TRIBUNE DEVELOPMENTS PTY LTD

Report on Geophysical Survey over
MCC 316 - 317
MCC 338 - 341
MLC 522
Tennant Creek
1987

CR94/378

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1. Introduction

Tribune Developments Pty Ltd holds a number of tenements north-east of Tennant Creek. Amongst these tenements are three project areas known as Black Cat, The Trump and Aga Khan (or Mem Sahib). The tenements covering each of these projects are:

- **Black Cat** - MCC 338 - 339
- **The Trump** - MCC 316 - 317, 340 - 341
- **Aga Khan** - MLC 522

In 1987 National Gold NL, as part of an exploration joint venture, completed an aeromagnetic survey over the project areas. This report details the results of this survey.

2. Tenure

a. **Black Cat**

MCC 338 and 339 were granted to Quadric Pty Ltd on 25 November, 1987 for a term of five years. The tenements are located adjacent to MCC 183 "Black Cat" which covers the old Black Cat Mine workings approximately 16km north east of Tennant Creek (see figure 1). On 13 November, 1992 the claims were transferred to Tribune Developments Pty Ltd. Applications for renewal were lodged and on 16 August, 1993 the claims were renewed by the Minister for a further five years, expiring on 24 November, 1997.

b. **The Trump**

Mineral Claims C316, 317 and 341 were granted to Quadric Pty Ltd on 25 November, 1987 for a term of five years. Mineral Claim C340 was also granted to Quadric Pty Ltd on 9 March, 1988 for a term of three years. The claims are located adjacent to MLC 17 which covers the old "The Trump" Mine workings approximately 13km north east of Tennant Creek (see figure 1). On 13 November, 1992 the claims were transferred to Tribune Developments Pty Ltd. Applications for renewal of all claims have been lodged and the Minister has renewed MCC 341 for a further five year term expiring on 24 November, 1997. The remaining renewal applications remain outstanding.

c. **Aga Khan**

Mineral Lease C522 was granted to Hilda Monckton on 29 July, 1953 as Gold Mining Lease 403E. In 1992 the lease was transferred to Tribune Developments Pty Ltd. The tenement is due to expire on 31 December, 1994. The lease covers old workings approximately 14km north east of Tennant Creek (see figure 1).

3. Geology

a. **Black Cat**

The tenements lie within the Mammoth - New Moon area as described by Crohn and Oldershaw (1965) where the Lower Proterozoic Warramunga Group consists of interbedded shale and greywacke. The hematitic shale horizon of this Group crops out as finely laminated banded hematitic shale at the Black Cat Mine, and extends discontinuously east-west across the area from Mammoth to New Moon. At Black Cat and all the other mines in this zone, gold is associated with ironstones consisting of hematite, +/-quartz, +/-jasper, +/-magnetite; the ironstones being emplaced close to hematitic shale, and localised near steeply dipping shears. Lenses of prominent blood red jasper occur in association with the ironstone at Black Cat.
Workings at the Black Cat consist of three shafts and an adit leading to a stope
d out area beneath the silicified ironstone capping. Ore occurs in highly weathered
and friable fine workings occur to depths of 10 to 15 metres below the gold
bearing lithologies has occurred during the weathering process.

The areas comprising MCC's 338 and 339 were found to contain thick sections of
Warramunga Group metasediments comprising interbedded weakly hematitic shale
and greywacke with minor quartz blows concentrated in fractures.

b. The Trump/Aga Khan

The tenements occur in Early Proterozoic Warramunga Group metasediments
consisting predominantly of foliated greywacke siltstone and hematitic
shale/siltstone. Outcrop in the claim areas is limited by scree slope and alluvium
cover from the steep topography surrounding the Trump workings.

The main workings at the Trump consist of an adit driven into the side of a hill
beneath an outcrop of haematite which contains minor quartz and jasper. A shaft
has been sunk from the top of the ironstone to link up with the adit below. The
adit forks not far from where it meets the shaft. Workings seem to have been of
an exploratory nature. Mainly pink mudstone with very minor patches of
ironstone outcrop above is limited to near surface.

Away from the main workings, numerous outcrops of haematite and ferruginous
Warramunga Group sediments occur. Workings in these outcrops are restricted to
shallow pits and costeans.

4. Previous Work

a. Black Cat

Gold was mined on a small scale from the Black Cat Mine prior to 1936 and then
more consistently in the period 1937-42 for a total recorded production of 1,023
ounces. Grades varied from 8 to 18 grams per tonne.

Previous exploration is reported by Forrest in 1987 to have consisted of ground
magnetic surveys and geological mapping. Further mapping, an electromagnetic
survey and drilling of 16 wagon drill holes were completed by Australian
Development NL in 1959. Results of this drilling were not considered
encouraging, however, intercepts in six of the holes ranged from 3.65 metres of
2.5 g/t Au to 1.23 metres of 5.4 g/t Au.

In 1987 National Gold NL completed a limited sampling program of the main
workings and dumps of the Black Cat reported by Forrest. Results of this work
indicated potential for gold lodes to continue below existing workings in a shear
zone.

The area of MCC's 338 and 339 were included in an airborne radiometric and
magnetic survey flown in late 1987. Reconnaissance outcrop inspection, mapping
and sampling was carried out over the region in early 1988. The main emphasis of
work was to locate similar quartz hematite bodies as that which occurs at the Black
Cat mine.

Sampling of several iron rich zones did not result in any gold being defined.
b. The Trump

Exploration by National Gold NL in 1987 comprised collection of 18 samples from both the adit and from ironstone, quartz or ferruginous sediment outcrops in the lease. Values were very low. The highest result was 0.17g/t Au from sample T8, a dump sample from a shallow pit in weathered haematite north west of the main workings.

No previous exploration work has been reported on The Trump.

c. Aga Khan

Exploration by National Gold NL comprised of a brief chain and compass mapping programme and the collection of 16 rock chip and dump samples. Results for the lease were uniformly low, the highest being 0.09 g/t Au.

No other previous exploration work has been reported on Aga Khan.

5. Radiometric/Aeromagnetic Survey

A high resolution airborne radiometric/magnetic survey was flown on behalf of National Gold NL by Aerodata Holdings Ltd in November - December 1987. Survey specifications were:

**Aircraft:**

VH-CPZ Cessna 206G Stationair II

**Magnetometer:**

Split Beam Cesium Scintrex V201

- Resolution: 0.04 nana Teela
- Cycle Rate: 0.20 second
- Sample Interval: 12 metres

**Flight Line Spacing:**

- Traverse Lines: 100 metres
- Tie Lines: 1000 metres

**Flight Line Direction:**

- Traverse Lines: 000 - 180 degrees
- Tie Lines: 090 - 270 degrees

**Survey Height:**

- 60 metres - Mean Terrain Clearance

**Navigation:**

- Visual from Planned Flight Strips

**Flight Path Recovery:**

- Onto A.M.G. Controlled Recovery Photos

**Spectrometer:**

Geometrics Exploranium GR800B

- Volume: 16.78 litres
- Cycle Rate: 1.00 seconds
- Sample Interval: 60 metres

**Data Acquisition:**

- 8 Channel Watanabe MC 6700 Chart Recorder
- Aerodata Digital Acquisition System
- Hewlett Packard 9825 Computer

Flight Path Recovery Maps are attached at Figures 2 and 3 and Total Field Magnetic Contour Maps are attached at Figures 4 and 5.
6. Conclusions

At Black Cat no prominent magnetic features were defined by the survey.

At The Trump the survey confirmed the north-westerly striking quartz veins to the north of The Trump Hill and also defined a prominent lineament striking north-east. The geological significance of this linear feature is not known, however, it may be related to a different structural event to the quartz related faulting. No prominent magnetic features representing potential magnetic ironstone bodies were defined over the Trump East (MCC 316), Trump West (MCC 317), Trump North (MCC 340) or Sargeant Hill (MCC 341) tenements.

At Aga Khan no prominent magnetic features were defined by the survey.