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EL 8191
FINAL REPORT

Ranford 1:100 000 Sheet

Title Holder:- Territory Goldfields N.L.

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NTDME:
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Northern Gold N.L., Perth Office
Barajam Mining
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1.0 SUMMARY

Exploration on EL 8191, during its tenure, mainly targeted gold mineralisation. This work consisted of a data review and stream sediment sampling.

The results from this work were disappointing.

Substitute Exploration Licence 9212 was granted over the area on the 9th of February 1996 for a period of four years.

Expenditure for the 1995/96 year was $1000.
2.0 LOCATION AND TENURE

EL 8191 is located on the Wandie 1:50,000 and the Ranford 1:100,000 map sheets. The tenement lies between latitudes 13°57' south and 13°58' south and longitudes 132°14' east and 132°15' east. Access is via the Stuart Highway to Pine Creek, thence via the Kakadu Highway and then along station tracks (Figure 1).

The licence consists of one graticular block, approximately 3 square kilometres in size, and was granted to Dominion Gold Operations Pty. Ltd. on the 8th of November 1993 for a period of two years. The licence was renewed for a further two years on the 30th of October 1995.

The area formed part of Dominions Wandie Project.

The tenement is now held by Territory Goldfields N.L. and the Barnjarn Mining Company, which holds a 10% interest through a Joint Venture, and is managed by Northern Gold N.L.

SEL 9212 was granted over the area on the 9th of February 1996 for a period of four years.
3.0 GEOLOGY

3.1 Regional Geology
EL 8191 is situated within the Pine Creek Geosyncline, a tightly to isoclinally folded sequence of mainly pelitic and psammitic Lower Proterozoic sediments with interlayered tuff units. All the lithologies in the area have been metamorphosed to low, and in places, medium grade metamorphic assemblages. For the purpose of this report, the prefix meta- is implied but omitted from the rock names and descriptions.

The sequence has been intruded by pre-orogenic dolerite sills of the Zamu Dolerite and a large number of late syn-orogenic to post-orogenic Proterozoic granitoids. Largely undeformed Middle and Late Proterozoic, Palaeozoic and Mesozoic strata, as well as Cainozoic sediments and laterites, overly the Pine Creek Geosyncline lithologies.

3.2 Local Geology
The tenement area encompasses rocks of the Burrell Creek Formation and lies adjacent to the Wolfram Hill Granite. Hornfelsing of the sediments is common along the granite margin.

4.0 EXPLORATION COMPLETED
Previous work in the area has focused on the known mineralised areas surrounding the Wolfram Hill Granite, i.e. Wolfram Hill, Hidden Valley and the Mountain View mines.

The area has previously been held as EL 1558 (Geopeko) and as EL 4730 (Billiton Aust./Driffield Mining Pty. Ltd. J.V.).

Stream sediment sampling was conducted within the licence area.

4.1 Stream Sediment Sampling
The area within EL 8191 is dominated by rugged hills surrounding the Wolfram Hill Granite and is amenable to stream sediment sampling. At each site approximately 2 kilograms of -2 millimetre material and 200 grams of -80# material was collected from the active bed load.

The -2 millimetre material was analysed for gold by the BLEG method. The sample was leached with cyanide solution for 24 hours. After solvent extraction, the gold was determined by AAS (Backo, 1994).
The -80# material was analysed for Cu, Pb, Zn, Ag, As, Bi, Mn, and Fe using flame AAS on an aqua regia digestion.

All samples were dispatched to Amdel Laboratories in Darwin. Detection limits for elements are given below:-

- Au-0.5 ppb
- Cu-1 ppm
- Pb-1 ppm
- Zn-1 ppm
- Ag-0.1 ppm
- As-5 ppm
- Bi-1 ppm
- Mn-4 ppm
- Fe-0.01%

A total of 13 -2 millimetre and 13 -80# samples were collected from streams draining the tenement. The results received were disappointing with the peak gold response being 1.7 ppb. All other elements returned subdued responses (Backo, 1994).

5.0 EXPENDITURE

The following is a breakdown of costs incurred to the 9/2/96 in the final year of tenure for EL 8191:-

- Report Compilation
- Data Review
- Tenement Management

TOTAL $1000

6.0 REFERENCES

BACKO, J., (November, 1994). EL 8191 - Irwins, Annual Report, Year One of Tenure, 28.11.93-7.11.94, Unpublished report by Dominion Mining Limited for the NTDME.