NORTH FLINDERS MINES LTD / ROEBUCK RESOURCES N.L.

TENNANT CREEK JOINT VENTURE

COMBINED ANNUAL REPORT FOR

EL 8114 (STATION HILL)

FOR TWELVE MONTH PERIOD TO 28 SEPTEMBER 1994

AND ADJOINING

EL 8194 (CREVASSE)

FOR TWELVE MONTH PERIOD TO 14 DECEMBER 1994

Tennant Creek 1:250,000 Sheet SE 53-14

Tennant Creek 1:100,000 Sheet 5758

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OCTOBER 1994

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SUMMARY

This report was prepared by North Flinders Exploration for the N.T. Department of Mines and Energy and documents exploration carried out on the Station Hill Exploration Licence (EL 8114) during the year to 28th September 1994 and the Crevasse Exploration Licence (EL 8194) during the year to 14th December 1994. The following work programme was carried out:-

- Assessment of earlier exploration - work carried out by Newmont Australia Ltd (1987-1990) and by Posgold (1990-1993).
- Geophysical review of Aerodata multiclient airborne magnetic and radiometric data in relation to both exploration licences.
- Geological mapping and rock chip sampling of both exploration licences.

Station Hill and Crevasse Exploration Licences are two of a number of Tennant Creek prospects that are subject to a farm-in agreement dated the 16th April 1991 between North Flinders Mines Ltd and Roebuck Resources N.L. NFM took over management of the Joint venture from the 1st January 1993.

1. INTRODUCTION

This report is a description of work undertaken by North Flinders Exploration (NFE) on EL 8114 Station Hill, and EL 8194 Crevasse in the first year of tenure.

Geological mapping of the tenement area was undertaken by NFE during the period July to August. Outcrop was found to be limited consisting mainly of subcropping siltstones in the middle of the tenements with leuco granite and granitic derived sand covering the northeastern portion of Station Hill. Rare hornfelsed sandstone and finer grained bedded sediments crop out south of the granite, dipping at moderate angles to the south.

2. TENEMENT DETAILS

2.1 EL 8114 (Station Hill)

EL 8114 comprises two graticular blocks and lies between latitudes 19° 33' and 19° 34' S and longitudes 134° 08' and 134' 10'E. It was granted on 29/09/93 for a period of three years. Covenanted expenditure for the first year of tenure was set at $10,000.

2.2 EL 8194 (Crevasse)

EL 8194 comprises two graticular blocks and lies between latitudes 19° 34' and 19° 35' S and longitudes 134° 08' and 134° 10' E. Four mineral claims (MCC 1140 - 1143) are pegged within the exploration licence. EL 8194 was granted on 15/12/93 for a period of three years. Covenanted expenditure for the first year of tenure was set at $11,000.

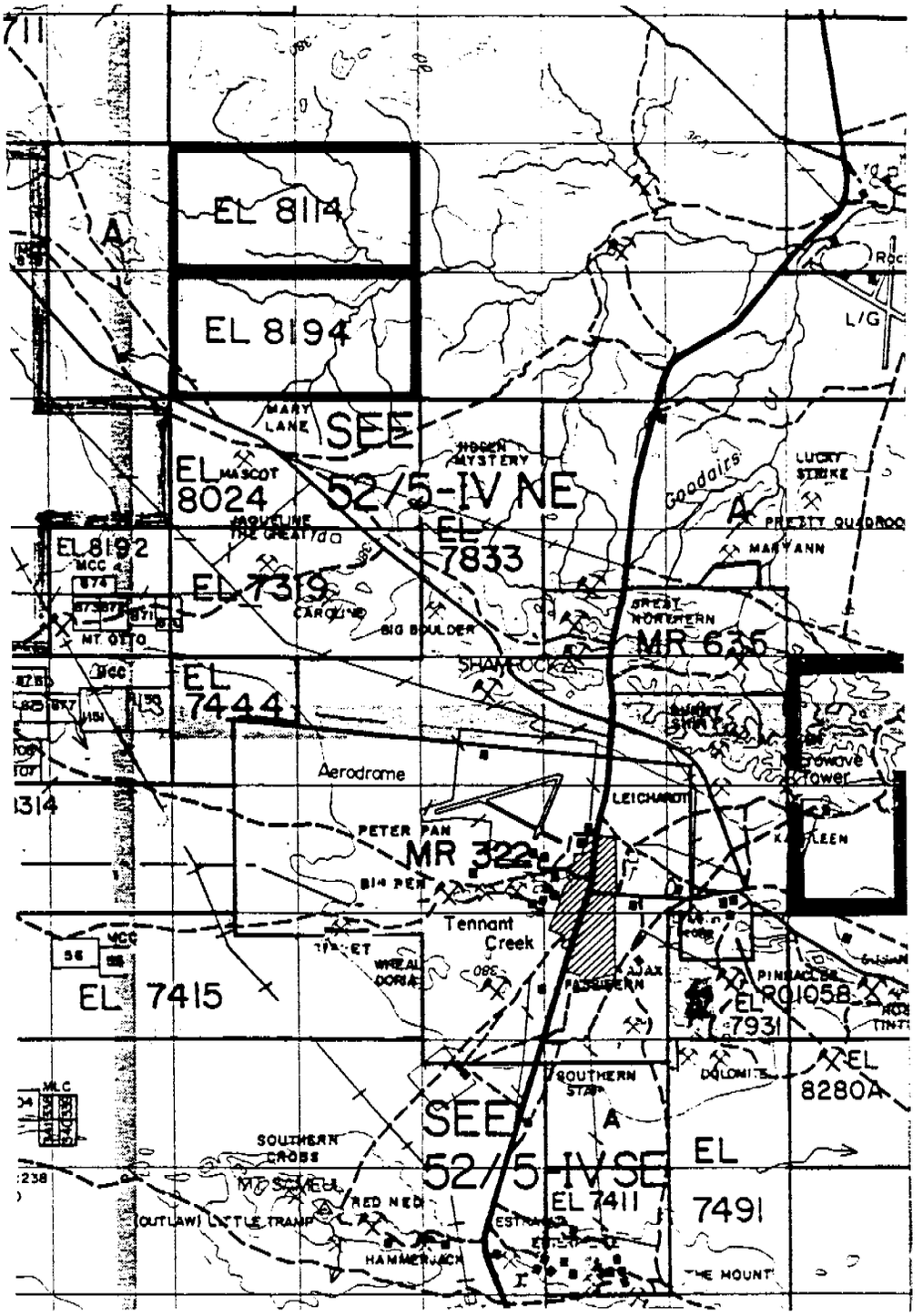
3. LOCATION AND ACCESS

Both exploration licences lie approximately nine kilometers northwest of Tennant Creek, with the south west corner post of EL 8194 lying adjacent to the Warrego Road. Access is via the Warrego Road from Tennant Creek, and then along unformed tracks north into the tenements. The Goodairs Creek drainage system cuts through the centre of the block comprised by the two licence areas making access somewhat difficult for drilling rigs.

4. TOPOGRAPHY AND VEGETATION

EL 8114 and EL 8194 lie over an undulating plan covered with soil and unconsolidated sediments. There are patches of outcrop/subcrop of Warramunga Group lithologies and to the north orange-brown sand occurs over the Tennant Creek Granite Complex. Local stream drainage channels are incised into the landscape.

The area is vegetated with spinifex grass together with some stands of turpentine bush and snappy gum.



EL 8114 AND 8194

LOCATION OF TENEMENTS

Fig. 1

5. PREVIOUS EXPLORATION

Previous exploration, as described in NTDME files, was carried out first by Newmont Australia Ltd between 1987-1990. They initiated a non-model specific exploration programme designed to discover mineralisation in structural settings not associated with Tennant Creek style massive ironstone bodies. To this end Newmont conducted systematic regional and infill soil sampling, RAB drilling, geological mapping, aeromagnetic and structural interpretations. No encouraging results or anomalies were gained from the geochemistry or geophysics. From 1990-93 the Posgold exploration programme consisted of access road grading, hand and compass gridding and vacuum drilling.

Some small prospector's pits were located close to the north west corner of EL 8194.

6. EXPLORATION ACTIVITY DURING THE PREVIOUS TWELVE MONTHS

Aeromagnetic Survey

NFE acquired the Aerodata multiclient aeromagnetic and radiometric package for Tennant Creek during 1992. Using Geophysical Exploration Consultants Pty. Ltd, a variety of linear and non-linear greyscale and pseudocolour magnetic images including shaddowgrams and K, Th and U colour composite images were produced.

The digital datafiles were reformatted, gridded and produced as contoured plots at 1;100,000 and 1:25,000 scale. As this data was purchased with conditions imposed on the rights of reproduction, only limited extracts of this data have been reproduced in this report.

The magnetic survey outlined a number of interesting magnetic features within the Crevasse and Station Hill tenements and use of this data facilitated the interpretive aspect of the mapping programme. The low at the top of the tenements is typical of an igneous intrusion. Further geophysical assessment of the regional aeromagnetics would be advantageous.

Geological Mapping

A geological mapping exercise was undertaken over both contiguous exploration licences. Positions in the field were determined with the aid of air photographs and a Magellan Nav1000 GPS unit. The map is presented at a scale of 1:10,000 and is included in this report.

Much of the Station Hill exploration licence (EL 8114) was found to be underlain by the main mass of the Tennant Creek Granite. This has intruded the Carraman Formation greywackes, siltstones and quartz-feldspar porphyry lithologies which extend southwards into the Cravasse exploration licence (EL 8194).

Hornfelsing of sediments has occurred beyond the southern margin of the granite and the contact zone here would appear to have a southerly dip. North and northwest trending faulting and shearing has been recognised in the area, and late stage faults have been filled with buck quartz.

Sediments in the area have moderate to steep southerly dips and are crosscut by small quartz feldspar porphyry. Bedding measurements at a number of outcrops suggest the area has been openly folded, as is typical for the eastern Tennant Creek Field.

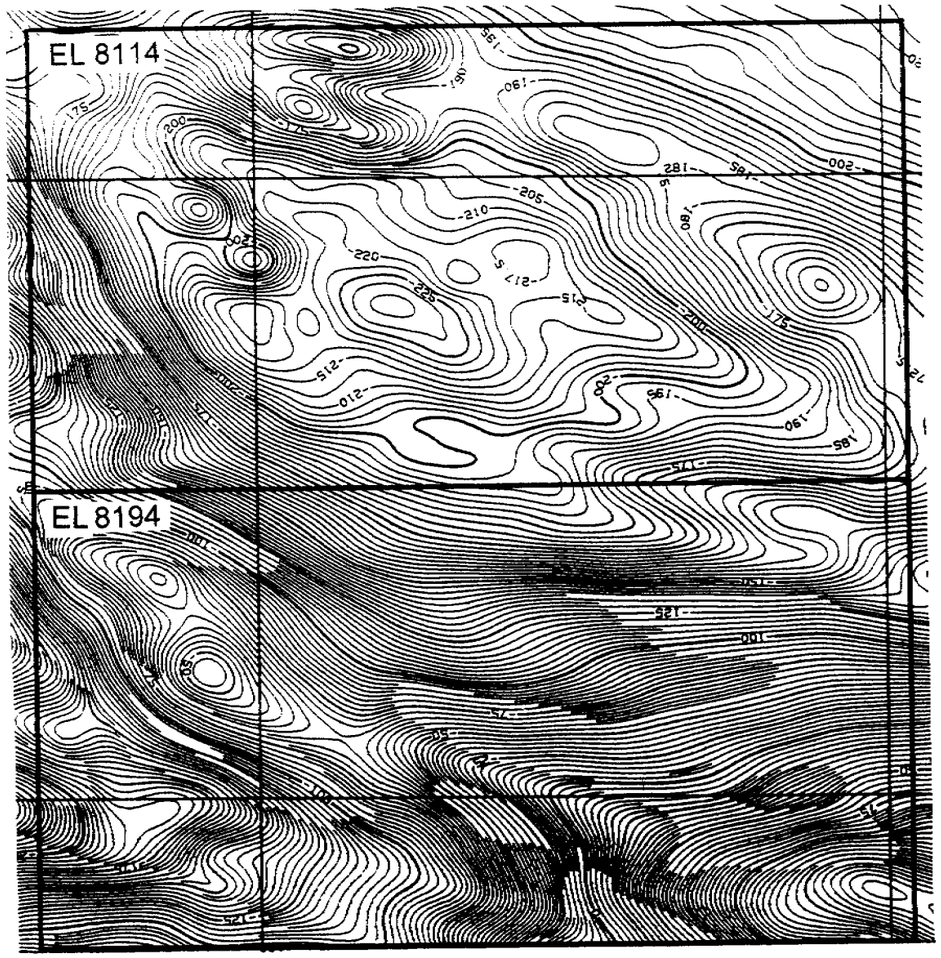
Due to the paucity of outcrop only nine rockchip samples were taken with maximum assayed results of 4ppb Au, 13ppm Cu and 2ppm Bi. The best minor mineralisation was hosted by a pink well cleaved siltstone with 30% quartz veining.

134°08'E

410000E

412500E

134°10'E



19°33'S

7837500N

19°34'S

7835000N

19°35'S

GRID NORTH

TRUE NORTH

MAGNETIC NORTH

North point relationships are shown for the centre of the map. Magnetic north is true for 1980.

GRID/MAGNETIC ANGLE	4°51'51"
GRID CONVERGENCE	-0°16'16.44"
SECULAR VARIATION	0°0'8" east per year

Scale 1:25 000

500 0 500 1000 1500 2000 2500 metres

AUSTRALIAN MAP GRID

EL 8114 AND 8194

MAGNETIC CONTOUR MAP

DATA PROCESSING

GRID CELL SIZE	50 metres
CONTOUR INTERVAL	2.5 nanoTeslas
PARALLAX CORRECTION	70 metres
BASE VALUE ADDED	51031 nanoTeslas
REGIONAL FIELD	IGRF MODEL 1980 REMOVED

AIRCRAFT

VH-CPX NOMAD 228

MAGNETOMETER

PROTON PRECESSION GEOMETRICS G813

RESOLUTION	0.1 nanoTesla
CYCLE RATE	0.5 seconds
SAMPLE INTERVAL	30 metres

SPECTROMETER

5 channel GEOMETRICS GR8000

DOWNWARD VOLUME	50340 cc NaITl
UPWARD VOLUME	8380 cc NaITl
CYCLE RATE	0.5 seconds
SAMPLE INTERVAL	30 metres

DATA ACQUISITION

8 CHANNEL WATANABE MC 6700 CHART RECORDER
SONOTEK IGSSI COMPUTER
eastrex DIGITAL ACQUISITION SYSTEM

FLIGHT LINE SPACING

TRAVERSE LINES	200 metres
TIE LINES	4000 metres

FLIGHT LINE DIRECTION

TRAVERSE LINES	000 - 180 degrees
TIE LINES	090 - 270 degrees

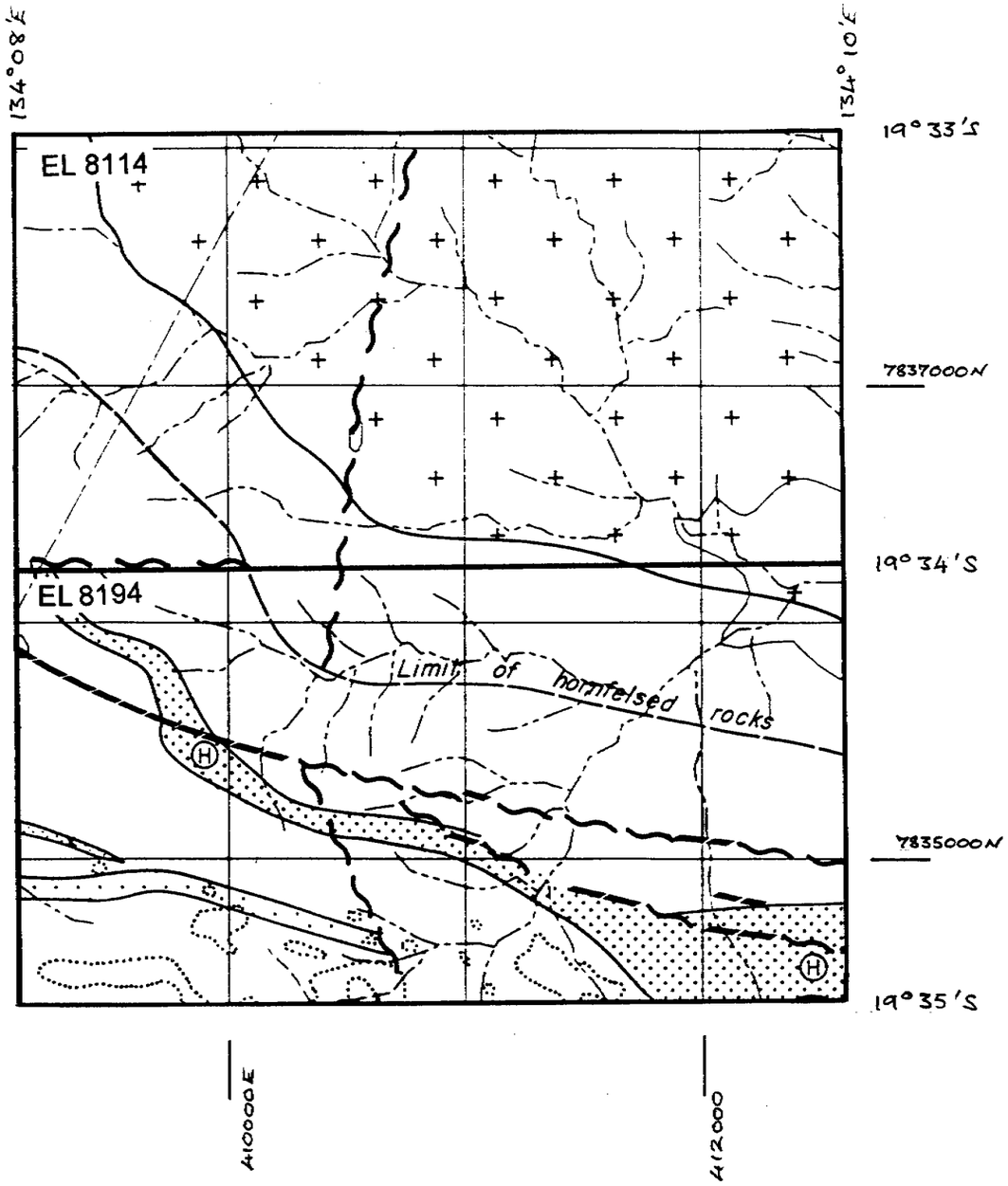
SURVEY HEIGHT

MEAN TERRAIN CLEARANCE - 80 metres

NAVIGATION

Real-time range range
Doppler assisted

Fig. 2



GEOLOGICAL LEGEND

INTRUSIVE ROCKS

- Granite
- Porphyry Narrow dyke
- Dolerite

Geological boundaries located from outcrops, drilling data and aeromagnetics

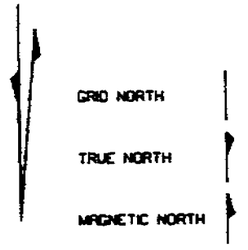
- Lamprophyre outcrop and subcrop

METASEDIMENTS

- High magnetic intensity unit (trend of magnetic high and spot high)
- Moderate magnetic intensity unit with identifiable trend
- "Background" magnetic intensity no identifiable trends
- Very low magnetic intensity unit, usually shales (trend of magnetic low)

MAGNETIC ALTERATION FEATURES

- Magnetic dipole. Symbol located over dipole high
- Magnetic monopole high located on or adjacent to a fault or shear zone
- Magnetic monopole high or low not located on a fault or shear zone
- Fault or shear zone identifiable from aeromagnetics
- Unconformity
- Ironstone outcrop
- Small gold mine
- Dip and strike of bedding
- EX 43 Explorer 43



North point relationships are shown for the centre of the map. Magnetic north is true for 1980.

GRID/MAGNETIC ANGLE	4°51'51"
GRID CONVERGENCE	-0°16'16.44"
SECULAR VARIATION	0°0'9" east per year

EL 8114 AND 8194

"SOLID" GEOLOGICAL MAP

INTERPRETED FROM OUTCROP MAPPING, DRILLHOLE DATA AND AEROMAGNETICS, NOV 1992

AUTHOR PA	DATE March 1993	FIGURE 3

7. EXPLORATION EXPENDITURE

EL 8114

Item	Estimated Expenditure $
Geologist 9 days @ $400/day	3,600.00
Assays	50.00
Geophysical Data Acquisition/Interpretation	3,100.00
Drafting	220.00
Accommodation	300.00
Vehicles	320.00
Airfares	550.00
Base Support Costs	815.00
Administration	1,345.00
TOTAL	**10,300**

Covenanted expenditure commitment was $10,000.00.

EL 8194

Item	Estimated Expenditure $
Geologist 11 days @ $400/day	4,400.00
Assays	65.00
Geophysical Data Acquisition/Interpretation	3,100.00
Drafting	220.00
Accommodation	450.00
Vehicles	480.00
Airfares	550.00
Base Support Costs	925.00
Administration	1,530.00
TOTAL	**11,720.00**

Covenanted expenditure commitment was $11,000.00.

8. PROPOSED EXPLORATION PROGRAMME

It is anticipated that selected portions of both exploration licences which are traversed by prospective structural lineaments will be tested by vacuum drilling bedrock below surficial cover.

An estimated minimum expenditure of $5,000 is proposed for EL 8114 (Station Hill) and $6,000 is proposed for EL 8194 (Crevasse).

9. REFERENCES

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Ding, P., & Giles, C.W., 1993: Geological Map of the Tennant Creek Region, 1:100,000 scale. North Flinders Exploration (unpublished).

Ivanac, J.F., 1954. The geology and mineral deposits of the Tennant Creek Goldfield, Northern Territory, Bureau of Mineral Resources, Geology and Geophysics, Bulletin No. 22

Le Messurier, P., Williams, B.T., and Blake, D.H., 1990: Tennant Creek Inlier - Regional Geology and Mineralisation, in Geology of Mineral Deposits of Australia and Papua New Guinea, Ed. F.E. Hughes, the Australian Institute of Mining and Metallurgy, Monograph No. 14.