FINAL REPORT

EXPLORATION LICENCE 9044

FOR THE PERIOD 2/6/95 TO 21/6/96

TENNANT CREEK DISTRICT, NORTHERN TERRITORY

BLUE HEELER PROSPECT

TENNANT CREEK 1:250,000 SHEET SE 53-14

VOLUME 1 OF 1

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DATE: JULY 1996

AUTHORISED BY: [Signature]

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COMMODITIES: Gold, Copper
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1 SUMMARY

This report presents the work undertaken by PosGold Limited on EL 9044 during the entire life of tenure.

EL 9044 (Blue Heeler) consisted of 9 blocks and was granted on 2/6/95 for a period of six years.

EL 9044 is located approximately 32 km WNW of Tennant Creek township and partly covers the Red Bluff South and Red Bluff Central group of mineral claims and leases held by PosGold Ltd. The work carried out by PosGold Ltd on EL 9044 comprises a review of the historical and exploration data. The potential of the licence to host economic Au-Cu-Bi mineralisation is considered little and EL 9044 was surrendered at the end of year one of tenure.
2 INTRODUCTION

2.1 Location and Access

EL 9044 (Blue Heeler) is located approximately 32 WNW of Tennant Creek township (Refer to Figure 1).

Access is gained using the Tennant Creek to Warrego Road, then south via the Amadeus Basin-Darwin Gas Pipeline track.

2.2 Climate and Physiography

The physiography of 9044 is characterised by aeolian, alluvial and colluvial peneplains which gently slope to the south from the Red Bluff line of hills. Several small ironstone bodies outcrop on the mineral claims enclosed in EL 9044.

The region experiences seasonal rainfall in the period November to April and this may reduce access for limited periods. Temperatures at this time of the year are high (maximum > 35°C). During the rest of the year, temperatures are warm to mild and conditions are dry.

2.3 Tenure

Exploration licence 9044 (Blue Heeler) consisted of nine blocks covering 29.2 km$^2$. It was granted on 1/6/95 for a period of six years.


2.4 Previous Exploration

2.4.1 Historical

The area covered by the Red Bluff South mineral claims has been explored since the 1930's in the search for ironstone-hosted Au, Cu and Bi mineralisation. Several small ironstone bodies outcrop on the mineral claims, although no past mine production is recorded for the area.

2.4.2 1960 to 1991

The period between 1960 and 1991 saw ADL, and subsequently PosGold, undertake an extensive programme of exploration incorporating several methods of investigation. Previous work over the Red Bluff South mineral claims indicates that two different exploration strategies have been employed on the claims.

The first involved extensive ground magnetic surveying and subsequent modelling and prioritising of magnetic anomalies. The highest priority anomalies were then tested by percussion and diamond drilling. The second method of exploration on the claims involved regional to prospect scale geological mapping, geochemical soil and auger sampling, rock chip sampling and shallow percussion drilling of geologically
favourable and/or geochemically anomalous targets. Two potential styles of mineralisation were tested in this phase of work.

i. Haematite ± quartz ± magnetite 'ironstone' bodies hosted by Warramunga Group sediments and often located close to sediment-porphyry contacts;

ii. Quartz ± jasper ± haematite ± chert 'lenses' occurring on the contact between porphyries and overlying sediments and often found to be anomalous in Pb and Zn, as well as Cu, Bi and Au. It is uncertain whether these lenses were envisaged as discrete, concordant vein-like bodies, or stratiform replacement horizons.

Evaluation of the mineral claims included diamond and percussion drilling of both types of targets outlined above. Drilling completed on the RAB12(A) and RB12(B) magnetic anomalies intersected quartz-haematite ironstone containing economic values of up to 19g/t Au over narrow widths.

From the mid-1980's to 1991 exploration of the mineral claims was confined to limited gravity surveying of selected areas on the claims, and geological mapping. No further drilling was undertaken on completion of this work (Lowe, 1993).

2.4.3 1991 to 1/6/95

Since 1991, exploration of the Red Bluff South and Central mineral claims has entailed a renewed regional evaluation of the area, utilising modern and definitive techniques.

A detailed review of all previous exploration data was done with new data integrated with the previous work programmes to enable re-interpretation of the geology and geochemistry of the claims.

In late 1992 a programme of regional geochemical vacuum drilling was completed over the mineral claims to generate geochemical targets and to compile a geological map of the sub-outcropping and covered lithologies.

The holes were drilled into bedrock and all bedrock lithologies logged. From each hole a four kilogram sample of overburden and a two kilogram sample of bedrock were collected.

The overburden samples for all holes were submitted to Analabs in Perth for heavy mineral concentrating (HMC) and analysis for Au, Cu, Bi, Fe, Mn, Pb, Zn, Ag, Cd and Mo. The results indicate strong coincident Au-Cu-Bi anomalism.

Drilling intersected a sequence of interbedded siltstones and greywackes with common zones of quartz veining, occasional porphyry and minor zones of shearing.

Following initial interpretation of the HMC geochemical assays, five areas of drilling were selected for further evaluation. From these areas vacuum bedrock samples were submitted to AssayCorp, Pine Creek for analysis of Au, Cu, Bi, Fe and Mn. Encouraging results included values of 175ppm Cu, 9ppm Bi, 4ppb Au and 17.10% Fe.
Geological mapping and rock chip sampling of these areas of interest was also carried out in 1993.

In conjunction with the geochemical and geological evaluation of the mineral claims, both grid based ground magnetics and gravity surveys were completed over the area in 1993. Data collected during the ground magnetic survey was processed and filtered to produce contour plans and images. These will be used to refine the geological interpretation of the claims, and highlight possible mineralised sources for the geochemical anomalies (Lowe, 1993).

3 REGIONAL GEOLOGY

The Tennant Creek Inlier comprises gneissic basement successively overlain by unconformable Proterozoic sediments of the Warramunga Group, Hatches Creek Group and Tomkinson Creek Beds. These sediments have been intruded by Proterozoic aged granites, and subsequently overlain by Cambrian sediments (Le Messurier et al., 1990). The Warramunga Group contains all of the economically viable mineral deposits in the Tennant Creek region.

The Warramunga Group is overlain by the Flynn Sub-Group. The Warramunga Group comprises a sequence of argillaceous sedimentary rocks including siliceous greywacke, siltstone, shale and haematite shale with zones of disseminated haematite-magnetite being common throughout. Quartz-feldspar porphyry lenses occur as both cross-cutting and conformable units within the sedimentary sequences. The Flynn Sub-Group comprises a sequence of argillaceous to quartz-rich arenaceous sedimentary rocks, coarsening up sequence, with abundant quartz veining. All of the mineralised ironstones are contained in the Warramunga Group.

The Warramunga Group exhibits three deformational phases and is metamorphosed to greenschist facies. The first deformational episode results in tight to isoclinal, upright folds with EW axes. Two later episodes of faulting consist of WNW trending faults and shear zones with south-side-up movement, and NW trending faults often filled with quartz, showing sinistral movement.

4 LOCAL GEOLOGY

Exploration licence 9044 is an area of minimal bedrock outcrop due to the extent of aeolian sedimentary cover. Several small ironstone bodies outcrop on the mineral leases and claims enclosed in EL 9044.

Appraisal of bedrock drilling, geomorphology and the aerial magnetic survey suggests that the western portion of the licence area conceals granite, the eastern portion of EL 9044 conceals Warramunga Group sedimentary rocks.

5 EXPLORATION UNDERTAKEN OVER EL 9044 DURING LIFE OF TENURE

Work completed over EL 9044 included a review of previous exploration data. This work has led to the conclusion that the main areas of interest are covered by mineral claims and leases held by PosGold Ltd and that the remaining ground covered by EL 9044 lacks potential for economically attractive mineral resources.
6 EXPENDITURE INCURRED DURING THE PERIOD 2/6/95 to 21/5/96

During the entire life of tenure PosGold Ltd incurred an exploration expenditure of $3,626 over EL 9044. A breakdown of this is as follows:

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<th>EXPENSE</th>
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<td>Employee Costs</td>
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<tr>
<td>Drilling</td>
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<td>Assays</td>
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<tr>
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<td>Specialist Services</td>
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<td>Tenement Costs</td>
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<td><strong>TOTAL</strong></td>
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7 CONCLUSIONS AND RECOMMENDATIONS

Work over EL 9044 has led to the conclusion that the ground lacks potential for economically attractive mineral resources and that the area of interest are covered by mineral claims and leases already held by PosGold.

EL 9044 was therefore surrendered at the end of year one of tenure.

8 ENVIRONMENTAL AND REHABILITATION FACTORS

PosGold has commenced an active rehabilitation programme over much of the Tennant Creek field. This commitment has been reinforced within the Normandy Group with the appointment of a Group Environmental Engineer to oversee and implement the Group's guidelines and objectives. In addition to this an Environmental Superintendent has been engaged at Tennant Creek to design and implement the Group's objectives throughout the Tennant Creek area.

As an example of the Group's commitment to environmental issues several active rehabilitation programmes are currently being undertaken in the Tennant Creek field. These include programmes at Nobles Nob, Eldorado, White Devil and Warrego.

An Environmental Management Plan for the Company's Tennant Creek Operations (Fowler, 1993) has been submitted to the Department of Mines and Energy under separate cover (March 1993). This plan details the strategies to be implemented over various areas following completion of exploration programmes and mining operations.
REFERENCES


Lowe, G. M. (1993); Report in support of renewal of Mineral Claim Central No's 68 to 73, 77 and 134 to 139 inclusive. Red Bluff South Area, Tennant Creek District, Northern Territory. Report to the NT DME No 93214.fs
REPORT NUMBER 96041

REPORT NAME FINAL REPORT EXPLORATION LICENCE 9044 FOR THE PERIOD 2/6/95 TO 21/6/96 TENNANT CREEK DISTRICT, NORTHERN TERRITORY, BLUE HEELER PROSPECT

PROSPECT NAME(S) EL 9044 BLUE HEELER PROSPECT

OWNER/JV PARTNERS POSGOLD LIMITED

KEYWORDS TENNANT CREEK, RED BLUFF SOUTH AND CENTRAL

COMMODITIES GOLD, COPPER

TECTONIC UNIT TENNANT CREEK INLIER

1:250,000 MAP SHEET TENNANT CREEK SE 53-14 (52)

1:100,000 MAP SHEET TENNANT CREEK 52/5