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DATE	CC & M	DSMAE
26 JAN 1971		
DEPT. OF MINES	E. L. C	
REF. NO.		

COMSTAFF PROPRIETARY LIMITED

ESPEA AND BALD HILL AREAS

E.L. 1/68

WINTER 1970

**OPEN FILE**

ANGLO AMERICAN CORPORATION (AUSTRALIA) LIMITED

71-721

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**MICROFILMED**

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EL. 1/68 ESPEA AND BALD HILL AREASSECTION IESPEA (Map No. 1)1. INTRODUCTION:

Work carried out here in the 1969-1970 summer season was described in the Review of 1969-1970 Summer Exploration Programme, E.L. 1/68. A self-potential survey had produced classic anomaly curves over a strike length of 3,000 feet but the results of geochemical soil sampling were awaited. A costean across the self-potential anomaly on line 40S was recommended.

The geochemical results have since been received, and the costean bulldozed as planned.

2. GEOCHEMISTRY:

Soil samples had been collected at 100 ft. intervals from lines 30-60S. They were analysed for Ag, As, Co, Cu, Ni, Pb, Sn, and Zn but no anomalous values were recorded.

3. COSTEANING (Map No. 2)

A costean was bulldozed from 48E to 54E (600 ft.) on Line 40S, and revealed that the bedrock was as previously mapped, namely sandstone/quartzite. The

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strike of the sandstone was approximately north-south, and the dip was to the east, varying from  $8^{\circ}$  at 48.6E to  $30^{\circ}$  at 51.2E. At 51E, corresponding exactly with the maximum self-potential anomaly was a gossanous vein, consisting of a number of bright pink haematite veinlets, partly anastomosing and partly controlled. The veinlets were generally parallel or sub-parallel to the western contact of the vein, which dipped eastwards at  $66^{\circ}$ , whilst the eastern contact dipped eastward at  $48^{\circ}$ , suggesting an increase in width with depth. The width of the vein was 5 ft. 4 ins. on the northern side of the costean, and 7 ft. 3 ins. on the southern side, whilst the strike of the western contact was  $351^{\circ}$  (magnetic).

Samples of the vein material were collected and submitted for a multi-element spectrograph scan, but this did not reveal any significant elemental concentration(s). It must therefore be concluded that the vein is dominantly pyritic, and thus of no economic interest.

## SECTION II

### BALD HILL (Map No. 1)

#### 1. INTRODUCTION:

Few lines of soil samples had been run here in the 1968-1969 field season. Work carried out here in the 1969-1970 summer season had revealed magnetic and

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self-potential anomalies at the western end of Line 4, almost coincident with geochemical anomalies in nickel and cobalt. It was decided to investigate this by trenching.

2. WORK CARRIED OUT:

A trench was dug to bedrock from 3,100 ft. to 3,500 ft. along Line 4. To facilitate trenching and reduce the amount of bush clearance required, the trench was offset from the line (See Map No. 3), and its length is thus 465 ft. The trench was mapped in detail, and chip sampled in 5 ft. sections.

3. GEOLOGY (Map No. 3)

At the south-eastern end of the trench is about 30 ft. of serpentinised but still recognizable dunite, with relict crystals of olivine set in a matrix of fibrolamellar serpentine and chlorite. Occasional grains of red spinel are present. The remainder of the rock exposed is serpentine, of which three main types were distinguished as is indicated on the map. Two narrow bands (?) of relatively fresh dunite occur within the serpentinite. A number of vertical or steeply dipping joints were recorded, and the junction between the rotten khaki serpentine and the grey-green blocky serpentine was sufficiently distinct to be measured. It dipped to the north-east at about  $55^{\circ}$ .

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Three minor shears were observed, and the 20 ft. of serpentine at the north-western end of the trench was oxidised and intensely sheared.

The orientation of ribbing within the ribbed streaky serpentine at the north-western end of the trench was measured, and dips north-westwards at 75°. It is possible that this ribbing may indicate layering within the ultra-mafic but there is no other evidence of this.

4. ANALYTICAL RESULTS:

The chip samples were analysed for nickel and cobalt. Maximum and minimum values were: Ni 5,900 ppm, 2500 ppm, Co 350 ppm, 110 ppm, and the values averaged about 170 ppm Co and 3,500 ppm Ni. There was no apparent correlation between rock type and analytical value.

5. CONCLUSIONS:

Geological investigation of the trench did not indicate any direct relationships between either the geochemical or the geophysical anomalies and the various rock types. No sulphide mineralisation was observed.

These facts together with the analytical results, which are considered to be poor, lead to the conclusion that nothing of possible economic import is present here.

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6. PLANS:

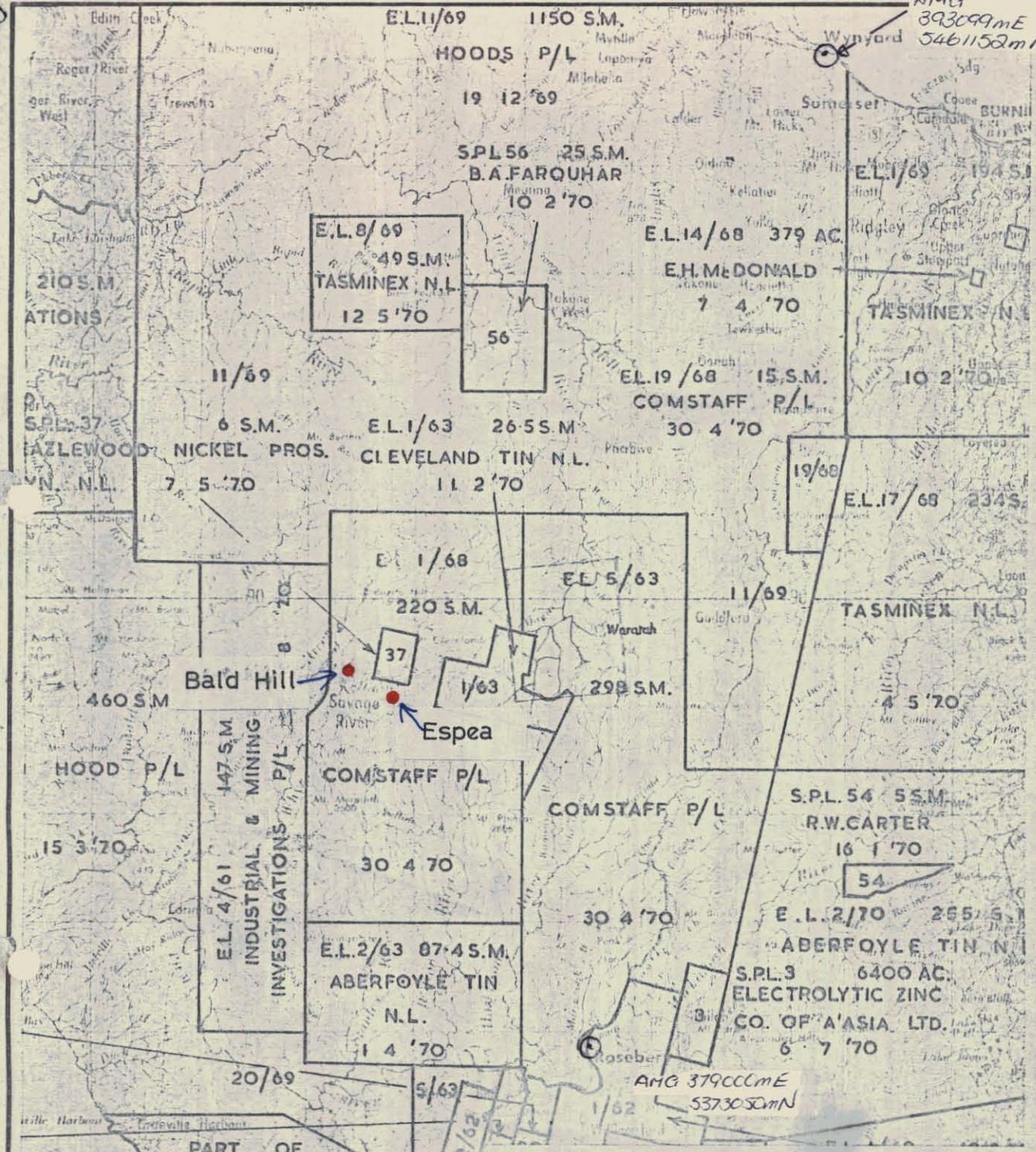
<u>Plan No.</u>	<u>Title</u>
1	Espea and Bald Hill Areas Locality Plan.
2	Espea Area Costean
3	Bald Hill Area Trench Geology Line 4.

*Roseana Armfield*

*for* (H.R. Robison)

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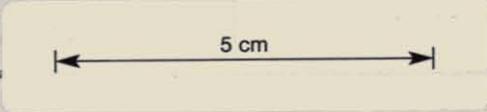
AMG 393099mE  
5461152mN



AMG REFERENCE POINTS ADDED Map 1

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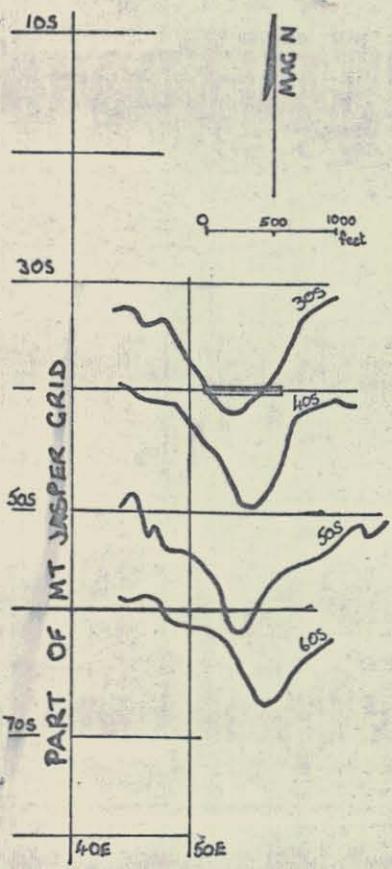
ESPEA - BALD HILL AREA  
 LOCALITY PLAN  
 919007



DRAWN	COMPILED	SCALE 1:500,000	TAS-2-171
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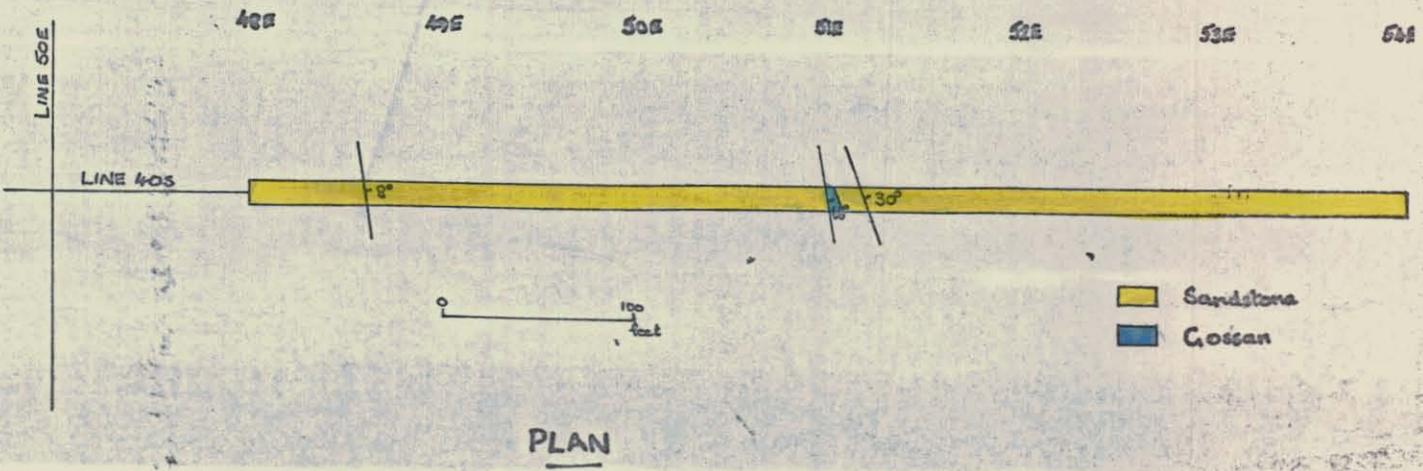
11-121

LEGEND

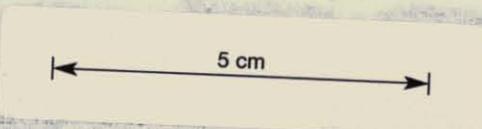


- Cut Line.
- Graph of S.P. readings, Line 305.
- Costean.

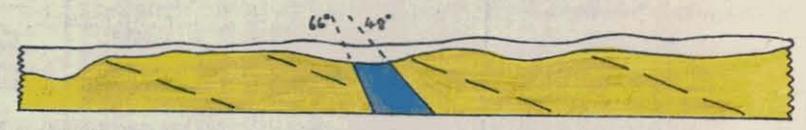
LOCATION



PLAN



50-5E      51E      51-5E



SECTION  
(S. side of costean)

- Soil/Humus
- Sandstone
- Gossan

- Sandstone
- Gossan

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ESPEA AREA  
COSTEAN

919008

DRAWN

COMPILED

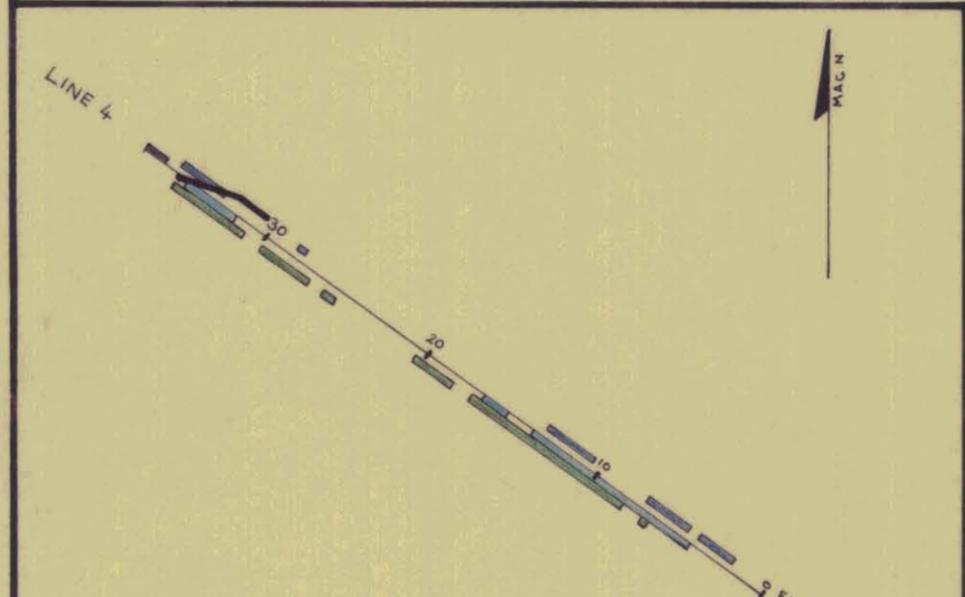
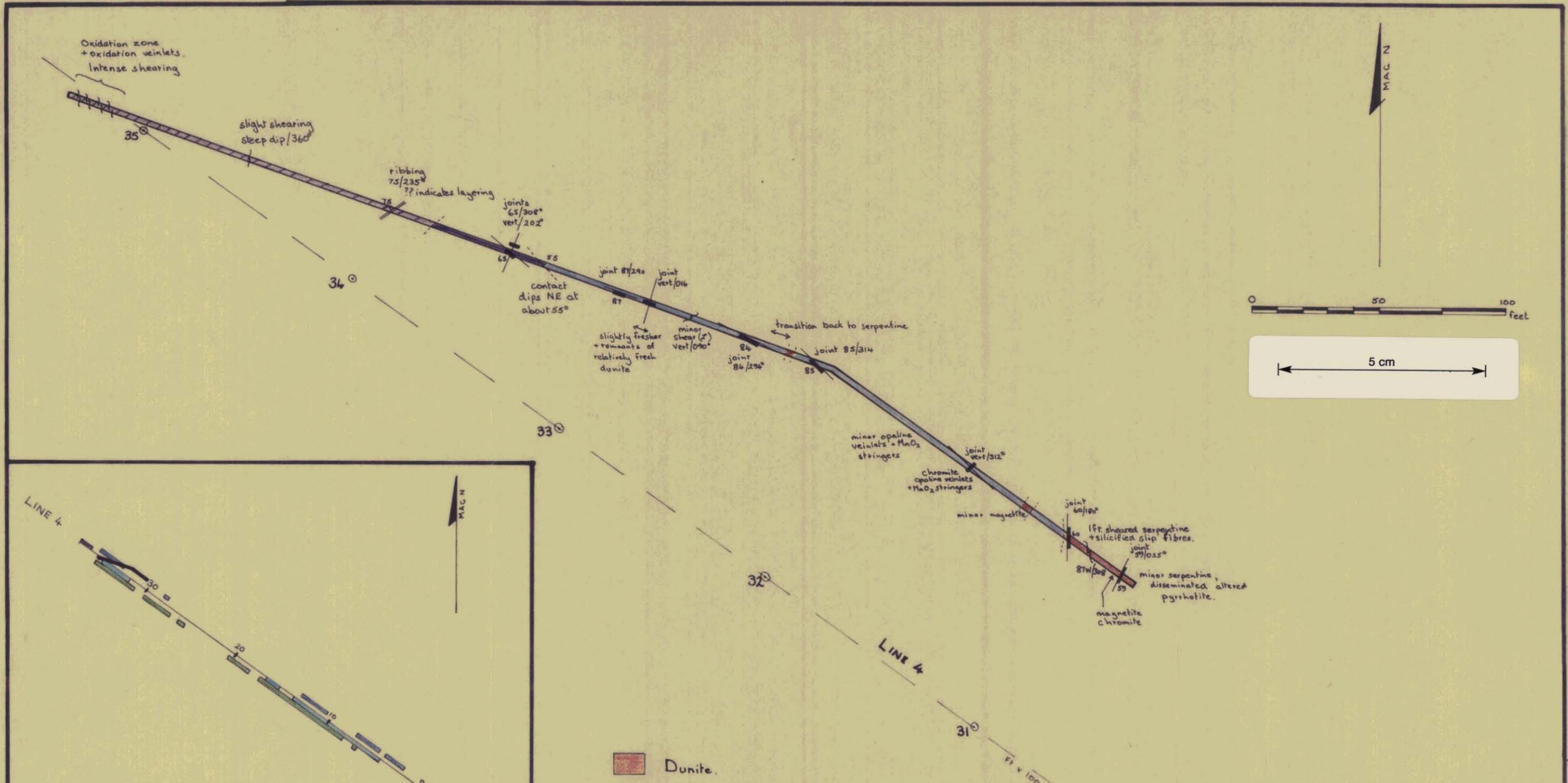
SCALE

TAS-2-172

41-72b

MAP No. 2

007



- Trench
- Geophysical Anomaly Magnetometer.
- Self Potential.
- Ni.
- Geochemical Anomaly Co.

- Dunite.
- Rotten khaki serpentine.
- Grey-green blocky serpentine.
- Ribbed streaky serpentine.

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BALD HILL AREA  
TRENCH GEOLOGY  
LINE 4

DRAWN	COMPILED	SCALE	TAS-2 - 173
M1-721			MAP No. 3