

## GUNSON RESOURCES LIMITED

### QUARTERLY REPORT FOR THE PERIOD ENDED 30<sup>th</sup> SEPTEMBER 2009

#### HIGHLIGHTS

##### COBURN ZIRCON DEVELOPMENT PROJECT

- The Design Definition Study, aimed at reducing the capital and operating costs, as well as risk associated with execution of the Project, is almost complete and should be available in November.
- Completion of the Study will allow finalisation of the Project Definitive Feasibility Study (DFS) and a decision regarding mine development prior to the end of 2009.
- Discussions with a potential strategic investor continued during the quarter, advancing to agreement in principle that an investment decision would be based on the DFS results, including final zircon product quality data.

##### MOUNT GUNSON COPPER PROJECT

- Down-hole and surface geophysical readings around the first of 2 deep diamond drill holes in the Emmie Bluff Prospect area have revealed an encouraging deep TEM conductor 600m north east of this drill hole, MGD 55. Further surface TEM survey work aimed at better defining drill targets is scheduled to commence at the end of October.
- A preliminary feasibility study (PFS) on the MG14 copper deposit has shown that the 1.1 million tonne, 25 metre deep deposit pays back the capital investment, with residual cash left over, while leaving a processing plant available to treat ore from the ten times larger Windabout deposit 5 km to the north.
- Metallurgical test work completed during the PFS has produced a high grade copper concentrate containing 33% copper and 1.1% cobalt, with low sulphur and uranium contents, an attractive smelter feedstock.
- On the recommendation of engineering group Sedgman Metals, who reviewed the PFS at the end of the quarter, the Company has decided to proceed with a 15 month bankable feasibility study (BFS), with major focus on improving the financial returns of a sequential MG14-Windabout mine development by further enhancing the concentrate grade and recovery of copper into concentrate of both deposits.

##### TENNANT CREEK PROJECT

- Aboriginal heritage clearance of both granted tenements has paved the way for a drilling program to test the promising Gosse 5 gravity geophysical anomaly.

#### 1. COBURN ZIRCON DEVELOPMENT PROJECT (100%) WESTERN AUSTRALIA

The Design Definition Study by Perth based engineering group Sedgman Metals is almost complete and the Company expects to receive the final Study report in November. Indications to date are that both the capital and operating costs of the Project will be reduced from previous estimates.

Completion of the Design Definition Study will allow finalisation of the Project Definitive Feasibility Study (DFS) and a decision on mine development prior to the end of 2009.

### **1.1 Government Approvals**

Redrafting of the Groundwater Mounding Management Plan has been completed, following discussions with regulators from the Departments of Environment/Conservation and Water during the quarter. Approval of this Management Plan is required prior to the commencement of mining operations and approval is expected by the end of 2009.

Finalisation of the Application for a second Non Substantial Change from the Public Environmental Review (NSCA 2), first lodged in December 2008, was suspended pending completion of the Design Definition Study. NSCA 2 should be submitted to the regulators in December 2009 and no major issues with approval are expected.

### **1.2 Design Definition Study/Costing**

This study has been in progress since mid June and is nearing completion.

Metallurgical test work to confirm equipment selection and to optimise the flow sheet has comprised a major part of the Study. Spiral equipment from Australian and overseas suppliers was successfully compared for cost effectiveness and the preferred equipment is being incorporated into the capital cost estimates.

Most of the metallurgical test work has been focused on developing an optimum dry mineral separation (MSP) flow sheet, to produce quality final heavy mineral products. This work has provided the information required to design and cost the MSP at the mine and most of the final mineral product specifications are expected by early November. The remainder should be available later in November.

Tenders for the 44 km long mine access road and the village were received in mid October, revealing a wide range of prices in the 12 proposals received. The most competitive prices received are 6 to 8% lower than previous estimates included in the Project financial model.

Expressions of interest for a build-own-operate dual fuel natural gas/diesel power station for the mine were received from 5 suppliers and final proposals requested from 3 of those. The closing date for proposals is 10<sup>th</sup> November 2009.

Trucking costs for heavy mineral concentrate at the mine and for final heavy mineral products from the mine to the port at Geraldton should be finalised in early November. All of the rutile and leucoxene, and at least some of the zircon is to be shipped bulk in containers.

### **1.3 Marketing**

The recent closure of several heavy mineral sand mines, together with decisions by BHP Billiton and Exxaro to cease feasibility studies on 2 large deposits in southern Africa this year, have contributed to some minor improvement in titanium dioxide mineral sand feedstock prices, in particular those with similar high titanium content to Gunson's mineral products. As a result, verbal agreement has been reached for marketing of the Company's rutile and leucoxene production in containers from Geraldton. Documentation of this agreement should be completed by the end of 2009.

Despite a significant increase in Chinese zircon demand since mid 2009, producer stocks have built up to unusually high levels this year and are now impacting on spot prices. Opinion on the duration of the approximately \$US100 per tonne reduction in zircon prices since July 2009 is divided. However, the combination of increased demand driven by urbanisation in developing countries and the longer term supply outlook support the Company's view that the current period of price weakness will have ended by the anticipated Project commissioning date.

## 1.4 Financing

A third visit was made to the Middle East in mid October, facilitated by Abu Dhabi based Australian consulting firm Templeton Galt. Several investment groups, a retail stockbroker and the Nasdaq Dubai Stock Exchange were visited.

Discussions with a potential strategic investor continued during the quarter, advancing to agreement in principle that an investment decision would be based on the results of the DFS, including final zircon product quality data.

## 2. MOUNT GUNSON COPPER PROJECT (100%) SOUTH AUSTRALIA

### 2.1 MG 14 Feasibility Study

Results of the Preliminary Feasibility Study (PFS) on the shallow MG 14 copper deposit, now excised from the Noranda Pacific Pty Limited farm-in agreement, were announced to ASX on 12<sup>th</sup> October.

The final Locked Cycle flotation metallurgical test carried out by the Ian Wark Research Institute at the University of South Australia yielded a high grade copper concentrate containing 33% copper and 1.1% cobalt, with low sulphur and uranium contents, an attractive smelter feedstock. This result was a significant improvement on the concentrate grade of 19.3% copper obtained in the earlier test work reported in the March 2009 quarterly report.

On the basis of the Locked Cycle test results, a 550,000 tonne per annum treatment plant was designed and costed. Power, water, contract mining, concentrate transport, labour and accommodation costs obtained over the past 15 months were also incorporated in the Project financial model.

Modelling of the Project yielded positive financial returns and in September 2009, the internal Gunson PFS was forwarded for review to Sedgman Metals, the engineering group appointed as the Company's preferred contractor for the Coburn Zircon Project in June 2009.

### 2.2 PFS Review by Sedgman Metals

Sedgman Metals concluded that the MG 14 project could generate about \$21.5 million of surplus cash per annum over its two year life, based on the Ian Wark Research Institute Locked Cycle flotation test work results and the following price assumptions:

Copper Price	\$US2.70 per pound
Cobalt Price	\$US14.50 per pound
Exchange Rate	US 86 cents to \$A1.

From the costs estimated in the Sedgman review, the project will generate surplus cash marginally above the capital cost of the MG 14 mine. This cash surplus could be used for a drilling program on the much larger but lower grade Windabout deposit some 5 km to the north of MG 14.

However, Sedgman commented that a better copper recovery than 67% could be achieved, along with a higher concentrate grade, based on the dominance of high tenor copper sulphides in the ore. Sensitivity analysis showed that moderate increases in recovery, coupled with a higher concentrate grade, could have a large positive impact on the financial return of MG 14 but the most significant improvement to the return of a small scale mine development at Mount Gunson would be if mining of the Windabout deposit followed immediately after the exhaustion of MG 14. For these reasons, Sedgman proposed the

following work program to bring the feasibility study to bankable status:

- Diamond drilling of the Windabout and MG 14 deposits to obtain additional samples for further metallurgical test work and better define the Windabout mineralisation.
- Metallurgical test work to confirm and optimise the previous work on MG 14 ore, including comminution testing and flotation optimisation.
- BFS test work including thickening, filtration, rheology, flotation variability and other tests.
- Comminution, flotation and geotechnical work on the Windabout deposit additional to the work done for a pre feasibility study in the mid 1990s.

### **2.3 Decision on Bankable Feasibility Study**

Results of the PFS on MG 14 have indicated that sufficient cash is generated at the mid October copper price to pay back the capital invested and to fund additional drilling at MG 14 and Windabout. At the higher prices forecast from 2010 onwards by some respected analysts, the financial returns could be very attractive.

Metallurgical test work by the Ian Wark Research Institute at the University of South Australia has resulted in a premium high copper, low sulphur and uranium concentrate that should attract strong interest in the market. These results are a significant improvement on those obtained in previous metallurgical test work.

Consequently, the Company has decided to proceed with the following work program in the next 15 months to upgrade the present study to bankable status:

- Initiate an infill drilling program at Windabout Prospect to collect additional samples for further metallurgical and geotechnical test work and to define zones of shallow, higher grade mineralisation for early mining.
- A small infill drilling program at MG 14 to collect additional metallurgical samples.
- Metallurgical test work, primarily on samples from Windabout but some work on MG 14 additional to that already completed this year by the Ian Wark Research Institute.
- Optimisation of the process design to realise possible improvements in the metal recovery and concentrate grade.
- Complete regulatory approvals for the proposed mine development.
- Develop bankable capital and operating cost estimates.
- Initiate contact with potential copper concentrate customers and financiers with a view to completing offtake and financing arrangements by late 2010.

The primary focus of this bankable feasibility study will be to improve the financial returns of a sequential MG 14- Windabout mine development by enhancing the concentrate grade and recovery of copper into concentrate of both deposits.

### **2.4 Emmie Bluff Drilling Program**

A 2 hole deep drilling program designed to test gravity geophysical targets in the Emmie Bluff Prospect area was completed at the end of August.

Geological comments on the first hole, MGD 55, were reported in the previous quarterly report but assays were not available at that time. The assays confirmed the existence of extensive sub economic copper mineralisation, within which are 2 narrower zones of higher grade copper - gold values, as follows:

From	To	Intersection
974 m	981 m	<b>7 m @ 2.2% copper, 0.5 g/t gold</b>
1,006 m	1,007 m	<b>1 m @ 4.6% copper, 1.3 g/t gold</b>

The rationale for drilling the second hole of the program, MGD 56, some 2.8 km west of MGD 55, was discussed in the previous quarterly report. MGD 56 intersected a similar thickness of cover rocks to MGD 55, before passing into basement at 752 m. The basement is distinctly different to MGD 55, comprising altered and variably brecciated Gawler Range Volcanics to 1,107 m, then altered and brecciated granite with some volcanic fragments to the end of the hole at 1,181 m. Hematite alteration is common, associated with quartz-chlorite veins, with magnetite-quartz-chlorite veins becoming predominant below 1,030 m. Patches of barite and fluorite are common between 989 - 1,030 m.

Strong brecciation and alteration of the basement rocks in MGD 56, accompanied by veins and patches of copper sulphides, enhance the prospectivity of the area. Copper assays up to 0.8% have been revealed in the basement sampled in 2 m intervals between 752 - 1,181 m.

## 2.5 Down-hole Geophysical Logging/Surface TEM

The narrow zones of higher grade copper mineralisation in MGD 55 listed above are considered encouraging, because they could develop nearby into much thicker bodies with the same grade. Down-hole Transient Electromagnetic (TEM) logging was carried out to test this possibility, revealing a conductive zone in the basement but unfortunately the hole became blocked before the MGD 55 survey had been completed. Surface readings taken at the same time as the second down-hole survey indicated a strong, deep conductor 600 m north east of MGD 55, on the eastern edge of the main gravity anomaly.

Two attempts to survey MGD 56 failed, the first time due to a malfunction of the TEM probe and the second due to blockage of the hole at 256 m.

Modelling of the down-hole and surface TEM readings taken during the survey have indicated that the surface TEM can detect large conductive bodies at the target depths.

As a consequence, a 2 week surface TEM survey aimed at defining further drilling targets around Emmie Bluff is scheduled to start on 29<sup>th</sup> October.

First pass Induced Polarisation (IP) resistivity logging was also carried out down the 2 deep drill holes, prior to the commencement of TEM work. The IP resistivity logs revealed a 300 metre thick conductive zone between 750 m and 1,050 m in MGD 55 and several conductive zones between 870 - 1,180 m in MGD 56. The conductors in MGD 56 include a narrow zone near the base of the hole that is stronger than any response from MGD 55.

## 2.6 Geophysical Modelling

A revised density-magnetic susceptibility model for the Emmie Bluff Prospect area was made, using measurements on the drill core from MGD 55 and 56. This model was then compared with models made up using publicly available information from the Olympic Dam and Carrapateena copper deposits, located 80 km north and 35 km east of Emmie Bluff Prospect respectively.

The comparison was done at a common depth of 350 m, the average thickness of cover rocks at Olympic Dam. The near-barren hematite body at Olympic Dam has an amplitude of

16 milligals and the modelled response of the Emmie Bluff hematite body at 350 m depth is 6 milligals, more than twice the modelled response of the Carrapateena deposit at the same depth.

Viewed in the context of iron oxide associated copper-gold mineralisation in the 500 km long Olympic Copper - Gold Province of South Australia, the gravity anomaly at Emmie Bluff Prospect is extensive and strong, like the rock alteration, encouraging persistence in the search for a major copper-gold deposit in this area.

### 2.7 Noranda Earn-In Expenditure

Noranda Pacific Pty Limited (Noranda), part of the Xstrata Copper Business Unit, continued to fund exploration for iron oxide associated copper-gold deposits in basement rocks during the quarter, spending \$574,394. This brings Noranda's cumulative earn-in expenditure to \$2.9 million, \$0.6 million short of its minimum requirement of \$3.5 million by mid June 2010.

## 3. BURKIN NICKEL PROJECT (100%) WESTERN AUSTRALIA

A two hole diamond drilling program was completed at Burkin between mid August and mid September 2009. This drilling was the subject of a co-funding agreement with the Western Australian Government, as part of the first year of its four year Exploration Incentive Scheme announced in early 2009. The agreement provides for 50% reimbursement of direct drilling costs up to a maximum of \$75,000.

Both drill holes tested magnetic targets defined from results of the December 2007 aeromagnetic survey, thought to be the signature of a large mafic-ultramafic intrusive complex in the Proterozoic basement at shallow depth, beneath flat lying sedimentary rocks of the Eucla Basin. The drilling statistics are listed in the table below.

#### *Burkin Drilling Summary*

Hole No	Drill Collar Inclination	Basement Depth (m)	Hole Depth (m)
BKD 1	Vertical	269	418
BKD 2	Vertical	249	405

Hole BKD 1 was the first ever drill test of the Burkin cluster of airborne magnetic anomalies and intersected basement at 269 m, over 100 m deeper than expected from the initial magnetic interpretation. Basement in the second hole was intersected at a slightly shallower depth but in both holes, the basement comprises deformed mafic and magnetite rich ultramafic rocks.

Although no nickel sulphides were intersected in the drilling, the 2 hole program succeeded in demonstrating that the initial geological interpretation of a large mafic-ultramafic intrusive complex in the basement was correct. The nickel sulphide potential of the 200 square kilometre Burkin area has been upgraded by the intersection of prospective host rocks in the drilling but further exploration will depend on the results of laboratory test work and on assessment of the likely effectiveness of deep penetration sulphide - detecting geophysical techniques as a targeting tool.

## 4. TENNANT CREEK GOLD/COPPER PROJECT (100%) NORTHERN TERRITORY

Aboriginal heritage clearance of the Company's two granted exploration licences was received during the quarter, clearing the way for a drilling program to test the 2 km long gravity anomaly on the Grosse 5 licence described in the June quarterly report.

Discussions with prospective drilling contractors have commenced, with a view to commencing the drilling prior to the end of 2009.

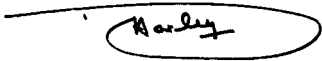
Two of the Company's exploration licence applications on aboriginal land which were placed in 5 year moratorium in 2004, after unsuccessful negotiations regarding access with the Central Lands Council (CLC), were resubmitted to the CLC in mid September.

**5. FOWLER'S BAY NICKEL PROJECT (100%) SOUTH AUSTRALIA**

The Company's application to access the Yellabinna Regional Reserve to diamond drill a strong TEM geophysical conductor is being processed but access is unlikely to be granted until early 2010.

**6. FINANCIAL**

At 30<sup>th</sup> September the Company had \$717,000 in cash and short term deposits. Exploration expenditure during the quarter was \$723,000 and forecast exploration expenditure for the December quarter is \$150,000.



**D N HARLEY  
MANAGING DIRECTOR**

**27<sup>th</sup> October 2009**

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**ATTRIBUTION**

The information in this report that relates to exploration results, mineral resources and ore reserves is based on information compiled by Mr D N Harley, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Harley has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Harley consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.