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**Companies Announcement Office** 

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# YELLOW ROCK RESOURCES LTD - GABANINTHA PROJECT UPDATE

# EXPLORATION FOR COPPER, GOLD AND BASE METALS

# **Highlights:**

Yellow Rock Resources Ltd (YRR) announces an update to its current activities including:

- 1. Electromagnetic survey and Soil sampling in areas prospective for Copper and Gold;
- 2. The engagement of Geologica Pty Ltd to carry out a major review of exploration activities to date including the current known V, Ti, Fe deposit and areas prospective for Copper and Gold;
- 3. The engagement of Fugro Airborne Services Pty Ltd to carry out a comprehensive HELITEM Electromagnetic survey of all of the Gabanintha and Nowthannna tenements using the latest helicopter carried equipment and technology to map areas prospective for Copper and Gold;
- 4. The engagement of Allegro Logistics to carry out a comprehensive soil sampling program of all of the Gabanintha and Nowthannna tenements with particular analysis relating to the presence of Copper and Gold;
- 5. Commencement of preparation for a Mining License application for the V, Ti, Fe deposit at Gabanintha;
- 6. Commencement of preparation of a scoping document for the commissioning of engineering, environmental and related studies to support the progress towards mining the V, Ti, Fe deposit.

# **Executive Summary:**

### General Review of Exploration to Date

- Yellow Rock Resources Ltd (YRR) has engaged Geologica Pty Ltd to provide consulting services for a major review of exploration activities carried out to date and to develop an extensive exploration programme on its Gabanintha tenements.
- The review of operations will include examining the Mining, Metallurgical, Processing and Marketing options with the aim of advancing the current Concept Study towards a Bankable Feasibility Study for the Company's High Quality Vanadium Project

#### Gabanintha Mining Review

- Recently completed review of metallurgical and treatment options has identified:
  - Further metallurgical testing is required across the ore types (Oxide, Transition, Fresh for Scree, Main and Hangingwall ores)
  - Further t drilling is required in Fresh ore material within the resource
  - The density database is needs to be enlarged to provide for comprehensive gravity separation tests
  - Previous metallurgical results confirmed that magnetic separation works well in Fresh material and that more Davis Tube Recovery tests are needed
  - More gravity separation testing is required to provide more definite results.

#### Gabanintha and Nowthanna HELITEM Geophysical Survey

- A helicopter-borne Time Domain Electromagnetic and Magnetic Survey (HELITEM) has been commissioned across the Gabanintha and Nowthanna tenements.
- The HELITEM survey is being conducted by Fugro Airborne Services Pty Ltd and will comprise 537 line kilometres on flight paths 150 metres apart to cover the entirety of the YRR Gabanintha and Nowthanna tenements
- It is anticipated that this technique will enable identification of hidden sulphide-bearing orebodies and detailed structures under alluvial cover.
- This technique is reputed to be capable of providing deeper profiles of the known and potential ore bodies

#### Gabanintha Copper-Gold Exploration Program

- A comprehensive geochemical sampling program is planned for September-October
- This will involve approximately 508 line kilometres of sampling at 100 metre line spacing to collect 5080 samples for multi-element analysis
- The sampling work will be completed by Allegro Logistics
- In conjunction with geological mapping and compilation of geophysical data this major exploration program is expected to lead to the discovery of several gold and copper targets

#### Further Planning for Development of the Vanadium, Titanium, Iron Deposit

- YRR is preparing an application for a Mining License for the V, Ti Fe Deposit.
- YRR has commissioned Geologica to prepare a detailed scoping study for the engagement of relevant consultants to develop a full mining feasibility study.
- YRR is seeking engineering design consultants for the preparation of plans for development of the V, Ti, Fe deposit.

• YRR is seeking interest from consultants to provide further design services including environmental and related studies necessary to move forward with the mining of the V, Ti, Fe deposit.

# **Update:**

# **General Review of Exploration to Date**

YRR has engaged Geologica Pty Ltd to provide consulting services for a major review of exploration to date and to conduct an extensive exploration programme on its Gabanintha tenements. The review of operations will include examining the Mining, Metallurgical, Processing and Marketing options with the aim of advancing the current Concept Study towards a Bankable Feasibility Study.

# **Gabanintha Mining Review**

An initial review of metallurgical and treatment options was completed and several areas critical to the development of Gabanintha were identified.

Yellow Rock Resources announced a revised mineral resource estimate on 8 February 2011.

Further metallurgical testing is required across the ore types revealed in previous testing (Oxide, Transition, Fresh for Scree, Main and Hangingwall ores) See Figure 1 below:



Figure 1 – Schematic profile at Gabanintha showing ore types, weathering and pit shells

Further drilling is required to produce sufficient Fresh ore material within the resource to confirm metallurgical characteristics. To date 70% of the ore intersected within a preliminary pit shell is Oxide or Transition and located in the upper part of the weathering profile. Thus further drilling is required to obtain Fresh ore for testing as well as to revise the resource and extend the pit shell deeper.

A resource definition diamond drill programme is planned to be completed during the next quarter. Further density sampling data is required to provide robust measurements for comprehensive heavy media separation tests. Therefore a measurement campaign on existing RC chips and core is planned to upgrade the knowledge of density changes with ore type.

Initial analysis of geochemical data shows that some elements are significantly different in Fresh material compared to Oxide or Transition. E.g.

Fresh material has

Lower Aluminium (by 3.5%) Higher Iron (by 10%) Higher MgO (by 1.7%) Lower Silica (by 8.9%) Higher Titanium (by 2.3%) Higher Vanadium (by 0.3%)

Previous metallurgical test results confirmed that magnetic separation works well in Fresh and Transition material, although tests on Oxide ore were inconclusive. A 10% loss of volume to waste was achieved (90% recovery) when Fresh and Transition ore was passed through magnetic separation. These same tests confirmed that up to 8% of the silica content is also reduced. Further tests are required to validate the behaviour of bulk materials through a magnetic separation plant. Preliminary results from sizing tests indicate that grind size will assist the concentration of iron, titanium and vanadium and that silica and aluminium are increased in the fines fraction. Initial gravity separation tests proved inconclusive and insufficient data is available to draw valid conclusions. More tests are planned.

# Gabanintha Copper-Gold Exploration Programme

A comprehensive geochemical sampling programme has been commissioned for September-October 2011.

This will involve approximately 508 line kilometres of sampling at 100 metre line spacing to collect 5080 samples for multi-element analysis.

The field campaign will begin in the northern part of the tenements adjacent to the historical Gabanintha Gold Mine and nearby gold and copper occurrences.

The sampling work will be completed by Allegro Logistics and is expected to take several weeks to complete.

Along with continuing geological mapping and compilation of geophysical data this major exploration program is expected to lead to the discovery of several gold and copper targets.



Figure 2 – Proposed Geochemical Transect Lines

#### Gabanintha Geophysical Survey

A helicopter-borne Time Domain Electromagnetic and Magnetic Survey (HELITEM) is in progress at Gabanintha. This survey is utilizing the expert services of Fugro Airborne Services Pty Ltd and will involve the use of a HELITEM magnetometer system towed behind the helicopter at a minimum height of 35 metres above the terrain.

The electro-magnetic signals transmitted and received from the Scintrex CS3 magnetometer are stored as raw data as well as being processed throughout the flight and through the differential GPS and altimeter instrumentation. The resulting time-domain responses are processed by computer at base to derive precise, calibrated magnetic as well as location data for mineral exploration maps.

The HELITEM survey comprises 537 line kilometres on flight paths 150 metres apart across all the YRR Gabanintha tenements.

The HELITEM method is particularly useful for identification of deeper or hidden sulphide-bearing orebodies and detailed structures under alluvial cover. The precision of the technique is several times higher than conventional airborne magnetic surveys.



Block	Area (km <sup>2</sup> )	Line Spacing (m)	Total Line Kilometres
Main Area	66.3	150	493
Smaller Area	3.1	150	44
Totals	69.4		537 line km

Figure 3 - HELITEM Flight Paths

The information in this statement that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by independent consulting geologist Brian Davis B.Sc (hons), Dip.Ed.

Brian Davis is a Member of The Australian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Brian Davis is employed by Geologica Pty Ltd.

Brian Davis has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which is undertaken 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.* Davis consents to the inclusion in the report of the matters based on the information made available to them, in the form and context in which it appears".

Brian Davis BSc, DipEd, RPGeo, MAusIMM, GAA Principal Consultant GEOLOGICA PTY LTD

August 23 2011