

Quarter ending 31 December 2015

Quarterly Report

Highlights

- New petrology and geophysics at Bygoo North Tin prospect firm up drill targets
- Petrology shows coarse cassiterite in clean host rock, potentially ideal for low cost processing to produce high quality concentrate
- Successful trial of Ultra Deep Ground Penetrating Radar survey to assist in Bygoo tin drill targeting
- Follow up drilling planned for February

BYGOO NORTH TIN PROSPECT

Thomson completed petrological research of samples from its successful drilling at Bygoo North (as reported in September 2015 quarterly). Rock chip samples from the drilling (BNRC11 at 70m downhole) were ground to paper-thin slices ("thin section") and viewed through a microscope (Figure 1).

Minerals identified included quartz (75%), topaz (10-15%) and cassiterite (tin, 5-8%), with trace amounts of tourmaline, fluorite and wolframite (contains tungsten). Overall the rock, including the cassiterite, was coarsely crystalline with quartz crystals up to 2mm long observed. The assemblage is typical of a granite greisen.

Both the heavy minerals cassiterite and wolframite are oxide minerals: no sulphide minerals were observed. The absence of sulphide minerals such as pyrite, pyrrhotite, chalcopyrite, arsenopyrite or galena is a strong contrast to the nearby Ardlethan Tin Mine, where these minerals are abundant and associated with the tin mineralisation.

The Ardlethan mineralisation has been described as "porphyry style cassiterite-sulfide deposits". In contrast, the Bygoo North mineralisation appears to be of a vein or fracture-controlled greisen style.

The mineralogical study, with the coarse mineralogy and absence of sulphides, indicates that the mineralisation is likely to be amenable to low cost processing during mining, and could produce a clean, high quality concentrate with minimal deleterious elements.



Figure 1: Mineral thin section showing coarse cassiterite (brown colours) in a matrix of quartz and topaz (light colours). Minor tourmaline is blue. The field of view is 2.8mm. Plane and crossed polarised light.

In terms of geophysical properties, the absence of sulphidic or magnetic minerals in the greisen means that conventional methods may be of limited use in tracing individual mineralised horizons.

Thomson therefore trialed a new generation geophysical method – Ultra deep penetrating ground radar (UDGPR), originally developed by the Russian aerospace industry for their Mars lander. This method sends extremely short (1-3 nanoseconds), very high-amplitude pulses of electromagnetic (EM) radiation vertically into the ground, with any reflected energy measured to produce subsurface images.

Similar to seismic, the principal features displayed are usually reflections at rock boundaries, with the system sensitive to:

- Soil composition and stratification.
- Rock crystallinity, composition and pore space (and thus density).
- Conductivity of pore fluids and bulk rock.
- Conductive media like wet clays and salt water that inhibit the signal.
- Groundwater.
- Mineralogy.

The trial at Bygoo North was successful, with a strong apparent fault detected and associated with the mineralisation. This fault was traceable over 4 lines (100m) and separates the previously modelled Greisens A and B (Figure 2).



Figure 2: Image of Ultra Deep Ground Penetrating Radar at Bygoo North – Line 11. Previously modelled greisen zones are shown in dark blue, with tin assays over 0.5% shown in black. A prominent offset is seen in the UDGPR data between the two greisen zones, with a high (brown-red-purple colours) to the NNE dropped down about 50m relative to a high in the SSW.

The success of the trial firms up the drill targets chosen by Thomson for the next drilling round. Six holes for 800m are planned (one of the proposed holes is shown on Figure 2), to confirm the greisen model and to extend the known mineralisation to the east. The drilling program is expected to take place in February 2016.

Mullagalah aeromagnetic survey

During the quarter Thomson commissioned modelling of aeromagnetic survey data over the Mullagalah project on EL 8102. The survey comprised 1,194 km at a line spacing of 50m, providing high resolution magnetic and radiometric data to detail the prominent anomaly.

The Mullagalah anomaly has previously been explored by YTC Resources Ltd in 2010, which drilled two deep diamond holes near the western edge of the anomaly (Figure 3). Both holes intersected anomalous copper and gold with accompanying mineral alteration of the types often found in intrusion-related mineralisation.



Figure 3: Image of magnetic modelling at Mullagalah. The image is of a modelled surface, viewed from the south. The previous drilling is shown: occurring on three prominent "highs" in the lower left (west) of the image. The surface is a magnetic susceptibility isosurface with a threshold of 0.003SI from the residual TMI inversion.

The modelling emphasised a deep low in the 800m area between the two YTC holes, ruling out any continuity of the copper-gold anomalism seen in them.

The modelling and other data is being reviewed to assess the prospectivity and generate drill targets if warranted.

Tenement Holdings

Thomson holds a 100% interest in 779 square kilometres over nine granted titles, after the Mt Paynter EL was granted during the quarter.

During the quarter the Havilah EL 7891 was joint ventured to Silver Mines Ltd. Under the agreement Silver Mines will spend \$300,000 to earn an 80% interest over three years, with a minimum of 1,000m of exploration drilling to be undertaken. Once Silver Mines has earned its interest, Thomson's 20% will be free-carried until a decision to mine.

Several other tenements have previously been joint ventured: four titles covering 404 square kilometres in the Kidman joint venture; and one title covering 59 sq. km in the Mullagalah joint venture.

Corporate

Exploration expenditure incurred during the quarter totalled \$131,677. Cash at the end of the quarter was \$341,316.

Thomson raised \$145,000 from private investors as well as \$192,500 from a Share Purchase Plan offered to all shareholders.

Thomson has no debt and had 95,303,306 shares on issue at the end of the quarter.

Thomson Resources Ltd

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Eoin Rothery Chief Executive Officer

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Eoin Rothery, (MSc), who is a member of the Australian Institute of Geoscientists. Mr Rothery is a full time employee of Thomson Resources Ltd. Mr Rothery 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 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Rothery consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



Figure 4: Thomson Projects in NSW