



**Report
on
Heap Leach Cyanidation Testing
Gil Project Drill Core Samples
MLI Job No. 3374
November 29, 2010**

for

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EXECUTIVE SUMMARY

Column percolation leach tests were conducted on three drill core samples from the Gil project at an 80%-12.5mm feed size to determine amenability to heap leach cyanidation treatment. Comparative bottle roll tests were also conducted on each sample at 80%-1.7mm feed size to obtain preliminary information concerning heap leach amenability and to generate comparative bottle roll test data. The samples tested were designated GM09-2, GM09-4 and GM09-5. Direct head assay results showed that the respective samples contained 0.47, 6.56 and 0.72 gAu/mt ore.

The three Gil samples were readily amenable to simulated heap leach cyanidation treatment at the 80%-12.5mm feed size. Column test gold recoveries obtained from samples GM09-2, GM09-4 and GM09-5 were 76.2%, 83.4% and 79.4%, respectively, in 133 to 215 days of leaching and rinsing.

Gold recovery rates for the two lower grade samples were moderate. Gold recovery rate for the higher grade sample (GM09-4) was slower. Increasing solution cyanide concentration from 0.1 to 0.5 gNaCN/L after 80 days of leaching was effective in slightly increasing gold recovery rate from the three samples. Gold extraction was progressing from all three feeds at a slow rate when leaching was terminated, including sample GM09-4, which was leached for a relatively long time (210 days).

Cyanide consumptions were moderate to high, but should be lower in commercial production. Cyanide consumptions for samples GM09-2 and GM09-5 were 0.79 and 0.84 kgNaCN/mt ore, respectively, in 133 days of leaching and rinsing. Cyanide consumption for the higher grade sample (GM09-4) was substantially higher (2.33 kgNaCN/mt ore), in large part because of the much longer leaching cycle employed, and the resulting high solution applied to ore weight ratio (14:1). Cyanide consumptions for all three feeds were less than 0.4 kgNaCN/mt ore through the first 80 days of column leaching.

The 2.1 - 3.0 kg/mt ore lime added before leaching resulted in good pH control for sample GM09-2, but was insufficient for adequate pH control during leaching of samples GM09-4 and GM09-5. Additional lime was added to those two tests during leaching. It is expected that initial lime additions of 3.1 - 4.0 kg/mt ore would result in adequate pH control during leaching of those samples.

Bottle roll test results (80%-1.7mm feed size) showed comparable or somewhat lower gold recoveries, and very low cyanide consumptions. Lower bottle roll test gold recoveries - in spite of the finer feed size employed - are not uncommon for ores displaying moderate to slow gold recovery rates, because of the longer leach time employed during column testing.

SAMPLE PREPARATION PROCEDURES AND HEAD ANALYSIS

A total of nine buckets of split drill core samples, comprising three samples (~ 47-50 kg ea.) from the Gil project, were received for metallurgical testing. The samples were identified as GM09-2, GM09-4 and GM09-5. A fourth sample (GM09-3) was also received, but was not tested.

Each sample was stage crushed to 80%-12.5mm in size, thoroughly blended and split to obtain approximately 32 kg for a column test, 15 kg for a head screen and 5 kg for finer crushing. The 5 kg for finer crushing was stage crushed to 80%-1.7mm in size, thoroughly blended and split to triplicate 1 kg splits for head assay and two 1 kg splits for bottle roll tests.

Head samples were submitted to Chemex for assay using conventional fire assay fusion procedures to determine gold and silver content. Head assay results and head grade comparisons are presented in Table 1.

**Table 1. - Head Assay Results and Head Grade Comparisons,
Gil Project Drill Core Samples**

Determination	Head Grade, gAu/mt ore		
	GM09-2	GM09-4	GM09-5
Direct Assay, Init.	0.43	7.28	0.78
Direct Assay, Dup.	0.51	6.52	0.66
Direct Assay, Trip.	0.47	5.88	0.71
Calc'd., Bottle Roll, 1.7mm	0.47	8.04	0.66
Calc'd., Head Screen, 12.5mm	0.41	6.79	0.72
Calc'd., Column, 12.5mm	0.42	6.37	0.63
Average	0.45	6.81	0.69
Std. Deviation	0.04	0.76	0.05
Precision, %	91.1	88.8	92.8

Gold head grade agreement was above or slightly below the normally expected precision limits (90%) for the Gil drill core samples. Gold occurrence for the highest grade sample (GM09-04) was “spotty” and head grade standard deviations was relatively high (0.76 gAu/mt ore). Head grade standard deviations for the two other samples were very low (0.04 - 0.05 gAu/mt ore).

Head assay results showed that none of the samples contained greater than 1 gAg/mt ore. Consequently, silver recovery data are not discussed in detail in this report.

BOTTLE ROLL TEST PROCEDURES AND RESULTS

Direct agitated cyanidation (bottle roll) tests were conducted on three Gil drill core samples at an 80%-1.7mm feed size to determine gold recovery, recovery rate and reagent requirements.

Ore charges were mixed with water to achieve 50 weight percent solids. Natural pulp pHs were measured. Lime was added to adjust the pH of the pulps to between 10.5 and 11.0 before adding the cyanide. Sodium cyanide, equivalent to 0.10 gNaCN/L of solution, was added to the alkaline pulps.

Leaching was conducted by rolling the pulps in bottles on the laboratory rolls for 96 hours. Rolling was suspended briefly after 2, 6, 24, 48 and 72 hours to allow the pulps to settle so samples of pregnant solution could be taken for gold and silver analysis by A.A. methods. Pregnant solution volumes were measured and sampled. Cyanide concentration and pH were determined for each pregnant solution. Make-up water, equivalent to that withdrawn, was added to the pulps. Cyanide concentrations were restored to initial levels. Lime was added, when necessary, to maintain the leaching pH at between 10.5 and 11.0. Rolling was then resumed.

After 96 hours, the pulps were filtered to separate liquids and solids. Final pregnant solution volumes were measured and sampled for gold and silver analysis. Final pH and cyanide concentrations were determined. Leached residues were filtered, dried and assayed in triplicate to determine residual precious metal content.

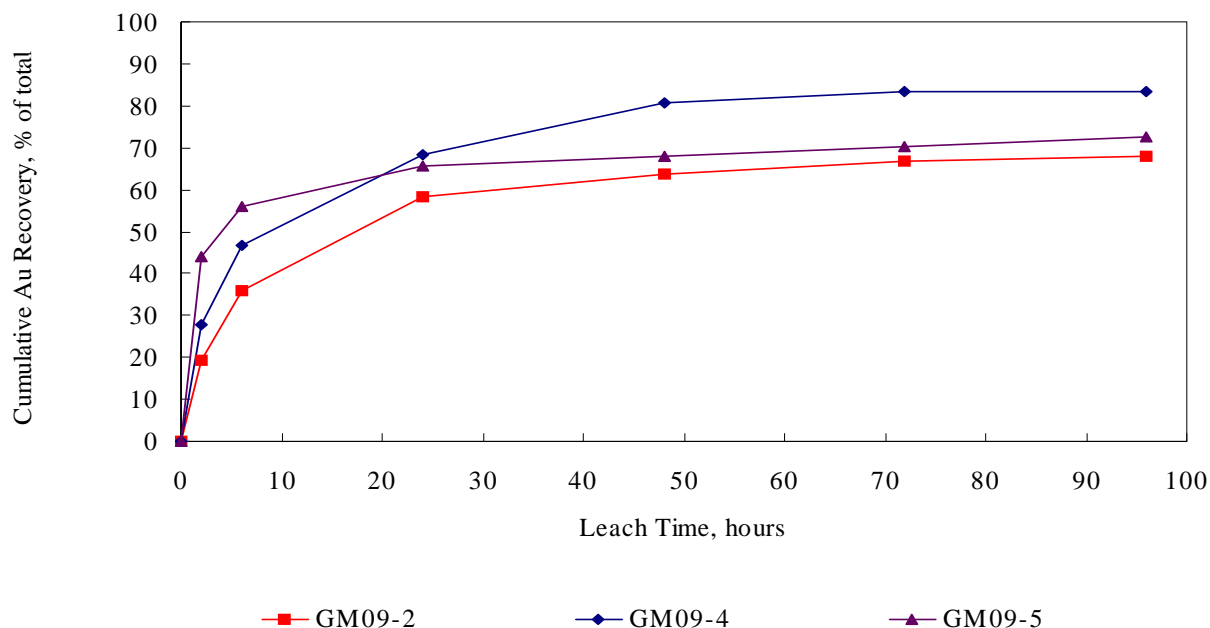
Overall metallurgical results from the bottle roll tests are provided in Table 2. Gold leach rate profiles are shown graphically in Figure 1. Detailed bottle roll test data are provided in Section 1 of the Appendix to this report.

**Table 2. - Overall Metallurgical Results, Bottle Roll Tests,
 Gil Project Drill Core Samples, 80%-1.7mm Feed Size**

Metallurgical Results	Sample		
	GM09-2	GM09-4	GM09-5
Extraction: % of total Au			
in 2 hours	19.1	28.0	43.9
in 6 hours	35.9	46.9	55.9
in 24 hours	58.4	68.3	65.5
in 48 hours	63.7	80.5	68.0
in 72 hours	66.8	83.4	70.2
in 96 hours	68.1	83.3	72.7
Extracted, g/mt ore	0.32	6.70	0.48
Tail Assay, g/mt ore ¹⁾	0.15	1.34	0.18
Calculated Head, g/mt ore	0.47	8.04	0.66
Average Head, g/mt ore ²⁾	0.45	6.81	0.69
NaCN Consumed, kg/mt ore	<0.07	<0.07	<0.07
Lime Added, kg/mt ore	2.1	3.0	2.1
Final Solution pH	10.5	10.1	10.2
Natural pH (50% solids)	7.1	7.2	7.5
Extracted, gAg/mt ore	0.1	0.6	0.3
Tail Assay, gAg/mt	<1.0	<1.0	<1.0

1) Average of triplicate direct assays.
 2) Average of all head grade determinations.

**Figure 1. - Gold Leach Rate Profiles, Bottle Roll Tests,
 Gil Project Drill Core Samples, 80%-1.7mm Feed Size**



Overall metallurgical results show that the Gil samples were amenable to direct agitated cyanidation treatment at the 80%-1.7 mm feed size. Gold recoveries achieved from samples GM09-2, 4 and 5 were 68.1%, 83.3% and 72.7%, respectively, in 96 hours of leaching.

Gold recovery rates were fairly rapid for all samples. A longer leach cycle would incrementally improve gold recovery from samples GM09-2 and GM09-5.

Cyanide consumptions were very low for all samples (<0.07 kgNaCN/mt ore). Lime requirements for the two lower grade samples, GM09-2 and GM09-5 were low at 2.1 kg/mt ore. Lime requirement for the high grade sample, GM-09-4, was slightly higher at 3.0 kg/mt ore.

COLUMN PERCOLATION LEACH TEST PROCEDURES AND RESULTS

Column percolation leach tests were conducted on three Gil drill core samples at an 80%-12.5mm feed size to determine precious metal recovery, recovery rate and reagent requirements under simulated heap leaching conditions.

Lime was mixed with the dry ore charges before column loading procedures. Lime additions were based on the bottle roll test lime requirements. Ore charges were placed into 10 cm (4") I.D. x 3 m (10') high PVC leaching columns in a manner to minimize particle segregation and compaction.

Leaching was conducted by applying cyanide solution (0.10 gNaCN/L) over the charges at a rate of 12 Lph/m² (0.005 gpm/ft²) of column cross-sectional area. After 80 days, the cyanide solution concentration was increased to 0.5 gNaCN/L for the remainder of the test. Pregnant effluent solutions were collected each 24 hour period. Pregnant solution volumes were measured by weighing, and samples were taken for gold and silver analysis using conventional A.A. methods. Cyanide concentration and pH were determined for each pregnant solution. Pregnant solutions were pumped through a three stage carbon absorption for dissolved precious metal values. Barren solution volumes were measured by weighing and samples were taken for analysis using conventional A.A. methods. Cyanide concentration and pH were determined. Barren solution, with appropriate make-up reagents, was applied to the ore charges daily.

After leaching, fresh water rinsing was conducted to remove residual cyanide (County requirement) and to recover dissolved precious metal values. Moisture required to saturate the ore charges (in process solution inventory) and retained moistures were determined. Apparent ore bulk densities were measured before and after leaching.

Drain down tests were conducted after rinsing was complete. Tests were conducted by terminating solution application, and at that time, measuring drain down volume. Drain volumes were collected and measured periodically by weighing until drain down was complete.

After leaching, rinsing and draining, residues were removed from the columns and moisture samples taken immediately. The remaining leached residues were air dried, blended and split to obtain a sample for a tail screen analysis. Tail screens were conducted using the same procedure and size fractions as for the head screens to determine residual precious metal content and distribution and to obtain recovery by size fraction data. Tail screen size fraction samples were assayed in triplicate.

Overall metallurgical results from the column tests are shown in Table 3. Gold leach rate profiles are shown graphically in Figure 2. Head and tail screen analysis results and recovery by size fraction data are provided in Tables 4 through 12. Metallurgical balances are presented in Tables 13 through 15. Physical ore characteristics data are provided in Table 16. Drain down test results are provided in Table 17. Detailed column test data are provided in Section 2 of the Appendix to this report.

**Table 3. - Overall Metallurgical Results, Column Leach Tests,
 Gil Project Drill Core Samples, 80%-12.5mm Feed Size**

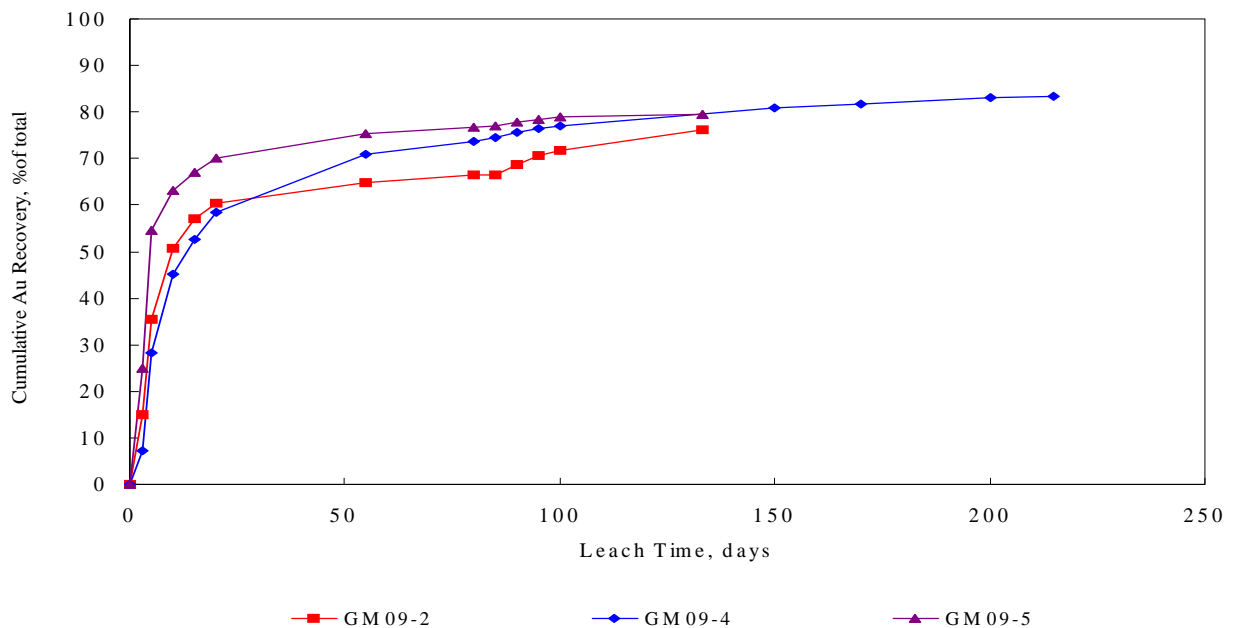
Metallurgical Results	Sample		
	GM09-2	GM09-4	GM09-5
Extraction: % of total Au			
1st Effluent	14.9	7.2	24.8
in 5 days	35.4	28.3	54.6
in 10 days	50.7	45.1	63.2
in 15 days	57.1	52.6	66.9
in 20 days	60.4	58.3	70.1
in 55 days	64.7	71.0	75.3
in 80 days ¹⁾	66.4	73.8	76.6
in 100 days	71.7	77.1	78.9
in 150 days		80.9	
in 170 days		81.8	
in 200 days		83.1	
End of Leach/Rinse	76.2	83.4	79.4
Extracted, gAu/mt ore	0.32	5.31	0.50
Tail Screen, gAu/mt	0.10	1.06	0.13
Calculated Head, gAu/mt ore	0.42	6.37	0.63
Average Head, gAu/mt ore ²⁾	0.45	6.81	0.69
NaCN Consumed, kg/mt ore	0.79	2.33	0.84
Lime Added, kg/mt ore ³⁾	2.1	3.0 (15.1)	2.1 (24.7)
Final Solution pH	10.2	10.4	10.5
pH After Rinse	10.0	11.1	10.8
Ag Extraction, % of total	9.1	33.3	23.1
Extracted, gAg/mt ore	0.1	0.5	0.3
Tail Screen, gAg/mt	1.0	1.0	1.0
Calculated Head, gAg/mt ore	1.1	1.5	1.3
Leach/Rinse Cycle, Days	133	215	133

1) Solution cyanide concentration was increased from 0.10 to 0.50 gNaCN/L.

2) Average of all head grade determinations.

3) Lime addition shown in parentheses is additional lime added as filtered milk-of-lime to the daily barren solution to increase effluent solution pH.

**Figure 2. - Gold Leach Rate Profiles, Column Leach Tests,
 Gil Project Drill Core Samples, 80%-12.5mm Feed Size**



Overall metallurgical results show that the Gil drill core samples were amenable to simulated heap leaching treatment at 80%-12.5mm feed size. Gold recoveries obtained from the two lower grade samples, GM09-2 and GM09-5, were 76.2% and 79.4%, respectively, in 133 days of leaching and rinsing. Gold recovery obtained from the higher grade sample (GM09-4) was 83.4%, in 215 days of leaching and rinsing

Precious metal recovery rates were moderate for the low grade samples. Gold recovery rate for the high grade sample was slower. Gold extraction was substantially complete by day 80, when solution cyanide concentration was increased. Increasing the cyanide concentration of the leach solution from 0.10 to 0.50 gNaCN/L solution, beginning after 80 days of leaching, was effective in increasing the gold recovery rate from the Gil Project samples.

Cyanide consumptions for samples GM09-2 and GM09-5 were 0.79 and 0.84 kgNaCN/mt ore, respectively. Cyanide consumption for sample GM09-4 was significantly higher at 2.33 kgNaCN/mt ore. The higher cyanide consumption for samples GM09-4 resulted largely from the much longer leaching cycle (210 days) and much higher ratio of barren solution applied to ore weight (14.4:1) employed, in comparison to the other two tests. As mentioned previously, cyanide consumption in a commercial operation should be lower.

The 2.1 kg/mt ore lime added to GM09-2 before leaching was sufficient for maintaining effluent solution above pH 10.0 throughout most of the leaching cycle. The 2.1 - 3.0 kg/mt added to samples GM09-4 and GM09-5 resulted in marginal pH control, and effluent solutions ranging from pH 9.0 - 10.0 generally were obtained during the first 60-100 days of leaching. Additional lime (15 - 25 kg/mt ore) was added to the daily barren solutions from these tests to increase effluent solution pH to above 10.5. Adding lime in this manner is known to be very inefficient, and results in substantially overstated lime demand. It is expected that initial lime additions of approximately 1 kg/mt ore more than used for column testing (3.1 - 4.0 kg/mt ore total) would result in adequate pH control during leaching.

**Table 4. - Head Screen Analysis Results,
Gil Project Drill Core Sample GM09-2, 80%-12.5mm Feed Size**

Size Fraction	Weight, %	Cum. Wt., %	Assay, g/mt		Distribution			
					Au		Ag	
					%	Cum. %	%	Cum. %
+12.5mm	22.4	22.4	0.28	0.9	15.5	15.5	21.9	21.9
-12.5+6.3mm	41.0	63.4	0.22	0.9	22.2	37.7	40.0	61.9
-6.3+1.7mm	21.0	84.4	0.59	1.0	30.6	68.3	22.8	84.7
-1.7mm+420µm	6.7	91.1	0.66	0.9	10.9	79.2	6.5	91.2
-420+212µm	1.9	93.0	1.67	0.9	7.8	87.0	1.8	93.0
-212+150µm	0.9	93.9	1.40	1.0	3.1	90.1	1.0	94.0
-150µm	6.1	100.0	0.66	0.9	9.9	100.0	6.0	100.0
Composite	100.0		0.41	0.9	100.0		100.0	

**Table 5. - Tail Screen Analysis Column Leached Residue,
Gil Project Drill Core Sample GM09-2, 80%-12.5mm Feed Size**

Size Fraction	Weight, %	Cum. Wt., %	Assay, g/mt*		Distribution			
					Au		Ag	
					%	Cum. %	%	Cum. %
+12.5mm	20.6	20.6	0.17	1.0	34.3	34.3	20.0	20.0
-12.5+6.3mm	39.2	59.8	0.09	1.0	34.6	68.9	38.1	58.1
-6.3+1.7mm	22.3	82.1	0.07	1.0	15.3	84.2	21.7	79.8
-1.7mm+420µm	8.1	90.2	0.07	1.0	5.6	89.8	7.9	87.7
-420+212µm	2.3	92.5	0.05	1.3	1.1	90.9	2.9	90.6
-212+150µm	0.8	93.3	0.07	1.3	0.6	91.5	1.0	91.6
-150µm	6.7	100.0	0.13	1.3	8.5	100.0	8.4	100.0
Composite	100.0		0.10	1.0	100.0		100.0	

* Each size fraction was assayed in triplicate.

**Table 6. - Recovery By Size Fraction Data, Bottle Roll Test,
Gil Project Drill Core Sample GM09-2, 80%-12.5mm Feed Size**

Size Fraction	Weight, percent		Assays, gAu/mt		Au Recovery, Percent
	Head	Tail	Head	Tail	
+12.5mm	22.4	20.6	0.28	0.17	39.3
-12.5+6.3mm	41.0	39.2	0.22	0.09	59.1
-6.3+1.7mm	21.0	22.3	0.59	0.07	88.1
-1.7mm+420µm	6.7	8.1	0.66	0.07	89.4
-420+212µm	1.9	2.3	1.67	0.05	97.0
-212+150µm	0.9	0.8	1.40	0.07	95.0
-150µm	6.1	6.7	0.66	0.13	80.3
Composite	100.0	100.0	0.41	0.10	75.6
			Column Test Recovery		76.2

Head screen analysis results show that the contained gold values in the GM09-2 sample were somewhat enriched in the -6.3mm size fractions. Tail screen analysis results show the residual gold values in the column leached residue were slightly enriched in the coarsest (+12.5mm) and finest (-150µm) size fractions. Tail screen results and recovery by size fraction data indicate that crushing finer than 6.3mm would improve gold recovery by cyanidation. Bottle roll test results show, however, that a somewhat lower gold recovery was obtained at a minus 6.3mm (80%-1.7mm) feed size, in 4 days of leaching.

**Table 7. - Head Screen Analysis Results,
Gil Project Drill Core Sample GM09-4, 80%-12.5mm Feed Size**

Size Fraction	Weight, %	Cum. Wt., %	Assay, g/mt		Distribution			
					Au		Ag	
			Au	Ag	%	Cum. %	%	Cum. %
+12.5mm	19.1	19.1	3.68	1.0	10.3	10.3	18.4	18.4
-12.5+6.3mm	31.7	50.8	7.10	1.0	33.1	43.4	30.6	49.0
-6.3+1.7mm	24.0	74.8	4.58	1.0	16.2	59.6	23.2	72.2
-1.7mm+420µm	10.1	84.9	6.39	1.0	9.5	69.1	9.8	82.0
-420+212µm	3.4	88.3	32.30	1.0	16.2	85.3	3.3	85.3
-212+150µm	1.2	89.5	19.15	4.0	3.4	88.7	4.6	89.9
-150µm	10.5	100.0	7.31	1.0	11.3	100.0	10.1	100.0
Composite	100.0		6.79	1.0	100.0		100.0	

**Table 8. - Tail Screen Analysis Column Leached Residue,
Gil Project Drill Core Sample GM09-4, 80%-12.5mm Feed Size**

Size Fraction	Weight, %	Cum. Wt., %	Assay, g/mt*		Distribution			
					Au		Ag	
			Au	Ag	%	Cum. %	%	Cum. %
+12.5mm	16.0	16.0	1.96	1.0	29.5	29.5	16.0	16.0
-12.5+6.3mm	31.1	47.1	1.16	1.0	33.9	63.4	31.2	47.2
-6.3+1.7mm	25.3	72.4	1.18	1.0	28.1	91.5	25.3	72.5
-1.7mm+420µm	11.6	84.0	0.57	1.0	6.2	97.7	11.6	84.1
-420+212µm	3.7	87.7	0.34	1.0	1.2	98.9	3.7	87.8
-212+150µm	1.0	88.7	0.22	0.9	0.2	99.1	0.9	88.7
-150µm	11.3	100.0	0.08	1.0	0.9	100.0	11.3	100.0
Composite	100.0		1.06	1.0	100.0		100.0	

* Each size fraction was assayed in triplicate.

**Table 9. - Recovery By Size Fraction Data, Bottle Roll Test,
Gil Project Drill Core Sample GM09-4, 80%-12.5mm Feed Size**

Size Fraction	Weight, percent		Assays, gAu/mt		Au Recovery, Percent
	Head	Tail	Head	Tail	
+12.5mm	19.1	16.0	3.68	1.96	46.7
-12.5+6.3mm	31.7	31.1	7.10	1.16	83.7
-6.3+1.7mm	24.0	25.3	4.58	1.18	74.2
-1.7mm+420µm	10.1	11.6	6.39	0.57	91.1
-420+212µm	3.4	3.7	32.30	0.34	98.9
-212+150µm	1.2	1.0	19.15	0.22	98.9
-150µm	10.5	11.3	7.31	0.08	98.9
Composite	100.0	100.0	6.79	1.06	84.4
			Column Test Recovery		83.4

Head screen analysis results show that the contained gold values in the GM09-4 sample were significantly enriched in the -420 + 150µm size fractions. Tail screen analysis results show the residual gold values in the column leached residues from GM09-4 were somewhat enriched in the +12.5mm size fraction, and depleted from the -1.7mm size fractions. Tail screen results and recovery by size fraction data indicate that gold recovery by cyanidation would tend to increase with decreasing feed size to as fine as a minus 420µm feed size.

**Table 10. - Head Screen Analysis Results,
Gil Project Drill Core Sample GM09-5, 80%-12.5mm Feed Size**

Size Fraction	Weight, %	Cum. Wt., %	Assay, g/mt		Distribution			
					Au		Ag	
					%	Cum. %	%	Cum. %
+12.5mm	23.7	23.7	1.14	0.9	37.6	37.6	21.7	21.7
-12.5+6.3mm	32.7	56.4	0.49	0.9	22.3	59.9	29.9	51.6
-6.3+1.7mm	23.0	79.4	0.50	0.9	16.0	75.9	21.0	72.6
-1.7mm+420µm	9.5	88.9	0.65	0.9	8.6	84.5	8.7	81.3
-420+212µm	2.8	91.7	0.69	1.0	2.7	87.2	2.8	84.1
-212+150µm	0.9	92.6	0.85	1.0	1.1	88.3	0.9	85.0
-150µm	7.4	100.0	1.13	2.0	11.7	100.0	15.0	100.0
Composite	100.0		0.72	1.0	100.0		100.0	

**Table 11. - Tail Screen Analysis Column Leached Residue,
Gil Project Drill Core Sample GM09-5, 80%-12.5mm Feed Size**

Size Fraction	Weight, %	Cum. Wt., %	Assay, g/mt*		Distribution			
					Au		Ag	
					%	Cum. %	%	Cum. %
+12.5mm	17.9	17.9	0.21	1.0	30.0	30.0	17.9	17.9
-12.5+6.3mm	29.5	47.4	0.16	1.0	37.6	67.6	29.5	47.4
-6.3+1.7mm	26.2	73.6	0.09	1.0	18.8	86.4	26.2	73.6
-1.7mm+420µm	12.8	86.4	0.07	1.0	7.1	93.5	12.8	86.4
-420+212µm	3.8	90.2	0.06	1.0	1.8	95.3	3.8	90.2
-212+150µm	0.9	91.1	0.06	1.0	0.4	95.7	0.9	91.1
-150µm	8.9	100.0	0.06	1.0	4.3	100.0	8.9	100.0
Composite	100.0		0.13	1.0	100.0		100.0	

* Each size fraction was assayed in triplicate.

**Table 12. - Recovery By Size Fraction Data, Bottle Roll Test,
Gil Project Drill Core Sample GM09-5, 80%-12.5mm Feed Size**

Size Fraction	Weight, percent		Assays, gAu/mt		Au Recovery, Percent
	Head	Tail	Head	Tail	
+12.5mm	23.7	17.9	1.14	0.21	81.6
-12.5+6.3mm	32.7	29.5	0.49	0.16	67.3
-6.3+1.7mm	23.0	26.2	0.50	0.09	82.0
-1.7mm+420µm	9.5	12.8	0.65	0.07	89.2
-420+212µm	2.8	3.8	0.69	0.06	91.3
-212+150µm	0.9	0.9	0.85	0.06	92.9
-150µm	7.4	8.9	1.13	0.06	94.7
Composite	100.0	100.0	0.72	0.13	81.9
			Column Test Recovery		79.4

Head screen analysis results show that the contained gold values in the GM09-5 sample were somewhat enriched in the +12.5mm and -150µm size fractions. Tail screen analysis results show the residual gold values in the column leached residues from GM09-5 were somewhat enriched in the +6.3mm size fractions. Tail screen results and recovery by size fraction data indicate that crushing finer than 1.7mm would somewhat improve gold recovery by cyanidation. Bottle roll test results showed, however, that a somewhat lower gold recovery was obtained at a minus 6.3mm (80%-1.7mm) feed size, in 4 days of leaching.

**Table 13. - Metallurgical Balances, Column Leach Test,
Gil Project Drill Core Sample GM09-2, 80%-12.5mm Feed Size**

	Metallurgical Balance		
	Sol. vs. Tail	Carbon vs. Tail ³⁾	Head vs. Tail ²⁾
Extracted, gAu/mt ore	0.32	0.33	0.35
Tail Assay, gAu/mt	0.10	0.10	0.10
Calculated, Head, gAu/mt	0.42	0.43	0.45
Recovery, %	76.2	76.7	77.8
Deviation, g/mt ¹⁾	N/A	0.01	0.03
Precision, %	100.0	97.6	92.9

1) Deviation from solution versus tail balance.

2) Calculated, based on average of all head grades and tail screen results.

3) Includes values lost through 30 ml samples.

**Table 14. - Metallurgical Balances, Column Leach Test,
Gil Project Drill Core Sample GM09-4, 80%-12.5mm Feed Size**

	Metallurgical Balance		
	Sol. vs. Tail	Carbon vs. Tail ³⁾	Head vs. Tail ²⁾
Extracted, gAu/mt ore	5.31	5.55	5.75
Tail Assay, gAu/mt	1.06	1.06	1.06
Calculated, Head, gAu/mt	6.37	6.61	6.81
Recovery, %	83.4	84.0	84.4
Deviation, g/mt ¹⁾	N/A	0.24	0.44
Precision, %	100.0	96.2	93.1

1) Deviation from solution versus tail balance.

2) Calculated, based on average of all head grades and tail screen results.

3) Includes values lost through 30 ml samples.

**Table 15. - Metallurgical Balances, Column Leach Test,
Gil Project Drill Core Sample GM09-5, 80%-12.5mm Feed Size**

	Metallurgical Balance		
	Sol. vs. Tail	Carbon vs. Tail ³⁾	Head vs. Tail ²⁾
Extracted, gAu/mt ore	0.50	0.48	0.56
Tail Assay, gAu/mt	0.13	0.13	0.13
Calculated, Head, gAu/mt	0.63	0.61	0.69
Recovery, %	79.4	78.7	81.2
Deviation, g/mt ¹⁾	N/A	0.02	0.06
Precision, %	100.0	96.8	90.5

1) Deviation from solution versus tail balance.

2) Calculated, based on average of all head grades and tail screen results.

3) Includes values lost through 30 ml samples.

Solution versus tail, loaded carbon versus tail and head versus tail metallurgical balances agreed within the normally expected precision limits (>90%) for the each of the column leach tests. Solution versus tail metallurgical balances are considered the most reliable, because of the number of check analyses performed on the column tests solutions. That balance was used for all percentage recovery calculations discussed in this report.

**Table 16. - Physical Ore Characteristic Data, Column Leach Tests
Gil Project Drill Core Samples, 80%-12.5mm Feed Size**

Sample Designation	Ore Charge, kg	Moisture, weight percent			Bulk Density, mt ore/m ³	
		As Rec'd.	to Saturate*	Retained	Before	After
GM09-2	32.71	0.1	14.9	6.3	1.62	1.66
GM09-4	31.87	0.1	16.6	6.5	1.58	1.58
GM09-5	31.99	0.1	17.4	8.1	1.64	1.66

* Calculated on dry ore weight basis.

Physical characteristic data show that moisture requirements were fairly typical for finely crushed feeds. Very little or no “slumping” of column charges was observed during leaching. Apparent bulk densities were essentially the same, before and after leaching. No solution percolation, fines migration or solution channeling problems were encountered during leaching.

**Table 17. - Drain Down Rate Test Results, Column Leached Residues,
Gil Project Drill Core Samples, 80%-12.5mm Feed Size**

Drain Time, hours	Effluent Solution								
	GM09-2			GM09-4			GM09-5		
	Liters	Cum. L/mt ore	Rate, L/hr/mt	Liters	Cum. L/mt ore	Rate, L/hr/mt	Liters	Cum. L/mt ore	Rate, L/hr/mt
0.08	0.006	0.18	2.294	0.006	0.19	2.351	0.007	0.22	2.734
0.25	0.018	0.73	3.238	0.012	0.56	2.213	0.015	0.69	2.757
0.50	0.026	1.53	3.180	0.073	2.85	9.154	0.023	1.41	2.875
1.00	0.058	3.30	3.547	0.167	8.09	10.470	0.051	3.00	3.188
2.00	0.113	6.76	3.456	0.162	13.17	5.078	0.105	6.28	3.281
4.00	0.259	14.68	3.168	0.127	17.15	1.991	0.208	12.78	2.600
8.00	0.168	19.82	1.468				0.128	16.78	1.143
24.00	0.244	27.28	0.466	0.477	32.10	0.748	0.187	22.63	0.365
48.00	0.117	30.86	0.149	0.071	34.33	0.093	0.099	25.72	0.129
72.00	0.040	32.08	0.051	0.015	34.80	0.020	0.050	27.28	0.065
96.00	0.014	32.51	0.018	0.006	34.98	0.008	0.033	28.31	0.043
120.00	0.005	32.66	0.006				0.018	28.88	0.023
144.00	0.002	32.72	0.003				0.011	29.22	0.014
168.00							0.005	29.38	0.007

CONCLUSIONS

- The Gil project drill core samples were amenable to direct agitated cyanidation at 80%-1.7mm feed size.
- Gold recovery rates were fairly rapid.
- Cyanide consumptions were very low.
- Lime requirements were low to moderate.

- The Gil project drill core samples were readily amenable to simulated heap leaching treatment at the 80%-12.5mm feed size.
- Gold recovery rates were moderate for the lower grade samples. Gold recovery rate for the higher grade sample was fairly slow.
- Cyanide consumptions were moderate to high, but should be substantially lower in commercial production.
- Increasing barren leach solution cyanide concentration from 0.1 to 0.5 gNaCN/L was effective in increasing gold recovery rate somewhat, late in the leaching cycle.
- Lime requirements were low to moderate.

RECOMMENDATIONS

We recommend that additional column percolation leach tests be conducted on representative drill core composites or bulk ore samples to optimize heap leach feed size and leaching conditions.

We also recommend that load/permeability testing be conducted on representative column leached residue samples to determine the permeability of the Gil Project samples under simulated heap stack height compressive loadings.

We recommend that, if sufficient quantities of higher grade material exist, consideration be given to evaluation of other (higher cost) processing methods (milling/cyanidation, gravity concentration and flotation).



Michael Doolin
Metallurgist / Project Manager

APPENDIX

Section 1 - Detailed Bottle Roll Test Data

Section 2 - Detailed Column Test Data

Section 1 - Detailed Bottle Roll Test Data

Bottle Roll Test

Project No. 3374
 Test No. CY-1
 Composite GM09-2
 Feed Size 80%-1.7mm

Head Assay	g Au/mt	g Ag/mt
Predicted		
Initial	0.43	<1
Duplicate	0.51	<1
Triplicate	0.47	<1
Average	0.47	<1

Ore Charge 1013.4 g Final Residue Wt 1005.9 g

Solution Vol. 1.0134 L

Natural pH 7.1

Tail Assay	g Au/mt	g Ag/mt
Initial	0.17	<1
Duplicate	0.10	<1
Triplicate	0.18	<1
Average	0.15	<1

Solid Density Wt. % 50.0 Cyanide Conc. Maintained at: g/L 0.10

Raw Data

Leach Time Hours	Solution Withdrawn			Reagents Applied		Sol. Analysis		Removed from pulp		
	mL	NaCN (gpL)	pH	NaCN (g)	Lime (g)	Au (mg/L)	Ag (mg/L)	Au (mg)	Ag (mg)	NaCN (g)
0	----	0.10	----	0.10	0.90	----	----	----	----	----
2	100	0.09	9.8	0.02	0.35	0.09	0.04	0.009	0.004	0.0085
6	100	0.10	10.2	0.01	0.15	0.16	0.04	0.016	0.004	0.01
24	100	0.10	9.8	0.01	0.50	0.25	0.06	0.025	0.006	0.0095
48	100	0.10	10.5	0.01	0.00	0.25	0.07	0.025	0.007	0.01
72	100	0.09	10.2	0.02	0.20	0.24	0.07	0.024	0.007	0.009
96	100	0.10	10.5	----	----	0.22	0.06	----	----	----

Metallurgical Results

Cumulative Au Extraction				Cumulative Ag Extraction			Reagent Requirements Cumulative kg/mt ore	
Leach Time Hours	mg	g/mt ore	% of total	mg	g/mt ore	% of total	Cyanide Consumed	Lime Added
0		0.000	0.0		0.00			0.9
2	0.091	0.090	19.1	0.041	0.04		0.01	1.2
6	0.171	0.169	35.9	0.045	0.04		0.01	1.4
24	0.278	0.275	58.4	0.069	0.07		0.02	1.9
48	0.303	0.299	63.7	0.085	0.08		0.01	1.9
72	0.318	0.314	66.8	0.092	0.09		0.02	2.1
96	0.322	0.32	68.1	0.089	0.1		0.02	2.1

	Au	% of Total	Ag	% of Total
Extracted g/mt ore	0.32	68.1	0.1	<10.0
Tail assay, g/mt	0.15		<1.0	
Calculated Head g/mt ore	0.47		<1.0	
NaCN Consumed, kg/mt ore	<0.07			
Lime Added, kg/mt ore	2.1			

Bottle Roll Test

Project No. 3374
Test No. CY-2
Composite GM09-4
Feed Size 80%-1.7mm

Head Assay	g Au/mt	g Ag/mt
Predicted		
Initial	7.28	<1
Duplicate	6.52	<1
Triplicate	5.88	<1
Average	6.56	<1

Ore Charge 1017.1 g Final Residue Wt 1011.9 g

Solution Vol. 1.0171 L

Natural pH 7.2

Tail Assay	g Au/mt	g Ag/mt
Initial	1.39	<1
Duplicate	1.53	<1
Triplicate	1.09	<1
Average	1.34	<1

Solid Density Wt. % 50.0
 Cyanide Conc. Maintained at: g/L 0.10

Raw Data

Leach Time Hours	Solution Withdrawn			Reagents Applied		Sol. Analysis		Removed from pulp		
	mL	NaCN (gpL)	pH	NaCN (g)	Lime (g)	Au (mg/L)	Ag (mg/L)	Au (mg)	Ag (mg)	NaCN (g)
0	----	0.10	----	0.10	1.40	----	----	----	----	----
2	100	0.09	9.6	0.02	0.60	2.25	0.16	0.225	0.016	0.009
6	100	0.10	10.1	0.01	0.35	3.55	0.26	0.355	0.026	0.01
24	100	0.10	9.8	0.01	0.75	4.92	0.41	0.492	0.041	0.01
48	100	0.10	10.5	0.01	0.00	5.42	0.42	0.542	0.042	0.01
72	100	0.10	10.3	0.01	0.00	5.12	0.41	0.512	0.041	0.0095
96	100	0.09	10.1	----	----	4.61	0.39	----	----	----

Metallurgical Results

Cumulative Au Extraction				Cumulative Ag Extraction			Reagent Requirements Cumulative kg/mt ore	
Leach Time Hours	mg	g/mt ore	% of total	mg	g/mt ore	% of total	Cyanide Consumed	Lime Added
0		0.000	0.0		0.00			1.4
2	2.288	2.250	28.0	0.163	0.16		0.01	2.0
6	3.836	3.771	46.9	0.280	0.28		0.01	2.3
24	5.584	5.490	68.3	0.459	0.45		0.01	3.0
48	6.585	6.474	80.5	0.510	0.50		0.01	3.0
72	6.822	6.707	83.4	0.542	0.53		0.01	3.0
96	6.815	6.70	83.3	0.563	0.6		0.02	3.0

Extracted g/mt ore	<u>Au</u>	<u>% of Total</u>	<u>Ag</u>	<u>% of Total</u>
Tail assay, g/mt	6.70	83.3	0.6	<40.0
Calculated Head g/mt ore	1.34		<1.0	
	8.04		<1.5	
NaCN Consumed, kg/mt ore	<0.07			
Lime Added, kg/mt ore	3.0			

Bottle Roll Test

Project No. 3374
 Test No. CY-3
 Composite GM09-5
 Feed Size 80%-1.7mm

Head Assay	g Au/mt	g Ag/mt
Predicted		
Initial	0.78	<1
Duplicate	0.66	<1
Triplicate	0.71	<1
Average	0.72	<1

Ore Charge 1011.8 g Final Residue Wt 1001.9 g

Solution Vol. 1.0118 L

Natural pH 7.5

Tail Assay	g Au/mt	g Ag/mt
Initial	0.14	<1
Duplicate	0.17	<1
Triplicate	0.23	<1
Average	0.18	<1

Solid Density Wt. % 50.0 Cyanide Conc. Maintained at: g/L 0.10

Raw Data

Leach Time Hours	Solution Withdrawn			Reagents Applied		Sol. Analysis		Removed from pulp		
	mL	NaCN (gpL)	pH	NaCN (g)	Lime (g)	Au (mg/L)	Ag (mg/L)	Au (mg)	Ag (mg)	NaCN (g)
0	----	0.10	----	0.10	0.95	----	----	----	----	----
2	100	0.08	9.7	0.03	0.50	0.29	0.22	0.029	0.022	0.008
6	100	0.10	10.1	0.01	0.35	0.34	0.23	0.034	0.023	0.01
24	100	0.09	9.8	0.02	0.25	0.37	0.24	0.037	0.024	0.009
48	100	0.10	10.3	0.01	0.10	0.35	0.22	0.035	0.022	0.01
72	100	0.10	10.4	0.01	0.00	0.33	0.20	0.033	0.02	0.01
96	100	0.10	10.2	----	----	0.31	0.19	----	----	----

Metallurgical Results

Leach Time Hours	Cumulative Au Extraction			Cumulative Ag Extraction			Reagent Requirements Cumulative kg/mt ore	
	mg	g/mt ore	% of total	mg	g/mt ore	% of total	Cyanide Consumed	Lime Added
0		0.000	0.0		0.00			0.9
2	0.293	0.290	43.9	0.223	0.22		0.02	1.4
6	0.373	0.369	55.9	0.255	0.25		0.02	1.8
24	0.437	0.432	65.5	0.288	0.28		0.03	2.0
48	0.454	0.449	68.0	0.292	0.29		0.03	2.1
72	0.469	0.463	70.2	0.293	0.29		0.03	2.1
96	0.482	0.48	72.7	0.303	0.3		0.04	2.1

Extracted g/mt ore	0.48	72.7	Ag	0.3	<25.0
Tail assay, g/mt	0.18		% of Total	<1.0	
Calculated Head g/mt ore	0.66			<1.2	
NaCN Consumed, kg/mt ore	<0.07				
Lime Added, kg/mt ore	2.1				

Section 2 - Detailed Column Test Data

3374 P1		NaCN added		54.24 g					g/mt ore		
Kilograms	32.71	NaCN Consumption		0.79 kg/mt ore					-----	Au	Ag
Metric Tons	0.033			2.1 kg/mt ore					Average Head	0.45	<1
									Head Screen	0.41	0.9
									Tail Screen	0.10	1.0

		NaCN Concentration	
		1/13 through 4/2	0.10 g/L solution
Daily Column Leach Test Data, MLI Composite # GM09-2		4/3 through Tests End	0.50 g/L solution

Nominal Feed Size (mm) 80%-12.5mm

Date	Days Leached	Pregnant Solution Analyses					Barren Solution											
		NaCN					Analyses		Au Extraction		Ag Extraction		NaCN	Au		Ag		
		Vol. l.	Conc. g/l	pH	Au ppm	Ag ppm	Au ppm	Ag ppm	Cum. g/mt ore	Cum. %	Cum. g/mt ore	Cum. %	Consumed kg/mt ore	mg	cum. mg	mg	cum. mg	
4/10	88	2.16	0.25	10.1	0.03	0.01	0.00	0.00	0.286	68.1	0.070	6.3	0.35	0.06	9.35	0.02	2.28	
4/11	89	2.46	0.25	10.1	0.02	0.00	0.00	0.00	0.287	68.4	0.070	6.3	0.37	0.05	9.40	0.00	2.28	
4/12	90	2.53	0.30	10.1	0.02	0.01	0.00	0.00	0.289	68.8	0.070	6.4	0.38	0.05	9.45	0.03	2.31	
4/13	91	2.26	0.30	10.2	0.02	0.00	0.00	0.00	0.290	69.1	0.070	6.4	0.40	0.05	9.50	0.00	2.31	
4/14	92	2.27	0.35	10.1	0.02	0.00	0.00	0.00	0.292	69.5	0.070	6.4	0.41	0.05	9.54	0.00	2.31	
4/15	93	2.33	0.35	10.1	0.02	0.00	0.00	0.00	0.293	69.8	0.070	6.4	0.42	0.05	9.59	0.00	2.31	
4/16	94	1.95	0.30	9.9	0.03	0.00	0.00	0.00	0.295	70.2	0.070	6.4	0.44	0.06	9.65	0.00	2.31	
4/17	95	2.39	0.30	10.1	0.02	0.00	0.00	0.00	0.296	70.6	0.070	6.4	0.45	0.05	9.70	0.00	2.31	
4/18	96	2.76	0.30	10.1	0.01	0.00	0.00	0.00	0.297	70.8	0.070	6.4	0.47	0.03	9.72	0.00	2.31	
4/19	97	2.18	0.30	10.0	0.01	0.00	0.00	0.00	0.298	70.9	0.070	6.4	0.48	0.02	9.75	0.00	2.31	
4/20	98	2.36	0.30	10.2	0.02	0.00	0.00	0.00	0.299	71.3	0.070	6.4	0.50	0.05	9.79	0.00	2.31	
4/21	99	1.88	0.30	10.1	0.02	0.01	0.00	0.00	0.301	71.6	0.071	6.5	0.52	0.04	9.83	0.02	2.32	
4/22	100	2.71	0.36	9.9	0.01	0.00	0.00	0.00	0.301	71.7	0.071	6.5	0.52	0.03	9.86	0.00	2.32	
4/23	101	2.12	0.30	10.0	0.01	0.00	0.00	0.00	0.302	71.9	0.071	6.5	0.54	0.02	9.88	0.00	2.32	
4/24	102	2.14	0.30	10.2	0.01	0.00	0.00	0.00	0.303	72.1	0.071	6.5	0.56	0.02	9.90	0.00	2.32	
4/25	103	2.56	0.35	10.2	0.01	0.00	0.00	0.00	0.303	72.2	0.071	6.5	0.57	0.03	9.93	0.00	2.32	
4/26	104	2.56	0.30	10.2	0.01	0.00	0.00	0.00	0.304	72.4	0.071	6.5	0.58	0.03	9.95	0.00	2.32	
4/27	105	2.19	0.25	10.4	0.02	0.00	0.00	0.00	0.306	72.7	0.071	6.5	0.60	0.04	9.99	0.00	2.32	
4/28	106	1.98	0.30	10.6	0.01	0.00	0.00	0.00	0.306	72.9	0.071	6.5	0.62	0.02	10.01	0.00	2.32	
4/29	107	2.51	0.25	10.3	0.01	0.00	0.00	0.00	0.307	73.1	0.071	6.5	0.64	0.03	10.04	0.00	2.32	
4/30	108	2.19	0.30	10.2	0.01	0.00	0.00	0.00	0.308	73.2	0.071	6.5	0.65	0.02	10.06	0.00	2.32	
5/1	109	2.19	0.30	10.2	0.02	0.00	0.00	0.00	0.309	73.6	0.071	6.5	0.67	0.04	10.11	0.00	2.32	
5/2	110	2.78	0.35	10.3	0.01	0.00	0.00	0.00	0.310	73.8	0.071	6.5	0.68	0.03	10.13	0.00	2.32	
5/3	111	2.25	0.35	10.2	0.01	0.00	0.00	0.00	0.310	73.9	0.071	6.5	0.69	0.02	10.16	0.00	2.32	
5/4	112	2.00	0.35	10.1	0.01	0.00	0.00	0.00	0.311	74.1	0.071	6.5	0.71	0.02	10.18	0.00	2.32	
5/5	113	2.35	0.25	10.1	0.02	0.00	0.00	0.00	0.313	74.4	0.071	6.5	0.72	0.05	10.22	0.00	2.32	
5/6	114	2.22	0.30	10.1	0.00	0.00	0.00	0.00	0.313	74.4	0.071	6.5	0.74	0.00	10.22	0.00	2.32	
5/7	115	2.43	0.30	10.0	0.01	0.00	0.00	0.00	0.313	74.6	0.071	6.5	0.75	0.02	10.25	0.00	2.32	
5/8	116	2.35	0.30	10.0	0.01	0.00	0.00	0.00	0.314	74.8	0.071	6.5	0.77	0.02	10.27	0.00	2.32	
5/9	117	2.61	0.30	10.0	0.01	0.01	0.00	0.00	0.315	74.9	0.072	6.5	0.78	0.03	10.30	0.03	2.35	
5/10	118	2.23	0.30	10.2	0.01	0.00	0.00	0.00	0.315	75.1	0.072	6.5	0.80	0.02	10.32	0.00	2.35	
5/11	119	Rinse Cycle					0.00	0.00	0.00	0.316	75.2	0.072	6.5	0.80	0.01	10.32	0.00	2.35
5/20	128	0.60	0.05	8.8	0.01	0.00	0.00	0.00	0.316	75.2	0.072	6.5	0.79	0.01	10.33	0.00	2.35	
5/21	129	1.03	0.10	9.8	0.01	0.00	0.00	0.00	0.32	76.2	0.072	6.5	0.79	0.02	10.36	0.00	2.35	
5/22	130	2.14	0.05	10.1	0.01	0.00	0.00	0.00	0.32	76.2	0.072	6.5	0.79	0.03	10.38	0.00	2.35	
5/23	131	2.64	0.00	10.1	0.01	0.00	0.00	0.00	0.32	76.2	0.072	6.5	0.79	0.00	10.38	0.00	2.35	
5/24	132	2.30	0.00	10.3	0.00	0.00	0.00	0.00	0.32	76.2	0.072	6.5	0.79	0.00	10.38	0.00	2.35	
5/25	133	1.94	0.00	10.0	0.00	0.00	0.00	0.00	0.32	76.2	0.072	6.5	0.79	0.00	10.38	0.00	2.35	
6/2	141	Drain Down					0.00	0.00	0.00	0.32	76.2	0.1	9.1	0.79	0.00	10.38	0.00	2.35

Extracted, g/mt ore	0.32	76.2	0.1	9.1
Tail, g/mt ore	0.10		1.0	
Calculated Head, g/mt ore	0.42		1.1	

3374 P2

Kilograms 31.87 NaCN added 156.17 g
NaCN Consumption 2.33 kg/mt ore

Metric Tons 0.032 3.0 kg/mt ore

Lime: 15.1 kg /mt ore lime (filtered milk-of-lime) added to barren solution

g/mt ore

Au Ag
Average Head 6.81 <1
Head Screen 6.79 1.0
Tail Screen 1.06 1.0

Daily Column Leach Test Data, MLI Composite # GM09-4
1/13 through 4/2 0.10 g/L solution
4/3 through Tests End 0.50 g/L solution

Nominal Feed Size (mm) 80%-12.5mm

Table with columns: Date, Days Leached, Vol. l., Conc. g/l, pH, Au ppm, Ag ppm, Barren Solution (Au, Ag ppm), Au Extraction (Cum. g/mt ore, Cum. %), Ag Extraction (Cum. g/mt ore, Cum. %), NaCN Consumed (kg/mt ore), Au (mg, cum. mg), Ag (mg, cum. mg). Rows include dates from 1/13 to 3/23, with a 'Rest Cycle' period from 2/20 to 2/23.

3374 P3

Kilograms 31.99 NaCN added 54.24 g
 NaCN Consumption 0.84 kg/mt ore

Metric Tons 0.032 2.1 kg/mt ore

24.7 kg /mt ore lime (filtered milk-of-lime) added to barren solution

g/mt ore

 Au Ag
 Average Head 0.69 <1
 Head Screen 0.72 1.0
 Tail Screen 0.13 1.0

Daily Column Leach Test Data, MLI Composite # GM09-5
 1/13 through 4/2 NaCN Concentration 0.10 g/L solution
 4/3 through Tests End 0.50 g/L solution

Nominal Feed Size (mm) 80%-12.5mm

Date	Days Leached	Pregnant Solution Analyses					Barren Solution											
		NaCN		pH	Au ppm	Ag ppm	Analyses		Au Extraction		Ag Extraction		NaCN Consumed kg/mt ore	Au		Ag		
		Vol. l.	Conc. g/l				Au ppm	Ag ppm	Cum. g/mt ore	Cum. %	Cum. g/mt ore	Cum. %		mg	mg	mg	mg	
4/16	94	1.93	0.35	9.6	0.01	0.00	0.00	0.00	0.493	78.3	0.3	23.1	0.51	0.02	15.78	0.00	10.72	
4/17	95	2.35	0.30	9.7	0.01	0.00	0.00	0.00	0.494	78.4	0.3	23.1	0.53	0.02	15.80	0.00	10.72	
4/18	96	2.65	0.30	9.7	0.01	0.00	0.00	0.00	0.495	78.5	0.3	23.1	0.54	0.03	15.83	0.00	10.72	
4/19	97	2.15	0.30	9.7	0.00	0.00	0.00	0.00	0.495	78.5	0.3	23.1	0.56	0.00	15.83	0.00	10.72	
4/20	98	1.38	0.35	9.8	0.01	0.01	0.00	0.00	0.495	78.6	0.3	23.1	0.58	0.01	15.84	0.01	10.73	
4/21	99	2.73	0.40	9.8	0.01	0.01	0.00	0.00	0.496	78.7	0.3	23.1	0.58	0.03	15.87	0.03	10.76	
4/22	100	2.53	0.35	9.8	0.01	0.00	0.00	0.02	0.497	78.9	0.3	23.1	0.59	0.03	15.89	0.00	10.76	
4/23	101	2.13	0.30	9.8	0.01	0.00	0.00	0.00	0.497	79.0	0.3	23.1	0.61	0.02	15.91	-0.05	10.71	
4/24	102	2.11	0.35	10.2	0.00	0.01	0.00	0.00	0.497	79.0	0.3	23.1	0.62	0.00	15.91	0.02	10.73	
4/25	103	2.64	0.35	10.2	0.00	0.01	0.00	0.00	0.497	79.0	0.3	23.1	0.63	0.00	15.91	0.03	10.76	
4/26	104	2.27	0.35	10.1	0.01	0.00	0.00	0.00	0.498	79.1	0.3	23.1	0.64	0.02	15.94	0.00	10.76	
4/27	105	2.17	0.35	10.1	0.00	0.00	0.00	0.00	0.498	79.1	0.3	23.1	0.66	0.00	15.94	0.00	10.76	
4/28	106	1.95	0.30	10.6	0.01	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.68	0.02	15.95	0.00	10.76	
4/29	107	2.44	0.35	10.3	0.01	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.69	0.02	15.98	0.00	10.76	
4/30	108	2.35	0.40	10.4	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.70	0.00	15.98	0.00	10.76	
5/1	109	2.19	0.35	10.3	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.71	0.00	15.98	0.00	10.76	
5/2	110	2.49	0.30	10.4	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.72	0.00	15.98	0.00	10.76	
5/3	111	2.23	0.25	10.4	0.01	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.74	0.02	16.00	0.00	10.76	
5/4	112	2.22	0.25	10.3	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.76	0.00	16.00	0.00	10.76	
5/5	113	2.28	0.30	10.3	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.78	0.00	16.00	0.00	10.76	
5/6	114	2.27	0.30	10.5	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.80	0.00	16.00	0.00	10.76	
5/7	115	2.27	0.25	10.3	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.82	0.00	16.00	0.00	10.76	
5/8	116	2.19	0.30	10.3	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.83	0.00	16.00	0.00	10.76	
5/9	117	2.42	0.30	10.3	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.85	0.00	16.00	0.00	10.76	
5/10	118	2.24	0.30	10.5	0.00	0.00	0.00	0.00	0.50	79.4	0.3	23.1	0.86	0.00	16.00	0.00	10.76	
5/11	119	Rinse Cycle													0.00	16.00	0.00	10.76
5/20	128	0.51	0.05	8.9	0.00	0.00			0.50	79.4	0.3	23.1	0.86	0.00	16.00	0.00	10.76	
5/21	129	1.38	0.15	10.3	0.03	0.00			0.50	79.4	0.3	23.1	0.86	0.04	16.04	0.00	10.76	
5/22	130	2.10	0.15	10.4	0.01	0.00			0.50	79.4	0.3	23.1	0.85	0.02	16.06	0.00	10.76	
5/23	131	2.65	0.05	10.4	0.01	0.00			0.50	79.4	0.3	23.1	0.84	0.03	16.09	0.00	10.76	
5/24	132	2.32	0.00	10.7	0.00	0.00			0.50	79.4	0.3	23.1	0.84	0.00	16.09	0.00	10.76	
5/25	133	2.03	0.00	10.8	0.00	0.00			0.50	79.4	0.3	23.1	0.84	0.00	16.09	0.00	10.76	
6/2	141	Drain Down								0.50	79.4	0.3	23.1	0.84	0.00	16.09	0.00	10.76

Extracted, g/mt ore 0.50 79.4 0.3 23.1
 Tail, g/mt ore 0.13 1.0
 Calculated Head, g/mt ore 0.63 1.3