ASX Announcement
3 February 2014

EXCEPTIONAL METALLURGICAL TEST RESULTS FROM GRUYERE PROSPECT

Highlights

- **Total Gold Recovery - 96.0% to 98.0%**
- **Gravity Gold Recovery - 52.2% to 69.2%**
- **The comprehensive assays did not show any deleterious elements and the excellent gold recoveries achieved indicate the ores are not refractory**

Gold Road Resources Limited (**Gold** Road or **the Company**) (ASX: GOR) received the results of a recent first pass metallurgical test work programme carried out by ALS between December 2013 and January 2014.

The metallurgical testing, which included gravity and cyanidation leach testwork, was conducted on five composite samples. These samples were taken from previously reported drill holes in the north and south of the recently discovered Gruyere Prospect - two fresh ore samples, two transitional ore samples, and one oxide ore sample, for a total mass of 130.52 kilograms. The testwork indicates the following:

Fresh Ore:

- High gravity recoveries of 58.2% (South) to 69.2% (North)
- Very high total gold recoveries of 96.0% (North) and 96.4% (South)
- Gold extraction rates during cyanidation were extremely fast and virtually completed after 4 hours

Transition Ore:

- High gravity recoveries of 52.2% (North) to 54.7% (South)
- Very high total gold recoveries of 97.5% (North) and 98.4% (South)
- Gold extraction rates during cyanidation were extremely fast and virtually complete after 4 hours

Oxide Ore:

- High gravity recoveries of 53.36%.
- Very high total gold recovery of 97.29%
- Gold extraction rates during cyanidation were fast and virtually completed after 8 hours

Gold Road Chairman Ian Murray said, "We are very encouraged by these metallurgical test results at Gruyere. Each of our gold discoveries, Attila–Alaric, Central Bore and now Gruyere has shown very good gold recoveries with no deleterious elements. Gruyere is shaping up as a company making discovery and these results gives us confidence to aggressively continue our exploration work on the Yamarna Belt priority Gold Camp Targets, which have already yielded excellent results not only at Gruyere, but also at YAM14, Breelya and Minnie Hill South."

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Other conclusions and recommendations from the Metallurgical Report include (refer Appendix B for details):

- Comprehensive assays did not show any deleterious elements and the excellent gold recoveries achieved indicate the ores are not refractory;
- The inclusion of an efficient gravity separation circuit and intensive cyanidation of the gravity concentrates is likely to be beneficial (leading to reduced reagent consumption and fast leach kinetics) in future process plant design;
- While the excellent gold recoveries were achieved at an industry standard grind size of P80 at 75µm the consultants recommend more test work at coarser grind size as this may yield acceptable recoveries with lower energy consumption

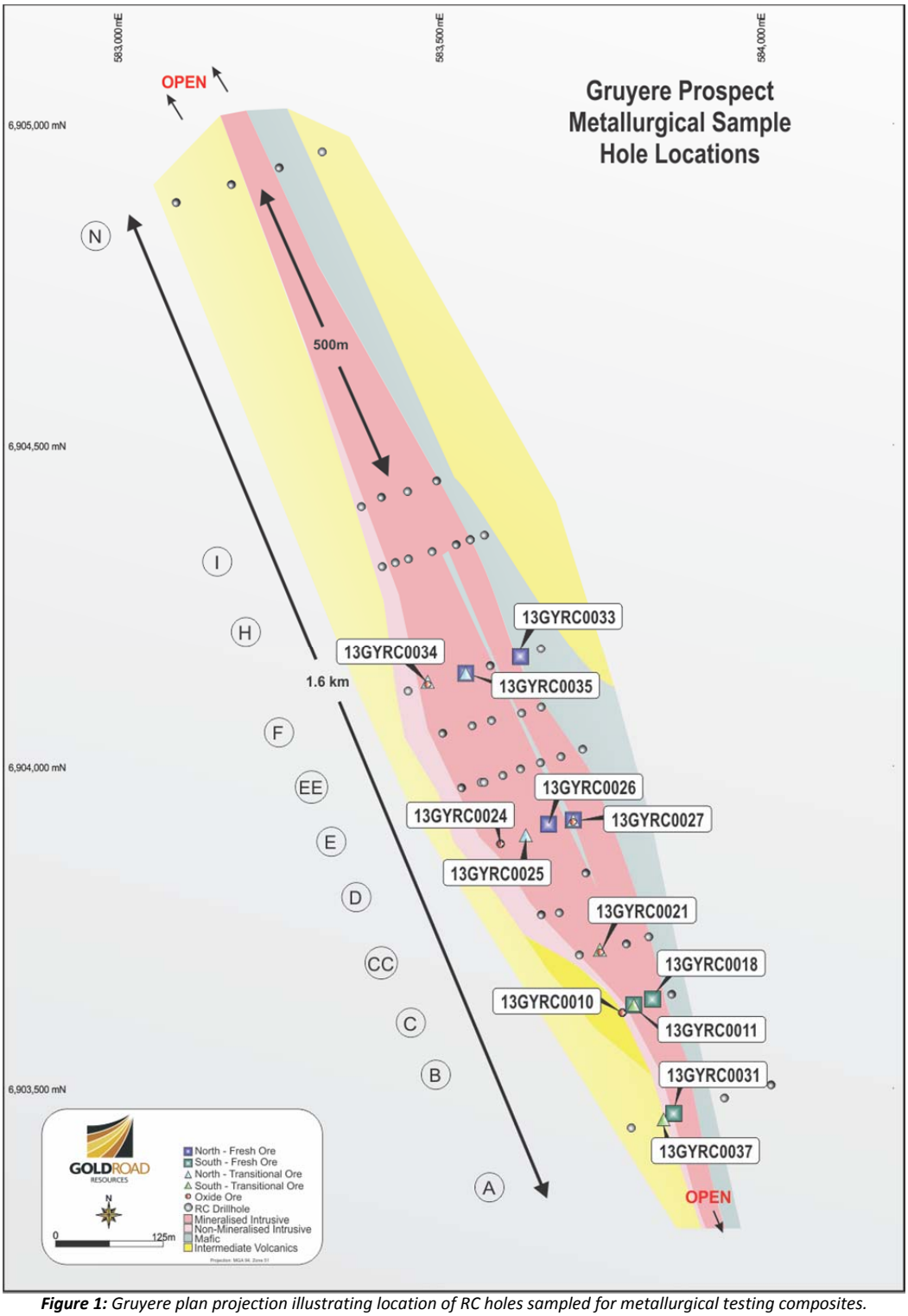

Figure 1: *Gruyere plan projection illustrating location of RC holes sampled for metallurgical testing composites.*

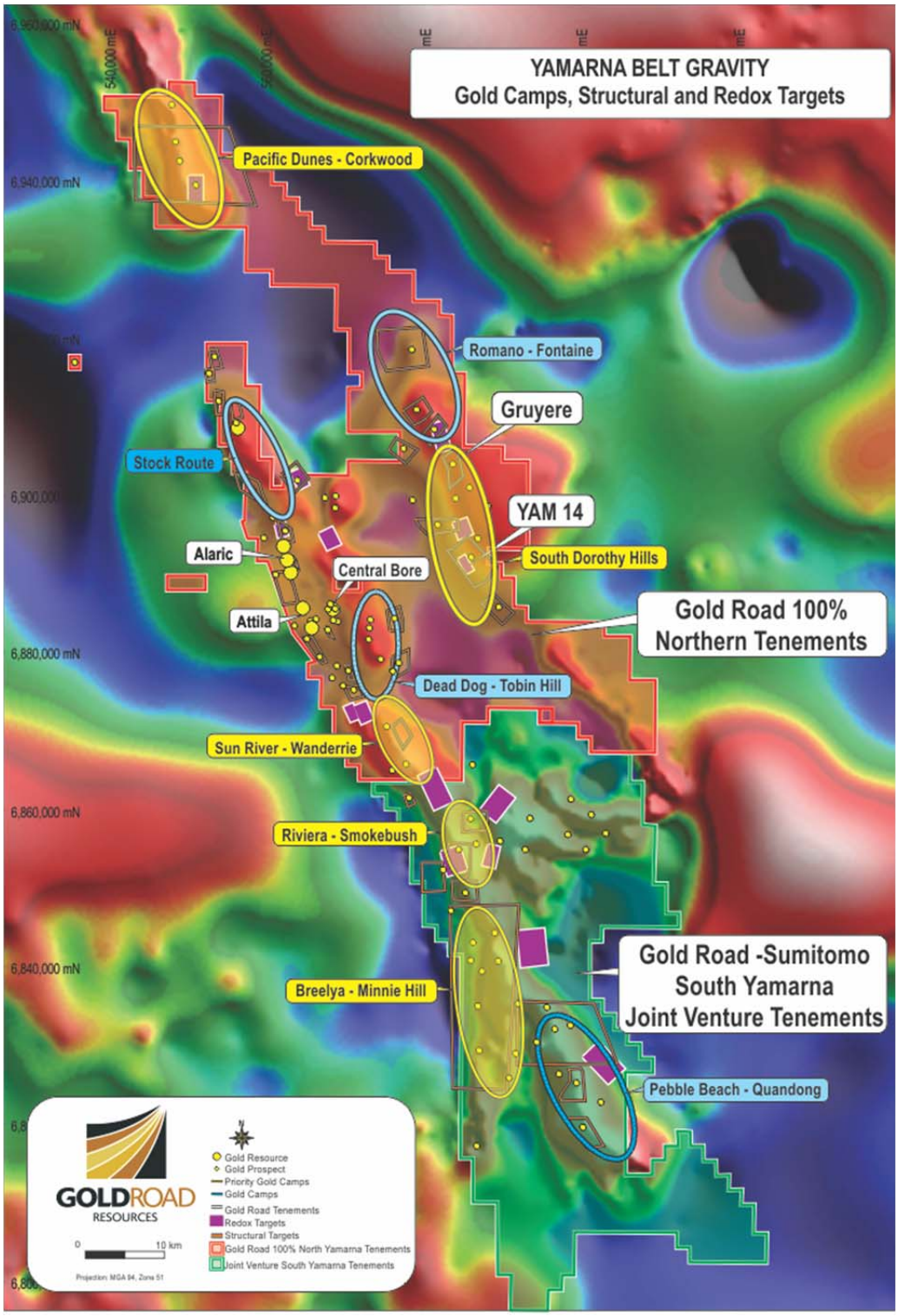

Figure 2: *Gold Road 100% tenements and Gold Road-Sumitomo South Yamarna Joint Venture tenements*

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About Gold Road Resources

Gold Road Resources Limited (ASX: GOR) is exploring and developing its wholly-owned **Yamarna Belt**, a newly discovered gold region covering ~4,200 square kilometres on the Yilgarn Craton, 150 kilometres east of Laverton in Western Australia.

Gold Road announced in May 2013 an exploration joint venture with Sumitomo Metal Mining Oceania Pty Ltd (a subsidiary of Sumitomo Metal Mining Co. Limited) for Sumitomo Metal Mining to earn up to 50% interest in Gold Road's South Yamarna tenements, an area covering ~2,120 square kilometres.

The Yamarna Belt, adjacent to the 500 kilometre long Yamarna shear zone, is historically underexplored and highly prospective for gold mineralisation. Geologically similar to the prolific Kalgoorlie Gold Belt, the Yamarna Belt has a resource of 1.3 million ounces of gold, hosts a number of significant new discoveries and lies north of the 7.9 million ounce Tropicana deposit.

Gold Road is prioritising exploration on five of its nine **Gold Camp Targets** on the Yamarna Belt. Identified in 2012 through interpretation of various geological and geophysical data sets, each target has a 15-25 kilometre strike length and contains numerous prospects. Initial exploration of these targets has been very encouraging.

The first Gold Camp Target was the South Dorothy Hills Trend which yielded the recent Gruyere and YAM14 gold discoveries. The discoveries, approximately 9 kilometres apart and on the same structural trend, approximately 25 kilometres north-east of its more advanced project Central Bore, exhibit two different mineralisation styles not seen before in the Yamarna Belt, and confirm the potential for the Dorothy Hills Trend to host further significant gold deposits.

NOTES:

The information in this report which relates to Exploration Results or Mineral Resources is based on information compiled by Mr Justin Osborne, Exploration Manager for Gold Road Resources Limited. Mr Osborne is an employee of Gold Road Resources Limited, as well as a shareholder and share option holder, and is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Osborne has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Osborne consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

Appendix A – Gruyere Metallurgical Samples – Drill hole details

Table 1: *Summary of RC hole collars for holes from which Metallurgical samples were derived*

Hole_ID	Depth (m)	MGA_E	MGA_N	m RL	MGAn Azimuth	Dip
13GYRC0010	60	583,786	6,903,617	413.6	250	-60
13GYRC0011	102	583,804	6,903,629	413.9	250	-60
13GYRC0018	120	583,832	6,903,638	415	250	-60
13GYRC0021	84	583,750	6,903,713	414	250	-60
13GYRC0024	84	583,596	6,903,878	411	250	-60
13GYRC0025	84	583,635	6,903,891	411	250	-60
13GYRC0026	84	583,671	6,903,903	412	250	-60
13GYRC0027	120	583,709	6,903,916	412	250	-60
13GYRC0031	120	583,865	6,903,460	414	250	-60
13GYRC0033	126	583,627	6,904,169	411	250	-60
13GYRC0034	120	583,483	6,904,129	410	250	-60
13GYRC0035	120	583,542	6,904,143	410	250	-60
13GYRC0037	66	583,849	6,903,450	414	250	-60

Appendix B – Metallurgical Testwork Report

1. Executive Summary

Results from a limited metallurgical test program, including Gravity and Cyanidation leach testwork undertaken at ALS Metallurgy, indicate the five composite samples representative of the Gruyere deposit all reported very good to excellent gravity gold recoveries and total gold recoveries.

Total gold recoveries ranged from a low of 96.04% to a high of 98.02%, while gravity gold recoveries ranged from a low of 52.24% to a high of 69.24%.

A single test on each composite was carried out. Parameters were chosen to maximize gold recovery and did not include efforts to determine the optimum parameters for design criteria or feasibility study input. An additional objective was to investigate the presence of coarse or nugget gold and its effect on assaying.

Besides the gravity separation (Knelson) circuit, other parameters to be investigated were limited to include:-

- A single grind size of P80 at 75µm.
- Oxygen sparging was selected in preference to air sparging.
- A reduced sample regime was used to investigate leach residence time in the cyanide leaching circuit. Limited samples were collected at 2, 4, 8 and 24 hours.

Both fresh ores (COMP1 and COMP2) reacted very similarly, indicating there is little difference between fresh ores from North and South locations.

- High gravity recoveries ranged from 58.24% (COMP2 South) to 69.24% (COMP1 North).
- There was very little between total gold recoveries. 96.04% (COMP1 North) and 96.43% (COMP2 South).
- Gold extraction rates during cyanidation were extremely fast and virtually completed after 4 hours.

Both transitional ores (COMP3 and COMP4) reacted very similarly, indicating there is little difference between transitional ores from North and South locations.

- High gravity recoveries ranged from 52.24% (COMP3 North) to 54.73% (COMP4 South).
- There was very little between total gold recoveries. 97.47% (COMP3 North) and 98.02% (COMP4 South).
- Gold extraction rates during cyanidation were extremely fast and virtually completed after 4 hours.

Oxide ore (COMP5) reacted similar to transitional ore from North and South.

- A high gravity recovery of 53.26% and a high total gold recovery. 97.19% were recorded.
- Gold extraction rates during cyanidation were still fast and virtually completed after 8 hours. A little slower than fresh and transitional ore, but still relatively quick.

There is strong evidence indicating the presence of coarse or nugget gold. The three ore types can be ranked from more likely to least likely to contain coarse or nugget gold, in the following order:- Fresh North and South>>Transitional North and South>>Oxide.

It was noted there is relatively good agreement between the head grade back calculated from Grav/Leach testwork and the method where the highest and lowest Fire Assay values are rejected and only the mid two values are averaged.

Other conclusions and recommendations include the following:-

- The comprehensive assays did not show any deleterious elements and the excellent gold recoveries achieved indicate the ores are not refractory.
- There is a strong indication, where low mass weights are used for FA to determine head grade, the result could understate the actual gold value in a high percentage of the cases. The degree of understatement is not large at between 5% and 13%, but can still have a serious implication when determining the overall gold grade of the deposits, and needs further investigation. Suggestions are:-
    i. Use at least two sub-samples with both being assayed in duplicate by FA.
    ii. At regular interval throughout the deposits, using 1kg or 2kg charges, carry-out 24 hour cyanide leach bottle rolls with leachWell including duplicate FA assaying of leach residues.
- The inclusion of an efficient gravity separation circuit and intensive cyanidation of the gravity concentrates is essential.
- Operating at a grind P80 of 75µm could be over-kill and tests at coarser grind sizes of P80 of 106µm and 125µm should be investigated. If successful the coarser grind will reduce both capital cost for grinding mills and power required for grinding. The very low gold grade and the mass distributions in the leach residue tails reported in Table 8.4 indicate that a grind size of P80 of 106µm should achieve satisfactory total gold recoveries, while even a P80 of 125µm could prove satisfactory. It's unlikely the coarser P80 would decrease the gravity gold recovery to any great extent.
- Due to the fast leach kinetics observed in all tests, sparging with oxygen may not be necessary and tests should be conducted with air. (In conjunction with the coarser P80 testwork and reagent optimization testwork.)
- No viscosity testwork was conducted, however the leach slurries at 40% showed no difficulties with viscosity.
- Testwork to optimize cyanide and lime consumption should be undertaken.
- Comminution testwork will need to be undertaken to enable grinding mill calculations.

2. Introduction

Five selected RC chip samples, between 20kg and 35kg, each representative of the Gruyere deposit at Gold Road Resources' Central Bore Gold Project were delivered during December 2013 to ALS Metallurgy's Laboratory in Balcatta. During December 2013 and January 2014 these samples were subjected to a limited metallurgical testwork program which concluded late January 2014.

The samples were representative of:-

- GRUYERE Fresh Composite North – (COMP1).
- GRUYERE Fresh Composite South – (COMP2).
- GRUYERE Transitional Composite North – (COMP3).
- GRUYERE Transitional Composite South – (COMP4).
- GRUYERE Oxide Composite - (COMP5).

The metallurgical testwork program included the following for each composite sample:-

- Sample preparation.
- From each composite a 4kg sample of "As Received Material" was sized over 10.0mm, 8.0mm, 6.3mm, 4.75mm, 2.00mm, 1.00mm and 0.50mm screens. Three low mass weight fractions were combined prior to assaying the following five fractions;- +6.30mm, -6.30mm/+2.00mm, -2.00mm/+1.00mm, -1.00mm/+0.50mm & -0.50mm.
- Comprehensive head assays on sub-sample A, including Au (duplicate by FA) Ag (low detection limit) As, Hg, ICP Scan plus C Total, C Organic, S Total, S Sulphide, Te, Cu, Ni and true SG determination on all composites.
- Due to the significant variation in the original Au (duplicate by FA) results, repeat Au assays (duplicate by FA) on second head sub-sample B were undertaken.
- Screen Fire assays on 1kg head samples.
- Analysis of site water sample was provided from a previous Central Bore test program Job No A14975. This site water was used for cyanide leach tests.
- Carry out multi-point grind establishment times at four selected grind P80s of 125, 106, 75 & 53 micron.
- 3kg samples would undergo Gravity (Knelson) Separation and intensive cyanidation leach of gravity concentrates at the grind size P80 of 75 microns. The tailings from the intensive cyanide leach were combined with the gravity tailings and subjected to a 24 hour direct cyanidation leach with oxygen sparging using Central Bore site water.
- The final leach residues were sized to determine the actual P80 of the grind. All leach residues grade were very low and close to the detection limit. Values were reported as 0.06, 0.04, 0.04, 0.04 and 0.04 g/t Au. Due to the low gold assay for the five leach residues, no sized fractions were assayed for gold.

3. Samples

Five RC chip samples representative of the Gruyere deposit at Gold Road Resources' Central Bore Gold Project were received at ALS Metallurgy's Laboratory in Balcatta. The samples would be used in a limited Metallurgical Testwork Program.

The samples included the following:-

- GRUYERE Fresh Composite North – (COMP1).
- GRUYERE Fresh Composite South – (COMP2).
- GRUYERE Transitional Composite North – (COMP3).
- GRUYERE Transitional Composite South – (COMP4).
- GRUYERE Oxide Composite - (COMP5).
- ATTILA_S Fresh ore – (COMP1).

3.1 Extractive Testwork Samples

Tables34.1 to 3.5 record the details of five composite samples to be used for gold extractive testwork.

Table 4.1 - Sample COMP1 – Gruyere North Fresh Ore

Hole_ID	Samples per hole	mFrom	mTo	Au_g/t
13GYRC0026	1	75	76	1.224
13GYRC0026	2	76	77	0.880
13GYRC0026	3	77	78	1.623
13GYRC0026	4	78	79	1.311
13GYRC0026	5	80	81	2.365
13GYRC0027	1	95	96	1.838
13GYRC0027	2	96	97	1.815
13GYRC0027	3	97	98	3.025
13GYRC0027	4	98	99	1.810
13GYRC0027	5	99	100	0.941
13GYRC0033	1	110	111	1.120
13GYRC0033	2	111	113	0.972
13GYRC0033	3	113	114	3.138
13GYRC0033	4	114	115	2.046
13GYRC0033	5	115	116	0.706
13GYRC0035	1	92	93	1.022
13GYRC0035	2	93	94	1.124
13GYRC0035	3	94	95	2.652
13GYRC0035	4	95	96	1.382
13GYRC0035	5	96	97	2.274

Total sample dry weight as received was recorded at **34.58 kg**. Estimated gold grade was **1.663 g/t**.

Table 3.2 - Sample COMP2 – Gruyere South Fresh Ore

Hole_ID	Samples per hole	mFrom	mTo	Au_g/t
13GYRC0011	1	63	64	1.555
13GYRC0011	2	64	65	1.798
13GYRC0011	3	65	66	1.641
13GYRC0011	4	66	67	0.935
13GYRC0011	5	67	68	0.773
13GYRC0018	1	92	93	2.860
13GYRC0018	2	93	94	3.385
13GYRC0018	3	94	95	1.292
13GYRC0018	4	95	96	1.427
13GYRC0018	5	96	97	0.950
13GYRC0031	1	36	37	1.085
13GYRC0031	2	37	38	0.557
13GYRC0031	3	38	39	1.517
13GYRC0031	4	39	40	0.682
13GYRC0031	5	40	41	2.685

Total sample dry weight as received was recorded at **17.20 kg**. Estimated gold grade was **1.543 g/t**.

Table 3.3 - Sample COMP3 – Gruyere North Transitional Ore

Hole_ID	Samples per hole	mFrom	mTo	Au_g/t
13GYRC0025	1	7	8	1.548
13GYRC0025	2	8	9	1.104
13GYRC0025	3	9	10	1.514
13GYRC0025	4	10	14	1.232
13GYRC0025	5	14	15	2.176
13GYRC0027	1	22	23	1.383
13GYRC0027	2	23	24	1.709
13GYRC0027	3	24	25	0.475
13GYRC0027	4	25	26	2.917
13GYRC0027	5	26	27	2.657
13GYRC0034	1	41	42	1.342
13GYRC0034	2	42	43	0.325
13GYRC0034	3	43	44	1.108
13GYRC0034	4	44	45	1.424
13GYRC0034	5	45	46	2.870
13GYRC0034	6	46	47	1.129
13GYRC0034	7	47	48	1.845
13GYRC0035	1	58	59	2.009
13GYRC0035	2	59	60	2.086
13GYRC0035	3	60	61	0.688

Total sample dry weight as received was recorded at **30.94 kg**. Estimated gold grade was **1.577 g/t**.

Table 3.4 - Sample COMP4 – Gruyere South Transitional Ore

Hole_ID	Samples per hole	mFrom	mTo	Au_g/t
13GYRC0011	1	48	49	1.207
13GYRC0011	2	49	50	1.045
13GYRC0011	3	50	51	1.182
13GYRC0011	4	51	52	0.988
13GYRC0011	5	52	53	1.239
13GYRC0021	1	32	33	1.156
13GYRC0021	2	33	34	1.762
13GYRC0021	3	34	35	0.726
13GYRC0021	4	35	36	2.517
13GYRC0021	5	36	37	2.705
13GYRC0021	6	37	38	5.015
13GYRC0021	7	38	39	0.890
13GYRC0021	8	39	40	0.936
13GYRC0037	1	10	11	1.125
13GYRC0037	2	11	12	0.658
13GYRC0037	3	12	13	0.980
13GYRC0037	4	17	18	1.362
13GYRC0037	5	19	20	0.881
13GYRC0037	6	20	21	1.316
13GYRC0037	7	21	22	1.036

Total sample dry weight as received was recorded at **26.58 kg**. Estimated gold grade was **1.436 g/t**.

Table 3.5 - Sample COMP5 – Gruyere Oxide Ore

Hole_ID	Samples per hole	mFrom	mTo	Au_g/t
13GYRC0010	1	3	4	3.108
13GYRC0010	2	4	5	2.273
13GYRC0010	3	5	6	1.452
13GYRC0010	4	6	7	1.335
13GYRC0021	1	3	4	2.443
13GYRC0021	2	4	5	2.486
13GYRC0021	3	5	6	2.730
13GYRC0021	4	6	7	1.231
13GYRC0024	1	9	10	1.059
13GYRC0024	2	10	11	1.558
13GYRC0024	3	11	12	1.314
13GYRC0024	4	12	13	1.292
13GYRC0027	1	4		0.827
13GYRC0027	2	5	6	1.871
13GYRC0027	3	10	11	5.962
13GYRC0027	4	11	12	0.677
13GYRC0034	1	15	16	0.915
13GYRC0034	2	16	17	0.994

Total sample dry weight as received was recorded at **21.22 kg**. Estimated gold grade was **1.863 g/t**.

4. Results of Size by Size Assaying

4kg samples of "As Received Material" were sized over 10.0mm, 8.0mm, 6.3mm, 4.75mm, 2.00mm, 1.00mm and 0.50mm screens. Three low mass weight fractions were combined prior to assaying, by duplicate Fire Assay, the following five fractions:- +6.30mm, -6.30mm/+2.00mm, -2.00mm/+1.00mm, -1.00mm/+0.50mm and -0.50mm.

For all five composites the majority of gold was found in the -0.50mm fraction. In four (two fresh and two transitional ores) of the five composites greater than 50% of the gold was found in the -0.50mm fraction. Only the oxide sample with 41.05% of the gold was less than 50%.

- Only COMP5, the oxide sample showed higher gold assays in the three sized fractions coarser than 1.00mm than the calculated grade.
- For COMP1 Fresh North, COMP2 Fresh South and COMP3 Transitional North greater than 70% of the gold was in the -1.00mm fraction.
- COMP4 Transitional South contained >60% of the gold in the -1.00mm fraction.
- Both COMP4 and COMP5 Oxide contained approx 24% of the gold in the -6.3mm/+2.00mm fraction.

However, these results do not indicate pre-concentration by sizing is likely to be successful. Results are presented in Tables 4.1, 4.2 and 4.3.

Table 4.1 – Mass Distribution in Size by Size Analysis

Size (mm)	COMP1 Fresh Comp Nth	COMP2 Fresh Comp Sth	COMP 3 Transitional Comp Nth	COMP4 Transitional Comp Sth	COMP5 Oxide Composite
+6.30	5.18	6.12	5.62	4.80	6.26
-6.30/+2.00	13.19	17.03	15.40	15.65	17.08
-2.00/+1.00	9.61	12.13	11.23	13.03	13.71
-1.00/+0.50	7.89	10.65	9.55	11.26	12.30
-0.50	64.15	54.08	58.20	55.27	50.66
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Calc'd P80	**1.83 mm**	**2.80 mm**	**2.29 mm**	**2.12 mm**	**2.84 mm**

Table 4.2 – Assay Grade (g/t Au) in Size by Size Analysis

Size (mm)	COMP1 Fresh Comp Nth	COMP2 Fresh Comp Sth	COMP 3 Transitional Comp Nth	COMP4 Transitional Comp Sth	COMP5 Oxide Composite
+6.30	1.20	1.39	0.67	0.95	2.15
-6.30/+2.00	1.16	1.12	1.18	1.57	1.89
-2.00/+1.00	1.79	0.98	0.86	0.76	1.47
-1.00/+0.50	1.05	1.03	0.96	0.76	0.98
-0.50	1.65	1.49	1.69	0.95	1.07
Calc'd Grade	**1.52**	**1.31**	**1.39**	**1.00**	**1.32**
Avg Assay	**1.43**	**1.51**	**1.49**	**1.57**	**1.78**

Table 4.3 – Gold Distribution in Size by Size Analysis

Size (mm)	COMP1 Fresh Comp Nth	COMP2 Fresh Comp Sth	COMP 3 Transitional Comp Nth	COMP4 Transitional Comp Sth	COMP5 Oxide Composite
+6.30	4.06	6.49	2.71	4.56	10.18
-6.30/+2.00	10.03	14.55	13.05	24.49	24.38
-2.00/+1.00	11.28	9.10	6.96	9.90	15.26
-1.00/+0.50	5.43	8.36	6.58	8.55	9.13
-0.50	69.20	61.50	70.70	52.50	41.05
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

5. Results - Head Assays

Sub-samples of the five composite samples were submitted for comprehensive head assays (duplicate Au by FA) and true SG determination. A second sub-sample was also assayed for duplicate Au by FA. All four FA assays are included. Results for Size by Size analysis and Screen Fire Assay have been added to the table. Results are presented in Table 5.1

Table 5.1 - Head Assays on Gruyere Samples

Analyte	Unit	COMP1 Fresh Comp Nth	COMP2 Fresh Comp Sth	COMP 3 Transitional Comp Nth	COMP4 Transitional Comp Sth	COMP5 Oxide Composite
Au 1A	g/t	0.97	1.03	1.48	1.36	1.62
Au 1B	g/t	1.56	2.47	1.29	1.68	1.88
Au 2A	g/t	1.62	1.25	1.70	1.61	1.80
Au 2B	g/t	1.58	1.27	1.50	1.64	1.82
Au FA Avg	**g/t**	**1.43**	**1.51**	**1.49**	**1.57**	**1.78**
Au Calc'd SxS	**g/t**	**1.52**	**1.31**	**1.39**	**1.00**	**1.32**
Au SFA	**g/t**	**1.79**	**1.44**	**1.52**	**1.42**	**1.78**
Ag	g/t	<0.3	<0.3	<0.3	0.3	0.6
Al	%	6.44	5.96	6.48	6.12	6.24
As	ppm	230	80	90	110	140
Ba	ppm	160	260	220	240	220
Be	ppm	<20	<20	<20	<20	<20
Bi	ppm	<25	25	50	<25	75
C	%	0.54	0.30	0.03	<0.03	<0.03
C organic	%	0.09	0.12	<0.03	<0.03	<0.03
Ca	%	1.60	0.80	0.20	0.20	0.20
Cd	ppm	<20	<20	<20	<20	<20
Co	ppm	<20	<20	<20	<20	<20
Cr	ppm	50	50	25	25	50
Cu	ppm	24	26	26	26	26
Fe	%	2.20	2.16	2.28	2.44	2.54
Hg	ppm	0.2	<0.1	<0.1	<0.1	<0.1
K	%	0.2	0.4	0.4	0.4	0.4
Li	ppm	<20	<20	<20	<20	<20
Mg	%	1550	1750	700	950	650
Mn	ppm	420	300	180	300	40
Mo	ppm	<20	<20	<20	<20	<20
Na	%	4.68	4.11	4.29	4.08	2.87
Ni	ppm	40	40	40	40	40
P	ppm	<250	<250	<250	<250	<250
Pb	ppm	20	35	45	40	55
S	%	0.72	0.40	0.04	0.04	0.08
S sulphide	%	0.60	0.34	<0.02	<0.02	<0.02
SiO_2	%	68.6	69.4	75.0	65.8	76.8
Sr	ppm	85	80	55	55	30
Te	ppm	0.6	0.2	<0.2	<0.2	0.6
Ti	ppm	1400	1200	1400	1200	1400
V	ppm	10	25	15	50	30
Y	ppm	<100	<100	<100	<100	<100
Zn	ppm	84	108	78	74	38
SG	**g/cm^3**	**2.731**	**2.726**	**2.719**	**2.718**	**2.667**

The following points are noted from the comprehensive analysis:-

- Arsenic, Carbon organic, Copper, Mercury, Nickel, Lead and Tellurium are all below levels that are likely to cause problems.
- The Total S and Sulphide S are very low for Transitional (North and South) and Oxide composites and don't present any problems.
- The Total S and Sulphide S in Fresh (North and South) composites are only moderately higher. Both fresh composites show Sulphide S to be approximately 85% of the Total S value. 0.60%/0.72% and 0.34%/0.40%. The excellent cyanide leaching results, from section 8, confirm the composites are not refractory.

1kg sub-samples of the five composite samples were submitted for screen fire head assays. Results of SFA are presented in Table 5.2.

Table 5.2 – Screen Fire Head Assays

Sample ID	>75um Wt gm	>75um Au g/t	<75um Wt gm	<75um Au1 g/t	<75um Au2 g/t	<75um Au Avg g/t	Calc Head Au g/t
COMP 1	22.88	**16.1**	977.49	1.51	1.38	**1.45**	**1.79**
COMP 2	13.94	**18.2**	981.11	1.09	1.31	**1.20**	**1.44**
COMP 3	17.19	**17.1**	977.61	1.22	1.27	**1.25**	**1.52**
COMP 4	19.87	**8.23**	973.46	1.36	1.67	**1.28**	**1.42**
COMP 5	18.91	**8.10**	977.96	1.64	1.51	**1.66**	**1.78**

A review of Fire Assay results are presented in Table 5.3.

Table 5.3 – Review of Fire Assay Results (using only highest and lowest values)

Sample ID	Lowest FA Au g/t	Highest FA Au g/t	Mean FA Au g/t	Variation from Mean
COMP1	0.97	1.62	1.295	**+/-25.1%**
COMP2	1.03	2.47	1.750	**+/-41.1%**
COMP3	1.29	1.70	1.495	**+/-13.7%**
COMP 4	1.36	1.68	1.520	**+/-10.5%**
COMP 5	1.62	1.88	1.750	**+/-7.4%**

An alternative review of Fire Assay results are presented in Table 5.4.

Table 5.4 – Review of Fire Assay Results (after rejecting highest and lowest values)

Sample ID	2nd Lowest FA Au g/t	2nd Highest FA Au g/t	Mean FA Au g/t	Variation from Mean
COMP1	1.56	1.58	1.570	**+/-0.6%**
COMP2	1.25	1.27	1.260	**+/-0.8%**
COMP3	1.48	1.50	1.490	**+/-0.7%**
COMP 4	1.61	1.64	1.625	**+/-0.9%**
COMP 5	1.80	1.82	1.810	**+/-0.6%**

Comparison between two sets of duplicate gold assays, screen fire assay (1kg sample) and back calculated grade from extractive testwork (3kg sample) are presented in Table 5.5

Table 5.5 – Comparison of Head Assays vs Screen Fire Assays

Sample ID	FA Au_{1A} g/t	FA Au_{1B} g/t	FA Au_{2A} g/t	FA Au_{2B} g/t	FA Avg of All Au g/t	FA (Mid 2) Au g/t	SFA Au g/t	Testwork Cal'd Au g/t	Estimate Grade* Au g/t
COMP1	0.97	1.56	1.62	1.58	**1.43**	**1.57**	**1.79**	**1.64**	**1.66**
COMP2	1.03	2.47	1.25	1.27	**1.51**	**1.26**	**1.44**	**1.22**	**1.54**
COMP3	1.48	1.29	1.70	1.50	**1.49**	**1.49**	**1.52**	**1.72**	**1.58**
COMP 4	1.36	1.68	1.61	1.64	**1.57**	**1.63**	**1.42**	**1.65**	**1.44**
COMP 5	1.62	1.88	1.80	1.82	**1.78**	**1.81**	**1.78**	**1.89**	**1.86**

Estimate Grade* refers to Tables 3.1 to 3.5 where the intercept grades were averaged to calculate an estimate grade of sample as received.

It should be noted that none of the five "as received samples" reported intercept grades greater than 6 g/t Au. Twenty three intercepts reported grades >2 g/t Au, while seventy intercepts reported grade <2 g/t Au.

Considering the extractive testwork Cal'd grade, having been determined from 3kg samples, it is reasonable to assume these values could be more representative, therefore can be allocating a value of 100. Values are then determined for both the Fire Assay average and Screen Fire assay results.

Results are presented in Table 5.6.

Table 5.6 – Comparison of Head Assays vs Screen Fire Assays on Gold Ore Samples

Sample ID	FA (Avg of All) Au g/t	FA (Avg of Mid 2) Au g/t	SFA Au g/t	Testwork Cal'd Au g/t
COMP1	**87.2**	**95.7**	**109.2**	**100.0**
COMP2	**123.8**	**103.3**	**118.0**	**100.0**
COMP3	**89.7**	**86.6**	**88.4**	**100.0**
COMP 4	**95.2**	**98.8**	**86.1**	**100.0**
COMP 5	**94.2**	**95.8**	**94.2**	**100.0**

The conclusion after reviewing all the various methods used to determine the most likely head grade is there is strong evidence for the presence of coarse or nugget gold. The three ore types can be ranked from more likely to least likely to contain coarse or nugget gold, in the following order:- Fresh North and South>>Transitional North and South>>Oxide.

It is interesting to note there is relatively good agreement between the head grade back calculated from Grav/Leach testwork and the method where the highest and lowest Fire Assay values are rejected and only the mid two values are averaged. Refer to Table 5.6 for details.

6. Grind Establishment Results

Grind establishments were carried out on the five composites COMP1, COMP2, COMP3, COMP4 and COMP5 to determine grind times to produce P80 grinds of 125, 106, 75 and 53 micron.

Results are reported in Tables 6.1, 6.2, 6.3, 6.4 and 6.5.

Table 6.1 – Grind Establishment Results [COMP1 Fresh Composite North Ore – Feed size <3.35mm]

Target Grind Size P80 micron	Time
125	4 minute 23 seconds
106	5 minute 21 seconds
75	8 minute 33 seconds
53	14 minute 58 seconds

Table 6.2 – Grind Establishment Results [COMP2 Fresh Composite South Ore – Feed size <3.35mm]

Target Grind Size P80 micron	Time
125	6 minute 0 seconds
106	7 minute 3 seconds
75	10 minute 42 seconds
53	17 minute 16 seconds

Table 6.3 – Grind Establishment Results [COMP3 Transitional North Ore – Feed size <3.35mm]

Target Grind Size P80 micron	Time
125	5 minute 20 seconds
106	6 minute 32 seconds
75	10 minute 15 seconds
53	16 minute 45 seconds

Table 6.4 – Grind Establishment Results [COMP4 Transitional South Ore – Feed size <3.35mm]

Target Grind Size P80 micron	Time
125	5 minute 51 seconds
106	6 minute 45 seconds
75	10 minute 21 seconds
53	16 minute 32 seconds

Table 6.3 – Grind Establishment Results [COMP5 Oxide Ore – Feed size <3.35mm]

Target Grind Size P80 micron	Time
125	7 minute 49 seconds
106	9 minute 15 seconds
75	13 minute 54 seconds
53	21 minute 45 seconds

7. Site Water Analysis

The following is the analysis of the site water used for the testwork. Results are presented in Table 7.1.

Table 7.1 - Site Water Analysis

Analyte	Unit	Gold Road Site Water
pH	-	7.67
SG	g/cm^3	1.0147
Ag	ppm (mg/L)	<0.02
Al	ppm (mg/L)	<0.20
Ba	ppm (mg/L)	<0.05
Bi	ppm (mg/L)	0.1
Ca	ppm (mg/L)	438
Cd	ppm (mg/L)	<0.05
Co	ppm (mg/L)	<0.05
Cr	ppm (mg/L)	<0.10
Cu	ppm (mg/L)	0.1
Fe	ppm (mg/L)	<0.01
K	ppm (mg/L)	334
Li	ppm (mg/L)	<0.05
Mg	ppm (mg/L)	954
Mn	ppm (mg/L)	0.05
Mo	ppm (mg/L)	<0.05
Na	ppm (mg/L)	4546
Ni	ppm (mg/L)	<0.05
P	ppm (mg/L)	3.0
Pb	ppm (mg/L)	<0.05
Sr	ppm (mg/L)	11.0
Ti	ppm (mg/L)	<0.01
V	ppm (mg/L)	<0.02
Y	ppm (mg/L)	<0.01
Zn	ppm (mg/L)	<0.02
Zr	ppm (mg/L)	<0.05
*HCO_3	ppm (mg/L)	460
*CO_3	ppm (mg/L)	<100
Cl	ppm (mg/L)	8550
SO_4	ppm (mg/L)	3170
TDS	ppm (mg/L)	20300
**Cond	mS/cm	27

The following points are noted;-

- Comparison to bore water from Yeo-PB13 & Yeo-PB19 is reasonably good.
- Lime buffer curve indicated pH started to buffer with lime at pH of 9.7 to 9.8, while Caustic Soda buffer curve indicated pH started to buffer with caustic soda at a similar pH.
- Lime would be the reagent chosen for pH adjustment.

8. Gravity Separation and Leach Extraction Testwork

A limited gravity separation and leach testwork program was conducted on the three composites. A single test on each composite was carried out. Parameters were chosen to maximize gold recovery and did not include efforts to determine the optimum parameters for design criteria or feasibility study input.

Besides the gravity circuit, other parameters to be investigated were limited to include:-

- A single grind size of P80 at 75µm.
- Oxygen sparging was selected.
- A reduced sample regime was used to investigate leach residence time in the cyanide leaching circuit. Limited samples were collected at 2, 4, 8 and 24 hours.

Results of Gravity Separation and Leach Extraction Testwork for gold are presented in Tables 8.1 to 8.3 below.

Table 8.1 – Results for Gravity Separation (Intensive Cyanide Leach of Concentrates) followed by 24 Hours of Direct Cyanide Leach of Gravity Tails - Gold Recovery

Sample ID	Prospect	Regolith	Au Rec'y Grav only	Au Rec'y Grav&2hr	Au Rec'y Grav&4hr	Au Rec'y Grav&8hr	Au Rec'y Grav&24hr
COMP1	North	Fresh	**69.24**	95.08	95.56	96.51	**96.04**
COMP2	South	Fresh	**58.24**	95.16	95.81	95.17	**96.43**
COMP3	North	Transitional	**52.24**	93.82	96.12	96.58	**97.47**
COMP4	South	Transitional	**54.73**	97.08	97.08	98.02	**98.02**
COMP5		Oxide	**53.26**	93.53	95.17	97.19	**97.19**

Table 8.2 – Results for Gravity Separation (Intensive Cyanide Leach of Concentrates) followed by 24 Hours of Direct Cyanide Leach of Gravity Tails - Gold Leach Extraction Rate

Sample ID	Prospect	Regolith	Gold Leach Extraction Grav only	Gold Leach Extraction at 2hrs	Gold Leach Extraction at 4hrs	Gold Leach Extraction at 8hrs	Gold Leach Extraction at 24hrs
COMP1	North	Fresh	**0%**	84.0%	**85.6%**	88.7%	87.1%
COMP2	South	Fresh	**0%**	88.4%	**90.0%**	88.4%	91.5%
COMP3	North	Transitional	**0%**	87.1%	**91.9%**	92.8%	94.7%
COMP4	South	Transitional	**0%**	93.5%	**93.5%**	95.6%	95.6%
COMP5		Oxide	**0%**	86.2%	**89.7%**	94.0%	94.0%

Table 8.3 – Summary of Gravity Separation (Intensive Cyanide Leach of Concentrates) followed by 24 Hours of Direct Cyanide Leach of Gravity Tails - Gold Recovery

Sample ID	Prospect	Regolith	Au Rec'y Grav & 24hr Leach	Residue Assay Au g/t	FA Au Avg g/t	SFA Au g/t	Testwork Cal Au g/t
COMP1	North	Fresh	**96.04**	**0.06**	**1.43**	**1.79**	**1.64**
COMP2	South	Fresh	**96.43**	**0.04**	**1.51**	**1.44**	**1.22**
COMP3	North	Transitional	**97.47**	**0.04**	**1.49**	**1.52**	**1.72**
COMP4	South	Transitional	**98.02**	**0.03**	**1.57**	**1.42**	**1.65**
COMP5		Oxide	**97.19**	**0.05**	**1.78**	**1.78**	**1.89**

The following points are noted from Tables 8.1, 8.2 and 8.3:-

- All tests recorded very high gravity gold recoveries – ranging between 52% and 69%.
- Gold extraction during the cyanide leach of the Gravity Tails was very fast. Gold leaching is virtually completed after 4 hours.
- All tests recorded high total gold recoveries – ranging between 96.04% and 98.02%.

All leach residues were sized from 75µm to 25µm, however with all leach residues showing very low gold grades of 0.60 g/t Au, 0.40 g/t Au, 0.40 g/t Au, 0.40 g/t Au and 0.40 g/t Au, being very close to the

detection limit) no fractions were assayed for gold. The actual P80 achieved was calculated from the sizing results. A summary of results are shown in Table 8.4.

Table 8.4 – Gold Distribution in Leach Residues (Tests KC1563 to KC1565)

Test ID	KC1591–COMP1	KC1592–COMP2	KC1593-COMP3	KC1594-COMP4	KC1595-COMP5
Ore Type	Fresh North	Fresh South	Transitional North	Transitional South	Oxide
Target P80	75um	75um	75um	75um	75um
Cal'd P80	76um	76um	74um	75um	75um
Head Cal'd	1.64 g/t Au	1.22 g/t Au	1.72 g/t Au	1.65 g/t Au	1.89 g/t Au
Residue Assay	0.06 g/t Au	0.04 g/t Au	0.04 g/t Au	0.04 g/t Au	0.04 g/t Au
Total Au Rec'y	96.04%	96.43%	97.47%	98.02%	97.19%
Size Fraction	**Mass Dist %**	**Mass Dist %**	**Mass Dist %**	**Mass Dist %**	**Mass Dist %**
+75um	20.65	20.49	19.19	19.74	20.24
-75um/+45um	25.53	27.88	28.38	28.06	26.94
-45um/+25um	15.84	13.44	13.97	13.58	14.19
-25um	37.98	38.19	38.46	38.62	38.63
Total	100.0	100.0	100.0	100.0	100.0
Residue Cal'd	Not Assayed	Not Assayed	Not Assayed	Not Assayed	Not Assayed
Residue Assay	0.06 g/t Au	0.04 g/t Au	0.04 g/t Au	0.04 g/t Au	0.04 g/t Au

A summary of reagent consumption is shown in Table 8.5.

Table 8.5 – Summary of Reagent Consumption (Not Optimized)

Test ID	KC1591–COMP1	KC1592–COMP2	KC1593-COMP3	KC1594-COMP4	KC1595-COMP5
Ore Type	Fresh North	Fresh South	Transitional North	Transitional South	Oxide
Cyanide kg/t	0.69	0.76	1.36	1.44	0.81
Lime kg/t	3.17	1.55	1.80	1.95	2.56

Cyanide consumption was moderately high for both fresh ore samples and the single oxide sample – ranging between 0.69 kg/t and 0.81 kg/t.

Cyanide consumption was high for both transitional ore samples – ranging between 1.36 kg/t and 1.44 kg/t.

Lime consumption was moderate to high between 1.55 kg/t and 3.17 kg/t and could be a result of the high chloride content of 8,550 ppm and TDS of 20,300 ppm as reported in the Gold Road site water.

9. Conclusions and Recommendations

- The comprehensive assays don't show any deleterious elements and the excellent gold recoveries achieved indicate the ores are not refractory.
- The inclusion of an efficient gravity separation circuit and intensive cyanidation of the gravity concentrates is essential.
- Operating at a grind P80 of 75µm could be over-kill and tests at coarser grind sizes of P80 of 106µm and 125 µm should be investigated. The very low gold grade and the mass distributions in the leach residue tails reported in Table 8.4 indicate that a grind size of P80 of 106µm should achieve satisfactory total gold recoveries, while even a P80 of 125µm could prove satisfactory. It's unlikely the coarser P80 would decrease the gravity gold recovery to any great extent. If successful the coarser grind will reduce both capital cost for grinding mills and power required for grinding.
- Due to the fast leach kinetics, sparging with oxygen may not be necessary and tests should be conducted with air. (In conjunction with the coarser P80.)
- No viscosity testwork was conducted, however the leach slurries at 40% showed no difficulties with viscosity.
- Testwork to optimize cyanide and lime consumption should be undertaken, with particular attention given to the chloride and TDS in the site water.
- Comminution testwork will need to be undertaken to enable grinding mill calculations.
- There is a strong indication, where low mass weights are used for FA to determine head grade, the result could understate the actual gold value in a high percentage of the cases. The degree of understatement is not large at between 5% and 13%, but can still have a serious implication when determining the overall gold grade of the deposits, and needs further investigation. Suggestions are:-
    iii. Use at least two sub-samples with both being assayed in duplicate by FA.
    iv. At regular interval throughout the deposits, using 1kg or 2kg charges, carry-out 24 hour cyanide leach bottle rolls with leachWell including duplicate FA assaying of leach residues.