Appendix 26: Interim Report of Metallurgical Test Work, November 2010

APPENDIX 26

Interim Report of Metallurgical Test Work, November 2010





Eagle Gold Project Interim Report of Metallurgical Test Work November 2010

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TABLE OF CONTENTS

Section Location 1.0 2.0 Sample Preparation of the Master Composite (KCA Sample 2.1 3.0 4.0 5.0 5.1 5.2 6.0 6.1 6.2 6.2.1 6.3 6.3.1 6.3.2 6.4 6.5 6.6 6.7 7.0 Detoxification Test Work7-1 7.1 7.2 7.3 8.0 9.0

Section

TABLE OF CONTENTS

Location

9.1	Heads and Tails	9-1
9.2	Carbon Assays	9-1
9.3	Solution Assays	9-1
9.4	Cyanide Assays	9-1
9.5	Multi-Element and Whole Rock Assays	.9-1
9.6	Carbon and Sulfur Assays	9-1

Appendix: Column Leach Test Logs

.

ii

LIST OF TABLES

Table		Location
2-1	Master Composite KCA Sample No. 42979 Description and Weights of Reject Core Material	2-1
3-1	Reject Core Intervals Head Analyses – Gold and Silver	
3-2	Reject Core Intervals Head Analyses – Multi-element Analyses	
3-3	Reject Core Intervals Head Analyses - Lithium Metaborate Fusion - Whole Rock Analyses	
3-4	Master Composite KCA Sample No. 42979 Summary of Head Screen Analyses – Gold and Silver	
4-1	Reject Core Intervals Acid Base Accounting	
5-1	Master Composite HPGR Crushed Product (Calculated $P_{80} = 3.641$ millimeters) Summary of Agglomeration Test Work	5-3
6-1	Master Composite KCA Sample No. 42979 KCA Test No. 43276 Minus 12.5 millimeter Crushed Material (Calculated $P_{80} = 3.641$ millimeters) Cyanide Column Leach Test Metal Recoveries and Chemical Consumption	6-3
6-2	Master Composite Cyanide Column Leach Test Work Effluent Solutions, Color and Clarity	6-6
6-3	Master Composite Cyanide Column Leach Test Work Copper Concentration in Column Leach Solutions	6-7
6-4	Master Composite Cyanide Column Leach Test Work Column Leach Tests, Reagent Consumptions	6-7
6-5	Master Composite Cyanide Column Leach Test Work Mercury Concentrations	6-8
6-6	Master Composite Cyanide Column Leach Test Work Percent Slump and Final Apparent Bulk Density	
7-1	Master Composite KCA Sample No. 42979 KCA Test No. 43276 Leachate Chemistry	7-2
7-2	Master Composite HPGR Crushed Material Summary of Detoxification Test Results Total and WAD Cyanide	7-4
7-3	Master Composite HPGR Crushed Material Detoxification Test Work Summary of Chemical Additions	7-5
7-4	Master Composite KCA Sample No. 42979 KCA Test No. 43276 HPGR Crushed Material (Calculated $P_{80} = 3.641$ millimeters) Daily Detoxification Data	7-6

LIST OF TABLES

Table		Location
7-5	Master Composite KCA Sample No. 42979 KCA Test No. 43276 HPGR Crushed Material (Calculated $P_{80} = 3.641$ millimeters) Daily Detoxification Data	7-7
7-6	Master Composite KCA Sample No. 42979 KCA Test No. 43276 HPGR Crushed Material (Calculated $P_{80} = 3.641$ millimeters) Detoxification Solution Analyses	7-8

LIST OF FIGURES

Figur	re I	Location
3-1	Master Composite KCA Sample No. 42979 Head Screen Analyses	3-7
6-1	Column Leach Test Apparatus	6-5



10 November 2010

Eagle Gold Project Interim Report of Metallurgical Test Work November 2010

1.0 Introduction to Interim Report

This interim report discusses the metallurgical test work completed to date on a Master Composite sample developed from core initially worked on by Kappes, Cassiday & Associates (KCA) in 1996.

The test work completed to date included the preparation of the Master Composite sample by SGS Lakefield. Lakefield utilized a laboratory scale High Pressure Grinding Roll (HPGR) unit to crush a portion of the Master Composite to a particle size of 80% passing 3.641 millimeters.

The crushed material was returned to KCA and a sodium cyanide column leach test was conducted over a 33 day leach period. Following the leach phase the leach solution was treated with hydrogen peroxide to neutralize the Weak Acid Dissociable (WAD) Cyanide and the solution recycled to the column of leached tailings. The detox/rinse test work was continued until a WAD cyanide value of less than 0.2 mg/L was obtained in the column effluent.

After completion of the detox test work the column of leached and detoxified material underwent a modified humidity cell test program.

The humidity cell test is continuing at this point and final column tailings have not been assay for gold or silver. For the purpose of this report the weighted average grade of the Master Composite material based upon the head screen analysis with assays by size fraction was utilized as an estimate for the grade of the material leached in the column.

2.0 Sample Receipt and Preparation

In July 1995, the laboratory facility of Kappes, Cassiday & Associates (KCA) in Reno, Nevada received core material from the Dublin Gulch Project located in the Central Yukon Territory of Canada. Portions of this material were stored at KCA in sealed steel drums.

In June 2009, Victoria Gold acquired its interest in the Dublin Gulch Property (which contains the Eagle Gold Project) as a result of its takeover of of the previous owner.

In September 2009, selected stored crushed reject samples received in July 1995 were utilized to generate the Eagle Gold Master Composite (KCA Sample No. 42979).

Sample preparation was conducted utilizing each of the three (3) separate core intervals, used to generate the Master Composite, to provide material for head analyses.

Portions of the reject core intervals (crushed to minus 50 millimeters) were then combined to generate the Eagle Gold Master Composite (KCA Sample No. 42979).

A portion of the Master Composite was then sent to SGS for High Pressure Grinding Roll (HPGR) test work.

The HPGR product was returned to KCA for additional metallurgical test work including head screen analyses, agglomeration test work, cyanide column leach test work, detoxification and Humidity Cell Testing (HCT).

A description of the selected stored reject core intervals utilized to generate the Master Composite is presented in Table 2-1.

Table 2-1.Eagle Gold ProjectMaster CompositeKCA Sample No. 42979Description and Weights of Reject Core Material

		Inte	rval					
								Weight to
KCA		From,	To,			Crush Size,	Weight,	Composite,
Sample No.	Core Hole	meters	meters	Unit Type	Description	millimeters	kg	kg
22602	74 C	47.3	99.1	C1	Sericite altered granodiorite	50	594	41.25
22603	74 C	99.1	177.2	В	Fresh to weakly altered granodiorite	50	938	41.25
22616	76 C	22.9	190.0	А	Weathered granodiorite	50	1955	67.50
42979					Master Composite			150.00

Note: Core Hole, Interval, Unit Type and Description provided by First Dynasty Mine/ Ivanhoe Goldfields, LTD (1995).

2.1 Sample Preparation of the Master Composite (KCA Sample No. 42979)

Sample preparation of the reject core intervals (crushed to minus 50 millimeters) was conducted individually but identically as follows:

- 1. The minus 50 millimeter crushed material was coned three (3) times and quartered.
- 2. One quarter was selected and stage crushed to minus 6.3 millimeters.
- 3. From the minus 6.3 millimeter crushed material a 10 kilogram portion was split out and crushed to nominal 1.70 millimeters.
- 4. From the nominal 1.70 millimeter crushed material two (2) 500 gram portions were split out and pulverized individually to 80% passing 0.075 millimeters.
- 5. The pulverized portions were assayed for gold and silver by standard fire assay and wet chemistry methods. A portion of one pulverized portion was also utilized for multi-element, whole rock, total carbon, total sulfur (sulfur speciation) and mercury analyses. In addition to these analyses, a cold cyanide soluble copper shake test was conducted.
- 6. In addition to the head analyses, a portion of one pulverized portion was utilized for Acid Base Accounting (ABA) test work.
- 7. From the remaining quarter splits (minus 50 millimeter crushed material) the follow portions were split out and combined to generate the Eagle Gold Master Composite (KCA Sample No. 42979); 41.25 kilograms (KCA Sample No. 22602), 41.25 kilograms (KCA Sample No 22603) and 67.50 kilograms (KCA Sample No. 22616). The reject material for each separate core interval was stored individually.
- 8. The Eagle Gold Master Composite (150 kilograms) was sent to SGS for High Pressure Grinding Roll (HPGR) test work. The crushed product was then returned to KCA for additional metallurgical test work.
- 9. The HPGR product was thoroughly blended. An 80-kilogram portion was split out and utilized for a cyanide column leach test work, a 10-kilogram portion was split out and utilized for a head screen analysis and four (4) 2-kilogram portions were split out and utilized for agglomeration test work. The reject material was stored.

3.0 Head Analyses

Head analyses were completed on each of the three (3) separate reject core intervals, received in July 1995 and crushed to minus 50 millimeters, utilized to generate the Eagle Gold Master Composite (KCA Sample No. 42979).

The reject core material (crushed to minus 50 millimeters) from each separate interval was coned three (3) times and quartered. One quarter was selected and stage crushed to minus 6.3 millimeters. A 10-kilogram portion was then split out and crushed to nominal 1.70 millimeters. From the nominal 1.70 millimeter crushed material two (2) 500 gram portions were split out and pulverized individually to 80% passing 0.075 millimeters.

Each pulverized portion was analyzed for gold and silver by standard fire assay and wet chemistry methods.

A portion of one pulverized portion was assayed semi-quantitatively by means of inductively coupled argon plasma – optical emission spectrophotometer (ICAP-OES) for an additional series of elements and for a whole rock analyses. In addition to these semi-quantitative analyses, the sample was assayed by quantitative methods for total carbon, total sulfur (sulfur speciation) and mercury. A cyanide soluble copper shake test was conducted on a portion of the pulverized head material.

3.1 Head Analyses for Gold and Silver

Head analyses for gold and silver were completed by standard fire assay and wet chemistry methods.

The results of the head analyses for gold and silver are presented in Table 3-1.

	0	Gold Proj Core Inter ses – Gold a	vals	
			Assays 2009	
٨		Assess 1	A see 2	Average

Table 3-1.
Eagle Gold Project
Reject Core Intervals
Head Analyses – Gold and Silver

				Average
KCA		Assay 1,	Assay 2,	Assay,
Sample No.	Unit Type	gms Au/MT	gms Au/MT	gms Au/MT
22602	C1	0.47	0.28	0.37
22603	В	0.44	0.37	0.41
22616	А	0.98	0.92	0.95
			Assays 2009	
				Average

			Assays 2009			
				Average		
KCA		Assay 1,	Assay 2,	Assay,		
Sample No.	Unit Type	gms Ag/MT	gms Ag/MT	gms Ag/MT		
22602	C1	5.3	1.6	3.4		
22603	В	2.0	6.5	4.2		
22616	А	1.5	1.3	1.4		

3.2 **Head Analyses for Multi-elements**

A portion of the pulverized material for each core interval was assayed semiquantitatively by means of inductively coupled argon plasma - optical emission spectrophotometer (ICAP-OES) as well as by flame atomic absorption spectrophotometer (FAAS) methods for an additional series of elements and for a whole rock analyses. In addition to these semi-quantitative analyses, the samples were assayed by quantitative methods for total carbon, total sulfur (sulfur speciation) utilizing a LECO CS 400 unit.

The results of the multi-element analyses are presented in Table 3-2. The results of the whole rock analyses are presented in Table 3-3.

Table 3-2. Eagle Gold Project Reject Core Intervals Head Analyses – Multi-element Analyses

		Apr-96			Oct-09		
		KCA Sample No.					
Constituent	Unit	22602	22603	22616	22602	22603	22616
Al	%				7.63	7.74	8.19
As	mg/kg	150	670	40	223	416	158
Ba	mg/kg	227	258	208	1531	1524	1555
Bi	mg/kg	14.0	5.4	7.03	24	24	26
C _{total}	%	0.50	0.46	0.19	0.54	0.49	0.14
Ca	%				2.51	2.41	2.34
Cd	mg/kg	6.03	6.14	2.14	7	6	6
Со	mg/kg				13	12	12
Cr	mg/kg	52.5	46.1	24.9	93	90	116
Cu	mg/kg	27.7	15.9	8.11	38	33	20
Cu _(cyanide soluble)	mg/kg				8	6	6
Fe	%	2.00	1.85	0.71	2.54	2.39	2.39
Hg	mg/kg	<2.00	<2.00	<2.00	< 0.05	< 0.05	< 0.05
K	%				3.69	3.85	3.80
Mg	%				1.07	0.88	0.93
Mn	mg/kg	217	212	66.5	271	231	182
Mo	mg/kg	58.8	49.2	23.9	3	2	1
Na	%				1.59	1.60	1.76
Ni	mg/kg	16.3	15.4	7.94	28	30	32
Pb	mg/kg	25.6	191	1.10	42	38	24
S _{total}	%	0.34	0.44	0.08	0.21	0.22	0.05
S _{sulfide}	%	0.26	0.31	< 0.01	0.11	0.07	< 0.01
S _{sulfate}	%	< 0.01	0.13	< 0.03	0.10	0.15	0.05
Sb	mg/kg	< 0.05	16.4	< 0.05	9	10	5
Sr	mg/kg				417	431	466
Ti	%				0.30	0.28	0.33
V	mg/kg				44	34	38
W	mg/kg				35	25	11
Zn	mg/kg	45.2	297	9.08	95	52	33

Table 3-3.
Eagle Gold Project
Reject Core Intervals
Head Analyses - Lithium Metaborate Fusion - Whole Rock Analyses

Constuituent	Units	KCA Samp	le No. 22602	KCA Samp	le No. 22603	KCA Samp	e No. 22616
SiO ₂	%	64.53		64.99		66.66	
Si	%		30.17		30.38		31.16
Al ₂ O ₃	%	14.17		14.80		15.00	
Al	%		7.50		7.83		7.94
Fe ₂ O ₃	%	3.68		3.39		3.36	
Fe	%		2.57		2.37		2.35
CaO	%	3.60		3.59		3.10	
Ca	%		2.57		2.57		2.22
MgO	%	1.68		1.42		1.51	
Mg	%		1.01		0.86		0.91
Na ₂ O	%	2.14		2.21		2.38	
Na	%		1.59		1.64		1.77
K ₂ O	%	4.52		4.78		4.49	
K	%		3.75		3.97		3.73
TiO ₂	%	0.51		0.49		0.53	
Ti	%		0.31		0.29		0.32
MnO	%	0.03		0.03		0.02	
Mn	%		0.02		0.02		0.02
SrO	%	0.05		0.05		0.06	
Sr	%		0.04		0.04		0.05
BaO	%	0.17		0.17		0.18	
Ba	%		0.15		0.15		0.16
Cr ₂ O ₃	%	0.02		0.02		0.02	
Cr	%		0.01		0.01		0.01
P_2O_5	%	0.12		0.12		0.14	
Р	%		0.05		0.05		0.06
LOI (1,093°C)	%	4.21		3.52		1.73	
SUM	%	99.43		99.58		99.18	

Note: For the purpose of calculation, for values less than the detection limit a value of $\frac{1}{2}$ the detection limit is utilized. Note: The SUM is the total of the oxide constituents and the loss on ignition.

3.3 Head Screen Analyses with Assays by Size Fraction

Portions of the reject core intervals (crushed to minus 50 millimeters) were then combined to generate the Eagle Gold Master Composite (KCA Sample No. 42979).

A portion of the Master Composite was then sent to SGS for High Pressure Grinding Roll (HPGR) test work. The HPGR product was returned to KCA for additional metallurgical test work. From the HPGR product a 10-kilogram portion was split out and utilized for a head screen analysis.

The head screen analysis is summarized in Table 3-4.

The complete head screen analysis is presented in Table 3-5.

The head screen analysis is presented, graphically, in Figure 3-1.

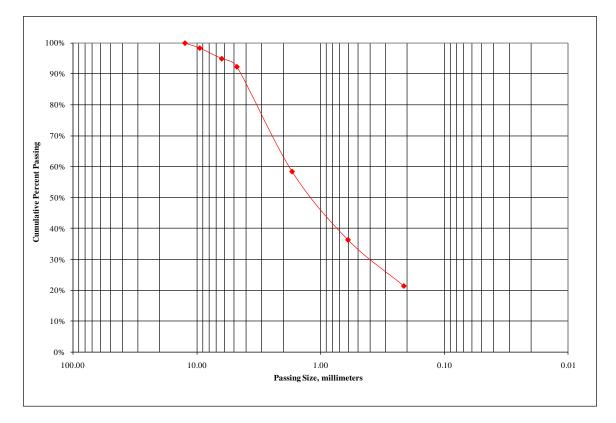
Table 3-4.Eagle Gold ProjectMaster CompositeKCA Sample No. 42979Summary of Head Screen Analyses – Gold and Silver

		Calc. P ₈₀	Weighted Avg.	Weighted Avg.
KCA		Size,	Head Assay,	Head Assay,
Sample No.	Description	mm	gms Au/MT	gms Ag/MT
42979	Master Composite	3.641	0.51	1.79

Table 3-5.Eagle Gold ProjectMaster CompositeKCA Sample No. 42979HPGR Crushed Product (Calculated P80 = 3.641 millimeters)Head Screen Analysis with Assays by Size Fraction

				Dry Scree	en Analysis			Analysis of	Gold Content	
					Cumulative	Cumulative				
			Sample	Weight	Weight	Weight			Average	
KCA	Passing,	Retained,	Weight,	Distribution,	Retained,	Passing,	Assay 1,	Assay 2,	Assay,	Weight Au,
Sample No.	mm	mm	kg	%	%	%	gms Au/MT	gms Au/MT	gms Au/MT	%
42979		12.50	0.00							
	12.50	9.50	0.16	1.61%	1.61%	100.00%	0.14	0.14	0.14	0.45%
	9.50	6.30	0.34	3.43%	5.05%	98.39%	0.30	0.55	0.43	2.91%
	6.30	4.75	0.26	2.62%	7.67%	94.95%	0.17	0.23	0.20	1.03%
	4.75	1.70	3.36	33.91%	41.57%	92.33%	0.73	0.36	0.55	36.70%
	1.70	0.600	2.19	22.10%	63.67%	58.43%	0.37	0.39	0.38	16.55%
	0.600	0.212	1.48	14.93%	78.61%	36.33%	0.41	0.34	0.37	10.98%
	0.212	Pan	2.12	21.39%	100.00%	21.39%	0.74	0.75	0.74	31.38%
Total -			9.91	100.00%			0.57	0.45	0.51	100.00%
Detection -							0.10	0.10		

				Dry Scree	n Analysis			Analysis of S	Silver Content	
					Cumulative	Cumulative				
			Sample	Weight	Weight	Weight			Average	
KCA	Passing,	Retained,	Weight,	Distribution,	Retained,	Passing,	Assay 1,	Assay 2,	Assay,	Weight Ag,
Sample No.	mm	mm	kg	%	%	%	gms Ag/MT	gms Ag/MT	gms Ag/MT	%
42979		12.50	0.00							
	12.50	9.50	0.16	1.61%	1.61%	100.00%	2.06	2.06	2.06	1.85%
	9.50	6.30	0.34	3.43%	5.05%	98.39%	1.71	1.71	1.71	3.28%
	6.30	4.75	0.26	2.62%	7.67%	94.95%	1.37	1.71	1.54	2.26%
	4.75	1.70	3.36	33.91%	41.57%	92.33%	1.71	1.37	1.54	29.16%
	1.70	0.600	2.19	22.10%	63.67%	58.43%	1.37	1.37	1.37	16.89%
	0.600	0.212	1.48	14.93%	78.61%	36.33%	1.37	3.43	2.40	19.98%
	0.212	Pan	2.12	21.39%	100.00%	21.39%	2.06	2.40	2.23	26.58%
Total -			9.91	100.00%			1.66	1.93	1.79	100.00%
Detection -							1.70	1.70		



Page 3-7

4.0 Acid Base Accounting

A pulverized portion from each of the three (3) separate core intervals was utilized for Acid Base Accounting (ABA) test work.

The ABA analysis is a static test used to determine the acid producing or acid consuming potential of a mined material.

The ABA analysis is comprised of three distinct determinations. To facilitate the comparison of values, the neutralizing potential, (NP), acid potential (AP) and net neutralization potential (NNP) are expressed in units of metric tonnes $CaCO_3$ equivalent per 1000 metric tonnes of material

- 1. In the procedure utilized to determine the neutralization potential (NP) of a mined material the sample is treated with an excess of standardized hydrochloric acid (HCl) at ambient temperature for a 24 hour period. During this period, the pH of the sample is checked, to insure that sufficient acid is available for consumption reaction. After the test period, the un-reacted acid is titrated with a standardized base to a neutral pH to calculate the calcium carbonate equivalent of the acid consumed.
- 2. In calculating the acid potential (AP) of a mined material determinations are made for the percentage of total sulfur, sulfate sulfur, and sulfide sulfur by difference in the test sample. Standards and blanks are used in the sample set to insure accuracy. The acid potential of the sample in tonnes $CaCO_3$ equivalent per 1000 tonnes is given by,

AP = Percent "Sulfur" x 31.25

That is assuming that 31.25 tonnes of CaCO₃ is needed to neutralize the acid, potentially generated, from 1 tonne of material containing 1 % sulfur.

3. The net neutralization potential (NNP) in tonnes CaCO₃, equivalent per 1000 tonnes of material is given by the difference of the neutralization potential and the acid potential.

NNP = NP - AP

If a negative NNP value is determined, the material may be classified as a potentially acid producing material. Conversely, if the NNP value is positive, then the material may be classified as a potentially acid consuming material. This test does not reflect the longterm acid producing potential of a material due to geological or bacterial degradation.

Data in the table allows for the calculation of two values: acid potential (AP) and net neutralization potential (NNP).

The total sulfur (as %S) provides for the maximum potential acid generating or neutralizing potential of a mined material. The most common way to calculate the overall AP value in the mining industry today is to use the sulfide sulfur content. However, since the calculated sulfide sulfur content is below the analytical detection limit for the core interval identified as Unit Type A (KCA Sample No. 26616) the total sulfur content was utilized to calculate the overall AP value.

The net neutralization potential (NNP - based upon total sulfur content) for the core intervals indicated that the material has a net ability to neutralize or consume acid.

The results of the ABA analyses utilizing pulverized material from each of the three (3) separate core intervals are presented in Table 4-1.

Table 4-1.Eagle Gold ProjectReject Core IntervalsAcid Base Accounting

			Apr-96					Oct-09							
KCA		Total Sulfur.	Sulfide Sulfur,	Sulfate Sulfur.	Paste				Total Sulfur.	Sulfide Sulfur,	Sulfate Sulfur,	Paste			
Sample No.	Unit Type	3uliui, %	3uliui, %	3uiiui, %	pH	NP	AP	NNP	%	3uliui, %	3uliui, %	pH	NP	AP	NNP
22602	C1	0.34	0.26	< 0.01	8.22	47	10.6	36	0.21	0.11	0.10	7.6	51	7	44
22603	В	0.44	0.31	0.13	8.48	40	13.8	26	0.22	0.07	0.15	8.2	50	7	43
22616	А	0.08	< 0.01	< 0.03	8.47	18	2.5	16	0.05	< 0.01	0.05	8.2	17	2	15

Notes: In tonnes CaCO3 equivalent per 1,000 tonnes of material.

Note: Net Neutralization Potential (NNP) = Neutralization Potential (NP) - Acidification Potential (AP).

5.0 Preliminary Agglomeration Test Work

Agglomeration tests were completed on four (4) 2 kilogram portions of the Eagle Gold Master Composite HPGR crushed product (calculated P₈₀ 3.641 millimeters).

The crushed material was tested with the addition of 0, 2, 4 and 8 kilograms of Portland Type II cement per metric tonne of ore.

The percolation tests were conducted in small (7.5 cm inner diameter) columns at a range of cement levels with no compressive load applied. The purpose of the percolation tests was to examine the permeability of the material under various cement agglomeration levels.

The non-agglomerated (no cement added) percolation test failed. The percolation tests utilizing material agglomerated with 2, 4 and 8 kilograms of Portland Type II cement per metric tonne of ore passed.

5.1 Agglomeration and Percolation Test Procedure

Agglomeration tests were conducted on 2 kilogram portions of HPGR crushed material (calculated P_{80} 3.641 millimeters). Agglomeration tests were conducted utilizing 0, 2, 4 and 8 kilograms of Portland Type II cement per metric tonne of ore. The procedure used for these tests was as follows:

- 1. A 2 kilogram split of material was placed into the agglomerating drum and a specified amount of cement was added.
- 2. The drum was rotated for several minutes to mix the ore and cement thoroughly.
- 3. The material was sprayed with a solution of tap water to form the agglomerates. The amount of solution required for agglomeration was recorded.
- 4. The agglomerates were then placed into a 75 millimeter diameter column and the initial ore height was recorded. The agglomerates were allowed to cure for a period of 24 hours.
- 5. Solution was applied to the column at a rate of 10 12 liters per hour per square meter of column surface area for 72 hours. Changes in the height of the ore in the column, agglomerate stability and percolation problems were recorded.
- 6. After 72 hours of solution application, the sides of the column were tapped sharply until the ore height within the column remained stable. The final ore height was recorded.
- 7. The exit line from the column was clamped off and the column was flooded with solution to a level equal to 25 50 millimeters above the ore surface.

8. The clamp was removed and while the solution level above the ore was maintained, the solution flow rate from the bottom of the column was measured.

5.2 Discussion of Results

The complete results of this test program (including a pass/fail analysis of the information) are shown in Table 5-1.

Over the test period the pH of the effluent solution was monitored. In general a pH below 10 was an indication of a low pH and not acceptable for leaching. However, a high pH (a pH greater than 11.5) would also be noted as high.

In the non-compacted agglomeration tests, KCA generally considers a slump of over 10% as an indication of failure. One item also examined is the consistency of results with regard to slump. KCA would expect a lower slump with higher cement levels.

The slumps calculated for the agglomerated columns were negligible (0% slump was obtained).

The typical heap design solution application rate of $10 - 12 \text{ LpHr/m}^2$ is utilized when examining the agglomeration data. When examining results from this type of agglomeration tests KCA considers a measured flow of one hundred times (100X) the heap design rate as a "pass". A measured flow less than 100X the heap design flow is not necessarily a failure. If there are enough tests with enough consistency between tests, and all other points indicate a "pass", then KCA sometimes will "pass" a test with less than the 100X flow. However, we will never pass a test at 10X and probably not at 50X.

In examining the Pellet Breakdown, it is felt that 10% is marginally acceptable and anything higher is a failure. In general we allow more range in the allowable Pellet Breakdown as this is a subjective value based on the visual observation of the pellets after the test by the technicians performing the test.

Pellet breakdown for the agglomerated column tests for each separate crush size was not significant (less than 3%).

Solution color and clarity typically is an indicator of agglomerate failure. This information is utilized in coordination with both slump as well as Pellet Breakdown to determine if the test passes.

It is believed that these types of tests are indicative of cement requirements for a low, single lift heap height (6 meter maximum) and provide cement levels for larger scale column test work. Compacted permeability tests may be required to evaluate heap heights over 6 meters.

Table 5-1.Eagle Gold ProjectMaster CompositeHPGR Crushed Product (Calculated P₈₀ = 3.641 millimeters)Summary of Agglomeration Test Work

			Top Size		Water	Column	Drv	Initial	Ht. on Day 3 of	Final					Apparent Bulk			Visual Estimate of				Overall
KCA	KCA		Material,	Cement,	Added,	Area,	Weight,		Leaching,		pH on	pH		Slump	Density,	Flow Out,	Flow	% Pellet	Pellet		Solution	Test
Sample No.	Test No.	Description	mm	kg/MT _{dry ore}	mLs	m ²	kg	cm	cm	cm	Day 3	Comment	% Slump	Result	MT_{dry}/M^3	LpHr/m ²	Result	Breakdown	Result	Color and Clarity	Result	Result
	43421 A		3.641	0	0.0	0.005	2.0	27.94	27.94	27.94	N/A	N/A	0%	Pass	1.57	-	Fail	N/A	Fail	N/A	Fail	Fail
42979	43421 B	Martin Campanita	3.641	2	154.9	0.005	2.0	31.12	31.12	31.12	11.5	Good	0%	Pass	1.41	10,702	Pass	3	Pass	Colorless & Clear	Pass	Pass
42979	43421 C	Master Composite	3.641	4	176.0	0.005	2.0	32.39	32.39	32.39	11.8	High	0%	Pass	1.35	18,237	Pass	3	Pass	Colorless & Clear	Pass	Pass
	43421 D		3.641	8	167.3	0.005	2.0	33.66	33.66	33.66	12.1	High	0%	Pass	1.30	23,601	Pass	3	Pass	Colorless & Clear	Pass	Pass

6.0 Column Leach Test Work

A single column leach test was completed utilizing the Eagle Gold Master Composite HPGR crushed product (calculated P_{80} 3.641 millimeters).

The material utilized for the column leach test was agglomerated with 2 kilograms of Portland Type II cement per metric tonne of ore prior to loading into the column.

Following the leaching period, detoxification test work utilizing a hydrogen peroxide (copper catalyzed peroxide) detoxification method was completed. The detoxification procedure was continued until a WAD cyanide value less than 0.2 mg/L was obtained for three (3) consecutive days.

The final barren solution and the final detox solution, for each separate column leach test were analyzed for a Profile II metals analysis, total cyanide and Weak Acid Dissociable (WAD) cyanide. The column tailings after detoxification were submitted for Humidity Cell Testing (HCT). The HCT test work was on-going at the time of this report.

The column leach test is described in Table 6-1.

Table 6-1.Eagle Gold ProjectMaster CompositeColumn Leach Test Parameters

			Column	Initial Charge	Charge
KCA	KCA	Crush Size,	Diameter,	Height,	Weight,
Sample No.	Test No.	mm	meters	meters	kilograms
42979	43276	100% minus 12.5	0.203	1.702	80.00

Note: Calculated P₈₀ based upon head screen analysis – 3.641 millimeters.

6.1 Column Leach Test Recoveries

Column tailings assays were not available for this report as the HCT test work was ongoing at the time of this report.

Column test recoveries for this report were based upon the average head screen analysis data as shown in Table 6-1.

Table 6-2.Eagle Gold ProjectMaster CompositeKCA Sample No. 42979Minus 12.5 millimeter Crushed Material (Calculated P₈₀ = 3.641 millimeters)Head Screen Analysis with Assays by Size Fraction

		Calc. P ₈₀	Weighted Avg.	Weighted Avg.
KCA		Size,	Head Assay,	Head Assay,
Sample No.	Description	mm	gms Au/MT	gms Ag/MT
42979	Master Composite	3.641	0.506	1.79

Preliminary results for the column leach test are presented in Table 6-1.

Gold recovery for the Master Composite column test, utilizing material crushed utilizing a High Pressure Grinding Roll (HPGR) to minus 12.5 millimeters was 96% after 33 days of leaching. This recovery was based upon an estimated head grade of 0.506 gms Au/MT. Sodium cyanide consumption was 0.40 kg/MT and cement addition was 2.0 kg/MT.

Column test recovery results contained in the body of this report were based upon carbon assays vs. the estimated head as no tailings assays were available. Recovery results contained in the attached appendix (Appendix A) were based upon the daily solution assays vs. an estimated calculated head (solution assays + estimated tailings assays).

When an outside party submits samples, KCA can estimate gold recovery for an ore body based upon the assumption that the ore to be mined will be similar to the samples tested. For feasibility study purposes, KCA normally discounts laboratory gold recoveries by two to three percentage points when estimating field recoveries. This assumes a well-managed heap leach operation, and if agglomeration is required, it is assumed that this process is completed correctly.

Based upon KCA's experience with mostly clean non-reactive ores, cyanide consumption in production heaps would be only 25 to 33 percent of the laboratory column test consumptions. For ores containing high amounts of leachable copper, higher factors would be utilized.

Table 6-3.Eagle Gold ProjectMaster CompositeKCA Sample No. 42979KCA Test No. 43276Minus 12.5 millimeter Crushed Material (Calculated P₈₀ = 3.641 millimeters)Cyanide Column Leach TestMetal Recoveries and Chemical Consumption

				Metal on				
		Solution	Carbon	Carbon		Cumulative	NaCN	Cement
	Cumulative,	Extraction,	Weight,	Extraction,	Extraction,	Extraction,	Consumed,	Added,
Days Leaching	t _s /t _o	gms Au/MT	grams	gms Au/MT	% Au	% Au	kg/MT	kg/MT
0-9	1.00	0.343	185.57	0.418	83%	83%	0.17	2.00
9-20	2.32	0.030	167.98	0.043	8%	91%	0.10	0.00
21-33	3.79	0.020	182.19	0.025	5%	96%	0.13	0.00
	Total:	0.393		0.486			0.40	2.00
	Estimated Tail:	0.020		0.020				
	Estimated Head:	0.413		0.506				

 t_s/t_o = Tonnes of solution effluent per tonne of dry ore leached.

				Metal on				
		Solution	Carbon	Carbon		Cumulative	NaCN	Cement
	Cumulative,	Extraction,	Weight,	Extraction,	Extraction,	Extraction,	Consumed,	Added,
Days Leaching	t _s /t _o	gms Ag/MT	grams	gms Ag/MT	% Ag	% Ag	kg/MT	kg/MT
0-9	1.00	0.09	185.57	0.11	6%	6%	0.17	2.00
9-20	2.32	0.00	167.98	0.01	1%	7%	0.10	0.00
21-33	3.79	0.01	182.19	0.00	0%	7%	0.13	0.00
	Total:	0.10		0.13			0.40	2.00
	Estimated Tail:	1.66		1.66				
	Estimated Head:	1.76		1.79				

 $t_s/t_o =$ Tonnes of solution effluent per tonne of dry ore leached.

	Column Pa	rameters	
KCA Sample No.	42979	KCA Test No.	43276
Dry Weight Ore, kg:	80.00	Column Area, m ² :	0.032
Initial Ore Height, m:	1.702	Column Volume (initial), m ³ :	0.055
Final Ore Height, m:	1.702	Column Volume (final), m ³ :	0.055
Slump, %:	0.0%	Apparent Bulk Density (final), MT _{dry} /m ³ :	1.450
Cement Addition, kg/MT:	2.00	Retained Moisture, L/MT _{dry} :	n/a
Agglom. Water Added, liters (1 gpL NaCN):	4.15	Mercury on C-1 Carbon, mg/kg:	0.98
Hydrated lime added during loading, kg/MT:	0.00	Final Percolation Rate, L/Hr/m ² :	n/a

6.2 Cyanide Column Leach Tests, Description of Apparatus

6.2.1 Drip Leach Test Apparatus

The column tests were run as a continuously drained drip leach tests.

This type of test most accurately reflects actual heap leach conditions and is normally run when the material contains enough fines to prevent channeling of solution down individual rock faces.

The apparatus used for this test is shown schematically in Figure 6-1.

6.2.2 Column Setup

The material to be leached was placed into a Plexiglas column with an inside diameter of 203.2 millimeters (cross sectional area of 0.032 square meters).

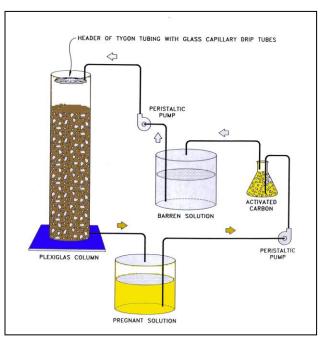
Alkaline cyanide solution was continuously distributed onto the material through a header of Tygon tubing with glass-capillary drip tubes. Flow rate of solution dripping onto the material was controlled with a peristaltic pump to approximately 10-12 liters per hour per square meter of column surface (target flow rate of 10 liters per hour per square meter of column surface).

The solution exiting the leach column was collected in the bottom (floor – pregnant leach solution) tank. Leach solution was checked each cycle for pH, NaCN, Au and Ag. Copper was checked periodically. The solution was then passed through a bottle of activated carbon over a period of 24 hours to recover the gold and silver in solution. After passing through the bottle of activated carbon, the solution was re-assayed for pH, NaCN, Au and Ag. Sodium cyanide was then added, if necessary, to maintain the solution at "target" levels (discussed in the History section). The leach solution was then recycled to the material for another 24 hour leach period. Two (2) batches of leach solution were used so that while one batch was applied to the column, the other was run through the carbon.

Page 6-5

Figure 6-1. Eagle Gold Project Column Leach Test Apparatus





6.3 History of Cyanide Column Leach Tests

6.3.1 Start-up of Tests

The initial leach solution for the column tests contained 1.0 grams sodium cyanide per liter of solution.

6.3.2 Solution Color and Clarity

The initial and final solution color and clarity were monitored for each column test.

The solution color and clarity for the column tests are summarized in Table 6-9.

Table 6-9. Eagle Gold Project Master Composite Cyanide Column Leach Test Work Effluent Solutions, Color and Clarity

KCA	KCA	Color and Clarity of	Color and Clarity of
Sample No.	Test No.	Initial Column Effluent	Final Column Effluent
42979	43276	Clear and Yellow	Clear and Yellow

A "colorless and clear" solution exiting the columns is indicative of the fact that no fines migrated within the column of ore. Metal buildup in solution is usually denoted by a significant color change in the solution (i.e. a yellow color is typically indicative of higher levels of iron and a light blue solution might be indicative of a solution containing higher levels of copper). The absence of color could be indicative that no build up of metals in solution occurred during leach.

6.4 Copper Analyses in Solutions

Interim pregnant (effluent) cyanide leach solutions were assayed (solution analysis by flame atomic absorption spectrophotometer methods) periodically for copper content.

The lowest and highest copper values in solution data obtained over the leach period are summarized in Table 6-10.

Table 6-10. Eagle Gold Project Master Composite Cyanide Column Leach Test Work Copper Concentration in Column Leach Solutions

KCA	KCA	Low Copper,	High Copper,
Sample No.	Test No.	mg/L	mg/L
42979	43276	3.87	21.8

Copper minerals dissolve in cyanide solutions at varying rates and to varying degrees. Copper in cyanide leach solutions is not desirable as copper can consume sodium cyanide, consume dissolved oxygen, decrease precious metal dissolution rates, interfere with solution processing techniques and end up in the final doré. At ambient temperatures copper dissolution is generally highest for the carbonate copper minerals Azurite and Malachite going to lower dissolutions for copper silicates (Chrysocolla) and copper iron sulfides (Chalcopyrite). In cyanide starved systems the presence of Chalcopyrite can act to remove gold from solution (preg-rob). Chalcocite mineralization typically shows a copper dissolution of greater than 90%.

The range of copper in solution obtained for this series of column leach tests would be considered low and generally not note worthy in relationship to the processing of the material. The low copper in solution values obtained during the column leach tests confirmed the results obtained for copper in the head analyses.

6.5 Cyanide Strength and Alkalinity

The initial leach solution for the column test contained 1.0 grams sodium cyanide per liter of leach solution. Cyanide strength of the on-flow solutions was then maintained at 0.5 grams per liter sodium cyanide. Protective alkalinity in the tests was maintained by the initial addition of hydrated lime. The leach solution was monitored to ensure that it was in the pH range of 10-11.

Reagent consumption data for the column leach tests are summarized in Table 6-11.

Table 6-11. Eagle Gold Project Master Composite Cyanide Column Leach Test Work Column Leach Tests, Reagent Consumptions

		NaCN	Hydrated	Cement
KCA	KCA	Consumed,	Lime Added,	Added,
Sample No.	Test No.	kg/MT	kg/MT	kg/MT
42979	43276	0.40	0.00	2.00

6.6 Mercury Analyses

The granular activated carbon samples utilized for the column tests for precious metal adsorption were air dried and then assayed for mercury as well as precious metal content.

The results of the mercury and gold analyses on the individual carbon samples are summarized in Table 6-12. The ratio of gold adsorbed to mercury adsorbed is also presented.

Table 6-12. Eagle Gold Project Master Composite Cyanide Column Leach Test Work Mercury Concentrations

KCA	KCA	Carbon	Carbon Weight,	Carbon Assay,	Carbon Assay,	
Sample No.	Test No.	Period	grams	grams Au/MT	gms Hg/MT	Ratio Au : Hg
42979	43276	C-1	185.57	180.26	0.98	184
		C-2	167.98	20.43	0.59	35
		C-3	182.19	10.83	0.29	37

6.7 Percent Slump and Final Apparent Bulk Density

The height of material in the column test was measured before and after leaching. This height was utilized to calculate the "slump" during leaching as well as to calculate the final apparent bulk density for the material in the column.

The height, slump and final apparent bulk density from the column leach tests are summarized in Table 6-13.

The percent slump of a column gives an indication of potential permeability problems in production heaps. KCA typically classifies slumps larger than 10% as high. The calculated percent slump values for the Eagle Gold column leach tests were low, ranging from 0% to 0.8%.

Table 6-13.Eagle Gold ProjectMaster CompositeCyanide Column Leach Test WorkPercent Slump and Final Apparent Bulk Density

KCA	KCA	Crush Size,	Initial Ht.,	Final Ht.,	Slump,	Final Apparent Bulk Density,
Sample No.	Test No.	mm	meters	meters	%	MTdry/m ³
42979	43276	-12.5	1.702	1.702	0.0%	1.449

7.0 Detoxification Test Work

7.1 Leachate Chemistry

As outlined in Section 6.0 of this report, the cyanide column leach test was conducted as a two (2) batch leach solution closed circuit test.

Alkaline cyanide solution was continuously distributed onto the material through a header of Tygon tubing with glass-capillary drip tubes utilizing a peristaltic pump.

The leachate or pregnant leach solution (PLS) exiting the leach column was collected in the bottom tank. The PLS was checked each cycle for pH, gold, silver and sodium cyanide.

The solution was then passed through a bottle of activated carbon over a period of 24 hours to recover the gold and silver in solution. After passing through the bottle of activated carbon, the solution was re-assayed for pH, gold silver and sodium cyanide. Sodium cyanide was then added, if necessary, to maintain the solution at "target" levels. The leach solution was then recycled to the material for another 24 hour leach period.

Two (2) batches of leach solution were used so that while one batch was applied to the column, the other was run through the carbon.

A portion of the PLS from the Eagle Gold Master Composite HPGR crushed product column test was sampled twice weekly for Profile II analysis beginning on day 10 of the column leach test.

Following the active leach period (the period where the PLS was passed through activated carbon to recover the gold and silver in solution) the PLS from the column leach test was continuously recycled through the column at an application rate of 10 $L/hr/M^2$ for four (4) consecutive days (day 33-36 of the column leach test).

The recycled PLS (Batch 2) was then combined with the final barren solution from the active leach period (Batch 1). A portion of the combined solution was submitted for a Profile II analysis.

The remaining combined solution was then continuously applied to the column at an application rate of 10 L/hr/M^2 . The PLS was sampled daily for a Profile II analysis. The PLS was recycled until the solution constituents approached equilibrium.

The final recycled PLS was combined with the remaining feed solution. The composite solution was measured and assayed for copper, iron, Weak Acid Dissociable (WAD) cyanide and total cyanide. A portion of the composite solution was submitted for a designated suite analysis. The remaining solution was utilized for detoxification test work.

The Profile II analyses for the PLS are presented in Table 7-1.

Table 7-1Eagle Gold ProjectMaster CompositeKCA Sample No. 42979KCA Test No. 43276Leachate Chemistry

Comments		December 200							Feed	Effluent 1	Effluent 2	Effluent 3	Effluent 4	Effluent 5	Effluent 6	Effluent 7	Effluent 8	+ Remaining Feed
																		Effluent 8
Туре	2 Batch System	P	P	P	P	P.45	P	P.50	P/B	P	P	P	P	P	P	P	P	Р
Volume	g/L L	10.83	9.37	10.11	8.46	9.43	8.85	9.38	16.1	8.44	8.11	7.34	7.99	6.51	9.09	8.02	6.65	
рн Free NaCN	g/L	0.58	0.44	0.38	0.53	0.55	0.48	0.45	0.37	0.43	0.45	0.31	0.36	0.33	0.46	0.59	0.41	
pН	units	11.3	10.9	10.9	10.7	10.8	10.7	10.7	10.6	10.2	10.3	10.4	10.6	10.5	10.6	10.3	10.3	
Zinc	mg/L	8.8	6.7	7.8	5.7	6.0	6.2	6.2	6.7	7.5	7.7	7.4	/.8	7.7	7.8	8.0	7.8	7.8
Vanadium	mg/L	0.046	0.061		0.11		0.1			0.11		0.11	7.8	0.11	0.11	0.10		
Titanium Vonadium	mg/L			<0.3 0.082		<0.2 0.12		<0.1 0.11	<0.1 0.12		<0.2		<0.2		<0.2	<0.2	<0.2 0.097	<0.2
Tin Titen in m	mg/L	<0.5	<0.5	<0.5	<0.5	<0.4	<0.4	<0.2	<0.2	<0.4 <0.2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Thallium	mg/L	<0.003	<0.003	<0.003	<0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	mg/L	8.4	6.7	6.1	3.2	6.1	5.5	5.6	5.2	5.2	5.4	4.9	5.1	5.1	5.5	6.2	6.0	6.1
Sodium	mg/L	400					640				660	610			690			
Silver	mg/L	0.017	0.01 390	0.009	0.006	<0.004 570	< 0.004	<0.004 700	<0.004 730	0.004 650	< 0.004	< 0.004	0.006 630	0.005 650	0.006	0.007	0.007 760	0.007 780
Selenium	mg/L	0.09	0.08	0.08	0.06	0.06	0.06	0.06	0.07	0.074	0.076	0.07	0.073	0.076	0.078	0.079	0.07	0.08
Scandium	mg/L	<0.3	<0.3	<0.3	<0.3	<0.2	<0.2	<0.1	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Potassium	mg/L	26	25	23	27	27	26	25	25	24	25	25	25	26	28	31	32	32
Nickel	mg/L	0.1	0.062	0.056	0.053	0.048	0.033	0.040	0.037	0.068	0.058	0.064	0.079	0.080	0.091	0.10	0.10	0.10
Molybdenum	mg/L	0.22	0.21	0.23	0.22	0.21	0.22	0.22	0.25	0.24	0.24	0.23	0.24	0.24	0.25	0.25	0.25	0.25
Mercury	mg/L	0.0023	0.0012	0.001	0.0014	0.0012	< 0.0002	0.0008	0.0003	0.0006	0.0008	0.0003	0.0005	0.0006	0.0010	0.0013	0.0009	0.0011
Manganese	mg/L	0.01	< 0.01	0.01	< 0.01	< 0.004	< 0.004	< 0.004	0.008	< 0.004	< 0.004	0.019	< 0.008	< 0.008	0.017	< 0.008	< 0.004	< 0.004
Magnesium	mg/L	<3	্র	<3	3	<2	<2	<1	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2
Lithium	mg/L	< 0.5	<0.5	<0.5	<0.5	<0.4	<0.4	<0.2	<0.2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Lead	mg/L	0.017	0.009	0.007	0.006	0.008	0.005	0.004	< 0.004	< 0.004	0.010	< 0.004	0.008	0.004	< 0.004	< 0.004	< 0.004	0.006
Lanthanum	mg/L	<0.3	<0.3	<0.3	<3	<0.2	< 0.2	<0.1	< 0.1	<0.2	<0.2	< 0.2	<0.2	<0.2	<0.2	< 0.2	< 0.2	<0.2
Iron	mg/L	1.7	1.7	1.8	1.9	1.6	2.1	1.9	2.2	2.3	2.4	2.2	2.2	2.2	2.2	2.4	2.6	2.5
Gallium	mg/L	< 0.5	< 0.5	<0.5	< 0.5	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	<0.4
Copper	mg/L	8.8	7.9	9	6.6	5.3	7.5	7.7	8.6	9.0	9.1	9.2	9.3	9.3	9.3	9.8	8.3	8.3
Cobalt	mg/L	0.9	0.86	0.9	0.83	0.30	0.69	0.65	0.85	0.73	0.77	0.74	0.82	0.72	0.76	0.81	0.74	0.73
Chromium	mg/L	0.035	0.03	0.027	0.02	0.013	0.012	0.014	0.014	0.013	0.013	0.010	0.010	0.009	0.009	0.008	0.008	0.008
Calcium	mg/L	260	220	200	240	220	180	180	140	190	200	170	170	170	190	210	200	200
Cadmium	mg/L	0.019	0.009	0.012	0.007	0.007	0.007	0.007	0.008	0.009	0.009	0.009	0.009	0.009	0.010	0.010	0.010	0.010
Boron	mg/L	< 0.3	< 0.3	<0.3	< 0.3	< 0.2	< 0.2	<0.1	< 0.1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	<0.2
Bismuth	mg/L	< 0.5	<0.5	<0.5	< 0.5	< 0.4	< 0.4	< 0.2	< 0.2	< 0.4	< 0.4	< 0.4	< 0.4	<0.4	<0.4	< 0.4	< 0.4	<0.4
Beryllium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Barium	mg/L	0.71	0.058	0.057	0.083	0.064	0.072	0.06	0.051	0061	0.065	0.056	0.062	0.061	0.070	0.076	0.067	0.069
Arsenic	mg/L	0.02	0.03	0.03	0.15	0.17	0.11	0.14	0.12	0.28	0.31	0.24	0.30	0.31	0.35	0.33	0.30	0.27
Antimony	mg/L	0.012	0.015	0.013	0.031	0.036	0.059	0.054	0062	0.068	0.075	0.076	0.080	0.085	0.094	0.092	0.099	0.095
Aluminum	mg/L	0.3	<0.3	<0.3	< 0.3	< 0.2	< 0.2	0.1	0.1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	<0.2
Parameter	Units	1-Dec	4-Dec	8-Dec	15-Dec	18-Dec	22-Dec	24-Dec	28-Dec	29-Dec	30-Dec	31-Dec	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	5-Jan Comp

Note: P/B - preg and barren combined - 28 December 2009.

Note: Metals Analyses only.

7.2 Detoxification Test Work

Detoxification test work utilizing a hydrogen peroxide (copper catalyzed peroxide) detoxification method was conducted on the column leach test residue.

The final recycled PLS was combined with the remaining feed solution. The combined solution was measured and assayed for copper, iron, Weak Acid Dissociable (WAD) cyanide and total cyanide. A portion of the combined solution was submitted for a designated suite analysis.

Based upon the copper and total cyanide analysis, copper sulfate pentahydrate (CuSO₄.5H₂O) and hydrogen peroxide (35% H₂O₂) were added to the remaining composite solution from the column leach test to reduce the WAD cyanide to less than 0.2 mg/L.

Copper sulfate pentahydrate (CuSO₄.5H₂O) was added to the composite solution to produce an overall copper level in solution of 20% of the WAD cyanide concentration. Hydrogen peroxide was added at a level equivalent to 300% of theoretical based upon the total cyanide level. The solution was then sparged with air and mixed for a period of four hours in an open vessel. After the four hour time period the solution was assayed for residual hydrogen peroxide and WAD cyanide before being cycled onto the column (Phase I).

The detoxification effluent was measured daily (days 1-6). Hydrogen peroxide and copper were added daily to the effluent based upon the initial total cyanide and copper levels. The effluents from day 7 and 8 of the detoxification period were measured, combined, assayed for copper, iron, Weak Acid Dissociable (WAD) cyanide, total cyanide and sampled for the designated suite analysis.

Based upon the copper and total cyanide analysis, copper sulfate pentahydrate was added to the composite solution to produce an overall copper level in solution of 20% of the WAD cyanide concentration. Hydrogen peroxide was added at a level equivalent to 500% of theoretical based upon the total cyanide level. The solution was sparged with air and mixed for a period of four hours in an open vessel. After the four hour time period the solution was assayed for residual hydrogen peroxide and WAD cyanide before being cycled onto the column (Phase II).

The detoxification procedure was continued until a WAD cyanide value less than 0.2 mg/L was obtained for three (3) consecutive days (Phase I-III). Following detoxification, the column was allowed to completely drain down. The final detoxification solution (final effluent plus drain down solutions) was sampled for the designated suite analysis.

The column was allowed to rest for a seven (7) day period prior to initiating modified Humidity Cell Testing (HCT).

The initial and final values for total and WAD cyanide are presented in Table 7-2.

Table 7-2.Eagle Gold ProjectMaster CompositeHPGR Crushed MaterialSummary of Detoxification Test ResultsTotal and WAD Cyanide

			Detoxification	Initial Total	Final Total	Initial WAD	Final WAD
KCA	KCA		Period,	Cyanide,	Cyanide,	Cyanide,	Cyanide,
Sample No.	Test No.	Description	Days	mg/L	mg/L	mg/L	mg/L
42979	43276	Master Composite	27	288.6	2.07	268.4	0.16

7.3 Detoxification Procedure

The Master Composite HPGR column leach test (KCA Test No. 43276) was treated as follows:

- 1. The final recycled PLS was combined with the remaining feed solution. The combined solution was measured and assayed for copper, iron, WAD and total cyanide. A portion of the combined solution was submitted for a designated suite analysis.
- 2. Based upon the total cyanide and copper analysis, hydrogen peroxide and copper, if needed, were added to detoxify the combined solution, (copper catalyzed peroxide). The solution was then sparged with air and mixed for a period of four hours in an open vessel. After the four hour time period the solution was assayed for residual hydrogen peroxide and WAD cyanide before being cycled onto the column.
- 3. The columns were then restarted with the detoxified solution. Daily additions of hydrogen peroxide and copper were added to the leach solution based on the initial total cyanide and copper values. Solution circulation through the column material was continued.
- 4. Every seven (7) days thereafter, the effluent solutions from the two batch cycle were combined, sampled and analyzed. The hydrogen peroxide and copper additions were adjusted accordingly. Detoxification continued until a WAD cyanide value less than 0.2 mg/L was obtained for three (3) consecutive days.
- 5. The final detoxification solution (final effluent plus drain down solutions) were combined, thoroughly mixed and sampled for the designated suite analysis, WAD and total cyanide analyses.
- 6. The column was allowed to rest for a seven (7) day period prior to initiating modified Humidity Cell Testing (HCT).

Total chemical additions are summarized in Table 7-3.

Table 7-3.Eagle Gold ProjectMaster CompositeHPGR Crushed MaterialDetoxification Test WorkSummary of Chemical Additions

			35% H ₂ O ₂	10 gpL	100% H ₂ O ₂	Copper
KCA	KCA	Column	Applied,	$CuSO_4.5H_2O$,	Applied,	Added,
Sample No.	Test No.	Weight, kg	gms	mLs	gms/MT	gms/MT
42979	43276	80	147.05	489	643	16

Daily detoxification data showing total and WAD cyanide analyses and chemical additions for the column are presented in Table 7-4 and Table 7-5.

Chemical additions of 35% H_2O_2 are reported in grams, (gms) added and copper, as 10g/L CuSO₄.5H₂O, are reported in milliliters, (mL), added. The complete results can be found in the Appendix.

The wet chemistry and metals analyses, total cyanide and weak acid dissociable cyanide analyses for the final recycled PLS solution, interim detoxification solutions and final detoxification solution are presented in Table 7-6.

Table 7-4.Eagle Gold ProjectMaster CompositeKCA Sample No. 42979KCA Test No. 43276HPGR Crushed Material (Calculated P₈₀ = 3.641 millimeters)Daily Detoxification Data

					Free		100%									Add			
					NaCN,	Volume,	H_2O_2 ,	Cu,	WAD,	WAD,	Total,	Cu,	Fe,	H_2O_2 ,	Sample	H ₂ O ₂ :WAD	CuSO ₄ ,	$35\% H_2O_2,$	Volume,
Date	Description	P/D*	Cycle	pН	gpL	kg	grams	grams	mg/L	grams	mg/L	mg/L	mg/L	mg/L	mLs out	CN	mLs	grams	kg
5-Jan	Start Detox	Р	0	10.3	0.40	14.67			268.40	3.937	288.60	8.79	2.29		900				
6-Jan	Detox w/ Anal.	P/1	1	10.3	0.40	13.69	15.57	0.61	268.40	3.674	288.60	8.79	2.29			4	240.00	44.50	
7-Jan		D	2	8.5	< 0.01	13.93			3.22	0.045		5.01	0.00	8	125				
8-Jan	Detox 1	Р	3	10.4	0.39	6.26	7.12	0.14				8.31	2.30		50		55	20.35	6.26
9-Jan		D		8.5	< 0.01	6.34						6.61	1.24	12	50				
9-Jan	Detox 1	Р	4	10.6	0.16	7.71	8.77	0.17				2.37	0.00		50		68	25.06	7.71
10-Jan		D		8.5	< 0.01	7.72						3.62	0.01	12	50				
10-Jan	Detox 1	Р	5	10.5	0.11	6.65	7.56	0.15				1.26	0.47		50		59	21.61	6.65
11-Jan		D		8.5	< 0.01	6.70						3.68	0.02	12	50				
11-Jan	Detox 1	Р	6	10.0	0.17	7.65	8.70	0.17				1.16	0.27		50		67	24.86	7.65
12-Jan		D		8.5	< 0.01	7.74						3.25	0.00	2	50				
12-Jan	Period 2	Р	7	10.6	0.03	6.41						0.59	0.11		50				6.41
13-Jan	Period 2	Р		10.6	0.01	8.18						0.42	0.15		50				8.18
13-Jan	Detox w/ Anal.	P/2	8	10.6	0.01	14.60	0.61	0.00	2.79	0.041	5.98	0.59	0.16		850	15	0	1.74	
14-Jan		D		10.0	< 0.01	14.38			0.57	0.008	4.00	0.03	0.00	<1	250				
15-Jan	Detox 2	Р	9	10.2	0.04	6.44	0.27	0.00				0.32	0.08		50		0	0.77	6.44
16-Jan		D		10.0	< 0.01	6.44						0.46	0.00	<1	50				
16-Jan	Detox 2	Р	10	10.0	0.02	7.51	0.31	0.00				0.16	0.04		50		0	0.90	7.51
17-Jan		D		10.0	< 0.01	7.51						0.08	0.00	<1	50				
17-Jan	Detox 2	Р	11	10.1	0.01	5.88	0.25	0.00				0.21	0.06		50		0	0.71	5.88
18-Jan		D		8.5	< 0.01	5.88						0.90	0.00	<1	50				
18-Jan	Detox 2	Р	12	10.2	0.01	5.22	0.22	0.00				0.21	0.05		50		0	0.63	5.22
19-Jan		D		8.6	< 0.01	5.22						0.51	0.02	<1	50				
19-Jan	Detox 2	Р	13	10.1	0.02	6.07	0.26	0.00				0.36	0.04		50		0	0.73	6.07
20-Jan		D		8.5	< 0.01	6.07						0.04	0.00	<1	50				
20-Jan	Detox 2	Р	14	10.1	< 0.01	4.22	0.18	0.00				0.96	0.00		50		0	0.51	4.22
21-Jan		D		8.6	< 0.01	4.22						0.11	0.00	<1	50				
21-Jan	Period 3	Р	15	9.9	< 0.01	4.63						0.04	0.06		50				4.63
22-Jan	Period 3	Р		9.9	< 0.01	4.92						0.02	0.01		50				4.92
22-Jan	Detox w/ Anal.	P/3	16	9.9	< 0.01	9.55	0.40	0.00	0.38	0.004	4.05	0.03	0.02		850	111	0	1.15	

Note: P = Pregnant Solution and D = Detox Solution.

Table 7-5.Eagle Gold ProjectMaster CompositeKCA Sample No. 42979KCA Test No. 43276HPGR Crushed Material (Calculated P₈₀ = 3.641 millimeters)Daily Detoxification Data

					Free		100%									Add			
					NaCN,	Volume,	H_2O_2 ,	Cu,	WAD,	WAD,	Total,	Cu,	Fe,	H_2O_2 ,	Sample	H ₂ O ₂ :WAD	CuSO ₄	, 35% H ₂ O ₂ ,	Volume,
Date	Description	P/D*	Cycle	pН	gpL	kg	grams	grams	mg/L	grams	mg/L	mg/L	mg/L	mg/L	mLs out	CN	mLs	grams	kg
23-Jan		D		8.8	< 0.01	8.70			0.11	0.001	3.14	0.00	0.00	<1	250				
24-Jan	Detox 3	Р	17	10.2	< 0.01	5.00	0.21	0.00				0.00	0.04		25			0 0.60	5.00
25-Jan		D		8.2	< 0.01	5.00						0.27	0.00	<1	25				
25-Jan	Detox 3	Р	18	10.1	< 0.01	4.93	0.21	0.00				0.00	0.00		25			0 0.59	4.93
26-Jan		D		8.9	< 0.01	4.93						0.00	0.00	<1	25				
26-Jan	Detox 3	Р	19	9.9	< 0.01	5.05	0.21	0.00				0.57	0.00		25			0 0.61	5.05
27-Jan		D		8.6	< 0.01	5.05						0.00	0.00	<1	25				
27-Jan	Detox 3	Р	20	9.6	< 0.01	4.64	0.20	0.00				0.39	0.00		25			0 0.56	4.64
28-Jan		D		8.4	< 0.01	4.64						0.03	0.00	<1	25				
28-Jan	Detox 3	Р	21	9.8	< 0.01	4.76	0.20	0.00				0.01	0.00		25			0 0.56	4.76
29-Jan		D		8.5	< 0.01	4.76						0.08	0.00	<1	25				
29-Jan	Detox 3	Р	22	9.8	< 0.01	5.11	0.21	0.00				0.00	0.00					0 0.61	5.11
30-Jan		D		8.6	< 0.01	5.11						0.00	0.00	<1	25				
30-Jan	Period 4	Р	23	9.8	< 0.01	5.00						0.08	0.00		25				5.00
31-Jan	Period 4	Р		9.8	< 0.01	4.87						0.08	0.00		25				4.87
1-Feb	Cycle w/ Anal.	P/4	24	9.8	< 0.01	9.87			0.16	0.002	2.07	0.08	0.03			0			
Total -							51.44	1.24									48	9 147.05	127.11

Note: P = Pregnant Solution and D = Detox Solution.

Table 7-6.Eagle Gold ProjectMaster CompositeKCA Sample No. 42979KCA Test No. 43276HPGR Crushed Material (Calculated P₈₀ = 3.641 millimeters)Detoxification Solution Analyses

		WETLAB 1001034-001	WETLAB 1001094-001	WETLAB 1001201-001	WETLAB 1002002-001
Parameter	Units	5-Jan-10	13-Jan-10	22-Jan-10	1-Feb-10
Cyanate	mg/L	27	69	390	210
Thiocyanate	mg/L	120	310	<100	<100
Ammonia, as nitrogen	mg/L	46	44	71	60
pH	Units	10.38 (10.3)	10.00 (10.6)	9.18 (9.9)	9.85
Bicarbonate (HCO ₃)	mg/L	<1.0	6.0	70.0	<1.0
Carbonate (CO ₃)	mg/L	190	100	34	49
Hydroxide (OH)	mg/L	84	<1.0	<1.0	6.0
Total Alkalinity	mg/L as CaCO3	570	170	110	99
Chloride	mg/L	35	30	39	44
Fluoride	mg/L	<1.0	<1.0	< 0.50	<0.50
Sulfate	mg/L	990	1000	1400	1400
Nitrate Nitrogen	mg/L	<10	<10	2.9	2.9
Nitrite Nitrogen	mg/L	0.43	0.61	2.1	1.7
Total Kjeldahl Nitrogen	mg/L	74	130	130	99
Total Nitrogen	mg/L	75	130	140	100
Total Cyanide	mg/L	380 (288.60)	290 (5.98)	0.82 (4.05)	0.33 (2.07)
Total Dissolved Solids (TDS)	mg/L	2500	2300	2800	2600
WAD Cyanide	mg/L	280 (268.40)	1.3 (2.79)	0.3 (0.38)	0.11 (0.16)
Silica	mg/L	28	26	25	27
Aluminum	mg/L	0.090	0.072	<0.045	0.047
Barium	mg/L	0.061	0.049	0.059	0.056
Beryllium	mg/L	< 0.0010	< 0.0010	< 0.0010	<0.0010
Bismuth	mg/L	<0.10	<0.10	<0.10	<0.10
Boron	mg/L	<0.10	<0.10	<0.10	<0.10
Cadmium	mg/L	0.0055	< 0.0010	<0.0010	<0.0010
Calcium	mg/L	180	150	200	170
Chromium	mg/L	0.014	0.013	0.0057	0.0050
Cobalt	mg/L	0.86	0.81	1.0	0.96
Copper	mg/L	9.1 (8.79)	0.55 (0.59)	0.11 (0.03)	<0.050 (0.08)
Gallium	mg/L	<0.10	<0.10	<0.10	<0.10
Iron	mg/L	2.6 (2.29)	0.12 (0.16)	0.062 (0.02)	0.034 (0.03)
Lead	mg/L	<0.010	<0.010	<0.010	<0.010
Lithium	mg/L	<0.10	<0.10	<0.10	<0.10
Magnesium	mg/L	<0.50	<0.50	<0.50	<0.50
Manganese	mg/L	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum	mg/L	0.22	0.19	0.25	0.22
Nickel	mg/L	0.095	0.019	<0.010	<0.010
Phosphorous	mg/L	< 0.50	<0.50	<0.50	<0.50
Potassium	mg/L	34	25	30	27
Scandium	mg/L	< 0.10	<0.10	<0.10	<0.10
Silver	mg/L	0.0085	<0.0050	< 0.0050	<0.0050
Sodium Strontium	mg/L	780 6.1	640 4.3	780 6.1	710 5.1
Tin	mg/L mg/L	<0.10	4.3	6.1 <0.10	<0.10
	•				
Titanium Vanadium	mg/L	<0.10 0.094	<0.10	<0.10 0.068	<0.10 0.061
Zinc	mg/L mg/L	8.2	<0.010	<0.068	0.061
	6	8.2 0.086	<0.010	<0.010	0.024
Mercury	mg/L	0.086	0.076	0.059	0.079
Antimony Arsenic	mg/L	0.095	0.13	0.17	
	mg/L	1			0.67
		0.000			
Selenium Thallium	mg/L mg/L	0.068 <0.0010	0.055 <0.0010	0.070 <0.0010	0.069 <0.0010

Notes: KCA results shown in (). Increase in results shown in red. Analysis ? Shown in blue.

8.0 Humidity Cell Test Work

Following cyanidation and detoxification, the metallurgical column was converted to a large scale modified humidity column by SRK Consulting. The protocol for the modification and test work results are provided in the SRK Consulting report entitled Geochemical Characterization and Water Quality Predictions for the Eagle Gold Project prepared for Stantec and Victoria Gold Corp, November 2010.

9.0 Assaying Procedures

9.1 Heads and Tails

Head assays were run as one assay ton fire assays on duplicate splits for gold and silver. For gold analyses gravimetric and AA finish were utilized. The silver analyses were completed by gravimetric finish.

Tailings assays were run as one assay ton fire assays on duplicate splits for gold and silver analyses by standard fire assay methods with flame atomic absorption spectrophotometer (FAAS) finish for gold and gravimetric and four (4) acid digestion finish for silver.

9.2 Carbon Assays

The loaded granular activated carbon was dried and weighed. Two samples were split out and assayed and the remainder saved for reference. The carbon for assay was roasted to convert it to ash, then conventionally fire assayed.

9.3 Solution Assays

Solution assays were made every cycle on an atomic absorption spectrophotometer, using gold and silver standards. The solution assays were used merely to check on the progress of the column tests, since actual extractions were based on fire assays of the activated carbon.

9.4 Cyanide Assays

Sodium cyanide concentrations in leach solutions were determined using a colorimetric titration using a silver nitrate titrant and 5-[p-(Dimethylamino)- benzylidene]-rhodanine as the indicator. Free cyanide was determined by titrating 25 mL of the leach solution to the colorimetric end point. A few drops of 1N sodium hydroxide solution were then added to break up any base metal cyanide complexes and the titration continued until the end point was reached again to determine the "total" cyanide in solution.

9.5 Multi-Element and Whole Rock Assays

Material for a multi-element analysis was digested using a four acid digestion. This digestion provided a total digestion. The resulting solution was then assayed semiquantitatively by means of a Perkin-Elmer 2000 DV ICAP-OES. Whole rock analysis was conducted using a lithium metaborate fusion followed by ICAP-OES analysis. Certified standards were utilized for both types of analyses.

9.6 Carbon and Sulfur Assays

Carbon and sulfur speciation were determined by means of a LECO CS 400 carbon/sulfur determinator with induction furnace. Each sample set included two quality control samples, a blank and a standard check.

Appendix

Project:		Eagle Gold																Head Screen.	gms Au/MT:	0.506		gms Ag/MT:	1.79		
Sample Descri	ption:	Master Comp	osite															Head Assay	gms Au/MT:	n/a		gms Ag/MT:	n/a		
Test No.:		43276																Extracted.	gms Au/MT:	0.395		gms Ag/MT:	0.10		
Sample I.D.:		42979																	gms Au/MT:			gms Ag/MT:	n/a		
Initial Ht., met	ers:	1.7018															Est. Ca	lculated Head	gms Au/MT:	0.413		gms Ag/MT:	1.76		
Crush Size, m	n	12.5																Weight	of Sample, kg:	80.00					
Column I.D., r	neters:	0.203															Column S	Surface Area, s	quare meters:	0.032					
																		Cement Ad	dition, grams:	160.00		kg/MT:	2.00		
																	Hyd	lrated Lime Ad	dition, grams:	0.00		kg/MT:	0.00		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
																		Solution		Cumulative	Percent of		Solution		Cumulative
				Ca(OH)2	Cum. Lime	NaCN	Cum. NaCN		Water						Flow Rate			Cumulative	Recovered	Recovered	Total		Cumulative	Recovered	Recovered
	pH,	Free NaCN,	Total NaCN,	Added,	Added,	Added,	Consumed,		Added,	Carbon	Au,	Ag,	Cu,	Volume,	Preg,	Cum. T Sol'n.	Solution,	Recov.,	Gold	Gold	Recovered	Solution,	Recov.,	Silver	Silver
Date	units	gpL	gpL	grams	kg/MT	grams	kg/MT	Days Run	grams	Bottle	mg/L	mg/L	mg/L	mLs	L/Hr/M ²	/ T Ore	gms Au/MT	gms Au/MT	Solution	Solution	Gold	gms Ag/MT	gms Ag/MT	Solution	Solution
21-Nov				0.00	0.00	14.15	0.00	0	14,150						0.00	0.09	0.00	0.000	0.0%	00/	00/	0.00	0.00	0.0%	00/
21-Nov 22-Nov				0.00	0.00	9.30	0.18	U	9,300						0.00	0.09	0.00	0.000	0.0%	0%	0%	0.00	0.00	0.0%	0%
22-Nov	11.5	0.73	0.73	0.00	0.00	7.50	0.10	1	7,500	C-1	2.11	0.71	21.8	7.190	9.24	0.09	0.19	0.190	45.9%	46%	48%	0.06	0.06	3.6%	4%
23-Nov	10.4	0.47	0.47	0.00	0.00	2.10	0.23		2,100		0.00	0.01		7,190			0.00	0.190	0.0%			0.00	0.06	-0.1%	
23-Nov	11.3	1.00	1.00					2			0.52	0.10	3.87	9,400	12.08	0.21	0.06	0.251	14.8%	61%	64%	0.01	0.07	0.7%	4%
24-Nov	10.9	0.95	0.95	0.00	0.00	0.00	0.14				0.00	0.01		9,400			0.00	0.251	0.0%			0.00	0.07	-0.1%	
24-Nov	11.2	0.59	0.59					3			0.26	0.03	4.63	8,460	10.87	0.31	0.03	0.278	6.7%	67%	71%	0.00	0.08	0.2%	4%
25-Nov	11.2	0.57	0.57	0.00	0.00	0.73	0.12		800		0.00	0.00		8,460			0.00	0.278	0.0%			0.00	0.08	0.0%	
25-Nov 26-Nov	11.5	0.63	0.63	0.00	0.00	0.70	0.17	4	700		0.15	0.03	9.8	8,590 8,590	11.04	0.42	0.02	0.294 0.292	3.9%	71%	75%	0.00	0.08	-0.1%	5%
26-Nov 26-Nov	11.3	0.60	0.60	0.00	0.00	0.70	0.17	5	700		0.02	0.01		8,590 9,120	11.72	0.53	0.00	0.292	-0.5%	75%	78%	0.00	0.08	-0.1%	5%
20-Nov 27-Nov	11.4	0.70	0.70	0.00	0.00	0.00	0.15	5			0.02	0.02		9,120	11.72	0.55	0.02	0.306	-0.6%	7,370	/070	0.00	0.08	0.1%	.370
27-Nov	11.5	0.60	0.60				0.15	6			0.16	0.00		7,690	9.88	0.63	0.02	0.321	3.7%	78%	81%	0.00	0.08	0.1%	5%
28-Nov	11.1	0.60	0.60	0.00	0.00	1.60	0.16		1,600		0.01	0.00		7,690			0.00	0.320	-0.2%			0.00	0.08	0.0%	
28-Nov	11.4	0.62	0.62					7			0.07	0.01	8.27	10,650	13.68	0.76	0.01	0.330	2.3%	80%	84%	0.00	0.08	0.1%	5%
29-Nov	11.3	0.56	0.56	0.00	0.00	0.00	0.18				0.00	0.00		10,650			0.00	0.330	0.0%			0.00	0.08	0.0%	
29-Nov	11.5	0.68	0.68		0.00	0.72	0.14	8	1.600		0.08	0.01	8.48	8,390 8,390	10.78	0.87	0.01	0.338	2.0%	82%	86%	0.00	0.08	0.1%	5%
30-Nov 30-Nov	11.2	0.63	0.63	0.00	0.00	0.72	0.16	9	1,600		0.00	0.00		8,390	13.21	1.00	0.00	0.338	1.2%	83%	87%	0.00	0.08	0.0%	5%
1-Dec	11.5	0.57	0.57	0.00	0.00	0.00	0.17	,		XC-1	0.04	0.01		10,280	15.21	1.00	0.01	0.343	0.0%	6370	8770	0.00	0.09	0.1%	.370
1-Dec	11.3	0.58	0.58				0.17	10		C-2	0.02	0.00		10,830	13.91	1.13	0.00	0.346	0.7%	84%	88%	0.00	0.09	0.1%	5%
2-Dec	10.9	0.45	0.45	0.00	0.00	0.00	0.16				0.00	0.00		10,830			0.00	0.346	0.0%			0.00	0.09	0.0%	
2-Dec	11.4	0.57	0.57					11			0.06	0.01	7.98	9,590	12.32	1.25	0.01	0.353	1.7%	85%	89%	0.00	0.09	0.1%	5%
3-Dec	11.0	0.50	0.50	0.00	0.00	0.00	0.16				0.00	0.00		9,590			0.00	0.353	0.0%			0.00	0.09	0.0%	
3-Dec	11.4	0.54	0.54				0.16	12			0.04	0.01		10,630	13.66	1.39	0.01	0.358	1.3%	87%	91%	0.00	0.09	0.1%	5%
4-Dec 4-Dec	10.6	0.47	0.47	0.00	0.00	0.00	0.15	13			0.00	0.00		10,630 9,370	12.04	1.50	0.00	0.358	0.0%	88%	92%	0.00	0.09	0.0%	5%
4-Dec 5-Dec	10.9	0.44	0.44	0.00	0.00	0.00	0.16	15			0.05	0.01		9,370	12.04	1.30	0.00	0.362	0.9%	0070	7470	0.00	0.09	0.1%	.370
5-Dec	10.9	0.07	0.05				0.10	14			0.03	0.00		8,660	11.13	1.61	0.00	0.365	0.8%	88%	93%	0.00	0.09	0.1%	5%
6-Dec	10.9	0.42	0.42	0.00	0.00	0.00	0.15				0.00	0.00		8,660			0.00	0.365	0.0%			0.00	0.09	0.0%	
6-Dec	11.1	0.43	0.43					15			0.01	0.00		10,670	13.71	1.74	0.00	0.366	0.3%	89%	93%	0.00	0.09	0.0%	5%
7-Dec	10.5	0.44	0.44	0.00	0.00	0.00	0.17				0.00	0.00		10,670			0.00	0.366	0.0%			0.00	0.09	0.0%	
7-Dec	10.9	0.38	0.38				0.15	16			0.02	0.01		8,610	11.06	1.85	0.00	0.369	0.5%	89%	93%	0.00	0.09	0.1%	5%
8-Dec 8-Dec	10.5	0.43	0.43	0.00	0.00	0.00	0.17	17			0.00	0.00		8,460 10,110	12.99	1.98	0.00	0.369	0.0%	89%	93%	0.00	0.09	0.0%	5%
8-Dec 9-Dec	10.9	0.38	0.38	0.00	0.00	2.60	0.19	1/			0.00	0.00		10,110	12.99	1.98	0.00	0.369	-0.3%	89%	95%	0.00	0.09	0.0%	5%
9-Dec 9-Dec	10.6	0.34		0.00	0.00	2.00	0.19	18			0.01	0.00	6.82	8,650	11.11	2.09	0.00	0.367	-0.3%	90%	94%	0.00	0.09	0.0%	5%
10-Dec	10.5	0.34	0.34	0.00	0.00	2.90	0.23		600		0.03	0.00		8,650		2.07	0.00	0.370	-0.3%	2010		0.00	0.09	0.0%	570
10-Dec	10.9	0.33	0.33					19			0.03	0.00		9,150	11.76	2.20	0.00	0.373	0.8%	90%	95%	0.00	0.09	0.0%	5%
11-Dec	10.4	0.30	0.30	0.00	0.00	2.80	0.27				0.00	0.00		9,150			0.00	0.373	0.0%			0.00	0.09	0.0%	
11-Dec	10.8	0.54	0.54					20			0.00	0.01		9,760	12.54	2.32	0.00	0.373	0.0%	90%	95%	0.00	0.10	0.1%	5%
12-Dec	10.6	0.45	0.45	0.00	0.00	0.00	0.27			XC-2	0.00	0.01		9,760			0.00	0.373	0.0%			0.00	0.09	-0.1%	

Project:		Eagle Gold																Head Screen,	gms Au/MT:	0.506		gms Ag/MT	1.79		
Sample Descr	iption:	Master Comp	osite															Head Assay,	gms Au/MT:	n/a		gms Ag/MT	n/a		
Test No.:		43276																Extracted.	gms Au/MT:	0.395		gms Ag/MT	0.10		
Sample I.D.:		42979																	gms Au/MT:			gms Ag/MT			
Initial Ht., me		1.7018															Eat. Ca	lculated Head,				gms Ag/MT			
																	Est. Ca		•			glis Ag/M1	1.70		
Crush Size, m		12.5																-	of Sample, kg:						
Column I.D., 1	neters:	0.203															Column S	Surface Area, s							
																		Cement Ad	dition, grams:	160.00		kg/MT	2.00		
																	Hyd	Irated Lime Ad	dition, grams:	0.00		kg/MT	0.00		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	-		-		Ů	· · ·	0	,	10		12	15	14	15	10	1/	10		20	21	22	2.5	24	20	20
																		Solution		Cumulative			Solution		Cumulative
				Ca(OH) ₂	Cum. Lime	NaCN	Cum, NaCN		Water						Flow Rate			Cumulative	Recovered	Recovered	Percent of Total		Cumulative	Recovered	Recovered
	pH,	Erra NaCN	Total NaCN,	Added,	Added,	Added,	Consumed,		Added,	Carbon	Au,	Ag,	Cu,	Volume,	Preg,	Cum. T Sol'n.	Solution,	Recov.,	Gold	Gold	Recovered	Solution,	Recov.,	Silver	Silver
Date	units	gpL	gpL	grams	kg/MT	grams	kg/MT	Days Run	grams	Bottle	mg/L	mg/L	mg/L	mLs	L/Hr/M ²	/ T Ore	gms Au/MT	gms Au/MT	Solution	Solution	Gold	gms Ag/MT	gms Ag/MT	Solution	Solution
12-Dec	10.6	0.45	0.45	0.00	0.00	0.00	0.27	,		XC-2	0.00	0.01		9,760		Ole	0.00	0.373	0.0%	a and the second	c	0.00	0.09	-0.1%	
12-Dec	10.9	0.55	0.55					21		C-3	0.03	0.01		8,300	10.66	2.43	0.00	0.376	0.8%	91%	95%	0.00	0.10	0.1%	5%
13-Dec	10.0	0.33	0.33	0.00	0.00	3.20	0.25		1,000		0.00	0.00		8,300			0.00	0.376	0.0%			0.00	0.10	0.0%	
13-Dec	10.9	0.37	0.37					22			0.03	0.01		8,750	11.24	2.54	0.00	0.380	0.8%	92%	96%	0.00	0.10	0.1%	5%
14-Dec	10.3	0.37	0.37	0.00	0.00	2.00	0.31				0.00	0.00		8,750			0.00	0.380	0.0%			0.00	0.10	0.0%	
14-Dec	10.6	0.44	0.44					23			0.01	0.01		10,510	13.50	2.67	0.00	0.381	0.3%	92%	97%	0.00	0.10	0.1%	6%
15-Dec	10.6	0.41	0.41	0.00	0.00	0.00	0.31				0.00	0.01		10,510			0.00	0.381	0.0%			0.00	0.10	-0.1%	
15-Dec	10.7	0.53	0.53					24			0.02	0.01		8,460	10.87	2.77	0.00	0.383	0.5%	93%	97%	0.00	0.10	0.1%	6%
16-Dec	10.4	0.49	0.49	0.00	0.00	1.70	0.29	25	800		0.00	0.01		8,460	10.07	2.00	0.00	0.383	0.0%	0.244	074	0.00	0.10	-0.1%	694
16-Dec 17-Dec	10.5	0.39	0.39	0.00	0.00	2.50	0.32	25			0.01	0.01	7.63	10,170 10,170	13.07	2.90	0.00	0.384 0.384	0.3%	93%	97%	0.00	0.10	0.1%	6%
17-Dec	10.5	0.35	0.35	0.00	0.00	2.50	0.52	26			0.00	0.00		9,190	11.81	3.01	0.00	0.384	0.6%	94%	98%	0.00	0.10	0.0%	6%
18-Dec	10.7	0.35	0.40	0.00	0.00	2.30	0.35	20			0.02	0.00		9,190	11.01	5.01	0.00	0.387	0.0%	9470	2070	0.00	0.10	0.0%	0/0
18-Dec	10.0	0.55	0.55				0.55	27			0.00	0.00		9,430	12.12	3.13	0.00	0.388	0.3%	94%	98%	0.00	0.10	0.1%	6%
19-Dec	10.6	0.43	0.43	0.00	0.00	0.00	0.36				0.00	0.01		9,430			0.00	0.388	0.0%	2.110		0.00	0.10	-0.1%	
19-Dec	10.8	0.46	0.46					28			0.00	0.01		8,990	11.55	3.25	0.00	0.388	0.0%	94%	98%	0.00	0.10	0.1%	6%
20-Dec	10.6	0.37	0.37	0.00	0.00	2.10	0.35				0.00	0.00		8,990			0.00	0.388	0.0%			0.00	0.10	0.0%	
20-Dec	10.7	0.48	0.48					29			0.01	0.00		9,420	12.10	3.36	0.00	0.389	0.3%	94%	99%	0.00	0.10	0.0%	6%
21-Dec	10.7	0.41	0.41	0.00	0.00	0.00	0.37				0.01	0.00		9,420			0.00	0.388	-0.3%			0.00	0.10	0.0%	
21-Dec	10.7	0.42	0.42					30			0.03	0.01		8,200	10.54	3.47	0.00	0.391	0.7%	95%	99%	0.00	0.10	0.1%	6%
22-Dec	10.6	0.44	0.44	0.00	0.00	2.40	0.37		1,100		0.00	0.01		8,200			0.00	0.391	0.0%			0.00	0.10	-0.1%	
22-Dec 23-Dec	10.7	0.48	0.48	0.00	0.00	2.00	0.39	31			0.00	0.01		8,850 8,850	11.37	3.58	0.00	0.391 0.391	0.0%	95%	99%	0.00	0.10	0.1%	6%
23-Dec 23-Dec	10.7	0.38	0.38	0.00	0.00	2.00	0.39	32			0.00	0.01	6.93	9,380	12.05	3.69	0.00	0.391	0.0%	95%	99%	0.00	0.10	-0.1%	6%
23-Dec 24-Dec	10.7	0.45	0.45	0.00	0.00	0.00	0.41	32			0.00	0.01	0.93	9,380	12.05	3.09	0.00	0.391	0.0%	7,3%	79%	0.00	0.10	0.1%	076
24-Dec 24-Dec	10.5	0.53	0.53	0.00	0.00	0.00	0.41	33			0.00	0.00		7,490	9.62	3.79	0.00	0.391	0.5%	95%	100%	0.00	0.10	0.0%	6%
28-Dec	10.5	0.33	0.33	0.00	0.00	2.00	0.40	55		XC-3	0.02	0.01		7,490	2.02	0.17	0.00	0.393	0.0%	2270	10070	0.00	0.10	0.0%	0,0
28-Dec	10.5	0.41	0.41					37			0.02	0.00		8,610	11.06	3.89	0.00	0.395	0.5%	96%	100%	0.00	0.10	0.0%	6%
29-Dec	10.6	0.41	0.41	0.00	0.00	0.00	0.43				0.02	0.00		8,610			0.00	0.393	-0.5%			0.00	0.10	0.0%	
29-Dec	10.2	0.43	0.43					38			0.02	0.01		8,440	10.84	4.00	0.00	0.395	0.5%	96%	100%	0.00	0.10	0.1%	6%
30-Dec	10.2	0.43	0.43	0.00	0.00	0.00	0.42				0.02	0.01		8,440			0.00	0.393	-0.5%			0.00	0.10	-0.1%	
30-Dec	10.3	0.45	0.45					39			0.03	0.01	8.00	8,110	10.42	4.10	0.00	0.396	0.7%	96%	100%	0.00	0.10	0.1%	6%
31-Dec	10.3	0.45	0.45	0.00	0.00	0.00	0.42				0.03	0.01		8,110			0.00	0.393	-0.7%			0.00	0.10	-0.1%	
31-Dec	10.4	0.31	0.31					40			0.02	0.01		7,340	9.43	4.19	0.00	0.395	0.4%	96%	100%	0.00	0.10	0.1%	6%
1-Jan	10.4	0.31	0.31	0.00	0.00	4.00	0.43				0.02	0.01		7,340		1	0.00	0.393	-0.4%		1	0.00	0.10	-0.1%	1

Project:		Eagle Gold																Head Screen,	gms Au/MT:	0.506		gms Ag/MT:	1.79		
Sample Descri	ption:	Master Comp	osite															Head Assay,	gms Au/MT:			gms Ag/MT:	n/a		
Test No.:		43276																Extracted,	gms Au/MT:	0.395		gms Ag/MT:	0.10		
Sample I.D.:		42979																	gms Au/MT:			gms Ag/MT:	n/a		
Initial Ht., met	ers:	1.7018															Est. Ca	lculated Head,	gms Au/MT:	0.413		gms Ag/MT:	1.76		
Crush Size, m		12.5																-	of Sample, kg:						
Column I.D., n	teters:	0.203															Column S	Surface Area, s	-						
																			dition, grams:	160.00		kg/MT:			
																	Hyd	rated Lime Ad	dition, grams:	0.00		kg/MT:	0.00		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
																									a 14
				Ca(OH)2	Cum. Lime	NaCN	Cum. NaCN		Water						Flow Rate			Solution Cumulative	Recovered	Cumulative Recovered	Percent of Total		Solution Cumulative	Recovered	Cumulative Recovered
	pH,	Free NaCN,	Total NaCN,	Added.	Added.	Added,	Consumed.		Added.	Carbon	Au,	Ag,	Cu,	Volume.	Preg,	Cum. T Sol'n.	Solution.	Recov.,	Gold	Gold	Recovered	Solution.	Recov.,	Silver	Silver
Date	units	gpL	gpL	grams	kg/MT	grams	kg/MT	Days Run	grams	Bottle	mg/L	mg/L	mg/L	mLs	L/Hr/M ²	/ T Ore	gms Au/MT	gms Au/MT	Solution	Solution	Gold	gms Ag/MT	gms Ag/MT	Solution	Solution
1-Jan	10.6	0.36	0.36					41			0.05	0.01	8.36	4,990	6.41	4.26	0.00	0.396	0.8%	96%	100%	0.00	0.10	0.0%	6%
2-Jan	10.6	0.36	0.36	0.00	0.00	0.00	0.51	42			0.05	0.01		4,990	0.27	4.24	0.00	0.393	-0.8% 0.8%	0.0%	100%	0.00	0.10	0.0%	(0)
2-Jan 3-Jan	10.5	0.33	0.33	0.00	0.00	1.80	0.51	42			0.04	0.01	8.60	6,510 6,510	8.36	4.34	0.00	0.396	-0.8%	96%	100%	0.00	0.10	0.0%	6%
3-Jan	10.5	0.35	0.46				0.04	43			0.04	0.01	8.43	9,090	11.68	4.45	0.00	0.397	1.1%	96%	101%	0.00	0.10	0.1%	6%
4-Jan	10.6	0.46	0.46	0.00	0.00	0.00	0.50				0.04	0.01		9,090			0.00	0.393	-1.1%			0.00	0.10	-0.1%	
4-Jan	10.3	0.59	0.59					44			0.04	0.01		8,020	10.30	4.55	0.00	0.397	1.0%	96%	101%	0.00	0.10	0.1%	6%
5-Jan 5-Jan	10.3	0.59	0.59	0.00	0.00	0.00	0.47	45			0.04	0.01		8,020 6,650	8.54	4.63	0.00	0.393 0.398	-1.0% 1.2%	96%	101%	0.00	0.10	-0.1%	6%
8-Jan	10.3	0.41	0.41	0.00	0.00	0.00	0.49	43			0.06	0.01		6,650	0	4.05	0.00	0.398	-1.2%	90%	10170	0.00	0.10	0.0%	0%
8-Jan	10.4	0.39	0.39					48			0.06	0.02	8.31	6,260	8.04	4.71	0.00	0.397	1.1%	96%	101%	0.00	0.10	0.1%	6%
11-Jan	10.4	0.39	0.39	0.00	0.00	0.00	0.51				0.06	0.02		6,260			0.00	0.393	-1.1%			0.00	0.10	-0.1%	
11-Jan 12-Jan	10.0	0.17	0.17	0.00	0.00	0.00	0.53	51			0.05	0.01	1.16	7,650	9.83	4.81	0.00	0.397	1.2%	96%	101%	0.00	0.10	0.1%	6%
12-Jan 12-Jan	10.0	0.17	0.17	0.00	0.00	0.00	0.53	52			0.05	0.01	0.59	7,650 6,410	8.24	4.89	0.00	0.393	-1.2%	96%	100%	0.00	0.10	-0.1%	6%
13-Jan	10.6	0.01	0.01	0.00	0.00	0.00	0.56	52			0.03	0.01		6,410	0.24	4.05	0.00	0.393	-0.6%	2010	10070	0.00	0.10	0.0%	0,0
13-Jan	10.6	0.01	0.01					53			0.05	0.01	0.42	8,190	10.52	4.99	0.01	0.398	1.2%	96%	101%	0.00	0.10	0.1%	6%
15-Jan	10.2	0.04	0.04	0.00	0.00	0.00	0.58	55			0.05	0.01		8,190	8.27	5.07	-0.01	0.393	-1.2% 0.6%	0.64	1000	0.00	0.10	-0.1%	644
15-Jan 16-Jan	10.2	0.04	0.04	0.00	0.00	0.00	0.57	55			0.03	0.00	0.32	6,440 6,440	8.27	5.07	0.00	0.395	-0.6%	96%	100%	0.00	0.10	0.0%	6%
16-Jan	10.0	0.02	0.02				0.57	56			0.03	0.00	0.16	7,510	9.65	5.16	0.00	0.395	0.5%	96%	100%	0.00	0.10	0.0%	6%
17-Jan	10.1	0.01	0.01	0.00	0.00	0.00	0.58				0.02	0.01		7,510			0.00	0.393	-0.5%			0.00	0.10	-0.1%	
17-Jan	10.1	0.01	0.01					57			0.04	0.01	0.21	5,880	7.55	5.24	0.00	0.396	0.7%	96%	100%	0.00	0.10	0.0%	6%
18-Jan 18-Jan	10.2	0.01	0.01	0.00	0.00	0.00	0.58	58			0.04	0.01	0.21	5,880 5,220	6.71	5.30	0.00	0.393 0.397	-0.7% 1.1%	96%	101%	0.00	0.10	0.0%	6%
19-Jan	10.2	0.01	0.01	0.00	0.00	0.00	0.58	56			0.07	0.00		5,220	0.71	5.50	0.00	0.393	-1.1%	2070	10170	0.00	0.10	0.0%	0/0
19-Jan	10.1	0.01	0.01					59			0.02	0.00	0.36	6,070	7.80	5.38	0.00	0.394	0.4%	95%	100%	0.00	0.10	0.0%	6%
20-Jan	9.9	0.01	0.01	0.00	0.00	0.00	0.58				0.04	0.01		6,070			0.00	0.391	-0.7%			0.00	0.10	0.0%	
20-Jan 21-Jan	9.9	0.01	0.01	0.00	0.00	0.00	0.58	60			0.04	0.01	0.41	4,630 4,630	5.95	5.44	0.00	0.393 0.391	0.6%	95%	100%	0.00	0.10	0.0%	6%
21-Jan 21-Jan	10.1	0.01	0.01	0.00	0.00	0.00	0.00	61			0.04	0.00	0.04	4,650	5.42	5.49	0.00	0.391	-0.6%	95%	100%	0.00	0.10	0.0%	6%
22-Jan	8.8	0.01	0.01	0.00	0.00	0.00	0.58				0.05	0.00		4,220			0.00	0.391	-0.6%			0.00	0.10	0.0%	
22-Jan	8.8	0.01	0.01					62			0.05	0.00	0.02	4,920	6.32	5.55	0.00	0.394	0.7%	95%	100%	0.00	0.10	0.0%	6%
24-Jan 24-Jan	10.2	0.01	0.01	0.00	0.00	0.00	0.58	64			0.04	0.00		4,920 5,000	6.42	5.61	0.00	0.391 0.394	-0.6% 0.6%	95%	100%	0.00	0.10	0.0%	(1)
24-Jan 25-Jan	10.2	0.01	0.01	0.00	0.00	0.00	0.58	04			0.04	0.00	0	5,000	0.42	5.01	0.00	0.394	-0.8%	93%	100%	0.00	0.10	0.0%	6%
25-Jan 25-Jan	10.1	0.01	0.01				0.50	65			0.05	0.01	1.27	4,930	6.33	5.68	0.00	0.391	0.7%	95%	100%	0.00	0.10	0.0%	6%
26-Jan	9.9	0.01	0.01	0.00	0.00	0.00	0.58				0.02	0.00		4,930			0.00	0.392	-0.3%			0.00	0.10	0.0%	
26-Jan	9.9	0.01	0.01				0.50	66			0.02	0.00	0.57	5,050	6.49	5.74	0.00	0.394	0.3%	95%	100%	0.00	0.10	0.0%	6%
27-Jan 27-Jan	9.6 9.6	0.01	0.01	0.00	0.00	0.00	0.58	67			0.06	0.00	0	5,050 4,640	5.96	5.80	0.00	0.390	-0.9% 0.8%	95%	100%	0.00	0.10	0.0%	6%
27-Jan 28-Jan	9.6	0.01	0.01	0.00	0.00	0.00	0.58	07			0.06	0.00		4,640	3.90	3.00	0.00	0.393	-0.6%	9,370	10070	0.00	0.10	0.0%	070
28-Jan	9.8	0.01	0.01					68			0.04	0.00	0.01	4,760	6.12	5.86	0.00	0.394	0.6%	95%	100%	0.00	0.10	0.0%	6%
29-Jan	9.8	0.01	0.01	0.00	0.00	0.00	0.58				0.04	0.00		4,760			0.00	0.391	-0.6%			0.00	0.10	0.0%	
29-Jan	9.8	0.01	0.01				0.69	69			0.04	0.00	0.08	5,110	6.57	5.92	0.00	0.394	0.6%	95%	100%	0.00	0.10	0.0%	6%
3-Feb 3-Feb	9.7 9.7	0.01	0.01	0.00	0.00	0.00	0.58	74			0.04	0.00	0.05	5,100 7,110	9.14	6.01	0.00	0.391 0.395	-0.6%	96%	100%	0.00	0.10	0.0%	6%
4-Feb	9.7	0.01	0.01	0.00	0.00	0.00	0.58	/4			0.04	0.00		7,110	2.14	0.01	-0.01	0.393	-1.3%	2070	10070	0.00	0.10	0.0%	070
4-Feb	9.7	0.01	0.01					75			0.06	0.00	0	6,970	8.96	6.10	0.01	0.395	1.3%	96%	100%	0.00	0.10	0.0%	6%