



# TERRITORY IRON PTY LTD

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## PRELIMINARY APPRAISAL OF OPEN FILE REPORTS RELATING TO EL24045 AS OF SEPTEMBER 2013

EL24045, of which Territory Iron Pty Ltd has 100% mineral rights, is located immediately to the south of the Frances Creek mine site. The potential for gold mineralisation is favourable, as the tenement is proximal to the well-known Mt Porter gold field situated ~2.5 km to the west and to the Golden Slips and Golden Honcho prospects <2 km to the north. At Mt Porter, gold mineralisation is hosted in an anticlinal fold closure within stratigraphically equivalent units of the Koolpin Formation, close to the contact with the Zamu Dolerite and to the north, associated with shear zones and quartz reefs within the Mundogie Sandstone. Moreover, similar mineralisation at the same stratigraphic level is documented at the well-known Cosmo Howley deposit ~50 km to the west.

The potential for base metal (Pb-Zn) mineralisation in the northwest portion of historical EL8313 (overlap with EL24045) was highlighted in Goulevitch (2003). With reference to an unpublished Homestake Gold of Australia internal report, earlier soil sampling on two parallel traverses 200 m apart identified a possible linear trend of base metal anomalism.

### **CR1984/0081**

In 1984, Greenix (a division of Greenbushes Tin Ltd) evaluated the potential for the Allamber Springs Granite to host Cassiterite ( $\text{SnO}_2$ ), tantalite  $(\text{Fe,Mn})(\text{Ta,Nb})_2\text{O}_6$  and tungsten (W) mineralisation. Stream sediment samples draining from the granite yielded low results for Ta, and subsequent rock chip sampling concentrated on Sn and W.

### **CR1995-0157**

In 1995, Northern Gold NL (on behalf of Mcleary Exploration and Mining Pty Ltd; Hardy, 1995) reported two weak, north-trending Au and As soil sample anomalies within historical tenement EL8313 (same area as current tenement EL24045). The gold anomalies, with abundances as high as ~30 ppb Au and 120 ppm As, coincided with west-dipping Koolpin Formation metasedimentary strata which forms the hanging wall to underlying Zamu Dolerite. These anomalous results are located at the same stratigraphic horizon as the Mount Porter gold anomaly.

### **CR1996-0944**

A first pass (1995) and follow-up (1996) exploration programme for EL8313 was undertaken by Homestake Gold of Australia (Goulevitch, 1996). The exploration programmes included soil sampling, stream sediment sampling, line mapping and RC and diamond drill programmes to evaluate the economic potential. This was augmented by geophysical surveys including an EM survey and aeromagnetic survey.

### *Soil Sampling*

A 300 m x 200 m soil sampling programme was conducted close to the contact of the Allamber Springs Granite with the Zamu Dolerite and Upper Wildman Siltstone. Assay results highlighting the potential for gold mineralisation, included a single sample with 457 ppb Au, with several samples above 25 ppb Au, the anomaly being open to the northeast. The anomalous gold values were thought to have been associated with highly altered, iron-stained, sericite, greisen granite and a rock chip sample of the granite returned 0.43 ppm Au. A later infill sampling programme was devised to test these results and although lower than expected anomalous values were obtained, the programme failed to reproduce the original results. Suspecting possible laboratory contamination, a second infill programme was initiated, but, once again yielded disappointing results.

### *Stream Sediment Sampling*

A stream sediment sampling survey validated the first soil chemistry results with one area of anomalous Au (180 ppb) found in a stream originating from the site of the earlier soil sampling anomalous gold values.

### *TEM and Aeromagnetic Surveys*

A TEM survey was initiated to investigate the economic potential of the area, however the results were considered difficult to interpret and inconclusive. Interpretation of the magnetic data suggests the source of the magnetic bodies to be doubly plunging folds with a shallow north plunge (Goulevitch, 1996). Follow-up drill testing for some of the magnetic anomalies was recommended by the contractor engaged to interpret the work.

### *RC and Diamond Drilling*

Two RC drill holes were designed to test earlier geochemical targets associated with alteration zones within the Allamber Springs Granite and the single combined RC/Diamond drill hole designed to test an earlier determined geophysical target within the Wildman Siltstone. Drill hole geochemical assay results (0.56 g/t Au and 2800 ppm As) confirm the association of gold mineralisation with altered, sericite granite. The combined RC/diamond drill hole intersected grey pyritic siltstone/shale to dark grey-black, graphitic pyrrhotite-rich shale at the expected magnetic target depth. Pyrrhotite is para-magnetic and most likely the source of the magnetic anomaly. The diamond drill hole terminated in well-bedded dolostone (192 m).

## **CR1998/811**

An attempt was made by Homestake Gold of Australia Ltd in 1998 to evaluate whether the Golden Honcho shear zone extended south towards the Allamber Springs Granite. In this location (EL8313), sericite-altered, sheared granites were thought to represent the southern extension of the strongly mineralised shears/reefs in metasedimentary strata at the Golden Honcho and Golden Slips prospects. However, field observations failed to identify significant quartz veins along this potential structural extension. Rock chip samples from this structure produced gold values of 0.10 and 0.17 g/t Au. Although these values are considered low, they do indicate the presence of gold in the area. Stream sediment sample geochemistry only yielded values of 2.6 ppb Au to below detection limit (unlike the Golden Honcho prospect, where values are as high as 34 ppb Au). Based on the above information, a recommendation was made to undertake a review of the stream sediment geochemical data or alternatively joint venture the prospect or relinquish the ground.

## CR2003/0049

This report is a compendium of previous activities for EL8313 submitted by Explormin on behalf of Arafura Resources in respect of the title which expired on 30 December 2002. Possible base metal mineralisation was also highlighted for the northwest portion of EL8313 with reference to an unpublished internal Homestake Gold of Australia Report (1997) where a continuous line of base metal anomalism was detected on two parallel traverses 200 metres apart, although no results or details relating to Pb-Zn mineralisation were listed. Although the base metal anomaly was of interest, it was not pursued at the time, as the company had a strict emphasis on gold exploration.

Reference to a 1988 unpublished internal technical report (#672) documents results of reconnaissance mapping and rock chip sampling at the Golden Bandito prospect ~700 m to the east of EL24045. Gold values of 0.2-0.4 g/t Au were reported in elevated arsenic (1.1-1.7% As) sericite-altered shear zones within the Allamber Springs Granite. The shear zones were thought to represent the southern extension of the strongly mineralised shear zones at the Golden Honcho and Golden Slips prospects immediately to the north, ~1.5-2.0 km to the north.

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Territory Iron Pty Ltd was granted tenement EL24045 in 2004 (Broomfield, 2010) and out of five blocks, two were relinquished in 2009. More regional surveys covering the tenement since that time include high-resolution airborne magnetic, radiometric and digital terrain surveys in 2005. In 2007, data acquisition included a Hyvista aerial survey and Quickbird satellite imagery.

Structural mapping in 2010 at Frances Creek included a portion of EL24045 (northeast corner of the tenement). The mapped ironstones form a 1-20 m wide semi-continuous belt for about 500 m. Interpretation of a regional geophysical survey in 2010 identified two linear targets for Fe-mineralisation at the most north-eastern extent of EL24045.

Future work will involve evaluating the potential for gold mineralisation within the Wildman Siltstone (close to the contact with the Allamber Springs Granite) and also the contact between the Zamu Dolerite and the Koolpin Formation. An evaluation of the potential Pb-Zn anomaly is recommended.

### REFERENCES

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