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THE MOUNT LYELL MINING AND RAILWAY COMPANY LIMITED

EXPLORATION LICENCE 9/66

TASMANIA

PROGRESS REPORT

SIX MONTHS ENDING 6TH JANUARY, 1982

AUTHOR  
M. J. HUTTON

DRAFTING  
P. J. RIMMER

JANUARY 1982

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1. INTRODUCTION

Exploration programmes to locate economic Cu-Pb-Zn-Ag-Au deposits in the Cambrian Mt. Read Volcanics continued on E.L. 9/66 during the first six months of the 1981/82 year (25.6.81 - 6.1.82). Detailed exploration was conducted on the Selina, Red Hills, East Tyndall and Howard's Anomaly areas. Preliminary exploration was conducted on the Basin Lake, Henty-Yolande and Jukes Pty areas. Figure 1 shows the exploration completed during this period.

Exploration expenditure for the period 25.6.81 - 6.1.82 was \$248,653, comprising \$208,668 (84%) on the Mt. Tyndall area and \$39,985 (16%) on the Sedgwick-Darwin area.

Proposed exploration for the remainder of the 1981/82 year includes further evaluation of anomalous zones by detailed geological, geochemical and geophysical surveys. 900 m of diamond drilling has been budgetted to test selected targets. A 300 line-km Dighem airborne E.M.-magnetics survey is also planned for the Huxley area, between Queenstown and Mt. Jukes. Proposed expenditure for these programmes is \$354,963, bringing the total 1981/82 expenditure to \$603,616.

Due to the current emphasis on field work details of exploration conducted during 1981/82 will be presented later in the E.L. 9/66 Annual Report.

2. EXPLORATION COMPLETED 25.6.81 - 6.1.82

2.1 HOWARD'S ANOMALY

Geochemistry: Soil sampling was conducted along strike from an anomalous Zn zone centred on a pit on line 23.7N. Assays received to date have shown no significant values, suggesting that the high Zn in the pit is of hydromorphic origin, derived from a nearby inferred NE-trending fault. No further sampling of this zone is planned.

Diamond Drilling: D.D.H. HA5, which was collared at line 19N, 500'W on 1st June, 1981, was advanced from 195.0 m to completion at 297.5 m on 3rd July, 1981. The hole intersected a sequence dominated by andesitic tuffs with local concentrations of pyrite and hematite. Assays indicated a silver-bearing hematitic zone between 66.0 m - 74.6 m: 8.6 m at 10.9 g/t Ag. In Series

D.D.H. HA6 was collared at line 21N, 950'W on 10th July, 1981, and completed at 250.0 m on 20th July, 1981. This hole also intersected andesitic tuffs with locally abundant hematite-carbonate. Best assays were 4.5m at 7.6 g/t Ag. Because of the sporadic nature of worthwhile Ag mineralisation, no further work is planned for this zone. In Series

2.2 EAST TYNDALL

Access: 5.7 line-km of in-fill trackcutting was completed in preparation for geophysical surveys.

Geochemistry: Geochemical soil and rock chip sampling has been conducted to follow-up anomalies from old reconnaissance soil sampling and I.P. surveys. No significant results have been received to date apart from scattered minor Pb and Zn anomalies.

### 2.3 SELINA-DORA

Access: The Selina 4-WD track was re-established north to the Anthony River. A new section of road was established to by-pass a washed-out section of old road.

Trackcutting of 14.68 line-km of grid lines extended the Selina Grid 1400 m to the north. 5.18 line-km of in-fill lines over the Mt. Selina geochemical anomaly zone reduced the line spacing between 136N and 104N to approximately 100 m.

Geochemistry: Soil sampling at 20 m intervals was conducted over the northern extension. There were no significant assays. Soil and rock chip sampling of the in-fill lines on Mt. Selina was commenced. Results of this sampling are not yet available.

Geophysics: A gradient array I.P. survey using a 20 m receiver dipole spacing was conducted over the northern extension. A chargeability anomaly zone, detected in 1980/81, was found to continue 1700 m to the north. This zone is due to disseminated pyrite of the Eastern Pyrite Zone. The lack of significant soil assays suggest that the pyritic mineralisation is barren of economic base or precious metal values.

Ground magnetic surveys were conducted over the northern extension and commenced over the Mt. Selina anomaly zone. Processing of the data is in progress.

Diamond Drilling: D.D.H. LS8 was collared at line 184N, 580 m E on 14th September, 1981, and completed at 355.2 m on 30th September, 1981. The hole was designed to test the mineralization of the Eastern Pyrite Zone. The hole intersected felsic tuffs and lavas with pyritic mineralisation (average 20%) between 221.0 m - 225.9 m. Magnetite-bearing lavas were intersected from 225.9 m to the end of the hole. Assays are not yet available but base metal sulphides are rare in the drill core. Downhole I.P. logging indicated that the pyrite mineralisation produced the surface I.P. anomalies. In Doris

### 2.4 RED HILLS

Access: A closely-spaced grid was established between lines 16S-40S, around the massive sulphide lens, intersected by D.D.H. RH5 in 1977. A total of 11 line-km of grid lines was cut and pegged at 20 m intervals.

Geophysics: An Applied Potential survey was conducted over the closely-spaced grid between lines 16S-40S. Processing of the data is in progress.

### 2.5 SPICER

Geochemistry: Assays were received for some soil samples collected during 1980/81. There were no significant results.

2.6 BASIN LAKE

Geochemistry: Assays for pyritic rock chip samples from near Leech Hill showed no significant base or precious metal values.

Diamond Drilling: Drill core assays for D.D.H. BL3 showed no significant values. Assays for BL4 were also insignificant, the highest values gave 13.1 m at 4.5 g/t Ag in pyritic andesites.

2.7 HENTY-YOLANDE

Geochemistry: Collection of stream sediment samples from the Henty-Yolande area was commenced.

2.8 JUKES PTY

Geochemistry: Rock chip sampling of the Jukes Pty adits was completed. Assay results received to date have indicated two zones of significant mineralisation: No. 1 adit (uppermost) 0-12 m: 0.58% Cu, 2.5 g/t, 0.6 g/t Au; No. 3 adit (middle), West X-cut, 0-12 m: 1.18% Cu, 3.5 g/t Ag, 0.8 g/t Au.

Three huts were flown to a campsite near the adits to form a base camp for field parties.

2.9 MT. READ VOLCANICS ALTERATION STUDY

This project, conducted by Dr. C. Eastoe of the University of Tasmania, was completed on 18th December, 1981. Presentation of the Final Report is awaiting photographic work.

2.10 REGIONAL COMPILATION PROJECT

Compilation of relevant exploration data onto 1:50 000 scale plans is currently in progress. The work is being carried out by the following:

Geology - K. Stanton-Cook (Getty Oil)  
 Geochemistry - Dr. S. Joyce (Geobase)  
 Geophysics - Dr. J. Bishop (Mitre Geophysics)  
 Metallogeny - D. Catley (Getty Oil)

*Mt. Lyell, E2, Getty*

3. EXPENDITURE 25.6.81 - 6.1.82

Exploration expenditure for the period 25.6.81 - 6.1.82 is tabulated below.

	<u>ITEMS</u>	<u>AMOUNT</u>	<u>%</u>
1.	Salaries and Wages	73 475	29.5
2.	Burden Charges	22 949	9.2
3.	Materials	16 670	6.7
4.	Access	40 502	16.3
5.	Geophysics	13 290	5.3
6.	Geochemistry and Petrology	10 055	4.0
7.	Diamond Drilling	49 597	19.9
8.	General Costs	5 269	2.1
9.	Equipment and Facilities	4 795	1.9
10.	Capital Items	3 898	1.6
11.	Indirect Charges	8 153	3.3
	TOTAL	\$248,653	100.0

4. PROPOSED EXPLORATION 7.1.82 - 23.6.82

Proposed exploration for the remainder of the 1981/82 year is given below.

East Tyndall: Detailed I.P. and E.M. surveys over prospective zones. Follow-up of anomalies with further detailed geophysical and geochemical surveys.

Selina: Completion of geochemical sampling and ground magnetic surveys over the Mt. Selina anomaly zone. Reconnaissance E.M. surveys over this zone and the northern grid extension.

Red Hills: Detailed E.M. and I.P. surveys over prospective zones.

Spicer-Dora: Detailed E.M. and geochemical surveys over a prospective mineralised zone.

Basin Lake: As per East Tyndall.

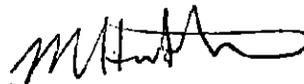
Henty-Yolande: Reconnaissance stream sediment and rock chip sampling and geological mapping.

Huxley: Reconnaissance stream sediment and rock chip sampling, geological mapping and airborne E.M. magnetics surveys (Dighem, 300 line-km).

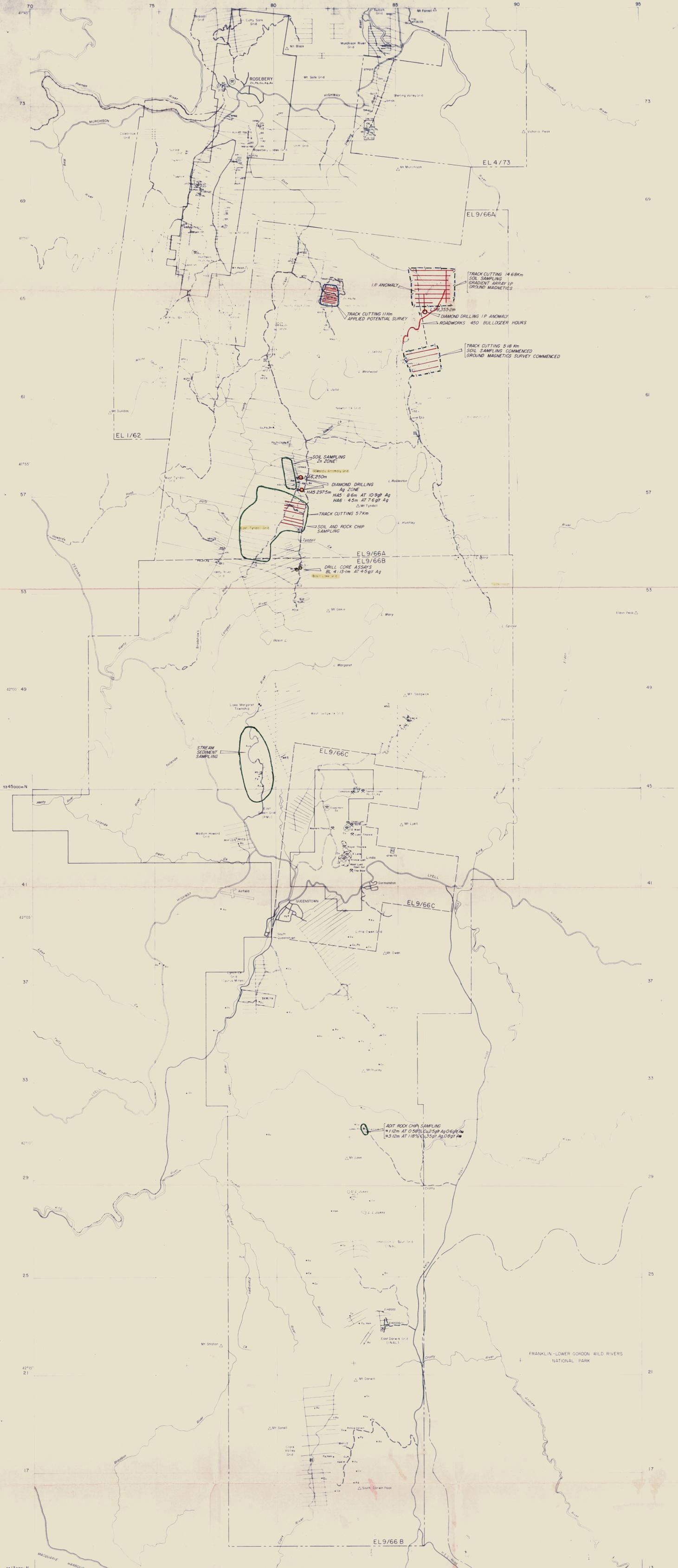
Jukes Pty: Detailed I.P., E.M. and ground magnetics surveys, soil and rock chip sampling, diamond drilling (300 m).

Diamond Drilling: A total of 600 m of diamond drilling is budgetted for testing selected targets in the Selina, Spicer, Red Hills and East Tyndall areas. 300 m of drilling is budgetted for the Jukes Pty area.

Expenditure: The above proposed programme is expected to cost \$354,963 bringing the total expenditure on E.L. 9/66 for the 1981/82 year to \$603,616.



(M. J. Hutton)  
Exploration Geologist



**LEGEND**

- Roadworks
- ▨ Track cutting
- Geochemo survey
- Geophysical survey
- Diamond drill hole completed
- Drill hole assays received

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5cm



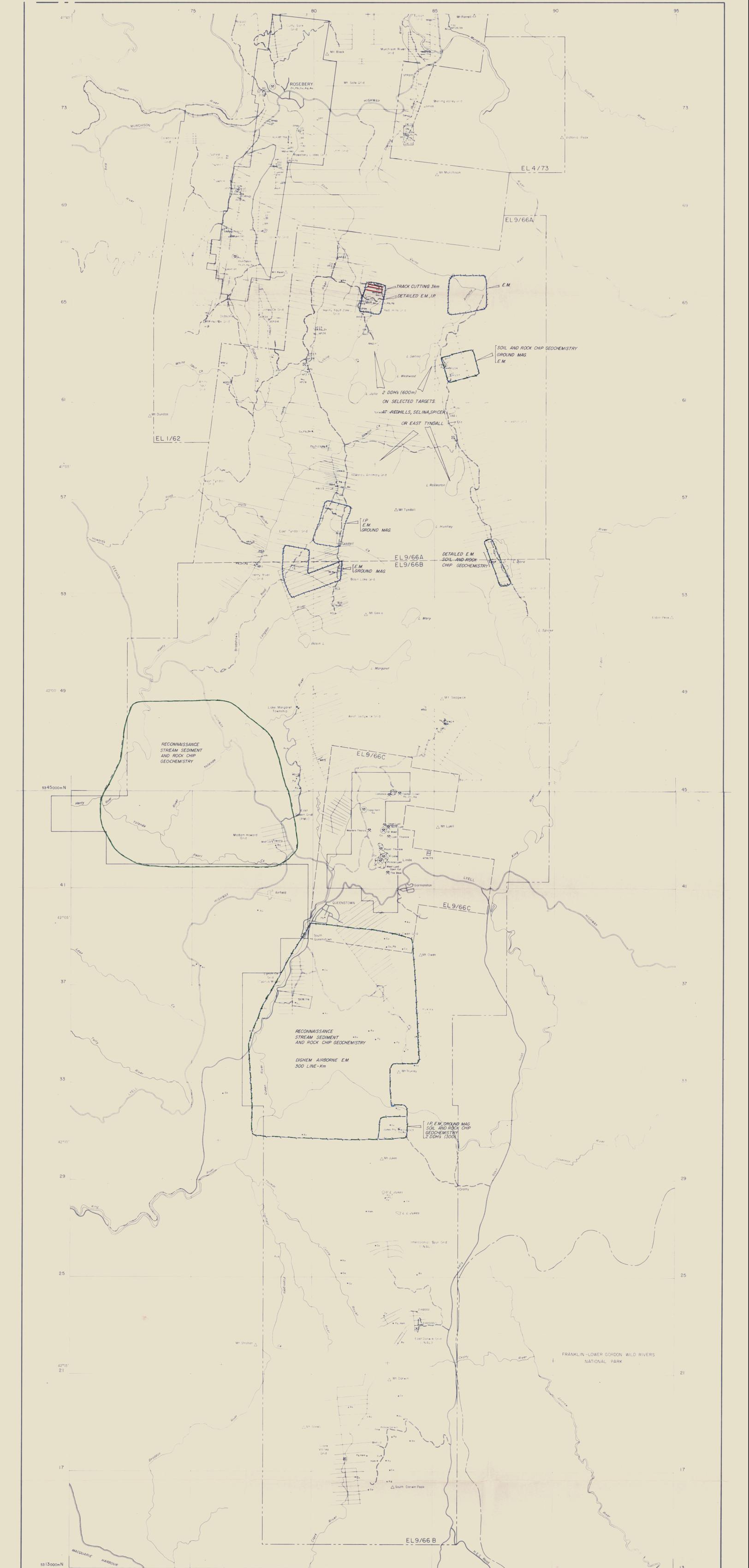
- Main Road
- Vehicular Track
- River, Creek
- Railway (abandoned)
- E.L. Boundary
- M.L. Boundary
- △ Prominent Peak
- ⊗ Major Mine Working
- ⊗ Major Mine Abandoned
- ⊗ Old Workings, Mineral Occurrence
- ⊗ Alluvial Workings
- ⊗ Drill Hole
- ⊗ Exploration Camp

SCALE 1:50,000  
KILOMETRES  
0 1 2 3 4 5

**MT LYELL-GODL-CGFA. JOINT VENTURE**

**EXPLORATION COMPLETED**  
25.6.81 - 6.1.82

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FIG 1



**LEGEND**

TRACK CUTTING  
 GEOCHEMISTRY  
 GEOPHYSICS

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50m



- Main Road
- Vehicular Track
- River, Creek
- Railway (abandoned)
- E.L. Boundary
- M.L. Boundary
- Major Mine Working
- Major Mine Abandoned
- Old Workings, Mineral Occurrence
- Alluvial Workings
- Drill Hole
- Exploration Camp
- Prominent Peak

SCALE 1:50,000

0 1 2 3 4 5

KILOMETRES

MT LYELL-GODL-CGFA JOINT VENTURE

E.L. 9/66

PROPOSED EXPLORATION

7 182-23 682

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FIG. 2