

HD Hazelwood's Tungsten Resource Inventory Boosted by 340%

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The directors of Hazelwood Resources (ASX: HAZ) are pleased to advise a new Mineral Resource estimate that boosts the **Company**'s tungsten Resource inventory by 340%.

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The Mt Mulgine Tungsten Project hosts a world-class tungsten resource that is compatible with Hazelwood's established downstream tungsten refining business.

Following a significant period of validation, review of historical data and integration of more recent drilling results, a significant new Mineral Resource has been estimated for the Trench Deposit at Mt Mulgine. The estimate was completed by independent consultants CSA Global Pty Ltd and supervised by SJS Resource Management Pty Ltd.

The Mineral Resource for the Trench Deposit occurs from surface and 49% of the Resource is within 100 metres of the surface. Substantial historical evaluation studies had been performed at the tungsten deposits of Mt Mulgine including shaft sinking at several locations to extract bulk samples that were used in pilot scale processing tests.

The Mt Mulgine Tungsten Project, located in the mid-west region of Western Australia also hosts an advanced stage Mineral Resource at the Mulgine Hill Deposit, situated approximately 1 kilometre from the Trench Resource. A recently completed engineering pre-feasibility study for Mt Mulgine envisaged a concentrator that would exploit higher grade parts of Mt Mulgine for Capital Expenditure of \$A31.5 million. The Mt Mulgine project is located 350km NNE of Perth, Western Australia. Discussion of the reported Mineral Resource estimate:

Geology and Mineralization Interpretation

The Trench deposit is a tungsten-molybdenum, vein-hosted exo-skarn formed at the intrusive contact of an Archaean S-type granite intrusive and a sequence of metavolcanics, metasediments and banded-iron formation. Mineralization is interpreted to be conformable with the stratigraphy, and dips at roughly -30-degree to the north-west. Scheelite appears to be the dominant tungsten mineral.

**Drill Information and Sampling** 

A total of 73 holes have been drilled at the Trench deposit using surface RC and diamond core drill holes. The average drill hole spacing is 80m x 120m, however there are close-spaced holes in central portion of the deposit at 30m x 40m. Most holes have been drilled vertically, although some have been angled at -60-degree to 135-degree.

Holes drilled by Minjar Gold Pty Ltd in 2012 to 2014 were sampled by reverse circulation (RC) with face sampling hammer. One metre samples were split and bagged. The original RC samples were then re-split using a three-tiered splitter before submission. Drill holes were generally angled at -60-degree to 135-degree or vertically to intersect mineralization close to perpendicular.

One hole was drilled by Vital Metals in 2008 and sampled by reverse circulation (RC) with face sampling hammer. One metre samples were split and bagged. The original RC samples were then re split prior to submission. The drill hole is angled vertically to intersect mineralization close to perpendicular.

All other legacy diamond holes (sixty three holes for 8,979.90m) drilled using NQ and BQ core from 1972 to 1981 were UV night-lamped and sample intervals marked out whilst core was whole (mostly in 2m intervals). The core was cut using brick saw and halves submitted to the laboratory. Drill holes were generally angled at -60-degree to 135-degree or vertically to intersect mineralization close to perpendicular. Core recovery was very good, rarely less than 95%.

# Sample Preparation and Analysis

For the recent RC drilling, the field sample preparation involved re-splitting the samples and transfer to calico bag for dispatch to the laboratory. Re-split samples from the CPRC holes were prepared by Bureau Veritas (Ultra Trace) Laboratory, Perth and re-split samples from the TCRC and BDWB holes were prepared by Nagrom, Perth. Samples were sorted, weighed and then dried prior to being pulverised. Sample preparation was monitored daily and all pulverisers are tested once a shift to ensure that pulverised material meets the agreed specification.

All legacy diamond drill samples (except for DDM215 and 216) were sent for sample preparation at either AMDEL Perth or AMDEL Adelaide, before pulps were sent for analysis. DDM215 and DDM216 were sent to Union Carbide in Niagara Falls (New York) and Ore Sorters in Melbourne for preparation and analysis.

As part of an extensive data validation and QAQC program, all core samples collected by Hazelwood for re-assay (in 2013) from the legacy drilling were prepared by Nagrom, Perth. Samples are weighed and then dried at 105-degreeC. The half core for re-assay is crushed to a nominal top-size of 6.3mm, prior to being pulverised, until 80% passes a 75-microm screen.

All samples in the Trench dataset have been analysed using XRF techniques. RC samples and legacy re-sampled core was analysed using XRF fusion. Original samples from the legacy drilling were analysed using XRF pressed pellet. XRF has proven to be a very accurate method analytical technique for WO, for all grades and is considered a total analysis.

### Estimation Methodology and Classification

The Ordinary Kriging (OK) algorithm for grade interpolation was used for the Trench Mineral Resource, constrained by mineralized domains using a nominal 0.1% WO3 cut-off grade. A check model was also generated using inverse distance (ID) interpolation. A high grade cut of 1.2% WO3 was applied to the composited data based on classical statistical analysis.

The block model was constructed using a  $20mE \times 20mN \times 10mRL$  parent block size, with sub-celling to  $2mE \times 2mN \times 1mRL$  for domain volume resolution. The parent cell size was chosen on the basis of the general morphology of mineralized bodies and in order to avoid the generation of too large block models. The sub-celling size was chosen to maintain the resolution of the mineralized bodies.

A bulk density value of 2.94 t/m3 was used to all fresh material. This bulk density value represents the average value derived from the 820 density measurements completed by SJS. A value of 2.2 t/m3 was used for the oxidation zones based on an adjacent deposit.

Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and **Ore** Reserves (JORC, 2012). The resource was classified as Inferred Mineral Resource on the basis of data quality, sample spacing and lode continuity. This evidence is sufficient to imply but not verify geological and grade continuity.

## Mining, Metallurgy and Other Modifying Factors

It has been assumed that the Trench deposit could be mined using open pit methods given the proximity of mineralization to the surface and the broad zones of mineralization. Detailed **mining** studies including pit optimisations have not yet been conducted on the Trench deposit given the early nature of the defined Mineral Resource. Extensive metallurgical testwork has been undertaken on the Trench deposit since the late 1970's.

Tungsten (scheelite) mineralization at Trench is amenable to recovery by gravity pre-concentration followed by flotation to provide a saleable specification concentrate. Scheelite from the Trench can also be recovered using whole **ore** flotation methods, producing a lower grade concentrate suitable for APT (chemical) plant feed. Hazelwood is considering gravity separation followed by flotation to remove sulphides, using a process similar to that envisaged for the Mulgine Hill Deposit. Additional confirmatory testwork on representative samples from the Trench will be required to validate the flow sheet selection.

Extensive baseline and targeted fauna and flora surveys have been conducted over the Mt Mulgine Project area. Waste rock and soil characterisation studies were completed on samples of oxide material from the Trench deposit during 2013. Oxide waste material was found to be non-acid forming. It was

assumed that tailings from any tungsten operation at Mt Mulgine will be deposited in a sub-aerial Tailings Storage Facility; tailings characterisation testwork and design criteria for the TSF are yet to be completed.

Hazelwood's 100% interest in the Mt Mulgine Tungsten Project and 100% interest in the Big Hill Tungsten Project in the Pilbara of Western Australia together represent a tungsten resource inventory of more than 14 million MTU (metric tonne units), equivalent to approximately 114,600 tonnes of contained tungsten metal. Hazelwood's established downstream refining business has a production capacity of 4,000 tonnes per annum ferrotungsten (3,000 tonnes per annum contained tungsten metal).

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### ABOUT HAZELWOOD

Hazelwood Resources Ltd is a new specialty metals producer with a majority **stake** in the ATC Ferrotungsten Project in Vietnam. Ferrotungsten is used in the production of high speed steels, tool steel and temperature resistant alloys. The ATC Ferrotungsten plant is the largest capacity facility of its type outside of **China** and its design is believed to be the most advanced in the world. High quality product from ATC meets the specifications of the Japanese and European markets and can be produced from a range of different feedstock sources.

With an established specialty metals production base, Hazelwood has the ability to expand into other capital-efficient opportunities in downstream processing. There is potential for future vertical integration with Hazelwood's 100% owned primary tungsten projects in Western Australia. The Big Hill Tungsten Deposit and Mt Mulgine Tungsten Project host near surface resources and are being evaluated as potential future sources of feedstock for Hazelwood's downstream refining business. Hazelwood has significant exposure to nickel sulphides and base metals exploration through its 100% owned Cookes Creek and Copper Gorge (HAZ 70% Atlas Iron 30%) areas in the East Pilbara of Western Australia.

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