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## **Bullabulling Gold Project – Initial Metallurgical Programme Results**

### **Highlights**

- **Metallurgical study of primary mineralisation (between Bacchus and Phoenix pits on the Bullabulling Trend) completed.**
- **Key inputs to a large scale carbon-in-leach operation now determined.**
- **Gold recoveries expected to exceed 90% for grades above 0.6 g/t Au.**
- **Master composite sample grading 0.96 g/t Au obtained 92.5% recovery over 24 hours.**
- **Mineralisation soft to medium hardness and moderate abrasiveness.**
- **The project is amenable to SAG milling and possibly high pressure grinding rolls (HPGR's).**
- **A follow-up metallurgical programme now underway to finesse optimum grind size, reagents and recoveries.**

Jeff Malaihollo, Managing Director of GGG Resources said “The metallurgical results are highly encouraging and confirm that the Bullabulling Gold project has excellent recoveries at head grades of less than 1.0g/t Au with the master composite producing recoveries of over 90% with low cyanide consumption. Previous operations during the 1990's produced average recoveries of approximately 94%. The Bullabulling mineralisation is not hard or abrasive in the context of the Eastern Goldfields which should have a positive impact on operating costs. Bullabulling continues to demonstrate all of the characteristics of a robust long term gold project.”

The Bullabulling Joint Venture is pleased to announce the results of the first stage comprehensive metallurgical test work on fresh mineralisation at the Bullabulling Gold Project. The final report for the Phase One test work has been received, based on five samples, which were composited to a master composite sample and the remaining samples were the subject of variability test work. The samples were selected from fresh (primary) mineralisation taken at intervals along the Bullabulling Trend between Bacchus pit in the south and Phoenix pit in the north (see sample location map).

The results from both the test work on the composite sample and the variability test work are highly encouraging with the results confirming that the Bullabulling gold deposit has excellent recoveries at head grades of less than 1.0 g/t Au, with approximately 40% of the contained gold recoverable by gravity. The gold recoveries are sensitive to grind size and additional test work is planned to optimise the required grind.

Compared to other deposits in the Goldfields, the ore at Bullabulling is neither hard nor abrasive due to the lack of quartz associated with the gold mineralisation. This should have a positive impact on operating costs. Planning and sampling of additional ore from the entire length of the Bullabulling Trend to increase the number of variability test work samples has commenced and these data will be used in the next phase of work to more accurately estimate processing and capital costs and assess recoveries at lower head grades.

### **Metallurgy Test Work**

A programme of diamond drilling was completed to provide fresh sample material for extractive and comminution testing. Five PQ size diamond core holes, two collared at the base of Bacchus South and Phoenix pits drilling directly into fresh rock, and three from surface requiring pre-collars to reach the base of oxidation prior to commencing PQ diamond tails, were completed for a total of 506m (see sample location map). Holes were designed to intersect gold mineralised zones in fresh rock as defined by the resource model, ranging from 10m to 19m in width to obtain sufficient sample (330kg per hole) for the test work. Where possible, drillholes were oriented partially down the dip of mineralised zones in order to extend the intersection width. All mineralised samples contained visible silicification and disseminated sulphide mineralisation at the contact with felsic and mafic lithologies. All core was logged and photographed before selecting 20-25m (300kg) mineralised intervals from each drillhole for transportation to Perth where they were assayed and prepared for processing. The core was reviewed and various samples selected for comminution (crushing and grinding), recovery and variability test work based on the assay results to produce one composite sample of approximately 1.0 g/t Au and five samples for variability test work. The metallurgical test work programme included the following:

- Sample preparation.
- Head assay analysis.
- Comminution test work.
- Gravity separation and cyanidation optimisation.

- Lime demand test work.
- Carbon loading test work.
- Oxygen uptake rate determination.
- Rheology test work.

Process water, obtained from the existing borefield at Bullabulling, was used for all parts of the test programme where wet grinding and slurry preparation were required.

The head assay analysis on the master composite sample gave a grade of 0.96 g/t Au, 0.3 g/t Ag, 150 ppm As and 0.88% S. The variability samples gave grades ranging 0.56-5.44 g/t Au, 0.3-0.8 ppm Ag, <10-480 ppm As and 0.42-1.32% S (Table 1). It is considered that the variability samples provided a complete range of potential ore types from low grade to high grade samples.

### Comminution

A comprehensive testwork programme was performed on samples from the five sample drill holes, with most of the testwork being performed on composite samples from the mineralised intervals in each drillhole ('comminution composites'). The comminution composites were submitted for a range of test work, including:

SAG Amenability	Unconfined Compressive Strength (UCS)
	Bond Impact Crushing
	JK Drop-weight
	Bond Abrasion
	Bond Rod Mill
	Bond Ball Mill
Variability	SAG Mill Comminution (SMC)
	Bond Ball Mill

The UCS values ranged from 5.4 to 161.3 MPa with an average of 101 MPa; the range spans Very Soft to Competent material, and indicates SAG milling would be an appropriate process option. The Bond Crushing Work Indices recorded ranged from 4.6 to 18.1 kW/t, averaging 8.8 kW/t. Apart from the high outlier readings the samples are considered soft to medium with respect to impact resistance and are generally lower than average for typical Eastern goldfields type gold deposits. The Bond Rod Mill Work Indices were consistently higher than the Ball Mill Work Indices averaging 15.7 and 12.5 kWh/t respectively. The Crushing Work Indices reported were significantly lower than the Rod and Ball Milling figures, which also supports the inclusion of a SAG mill in the process flowsheet. The Bond Abrasion Indices varied from 0.14 to 0.27 averaging 0.19 which is moderately abrasive. The Drop Weight and SMC testing indicate the samples exhibit significant resistance to both impact and abrasion breakage and indicate High Pressure Grinding Rolls (HPGR's) should be considered to realise power efficiencies.

## Gold Extraction

A thorough gravity and leach test programme was undertaken on the Master Composite with tests under optimum conditions performed on Variability Samples to evaluate:

- Suitability of gravity gold recovery
- Optimum grind size
- Use of sparged oxygen
- Use of lead nitrate
- Initial and maintained cyanide concentrations

As a result of the testwork, the following optimum conditions were selected:

- Gravity separation ahead of leaching
- Gravity grind P80 of 150 microns
- Leach grind P80 of 75 microns
- Leach with oxygen sparging
- Lead nitrate addition of 250g/t
- Initial cyanide level of 0.1%

The inclusion of gravity separation ahead of leaching achieved marginally higher gold recoveries over direct leaching, depending on the duration of leaching. Gravity recoveries typically range between 30% and 50% of total gold extraction and further work is required to determine the optimum design. Grinding optimisation was a major component of the testwork program, as power will be a significant operating cost and comminution efficiency must be maximised.

The testwork indicates the optimum grind is a P<sub>80</sub> of 75 microns but further work will be undertaken to define whether a coarser grind (between 75 and 106 microns) is beneficial. Leach extractions exceeding 90% are expected for all types of mineralisation (including low head grades), with cyanide consumption of around 0.8 kg/t and lime at 5 kg/t or higher. The recovery test work results for the master composite sample (0.96 g/t Au) gave 93.57% recovery after 48 hours with 45% of the gold reporting to gravity (Table 1). Lime and cyanide consumption were 6.89 and 0.39 kg/t respectively. The variability recovery test work gave similar recoveries but slightly different cyanide and lime consumption. The lower recovery of 89% for the variability sample with a head grade of 0.56 g/t Au suggests that recoveries may be sensitive to head grades below 0.6 g/t Au. Additional variability test work is required to test this possibility. The composite sample was also tested at four different grind sizes and the results suggest that the ore from Bullabulling is sensitive to grind size with the 75 micron sample giving the best recovery of 94.8%, with recoveries reducing to 88.58% at a 150 micron grind (Table 2).

Sample	Au g/t	Gravity %	% Au Extraction (Hours )				Consumption (kg/t)	
			2	8	24	48	Lime	NaCN
Master	0.96	45.00	87.01	91.15	92.51	93.17	6.89	0.39
HS25168	0.56	27.59	86.51	86.51	87.76	88.97	4.72	0.82

HS25169	5.44	47.73	93.86	94.42	96.93	97.61	4.92	0.89
HS25170	2.18	42.79	91.29	94.26	95.40	97.05	5.49	0.88
HS25171	1.60	52.50	90.33	92.57	94.00	94.70	5.33	0.78
HS25172	1.53	47.53	92.10	93.49	93.49	93.49	5.23	0.88

Table 1: Variability recovery test work results from individual samples

Sample	Grind (microns)	Gravity	% Au Extraction (Hours)				Consumption (kg/t)	
			2	8	24	48		
HS24786	150	33.97	77.62	85.72	87.65	88.58	6.90	0.68
HS24787	125	34.71	79.30	87.60	89.57	90.52	6.80	0.67
HS24788	106	36.28	80.68	89.33	90.36	90.85	6.87	0.77
HS24789	75	35.22	85.33	91.61	93.11	94.08	6.84	0.97

Table 2: Grind size recovery test results from the composite sample

Initial Cyanide (%)	% Au Recovery (24 hrs)
0.200	94.84
0.100	94.40
0.075	92.08
0.050	91.85
0.025	86.81

Table 3: Summary of Cyanidation Testwork

### Future Metallurgical Test Work Plan

Although the metallurgical test work for the scoping study is of a very high quality and gave results similar to previous operational data, additional variability data are required from the entire length of the Bullabulling Trend that potentially may be mined. A programme of PQ diamond drilling to obtain core samples for the variability testing using the optimised pit shells from the scoping study has been agreed by the metallurgical consultant and completed (see sample location map). The metallurgical drilling programme comprises 17 drillholes totalling 1,935m including 770m of RC drilling in 15 pre-collars and approximately 1,100m of PQ size diamond drill core. The drilling provided 27 samples (each 300kg in weight of full PQ core) made up of mineralised transitional partly oxidised material and fresh material.

The drilling and testwork are critical path tasks for the pre-feasibility study, consequently this work has commenced and currently well ahead of schedule. Additional water sampling for the pre-feasibility study test work has also been completed and the sample delivered to the laboratory in Perth.

### Bullabulling Overview

The Bullabulling Gold project (Bullabulling) is a large tonnage, low grade deposit with high grade shoots, associated with the regional Bullabulling shear zone which extends over tens of kilometres. The mineralised structure is 500m wide, consisting of multiple west dipping low grade stacked zones with narrower higher grade gold mineralisation. Bullabulling is located near Coolgardie and approximately 65km south-west of Kalgoorlie, Western Australia. Previous operations produced 371k oz Au in the 1990's. The current programme focuses on the 6km portion of the shear zone known as the Bullabulling Trend where previous operations were concentrated. The focus for the Bullabulling joint venture between

Auzex Resources Ltd and GGG Resources plc is to establish an initial reserve exceeding one million ounces gold to commence production in 2015.

On 15 August 2011 the Joint Venture announced an updated JORC compliant resource estimate based on the Phase One drilling programme of approximately 35,000m. The new JORC compliant resource is 78.84 Million tonnes at 1.03 g/t gold for 2,603,000 ounces, using a 0.5 g/t gold cut-off. Of the 2.6 Million ounces of resource, 711,700 ounces are in the indicated category.

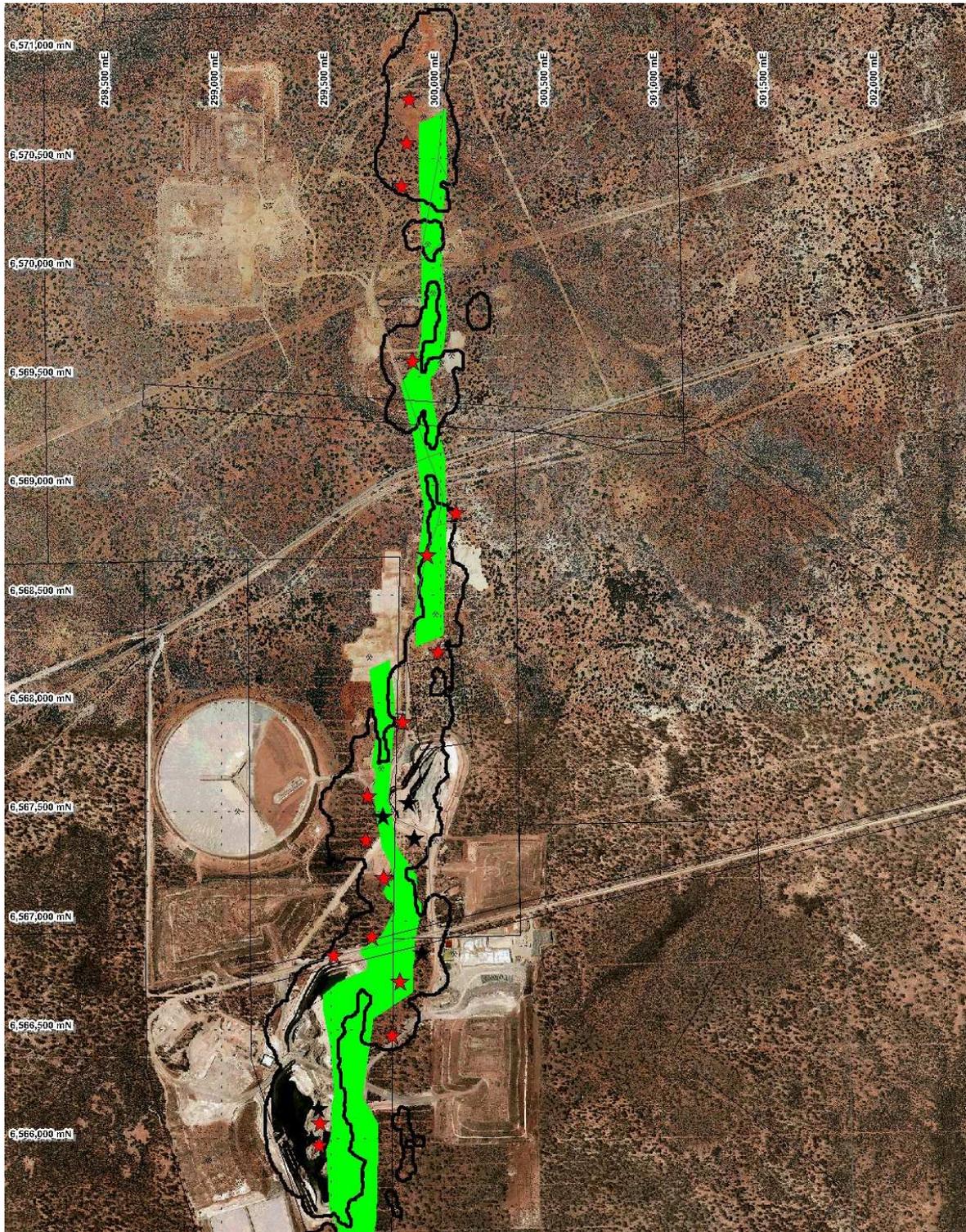
**Glossary:**

**Comminution** is the process in which solid materials are reduced in size, by crushing, grinding and other processes.

**Sparging** is a technique which involves bubbling a chemically inert gas through a liquid.

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Location map of Phase One metallurgical samples as black stars and completed Phase Two samples as red stars. The green polygon is the mapped surface position of the komatiite from the drilling and Niton work.