

Report for Quarter Ended 31 December 2009

Highly successful drilling program completed at Hermes Gold Project; Results imminent for VTEM survey at Magnus Copper-Gold Project adjacent to Sandfire discovery

Highlights

- **Magnus Copper-Gold Project, which borders Sandfire's rich Doolgunna find, confirmed as highly prospective based on preliminary field mapping and VTEM survey**
- **Full VTEM survey results and interpretation imminent. Numerous exploration targets expected to be identified and drilling program drawn up**
- **Drilling at the Hermes Gold Project discovers three more zones of mineralisation**
- **Flora and fauna surveys completed in preparation for mining at Hermes**
- **Tight cost control, with \$3.30 million cash at hand at 31 December 2009. Conversion of options in December 2009 quarter increased cash on hand by \$1.39 million**

Details

Three Rivers Gold Project (Alchemy 100%)

Magnus Copper-Gold Project

Alchemy Resources Limited ("Alchemy") contracted Geotech Airborne Pty Ltd to complete a VTEM survey (helicopter borne electromagnetic survey) over the Magnus Copper-Gold Project area extending from the eastern tenement boundary with Sandfire Resources NL ("Sandfire") westward towards the historic Wilgeena Mining Centre (Fig. 1).

Preliminary survey results indicated up to 13 conductors in the area tested (Fig 2). The final survey results and interpretation are due imminently.

Alchemy also completed geologic field mapping of the Narracoota Formation within its Magnus Project to evaluate the copper and gold potential. All exploration data collected by previous explorers over Alchemy's Magnus Project has now been captured on Alchemy's tenements E52/2362 and E52/2360 and this information is being evaluated in light of the recently completed field mapping and preliminary VTEM survey results.

Drilling programs to test conductors identified by the VTEM survey, coincident with gold in soil anomalies, will be planned in January 2010 and drilling will commence as soon as possible in March 2010.

For personal use only

Alchemy has secured two drilling rigs (one aircore and one RC) to undertake extensive drill programs at the Magnus, Hermes and Wilgeena projects commencing in March 2010. Alchemy is also planning to mobilise a diamond drill rig to Hermes and Wilgeena in March 2010 to provide samples for metallurgical testing in preparation for a mining operation.

Hermes Gold Project - Exploration

Alchemy's drilling program during the December 2009 quarter at the Hermes Gold Project was successful in discovering 3 new gold zones (Trapper West, Winchester and Blake) outside the existing gold resource at Hawkeye and Trapper (Fig 3.). Alchemy drilled 18 RC holes of which 11 holes returned significant gold intersections. This represents a 61% success rate with regard to the drilling program.

The best results from drilling in the December 2009 quarter included (Fig 4.):

- **19m @ 10.78g/t gold** from 84m (including **14m @14.54g/t gold** from 88m)
- **29m @ 2.26g/t gold** from 72m (including **5m @ 10.70g/t gold** from 72m)
- **9m @ 4.46g/t gold** from 94m
- **9m @ 6.54g/t gold** from 126m (including **4m @ 14.07g/t gold** from 126m)
- **12m @ 8.35g/t gold** from 74m (including **1m@ 84.2g/t gold** from 82m)

Alchemy has planned an extensive program of RC drilling at the Trapper deposit and Winchester, Trapper West and Blake prospects in 2010.

Hermes Gold Project - Mining Proposal

Alchemy has completed the first of a series of studies necessary to seek mining approval at the Hermes Gold Project. Flora and fauna studies have been completed with the final report on these studies due in the first quarter of 2010. This will form part of the Hermes Gold Project mining proposal to be submitted to the Department of Mines and Petroleum for approval to commence a mining operation.

Ore characterisation studies, waste rock studies, hydrology and hydrogeology studies progressed during the quarter and will be reported on in the first quarter of 2010. Engineering investigations to determine the optimum haul road design are ongoing.

Robinson Range Iron Project

Alchemy has deferred any activity on its mining lease M52/844 covering a portion of the Robinson Range until later in 2010.

Assessment of Murchison tenements (Alchemy 80%, Jindalee 20%)

Drilling programs to be undertaken at the Big Bell North, Wydgee and Gidgee Projects have been approved by the Department of Minerals and Petroleum and heritage surveys were completed in November 2009 on the Wydgee, Big Bell North and Gidgee Projects by the Wajarri People and on the Polelle Project by the Yugunya-Nya People.

A two year extension of term of E20/549 (Wydgee) was granted in November 2009. The tenement's expiry date is now 20 December 2011.

A surface sampling (soil and rock-chip) and regolith mapping program was completed over Polelle Project (E51/1225 and E51/1226) in October 2009. In total, 112 soil and 46 rock samples were collected on a 1km x 500m spaced grid across the tenements.

The results of the soil sampling program has generated 10 targets for aircore drill testing.

New reprocessed aeromagnetic and radiometric data has been acquired for the Murchison Projects. Interpretation of the new data has been undertaken for the Polelle and Big Bell North Projects to assist drill targeting.

Alchemy's 3D geological model covering the Murchison District has been refined to highlight gold targets at the Big Bell North and Wydgee Projects and Alchemy expects to drill test these projects in the first quarter of 2010.

Continued tight control on costs

Alchemy continues to maintain a tight control on costs.

In April 2009, Alchemy made an application to AusIndustry for a research and development tax concession reflecting its investment in the 3D model of the Murchison District. On 22 July 2009, Alchemy received a refund cheque for \$233,343 from the Australian Tax Office ("ATO"). Alchemy will continue to undertake its R&D efforts to evaluate it's Murchison Projects.

Alchemy is focussing expenditure on field based activities as highlighted by its drilling campaign at the Hermes Gold Project and its geologic field mapping and geophysical survey at the Magnus Copper-Gold Project.

Corporate activity

Alchemy is actively exploring three key areas; the Magnus Copper-Gold Project, the Hermes Gold Project, and the Murchison Projects (comprising six separate areas in the Murchison District).

Each of these projects is at a different stage in its evaluation. The Hermes Gold Project is the most advanced with a JORC code compliant resource and an active drilling campaign. The Magnus Copper/Gold Project is at the beginning of a rapid evaluation that will see rapid drill testing of conductors identified by the VTEM survey and gold in soil anomalies associated with prospective areas identified by recently completed geologic field mapping. Alchemy will devote significant expenditure to drilling during the first 6 months of 2010, commencing in early March 2010.

In less than two years, Alchemy has grown to explore on three separate and highly prospective areas. Alchemy has received a number of offers to evaluate opportunities near these areas and as it builds its exploration presence will carefully consider the merits of expanding its exploration efforts outside its current tenement holding versus evaluation of its numerous exploration targets within its tenements.

During the December 2009 quarter Alchemy spent approximately \$1.40 million on drilling and evaluation of its tenements.

As previously described, in September 2009, Alchemy raised \$2.50 million via two tranches of placements to sophisticated investors. The conversion of listed and unlisted options during the December 2009 quarter increased cash on hand by \$1.39 million.

At 31 December 2009, Alchemy had approximately \$3.30 million in cash.

Contact Details: Mr Michael Hannington
 Telephone: 61 8 9481 4400

The information in this report that relates to Exploration Results is based on information compiled by Mr Michael Cowin, who is a Member of the Australasian Institute of Geoscientists and is an employee of Cowin Holdings Pty Ltd which consults to Alchemy Resources Limited. Mr Cowin has sufficient experience that is relevant to the style of mineralisation, 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 Resource and Ore Reserves'. Mr Cowin consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

For personal use only

Figure 1. - Location of Magnus Copper/Gold Project within Three Rivers Project

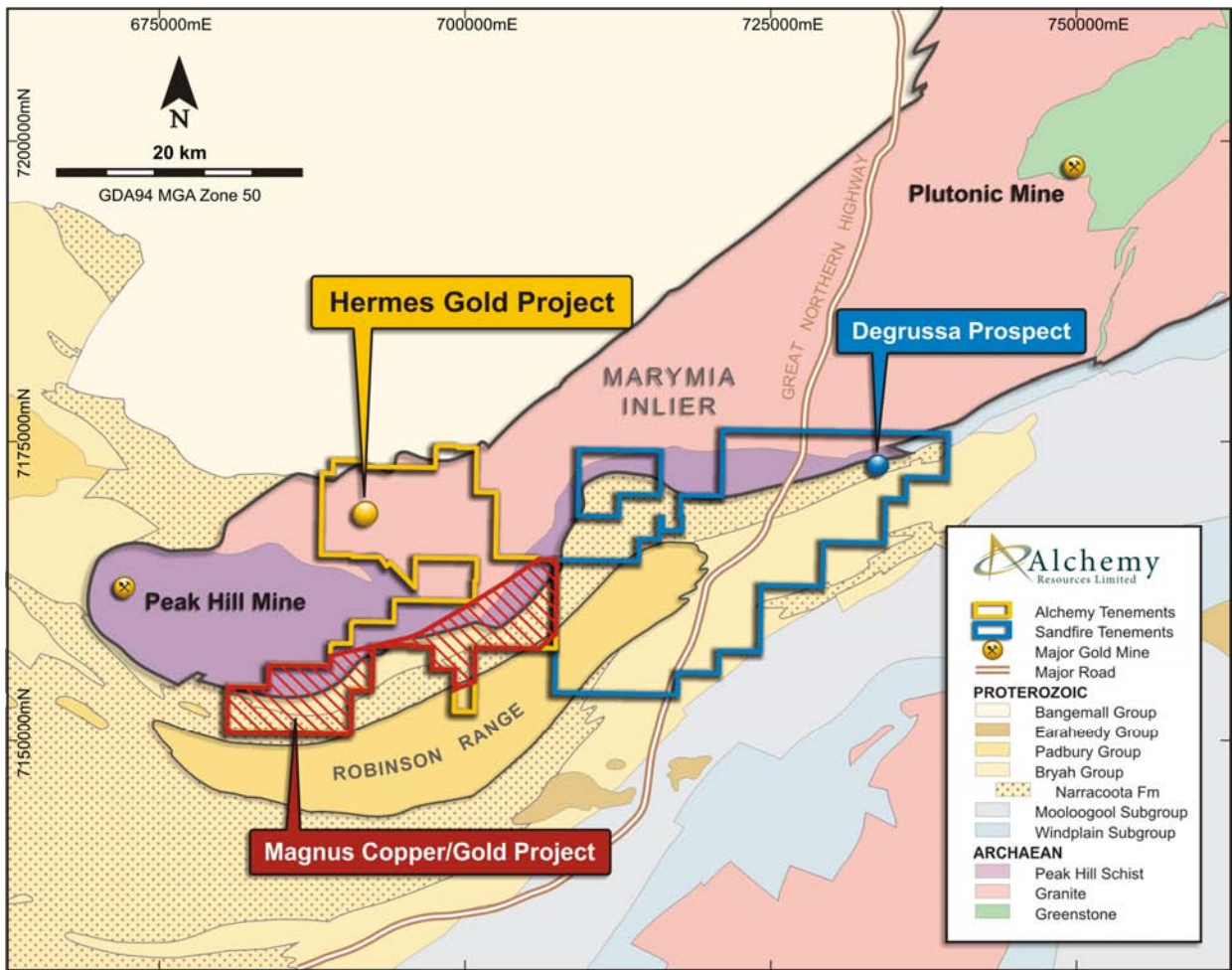


Figure 2. - VTEM Conductors over Magnus Copper/Gold Project - VTEM Channel 25

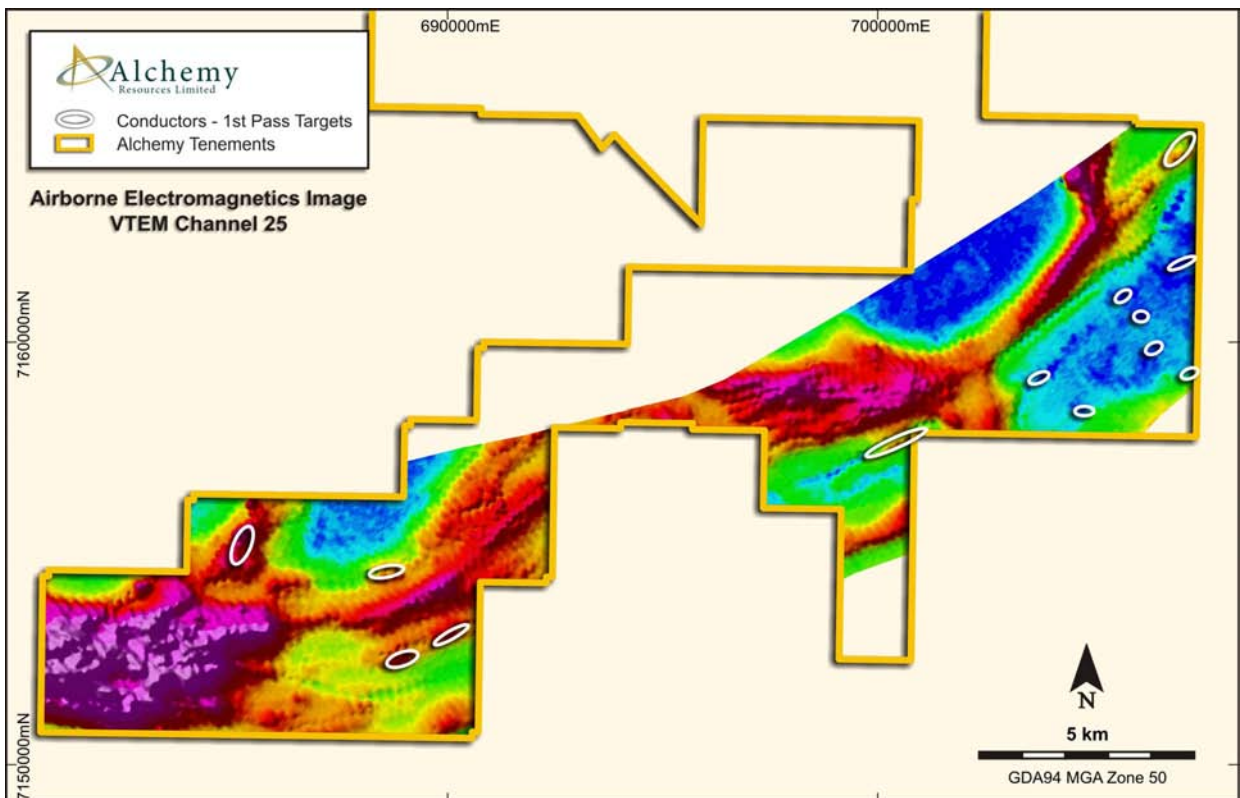
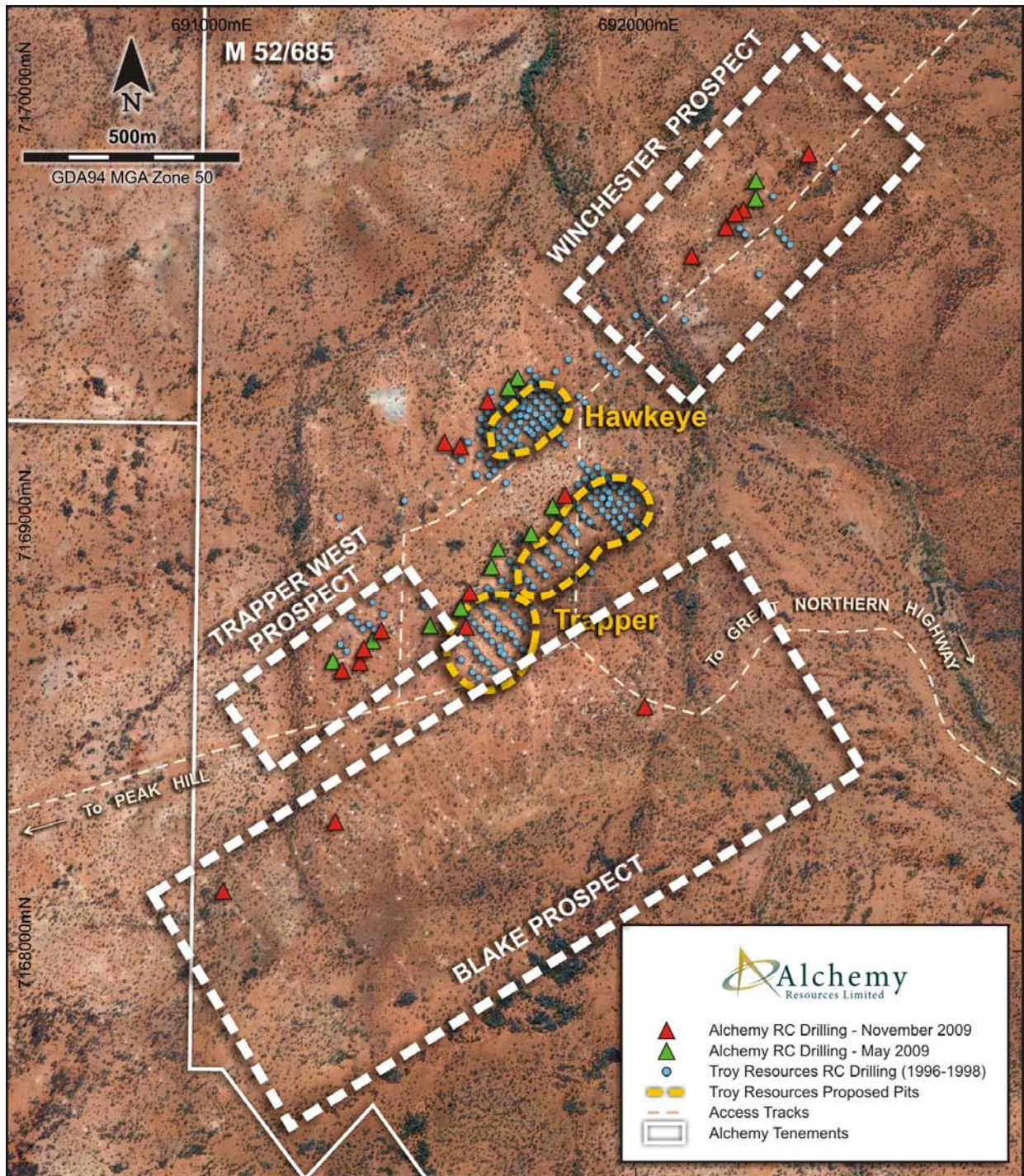
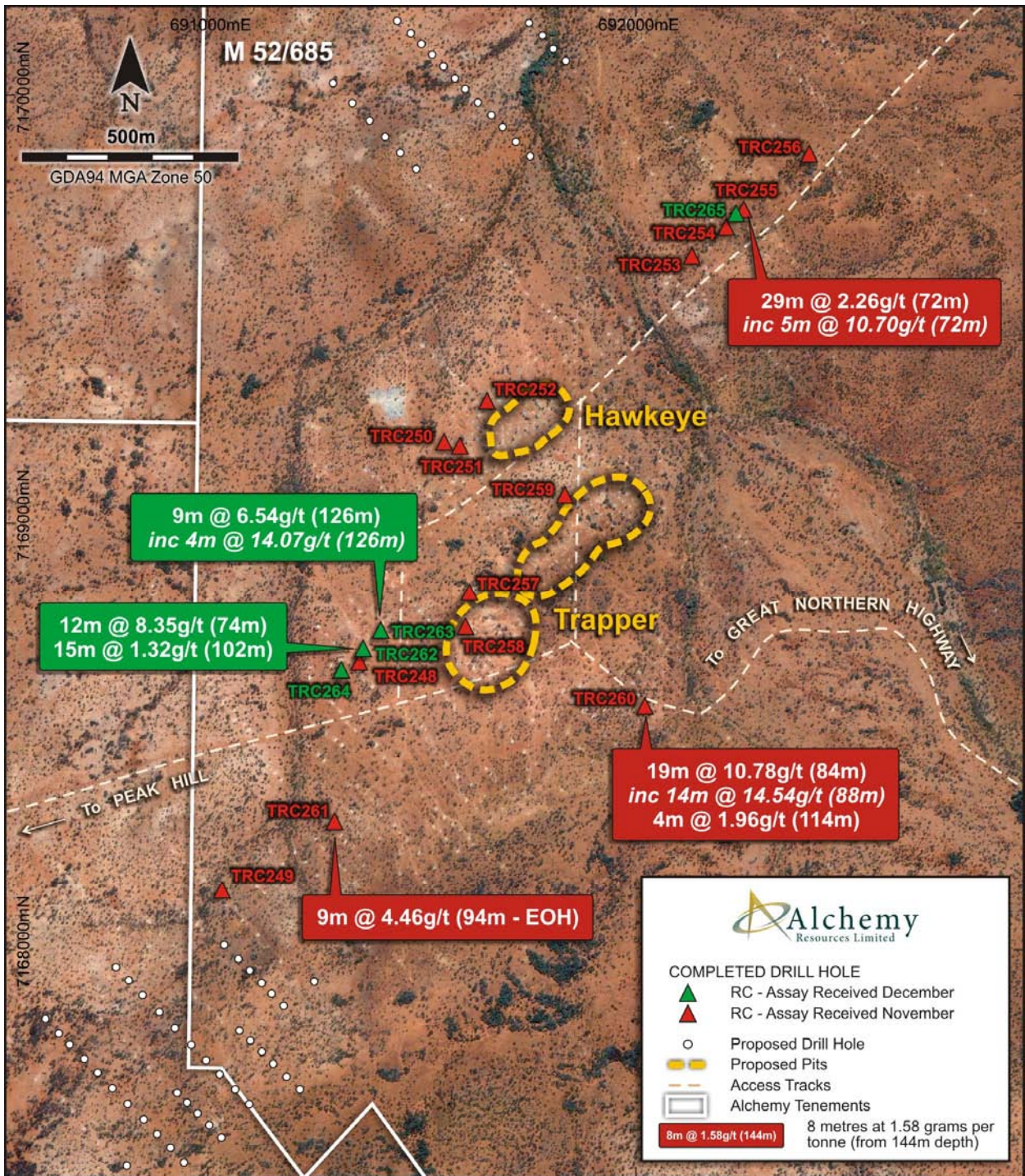


Figure 3. - Hermes Gold Project - Existing Deposits and Prospects



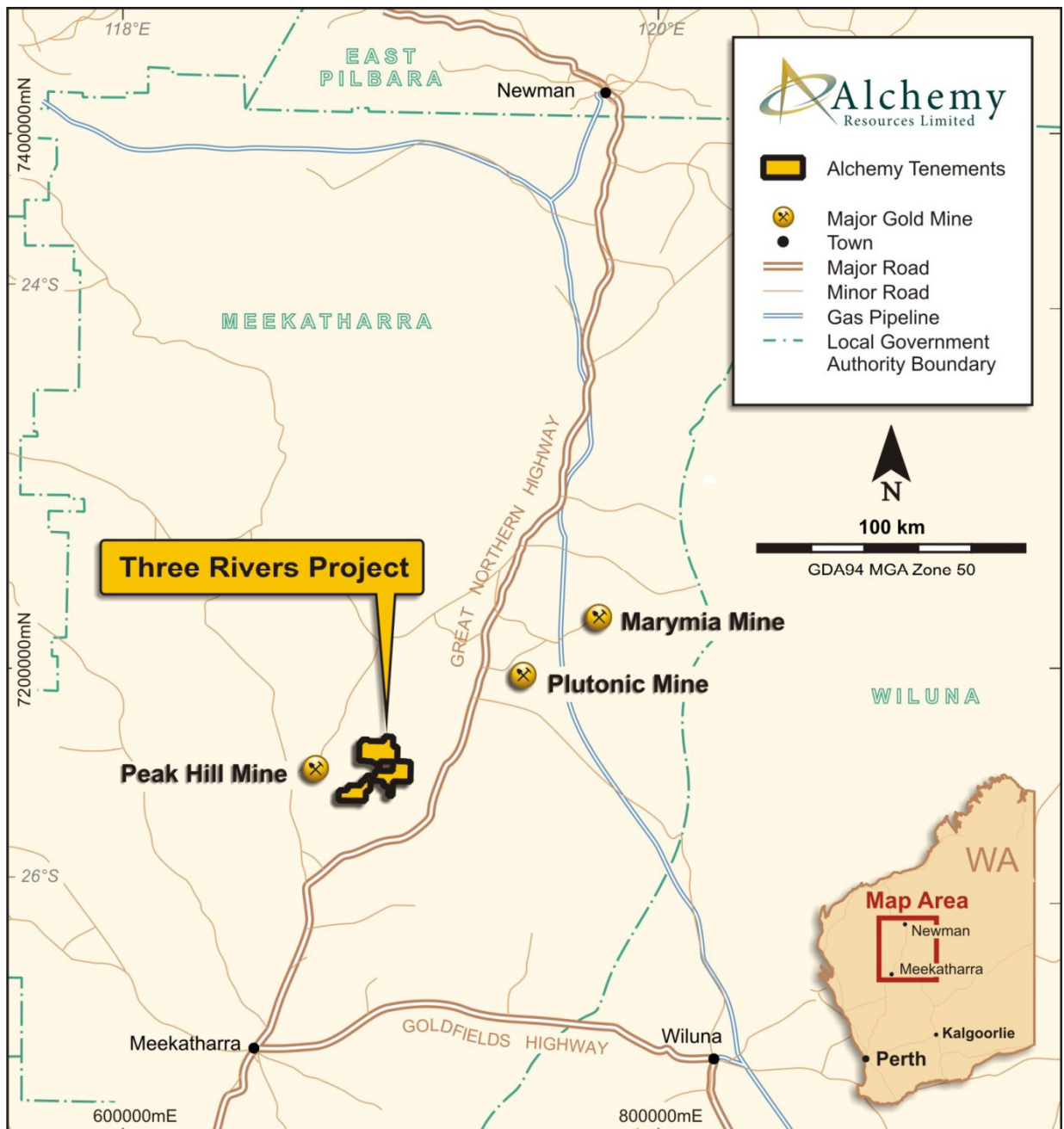
For personal use only

Figure 4. - Significant Gold Assay Results



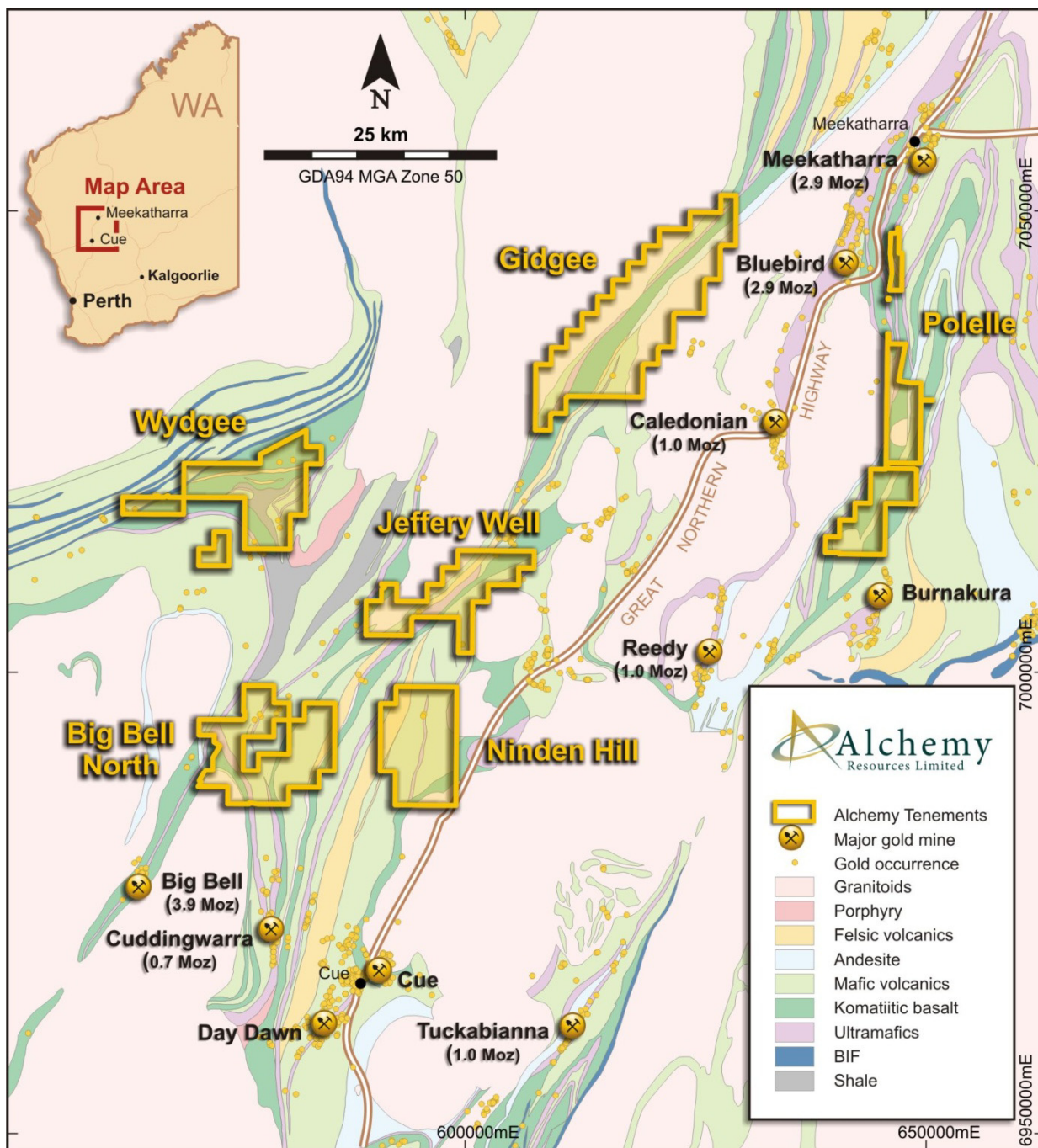
For personal use only

Figure 5. - Three Rivers Gold Project Location



For personal use only

Figure 6. - Murchison Gold Projects Location



For personal use only