - g/tonne
1	3687	57.5	96.9	98.7	2.03
2	6977	58.8	94.7	97.8	2.02

Note: PG above denotes primary grind sizing in µm K<sub>80</sub>.



#### **4.0 Conclusions and Recommendations**

A preliminary metallurgical assessment was conducted to assess the recovery of gold from two composites from Landore's BAM East Gold deposit using gravity and cyanidation leach techniques. The composites were formed from coarse crush samples with client instructions.

Measurement of the gold feed content for the two composites was challenging, as it was difficult to produce reproducible gold content by fire assay. Coarse gold grains were suspected.

Metallurgical testing with Composite 1 and Composite 2 was performed at a nominal primary grind sizing of 75 $\mu$ m K<sub>80</sub>. The entire mass remaining of each composite, about 12 kilograms for Composite 1 and 45 kilograms for Composite 2, was introduced to the Knelson concentrator.

Gravity separation test work results indicated that the two composites were amenable to gravity separation. Gold recovery by Knelson gravity separation followed by hand panning of the Knelson concentrates ranged between 58 and 59 percent of the feed gold. High grade pan concentrates grading 3,687 and 6,977 g/tonne gold were measured for Composite 1 and Composite 2, respectively.

Between 98 and 99 percent of the feed gold was recovered through combined gravity concentration and cyanidation leaching of gravity tails for the two composites tested. Gold leach kinetics were fast, with most of the gold extraction taking place within the first six hours. Sodium cyanide and lime consumption averaged about 0.1 and 0.3 kg/tonne, respectively. Gold head grades were calculated at 2.0 g/tonne for both composites based on combined gravity and cyanidation leach test results.

Further gravity and cyanidation leach testing at coarser primary grind sizings is recommended to determine whether similar gold recovery can be achieved with lower comminution energy requirements. Further testing of other zones within the deposit is also recommended.

APPENDIX I – KM5238

SAMPLE ORIGIN

## **1.0 Sample Origin**

A single shipment of samples weighing approximately 65.8 kilograms was received at ALS Metallurgy Kamloops on December 1, 2016. These samples were reported to be from the BAM East Gold deposit property, located in northwestern Ontario. A complete listing of the samples received and their respective weights is provided in Table I-1.

Two composites named Composite 1 and Composite 2 were constructed. Each composite was constructed according to client instructions, homogenized, and rotary split into 2 kilogram charges for metallurgical testing. The composite construction information is displayed in Table I-2. Duplicate head sub-samples were split from each composite for gold assaying; head assay results are shown in Table I-3.

TABLE I-1  
MASS AND IDENTIFICATION OF SAMPLES RECEIVED  
December 1, 2016

Sample ID	Mass (kg)	Sample Form
R711303	3.1	Coarse crush
R711299	3.3	Coarse crush
R711301	3.4	Coarse crush
R711304	3.1	Coarse crush
R711302	3.3	Coarse crush
R711300	2.8	Coarse crush
R711298	3.2	Coarse crush
R711290	3.3	Coarse crush
R711291	1.3	Coarse crush
R711292	1.9	Coarse crush
R711293	3.3	Coarse crush
R711297	0.5	Coarse crush
R711294	3.3	Coarse crush
R711310	3.1	Coarse crush
R711306	0.9	Coarse crush
R711305	1.9	Coarse crush
R711307	2.8	Coarse crush
R711308	3.3	Coarse crush
R711309	3.1	Coarse crush
N526623	1.7	Coarse crush
N526624	1.7	Coarse crush
N526625	1.5	Coarse crush
N526626	1.8	Coarse crush
N526627	1.6	Coarse crush
N526628	1.5	Coarse crush
N526629	1.6	Coarse crush
N526630	1.4	Coarse crush
N526631	1.9	Coarse crush

TABLE I-2A  
COMPOSITE CONSTRUCTION  
Composite 1

Sample ID	Mass (kg)
N526623	1.7
N526624	1.7
N526625	1.5
N526626	1.8
N526627	1.6
N526628	1.5
N526629	1.6
N526630	1.4
N526631	1.9
Total	14.7

TABLE I-2B  
COMPOSITE CONSTRUCTION  
Composite 2

Sample ID	Mass (kg)
R711290	3.3
R711291	1.3
R711292	1.9
R711293	3.3
R711294	3.3
R711297	0.5
R711298	3.2
R711299	3.3
R711300	2.8
R711301	3.4
R711302	3.3
R711303	3.1
R711304	3.1
R711305	1.9
R711306	0.9
R711307	2.8
R711308	3.3
R711309	3.1
R711310	3.1
Total	51.1

TABLE I-3  
HEAD ASSAY DATA

Composite	Assay	
	Au - g/tonne	TOC - percent
Composite 1	1.54	0.02
Composite 2	2.34	0.03

Note: Au = gold by fire assay, TOC = total organic carbon.

APPENDIX II – KM5238

METALLURGICAL TEST DATA

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**DATE:** December 6, 2016

**PROJECT NO:** KM5238-01

**PURPOSE:** Preliminary Gravity Test.

**PROCEDURE:** Perform a standard Knelson and Panning Procedure Using the 100g cone.

**FEED:** 12 kg of Composite 1 ground to a nominal 82 $\mu$ m K<sub>80</sub>.

Stage	Inlet Pressure	Outlet Pressures		Time Minutes
		Start	Finish	
Grind				17
KN Separation 1	65	1.2	1.2	20

KM5238-01 Composite 1  
Overall Metallurgical Balance

Product	Weight		Assay - g/tonne	Distribution - percent
	%	grams	Au	Au
Pan Con	0.03	3.4	3687	57.5
Gravity Tail	100.0	11752	0.79	42.5
Feed	100	11756	1.86	100

KM5238-01 Composite 1  
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - g/tonne	Distribution - percent
	%	grams	Au	Au
Product 1	0.03	3.4	3687	57.5
Product 2	100.0	11752.2	0.79	42.5
Feed	100	11755.6	1.86	100

**DATE:** December 7, 2016

**PROJECT NO:** KM5238-02

**PURPOSE:** Preliminary Gravity Test.

**PROCEDURE:** Perform a standard Knelson and Panning Procedure Using the 100g cone. Cone emptied every 12 kg of feed.

**FEED:** 45 kg of Composite 2 ground to a nominal 77 $\mu$ m K<sub>80</sub>.

Stage	Inlet Pressure	Outlet Pressures		Time Minutes
		Start	Finish	
Grind				21
KN Separation 1	65	1.2	1.4	80

KM5238-02 Composite 2  
Overall Metallurgical Balance

Product	Weight		Assay - g/tonne	Distribution - percent
	%	grams	Au	Au
Pan Con	0.02	7.9	6977	58.8
Gravity Tail	100.0	44970	0.86	41.2
Feed	100	44977.9	2.09	100

KM5238-02 Composite 2  
Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay - g/tonne	Distribution - percent
	%	grams	Au	Au
Product 1	0.02	7.9	6977	58.8
Product 2	100.0	44970.0	0.86	41.2
Feed	100	44977.9	2.09	100

**DATE:** December 12, 2016

**PROJECT NO:** KM5238-03

**PURPOSE:** Preliminary Cyanide Leach Test.

**PROCEDURE:** Standard bottle roll procedure. Agitate on rolls using cyanide and lime.  
1000ppm NaCN, pH 11.0.

**SAMPLE:** 2000g of Test 01 Gravity Tails at a nominal 82 $\mu$ m K<sub>80</sub>.

Parameter	Time Cum	Added (g)		Residual (g)	Consumed (g)	pH	Dissolved O <sub>2</sub> (mg/L)
		NaCN	Lime	NaCN	NaCN		
Natural	-	-	-	-	-	8.2	9.9
Leach 1	0	4.00	0.59	-	-	11.0	9.9
Leach 2	2	0.00	-	4.00	0.00	11.1	23.7
Leach 3	6	0.00	-	4.00	0.00	11.0	23.4
Leach 4	24	0.00	-	3.92	0.08	11.0	25.5
Leach 5	48	-	-	3.88	0.04	-	-
Total	48	4.00	0.59	3.88	0.12	-	-

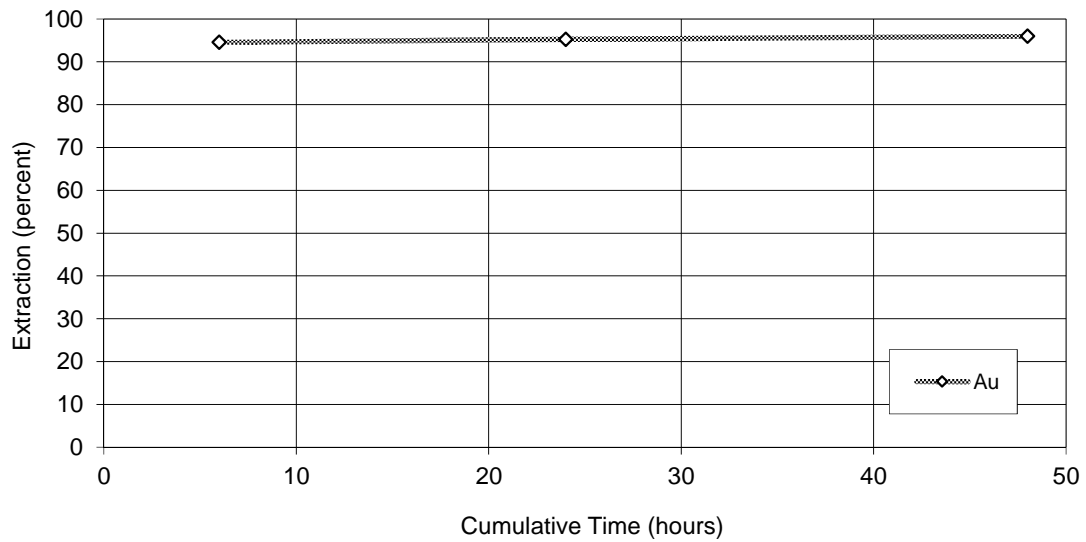
Mass of Sample	2000
Volume of Water	4000
Pulp Density	33

NaCN Consumption	0.1 kg/tonne
Lime Consumption	0.3 kg/tonne

KM5238-03 Test 01 Gravity Tails  
Cumulative Metallurgical Balance

Product	Cumulative Time - Hrs	Volume or Mass	Units	Assay - g/tonne	Distribution - percent
				Au	Au
Cyanide Liquor (6 hr)	6	4000	mL	0.47	94.6
Cyanide Liquor (24 hr)	24	4000	mL	0.47	95.3
Cyanide Liquor (48 hr)	48	4000	mL	0.47	96.0
Cyanidation Tails	-	1998	g	0.04	4.0
Calculated Feed		1998	g	1.00	100.0

Cyanide Leach Kinetic Curves



**DATE:** December 12, 2016

**PROJECT NO:** KM5238-04

**PURPOSE:** Preliminary Cyanide Leach Test.

**PROCEDURE:** Standard bottle roll procedure. Agitate on rolls using cyanide and lime.  
1000ppm NaCN, pH 11.0.

**SAMPLE:** 2000g of Test 02 Gravity Tails at a nominal 77 $\mu$ m K<sub>80</sub>.

Parameter	Time Cum	Added (g)		Residual (g)	Consumed (g)	pH	Dissolved O <sub>2</sub> (mg/L)
		NaCN	Lime	NaCN	NaCN		
Natural	-	-	-	-	-	8.3	9.9
Leach 1	0	4.00	0.51	-	-	11.0	9.9
Leach 2	2	0.00	-	4.00	0.00	11.0	24.3
Leach 3	6	0.00	0.07	4.00	0.00	11.0	24.3
Leach 4	24	0.00	-	3.92	0.08	11.0	26.5
Leach 5	48	-	-	3.88	0.04	-	-
Total	48	4.00	0.58	3.88	0.12	-	-

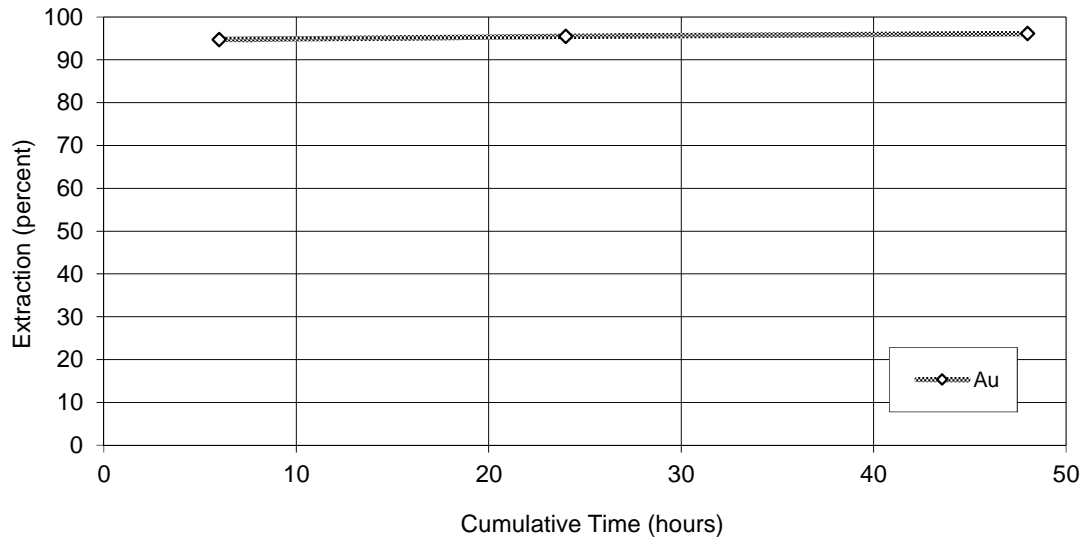
Mass of Sample	2000
Volume of Water	4000
Pulp Density	33

NaCN Consumption	0.1 kg/tonne
Lime Consumption	0.3 kg/tonne

KM5238-04 Test 02 Gravity Tails  
Cumulative Metallurgical Balance

Product	Cumulative Time - Hrs	Volume or Mass	Units	Assay - g/tonne	Distribution - percent
				Au	Au
Cyanide Liquor (6 hr)	6	4000	mL	0.37	94.7
Cyanide Liquor (24 hr)	24	4000	mL	0.37	95.5
Cyanide Liquor (48 hr)	48	4000	mL	0.37	96.2
Cyanidation Tails	-	1995	g	0.03	3.8
Calculated Feed		1995	g	0.78	100.0

Cyanide Leach Kinetic Curves





**DATE:** December 13, 2016

**PROJECT NO:** KM5238-05

**PURPOSE:** Repeat Test 03.

**PROCEDURE:** Standard bottle roll procedure. Agitate on rolls using cyanide and lime.  
1000ppm NaCN, pH 11.0.

**SAMPLE:** 2000g of Test 01 Gravity Tails at a nominal 82 $\mu$ m K<sub>80</sub>.

Parameter	Time Cum	Added (g)		Residual (g)	Consumed (g)	pH	Dissolved O <sub>2</sub> (mg/L)
		NaCN	Lime	NaCN	NaCN		
Natural	-	-	-	-	-	8.3	9.4
Leach 1	0	4.00	0.58	-	-	11.0	9.4
Leach 2	2	0.00	-	4.00	0.00	11.2	24.0
Leach 3	6	0.00	-	4.00	0.00	11.0	22.1
Leach 4	24	0.00	-	3.96	0.04	11.0	23.1
Leach 5	48	-	-	3.84	0.12	-	-
Total	48	4.00	0.58	3.84	0.16	-	-

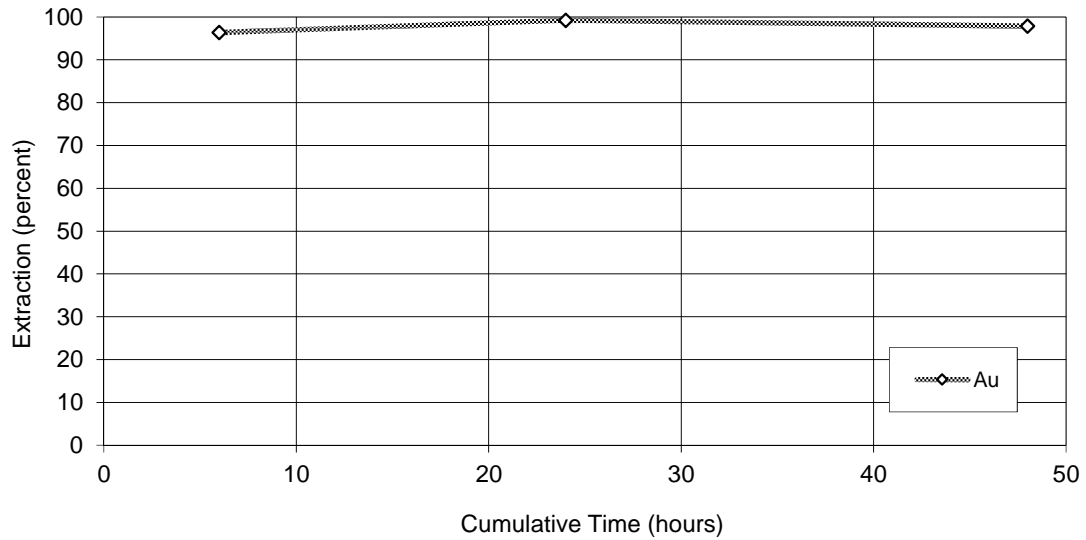
Mass of Sample	2000
Volume of Water	4000
Pulp Density	33

NaCN Consumption	0.1 kg/tonne
Lime Consumption	0.3 kg/tonne

KM5238-05 Test 01 Gravity Tails  
Cumulative Metallurgical Balance

Product	Cumulative Time - Hrs	Volume or Mass	Units	Assay - g/tonne	Distribution - percent
				Au	Au
Cyanide Liquor (6 hr)	6	4000	mL	0.45	96.4
Cyanide Liquor (24 hr)	24	4000	mL	0.46	99.3
Cyanide Liquor (48 hr)	48	4000	mL	0.45	97.9
Cyanidation Tails	-	2000	g	0.02	2.1
Calculated Feed		2000	g	0.93	100.0

Cyanide Leach Kinetic Curves



**DATE:** December 13, 2016

**PROJECT NO:** KM5238-06

**PURPOSE:** Repeat Test 04.

**PROCEDURE:** Standard bottle roll procedure. Agitate on rolls using cyanide and lime.  
1000ppm NaCN, pH 11.0.

**SAMPLE:** 2000g of Test 02 Gravity Tails at a nominal 77 $\mu$ m K<sub>80</sub>.

Parameter	Time Cum	Added (g)		Residual (g)	Consumed (g)	pH	Dissolved O <sub>2</sub> (mg/L)
		NaCN	Lime	NaCN	NaCN		
Natural	-	-	-	-	-	8.4	9.2
Leach 1	0	4.00	0.60	-	-	11.0	9.2
Leach 2	2	0.00	-	4.00	0.00	11.0	22.3
Leach 3	6	0.00	-	4.00	0.00	11.0	22.5
Leach 4	24	0.00	-	3.96	0.04	11.0	26.3
Leach 5	48	-	-	3.84	0.12	-	-
Total	48	4.00	0.60	3.84	0.16	-	-

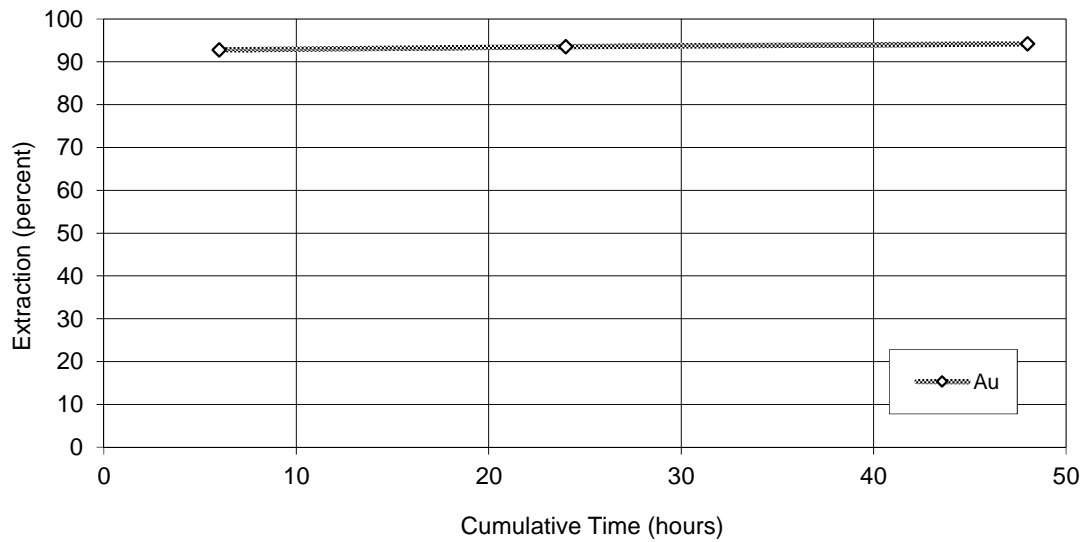
Mass of Sample	2000
Volume of Water	4000
Pulp Density	33

NaCN Consumption	0.1 kg/tonne
Lime Consumption	0.3 kg/tonne

KM5238-06 Test 02 Gravity Tails  
Cumulative Metallurgical Balance

Product	Cumulative Time - Hrs	Volume or Mass	Units	Assay - g/tonne	Distribution - percent
				Au	Au
Cyanide Liquor (6 hr)	6	4000	mL	0.36	92.8
Cyanide Liquor (24 hr)	24	4000	mL	0.36	93.5
Cyanide Liquor (48 hr)	48	4000	mL	0.36	94.2
Cyanidation Tails	-	1998	g	0.05	5.8
Calculated Feed		1998	g	0.78	100.0

Cyanide Leach Kinetic Curves



**DATE:** December 13, 2016

**PROJECT NO:** KM5238-07

**PURPOSE:** Repeat Test 04.

**PROCEDURE:** Standard bottle roll procedure. Agitate on rolls using cyanide and lime.  
1000ppm NaCN, pH 11.0.

**SAMPLE:** 2000g of Test 02 Gravity Tails at a nominal 77 $\mu$ m K<sub>80</sub>.

Parameter	Time Cum	Added (g)		Residual (g)	Consumed (g)	pH	Dissolved O <sub>2</sub> (mg/L)
		NaCN	Lime	NaCN	NaCN		
Natural	-	-	-	-	-	8.4	9.1
Leach 1	0	4.00	0.60	-	-	11.0	9.1
Leach 2	2	0.00	-	4.00	0.00	11.0	23.9
Leach 3	6	0.00	-	4.00	0.00	11.0	20.8
Leach 4	24	0.00	-	3.92	0.08	11.0	23.5
Leach 5	48	-	-	3.80	0.12	-	-
Total	48	4.00	0.60	3.80	0.20	-	-

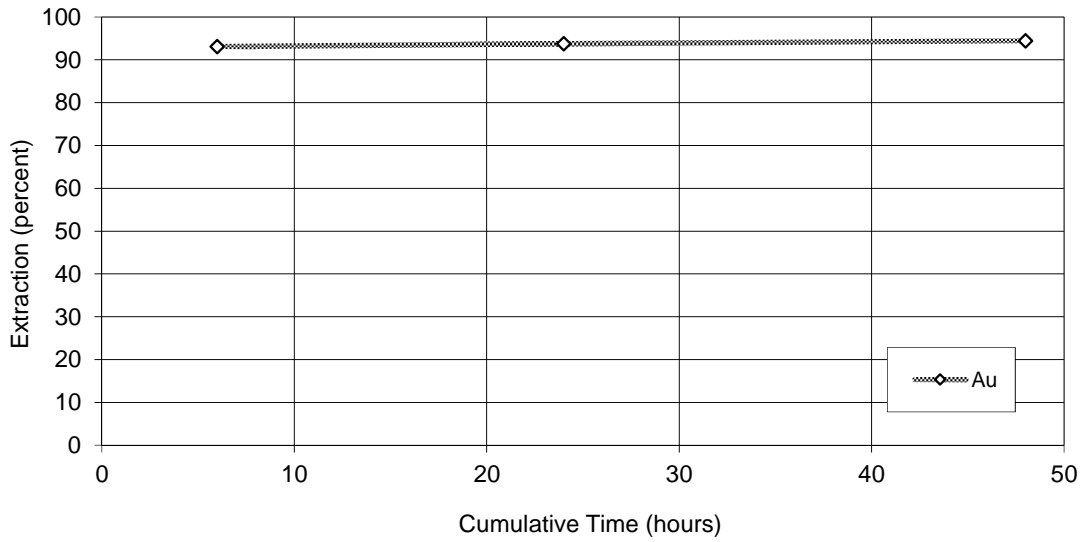
Mass of Sample	2000
Volume of Water	4000
Pulp Density	33

NaCN Consumption	0.1 kg/tonne
Lime Consumption	0.3 kg/tonne

KM5238-07 Test 02 Gravity Tails  
Cumulative Metallurgical Balance

Product	Cumulative Time - Hrs	Volume or Mass	Units	Assay - g/tonne	Distribution - percent
				Au	Au
Cyanide Liquor (6 hr)	6	4000	mL	0.38	93.1
Cyanide Liquor (24 hr)	24	4000	mL	0.38	93.8
Cyanide Liquor (48 hr)	48	4000	mL	0.38	94.5
Cyanidation Tails	-	2006	g	0.05	5.5
Calculated Feed		2006	g	0.81	100.0

Cyanide Leach Kinetic Curves



**DATE:** December 13, 2016

**PROJECT NO:** KM5238-08

**PURPOSE:** Repeat Test 04.

**PROCEDURE:** Standard bottle roll procedure. Agitate on rolls using cyanide and lime.  
1000ppm NaCN, pH 11.0.

**SAMPLE:** 2000g of Test 02 Gravity Tails at a nominal 77 $\mu$ m K<sub>80</sub>.

Parameter	Time Cum	Added (g)		Residual (g)	Consumed (g)	pH	Dissolved O <sub>2</sub> (mg/L)
		NaCN	Lime	NaCN	NaCN		
Natural	-	-	-	-	-	8.4	9.6
Leach 1	0	4.00	0.57	-	-	11.0	9.6
Leach 2	2	0.00	-	4.00	0.00	11.0	21.7
Leach 3	6	0.00	-	4.00	0.00	11.0	20.7
Leach 4	24	0.00	-	3.92	0.08	11.0	29.4
Leach 5	48	-	-	3.84	0.08	-	-
Total	48	4.00	0.57	3.84	0.16	-	-

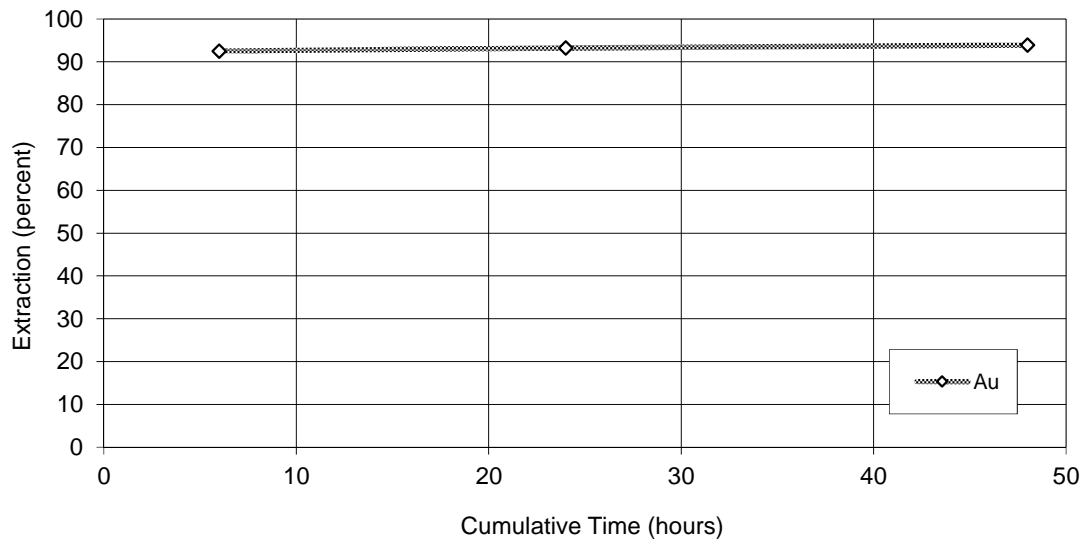
Mass of Sample	2000
Volume of Water	4000
Pulp Density	33

NaCN Consumption	0.1 kg/tonne
Lime Consumption	0.3 kg/tonne

KM5238-08 Test 02 Gravity Tails  
Cumulative Metallurgical Balance

Product	Cumulative Time - Hrs	Volume or Mass	Units	Assay - g/tonne	Distribution - percent
				Au	Au
Cyanide Liquor (6 hr)	6	4000	mL	0.38	92.5
Cyanide Liquor (24 hr)	24	4000	mL	0.38	93.2
Cyanide Liquor (48 hr)	48	4000	mL	0.38	93.9
Cyanidation Tails	-	1996	g	0.05	6.1
Calculated Feed		1996	g	0.82	100.0

Cyanide Leach Kinetic Curves





APPENDIX III – KM5238

PARTICLE SIZING DATA

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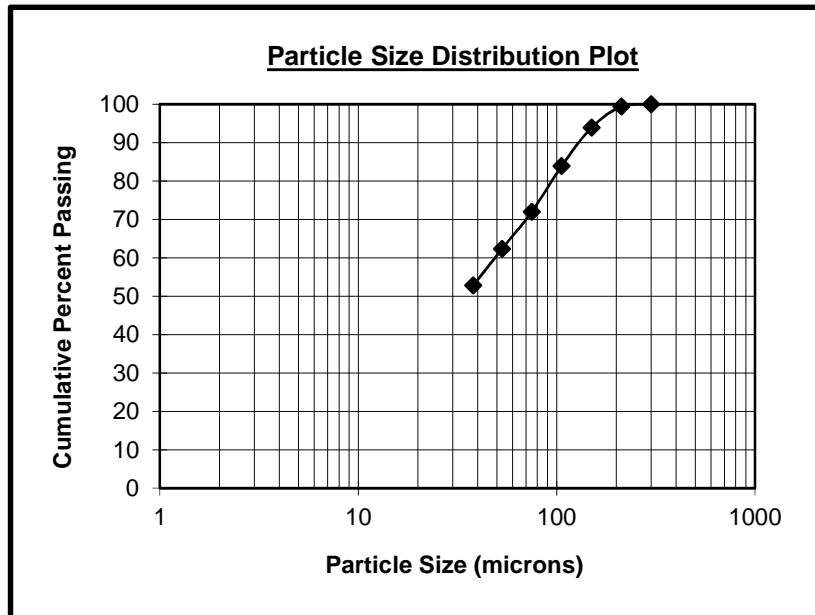
<u>TABLE</u>		<u>µm K<sub>80</sub></u>	<u>PAGE</u>
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III-6	KM5238-02 Gravity Tailing .....	77 .....	6

**TABLE III-1**  
**SCREEN ANALYSIS**  
**KM5238 Composite 1 - 14 Minute Grind Calibration**

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
48 Mesh	300	0.00	100.0
65 Mesh	212	0.60	99.4
100 Mesh	150	5.50	93.9
150 Mesh	106	10.00	83.9
200 Mesh	75	11.90	72.0
270 Mesh	53	9.70	62.3
400 Mesh	38	9.50	52.8
TOTAL		100.00	**

K80= 95µm

Note: 14 min. grind calibration using 2 kg. Ore, 1500 ml water and  
 20 kg. of Mild Steel rods in Mill: M4

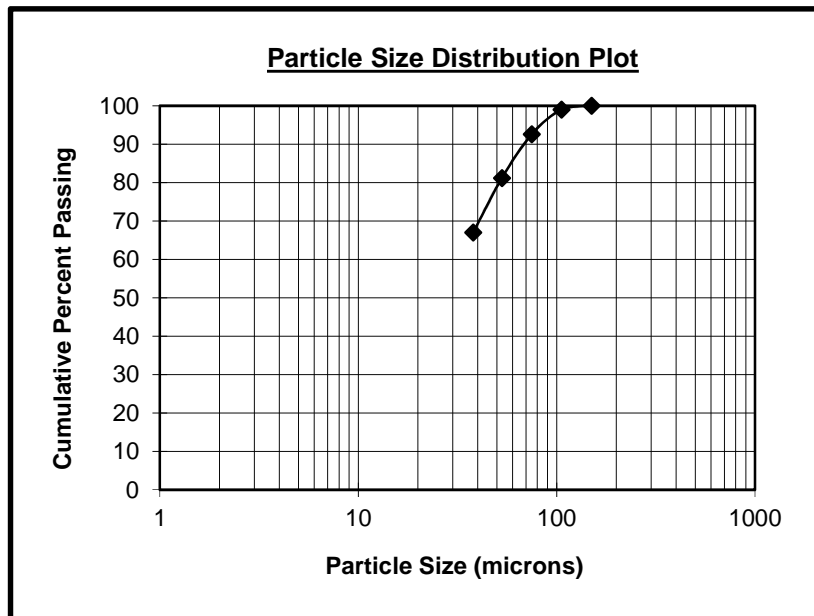


**TABLE III-2**  
**SCREEN ANALYSIS**  
**KM5238 Composite 1 - 20 Minute Grind Calibration**

Product	Particle Size $\mu\text{m}$	Weight % Retained	Cumulative % Passing
100 Mesh	150	0.00	100.0
150 Mesh	106	1.00	99.0
200 Mesh	75	6.40	92.6
270 Mesh	53	11.40	81.2
400 Mesh	38	14.20	67.0
TOTAL		100.00	**

K80= 52 $\mu\text{m}$

Note: 20 min. grind calibration using 1.6 kg. Ore, 1500 ml water and  
20 kg. of Mild Steel rods in Mill: M4

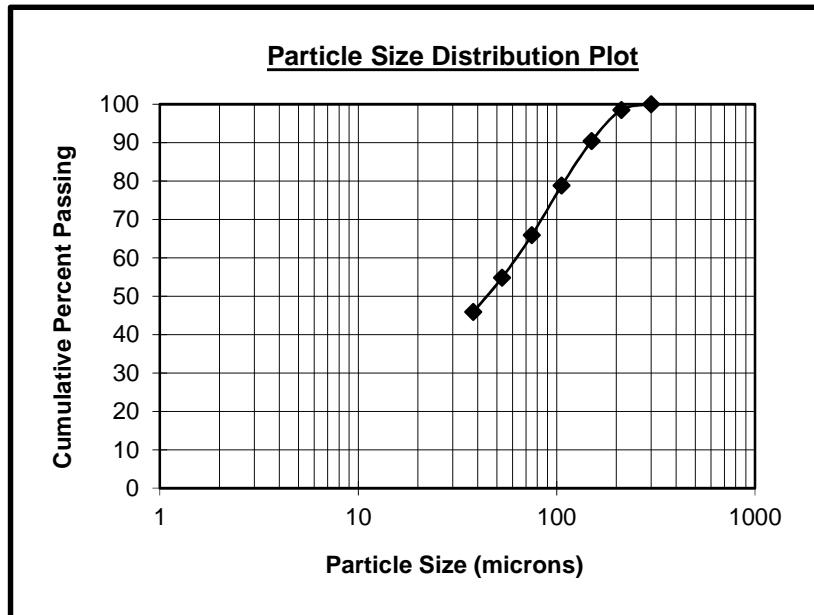


**TABLE III-3**  
**SCREEN ANALYSIS**  
**KM5238 Composite 2 - 15 Minute Grind Calibration**

Product	Particle Size $\mu\text{m}$	Weight % Retained	Cumulative % Passing
48 Mesh	300	0.00	100.0
65 Mesh	212	1.50	98.5
100 Mesh	150	8.10	90.4
150 Mesh	106	11.60	78.8
200 Mesh	75	12.90	65.9
270 Mesh	53	11.10	54.8
400 Mesh	38	8.90	45.9
TOTAL		100.00	**

K80= 110 $\mu\text{m}$

Note: 15 min. grind calibration using 2 kg. Ore, 1500 ml water and  
 20 kg. of Mild Steel rods in Mill: M4



**TABLE III-4**  
**SCREEN ANALYSIS**  
**KM5238 Composite 2 - 24 Minute Grind Calibration**

Product	Particle Size $\mu\text{m}$	Weight % Retained	Cumulative % Passing
65 Mesh	212	0.00	100.0
100 Mesh	150	0.10	99.9
150 Mesh	106	3.40	96.5
200 Mesh	75	9.50	87.0
270 Mesh	53	14.00	73.0
400 Mesh	38	13.60	59.4
TOTAL		100.00	**

K80= 64 $\mu\text{m}$

Note: 24 min. grind calibration using 2 kg. Ore, 1500 ml water and  
20 kg. of Mild Steel rods in Mill: M4

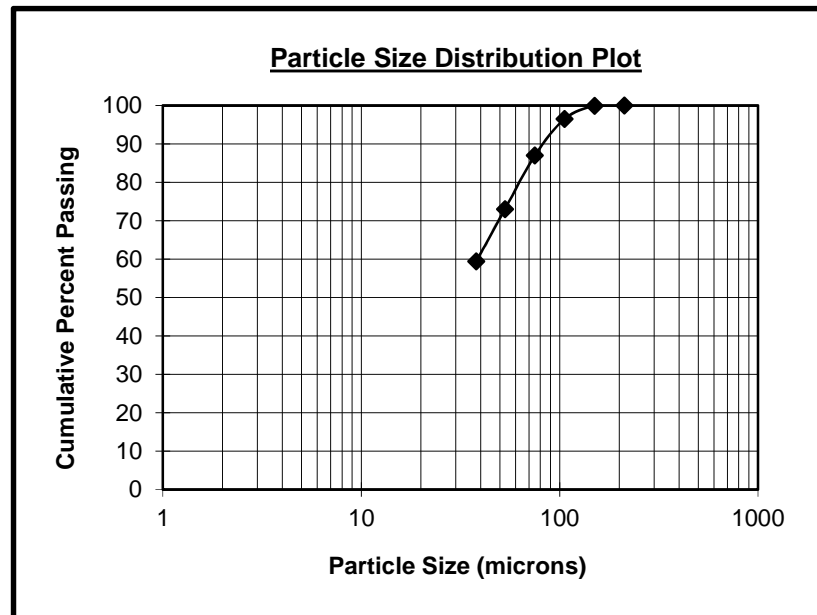
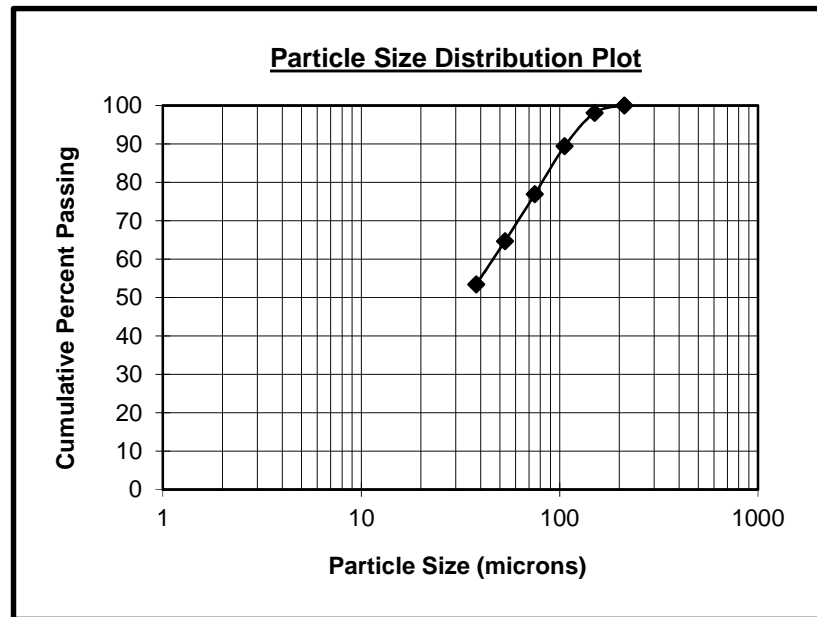


TABLE III-5  
SCREEN ANALYSIS  
KM5238-01 Gravity Tailing

Product	Particle Size $\mu\text{m}$	Weight % Retained	Cumulative % Passing
65 Mesh	212	0.00	100.0
100 Mesh	150	1.90	98.1
150 Mesh	106	8.70	89.4
200 Mesh	75	12.50	76.9
270 Mesh	53	12.20	64.7
400 Mesh	38	11.30	53.4
TOTAL		100.00	**

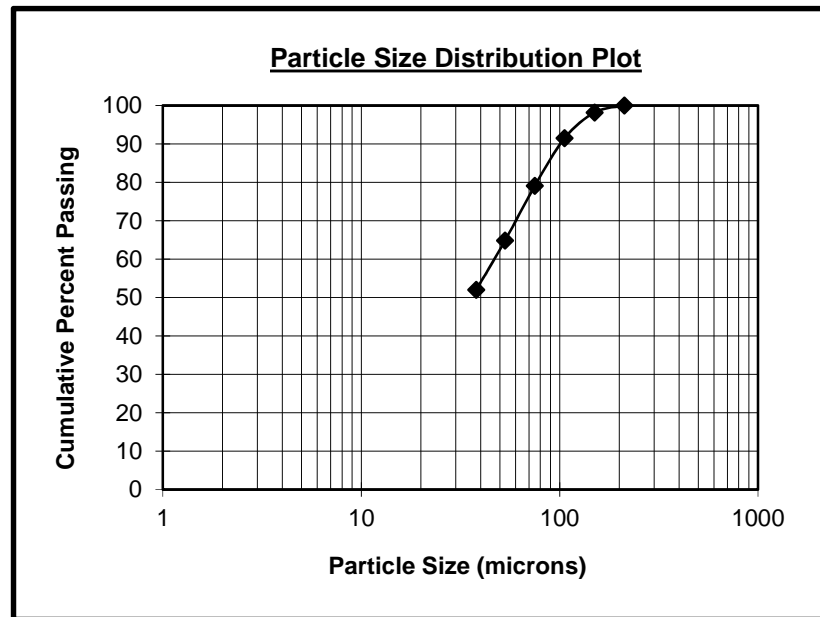
K80= 82 $\mu\text{m}$



**TABLE III-6**  
**SCREEN ANALYSIS**  
**KM5238-02 Gravity Tailing**

Product	Particle Size $\mu\text{m}$	Weight % Retained	Cumulative % Passing
65 Mesh	212	0.00	100.0
100 Mesh	150	1.80	98.2
150 Mesh	106	6.70	91.5
200 Mesh	75	12.40	79.1
270 Mesh	53	14.30	64.8
400 Mesh	38	12.80	52.0
TOTAL		100.00	**

K80= 77 $\mu\text{m}$





APPENDIX IV – KM5238

SPECIAL DATA

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IV-2 Statistical Analysis of Head Assays .....	2

TABLE IV-1  
REPLICATE HEAD ASSAY DATA

Sample	Assays – percent or g/tonne		
	TOC - percent	Au - g/tonne	Au re-assay - g/tonne
Composite 1 Head 1	0.01	1.95	1.82
Composite 1 Head 2	0.02	1.51	0.86
<b>Average</b>	<b>0.02</b>	<b>1.54</b>	
Composite 2 Head 1	0.02	1.34	0.93
Composite 2 Head 2	0.03	4.23	2.84
<b>Average</b>	<b>0.03</b>	<b>2.34</b>	

Note: TOC = total organic carbon.

TABLE IV-2A  
STATISTICAL ANALYSIS OF HEAD ASSAYS  
Composite 1

Test	Assays - g/tonne
	Au
1	1.86
Measured Head	1.54

TABLE IV-2B  
STATISTICAL ANALYSIS OF HEAD ASSAYS  
Composite 2

Test	Assays - g/tonne
	Au
2	2.09
Measured Head	2.34