

<b>MINES</b>	
File Ref. <b>EL 31/88</b>	
<b>24 APR 1989</b>	
Doc. Ref.	
Action Officer	Initials
<b>LETTER</b>	
<b>18. 4 '89</b>	
<b>REFERS</b>	
Resubmit to	Date

EXPLORATION LICENCE NO. 31/88  
 COMBINED REPORT FOR THE QUARTERS  
 ENDING 31 DECEMBER 1988 AND  
 31 MARCH 1989

**OPEN FILE**

GOLDSEARCH LIMITED

**MICROFILMED**

P.R. DARBY  
 APRIL 1989

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## INTRODUCTION

Exploration Licence (EL) 31/88 is located in northeast Tasmania, approximately 70 km east of Launceston (Figure 1). It was applied for on 29 June 1988 in order to explore for precious metal mineralisation in the area of old gold mining operations on the Mathinna Plains and surroundings.

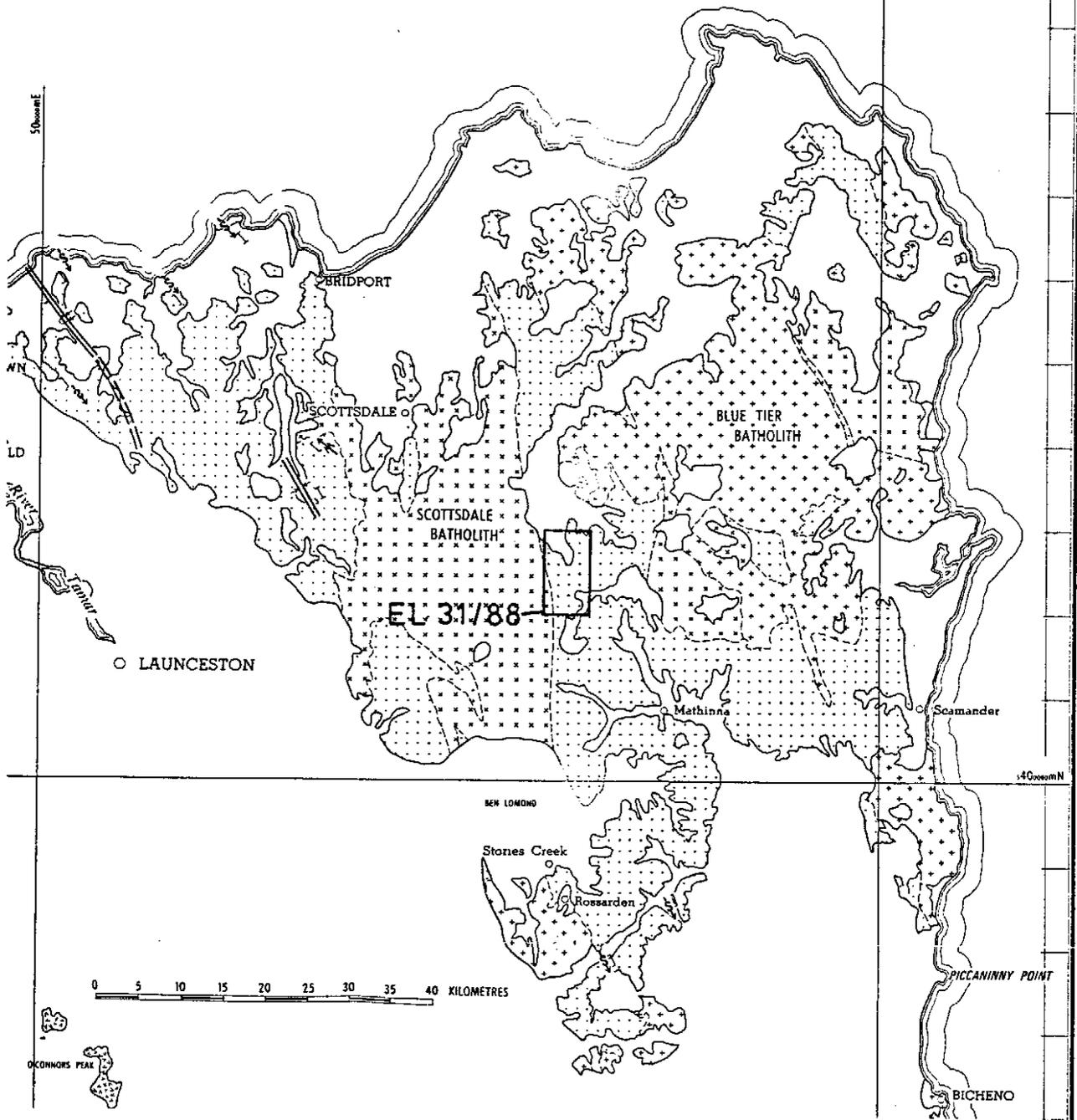
The northern quarter of the licence is privately owned, improved agricultural land. The rest of the licence is State Forest, and is centered on the Mathinna Plains. The plains form a plateau with an elevation of approximately 800 m above sea level and 300 m above the private land to the north. The major drainages are the South Esk River to the south and the Dorset River to the north. All year access to the plateau is provided by the gravel Mathinna Plains Road and Ben Ridge Road, whereas vehicular access to the edges of the plateau is virtually non-existent. The following report describes exploration activities conducted in EL 31/88 up to 31 March 1988.

## GEOLOGY

The regional geology of northeastern Tasmania is illustrated in Figure 1 (after Williams, 1978). Turbidites of Early to Middle Devonian age, known as the Mathinna Beds, occupy a large part of northeastern Tasmania and are the most common rock unit in EL 31/88. The dominant lithologies are mudstone and interbedded turbidite quartzwacke. These rocks accumulated in the Mathinna basin without major breaks in deposition, transported from the west by turbidity currents.

The Mathinna Beds are tightly folded. The folds have northwesterly trending hinge lines and are often horizontal or gently plunging to the southeast. The axial surfaces usually dip steeply to the southwest and a slaty cleavage, associated with the folds, displays divergent fans in the sandstone layers, and convergent fans in the mudstone beds (Williams, 1978).

Two large granite plutons have intruded the Mathinna Beds in northeast Tasmania. Isotopic ages range from 373 to 360 ma. They have sharp discordant boundaries, apparently controlled by fractures that are usually parallel to the pre-intrusion folds of the surrounding Mathinna Beds (Williams, 1978). The Scottsdale Batholith is composed predominantly of granodiorite and outcrops in the southwestern corner of EL 31/88 (Figures 1 and 2).



REFERENCE

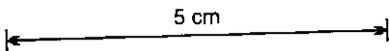
HOLOCENE -  Flat-lying deposits with Jurassic dolerite sheets and Tertiary basalt lavas.  
 LATE CARBONIFEROUS 

IGNEOUS ROCKS

LOWER CARBONIFEROUS - UPPER DEVONIAN  Dominantly adamellite.  
 Dominantly granodiorite.

EASTERN TASMANIA

LOWER DEVONIAN - TREMADOCIAN  Mathinna Beds of micaceous quartzwacke turbidite sequence

5 cm 

89 - 2947

Figure 1. Location and regional geological setting of EL 31/88.

## Local Geology

Outcrop is very rare over most of EL 31/88, however in the area of ML 1305 the dominant lithology was a dark grey, fine-grained sandstone and interbedded mudstone or shale. The only reliable strike and dip located (Figure 3) was 315/72SW, and it is noted that a southwesterly dip is a variance with the work of Mr Whitehead, who reported the dip to be predominantly to the northeast (Appendix 1).

The strike of gold bearing lodes is inferred from lines of old workings, and is approximately 300 to 330°. No information on dip was found, however it is probable that dips were close to vertical, as evidenced by quartz veins in the Alberton Goldfield.

## MINERALISATION

EL 31/88 lies adjacent to the Alberton Goldfield. This goldfield contained numerous small, narrow quartz veins that were mined for gold, usually only down to the depth of the water table. The quartz veins, and indeed the Alberton Goldfield as a whole, have a north-northwest trend, and occur on the ridge rising above the east bank of the Dorset River.

The Alberton Goldfield forms a part of a linear zone approximately 70 km in length, extending from Forester in the north to the Mangana Goldfield in the south, in which several goldfields occur. At the southern end of the zone is the Golden Gate Mine, from which 263,000 oz of gold were recovered at an average grade of about 1 oz per ton.

As noted above, EL 31/88 is located adjacent to, but just west of the zone described above, however it is considered prospective because of its closeness to the zone, and because of some very promising drilling results obtained in 1981. The drilling programme was carried out by a Mr P Heyes and comprised 3 vertical air-track holes. The holes were located in the area of the Mineral Lease and Prospecting Claims shown in Figure 2. The hole locations are shown in more detail in Figure 3, and the assay results from hole 2 (the only one to contain mineralisation) were reported as follows:

Depth (ft)	Au (g/t)
0 - 82	<0.3
82 - 92	14
92 - 102	<0.3
102 - 112	18
112 - 122	14
122 - 132	4.5
132 - 152	0.9

All depths refer to down hole depths. It was concluded that hole No. 2 may have intersected a gold bearing quartz vein, and probably drilled down-dip to give such a long (down hole) intersection. Despite the likelihood of having drilled down-dip, it was considered that the results were good enough to warrant further testing in the area.

#### EXPLORATION ACTIVITIES

Mr C Whitehead of Geotechnical Services Pty Ltd was contracted to carry out a rapid appraisal of the areas of the drill hole described above. Seventeen air-track holes were drilled, totalling 464 metres, with samples collected and assayed every 3 metres.

The location of each drill hole is shown on Figure 3, and the sample logs and results are presented as Appendix 1, together with a preliminary report of the drilling by Mr Whitehead.

The results were generally very low, with the highest assays being as follows:

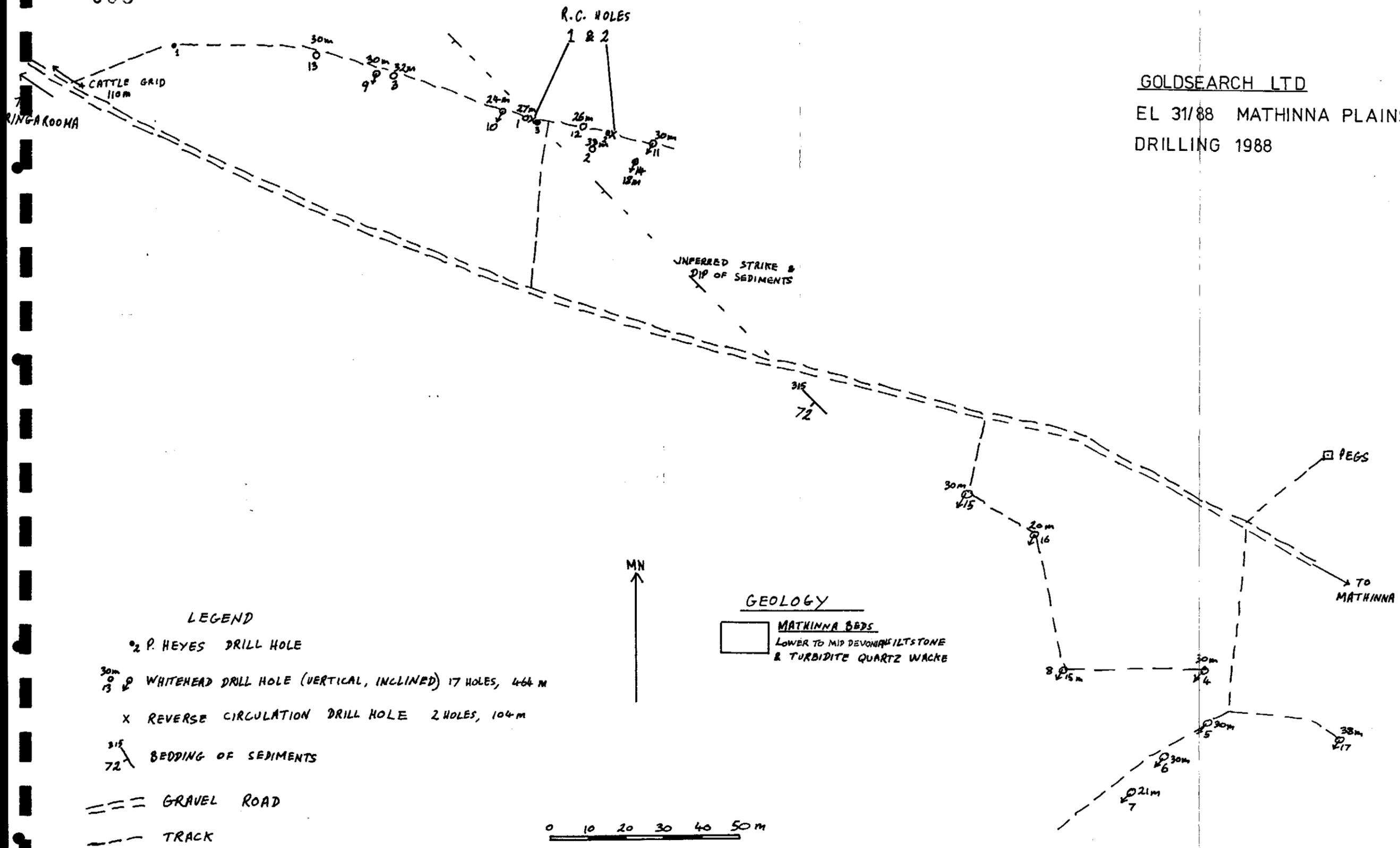
Hole No.	Interval (m)	Au (g/t)
4	9 - 12	0.604
7	0 - 3	0.356
7	3 - 6	0.534
15	27 - 30	0.121

At the northern workings, in the vicinity of the earlier reported mineralisation, no encouraging intersections were obtained.

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EL 31/88 MATHINNA PLAINS

DRILLING 1988



LEGEND

○ P. HEYES DRILL HOLE

○ WHITEHEAD DRILL HOLE (VERTICAL, INCLINED) 17 HOLES, 464 M

× REVERSE CIRCULATION DRILL HOLE 2 HOLES, 104 M

315 / 72 BEDDING OF SEDIMENTS

== GRAVEL ROAD

- - - TRACK

GEOLOGY

MATHINNA BEDS  
LOWER TO MID DEVONIAN SILTSTONE  
& TURBIDITE QUARTZ WACKE

DRAWN 21-11-88  
P. FARBY - MODIFIED FROM  
C. WHITEHEAD.

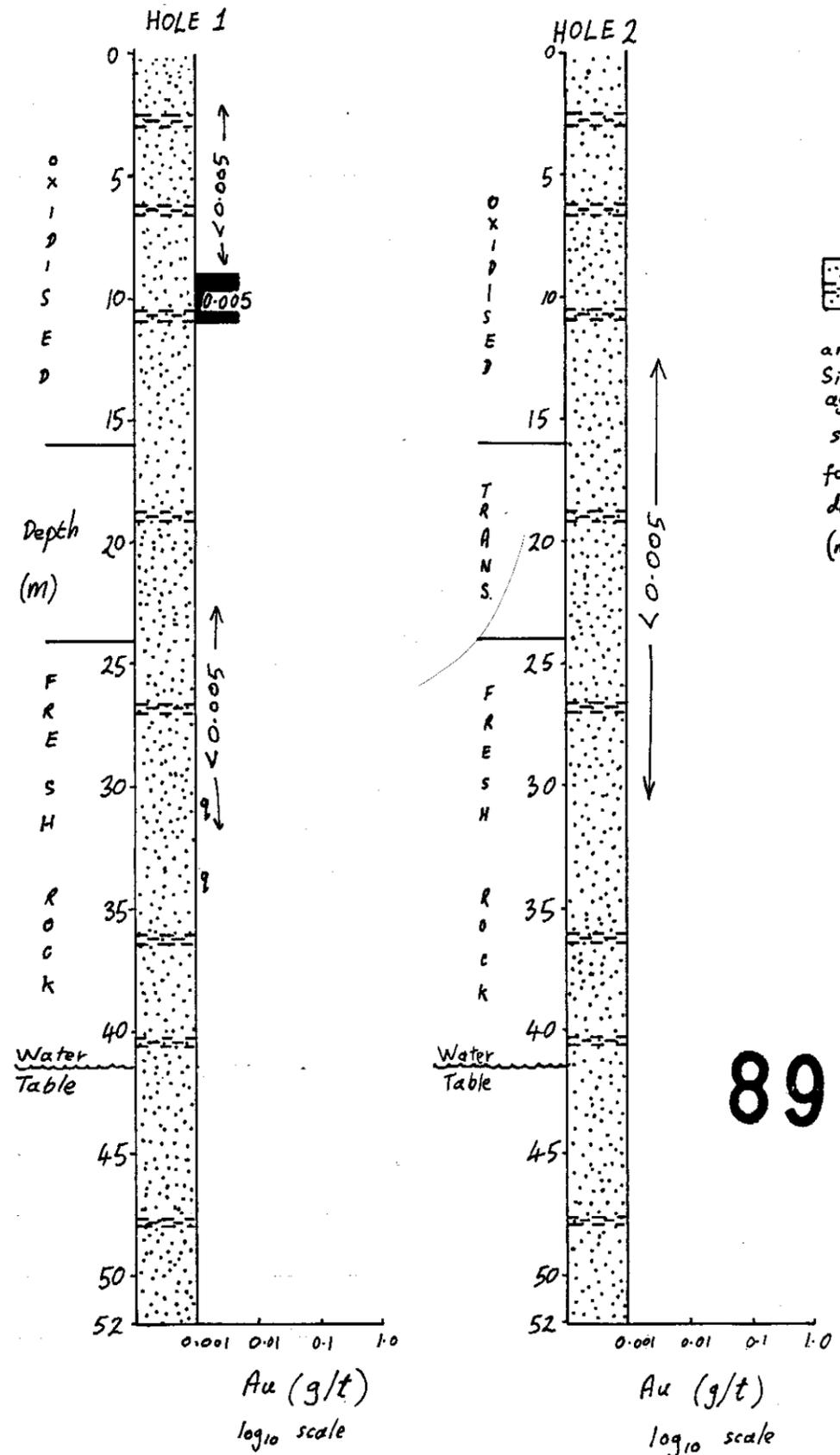
0 10 20 30 40 50 m

SCALE 1:1000

5 cm

89-2947

EL 31/88 REVERSE CIRCULATION DRILLING



89-2947

FIGURE 4.

A later attempt was then made to repeat the intersection reportedly obtained in 1981. Stacpoole Drilling were contracted to drill two vertical reverse circulation drill holes, located half of one metre away from holes 2 and 3 drilled in 1981 (Figure 3). The drill logs indicate a monotonous sandstone, siltstone, mudstone lithology (Figure 4) and no zones of mineralisation were intersected. Assay results from Analabs may be found in Appendix 2.

#### CONCLUSION AND RECOMMENDATIONS

Drilling to date has failed to produce any results even remotely similar to those reported for the 1981 drilling in ML 1305. Although the detailed geological structure in the vicinity of ML 1305 is not known with any degree of certainty, the drilling has severely down-graded the prospect.

Before carrying out any further drilling, it is recommended that detailed geological mapping be undertaken with the aim to elucidate the detailed structure within E1 31/88. This work, in conjunction with soil and rock chip sampling, may provide targets for further drilling.

#### REFERENCES

Launceston 1:250,000 geological sheet. Tasmanian Geological Survey.

Williams, E., 1976. The Tasman Fold Belt System in Tasmania.  
Tectonophysics, 48, 159-205.

009

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M. L. 1305P/M - GOLDEN POSSUM PROJECT, N.E. TASMANIA

PROGRESS REPORT ON DRILLING PROGRAMME

17 - 24th AUGUST 1988

M. L. 1305P/M    GOLDEN POSSUM J.V. PROJECT    N. E. TASMANIA

PROGRESS REPORT ON DRILLING PROGRAMME - AUGUST 17 - 24th 1988

A. PREAMBLE

The following is a brief summary report recording progress of the drilling programme recently completed (17 to 24th August 1988) on M.L. 1305P/M (P. Heyes, Golden Possum J.V. Project) south of Ringarooma, N.E. Tasmania.

The report is preliminary in form, prepared to document the objectives and record the drill statistics of the completed programme. Detailed lithological and mineralogical examinations of drill samples have not been completed, neither have overall assay results been acquired, and until such time, a final geological report of work and assessment of results will not be attempted.

Attached Tables 1 and 2 tabulate statistics of the drill progress; Plan No. 1 shows drill site locations; Figures 1 and 2 are provided to show the location of M.L. 1305P/M.

Appended are preliminary drill logs showing drill samples submitted for analysis.

B. GENERAL COMMENTS

A programme of shallow airtrack drilling consisting of 17 Holes total drill metreage of 464 metres was recently completed (17 - 24th August 1988) on M.L. 1305P/M and associated prospecting claims.

The programme was undertaken and completed as outlined by C. H. Whitehead report 4th July 1988 (attached). The drilling project had been proposed as the most practical and cost effective means of rapidly assessing the potential of 'indicated' gold mineralisation over a total strike distance of 330 metres.

Because of the type of drilling, and by closely monitoring progressive results of drilling, it was believed the drill programme was sufficiently flexible to optimise maximum utilisation of the approved drill budget. It was also believed the programme was of such a nature as to reconfirm the upper levels of previously recorded drill gold values (P. Heyes - Hole 2) and certainly their up dip and strike extensions.

#### C. DRILLING COMPLETED

In total 17 holes were completed with a total drill metreage of 464 metres.

Nine holes, totalling 250 metres, were completed at the "Northern Workings" area, ie., in the vicinity of the previously recorded gold intersections by P. Heyes(1981) drilling. A further eight holes, totalling 214m, were completed at the "Southern Workings" area. A total strike distance of 330 metres were investigated by drilling.

Of the holes drilled, 5 were vertical, the remainder inclined at an angle of  $70^{\circ}$  (SSW). The latter holes provided better intersection of strata.

At the "Northern Workings" drill depths ranged from 18m to 33m. Hole P.D. 2 (drilled to 33m) intersected material previously recording gold values in the P. Heyes Airtrack Hole No. 2 - 92ft sample. 14g/tonne). The remainder of the holes investigated strike and up - dip extensions of this 'mineralisation'. Deeper drilling was prohibitive by entering the water table at approx 27m at this location.

At the "Southern Workings", drilling within the water table and above was satisfactory, provided the upper sections of the holes were cased to prevent cave-ins.

Drilling was completed under contract to North West Exploration Services at a total drill cost of \$14,848. 00

Sampling:-

The holes were carefully sampled at 3 metre intervals. The entire sample (No. A) was collected over this interval and this has been retained on site. From Sample A, a 5 to 6kg representative sample (No. B) was collected on site.

Sample B was split/riffled down to a 2kg sample (No. C) which has or will be submitted for analysis. The remainder of sample B was sieved (1/8") to collect chip samples (No. D) for lithological/mineralogical examination, and minus 1/8" material panned down for heavy mineral collection and inspection.

A total of 156 samples have been collected.

Holes 1, 2 and 3 samples have been submitted to the Australian Laboratory Services Laboratory, Bendigo, for gold assay (fire assay, 0.01ppm detection limit).

All other samples will be submitted to Analabs, Bendigo for similar gold assay.

Mineralogical / lithological examinations are still in progress.



Cliff H. Whitehead,  
Burnie, Tasmania 29th August 1988.

M. L. 1305P/M - S. RINGAROOMA - DRILL STATISTICSDRILL PROGRAMME - AUGUST 1988

Drill Hole Numbers	- GP/PD 1 to GP/PD 17 (inclusive)
Total Metres Drilled	- 464m
Dates Drilled	- 17th - 24th August 1988
Drilled By	- North West Exploration Services (M.McCullagh)
Drill Rig	- Atlas Copco Hydraulic Airtrack drill rig
Total Number Holes	- 17
Vertical Holes	- 5
Inclined Holes	- 12 (70 <sup>0</sup> , 190 <sup>0</sup> Bearing)
Northern Workings	- No. of holes = 9 holes, total drill depth 250m.
Southern Workings	- No. of holes = 8 holes, total drill depth 214m.

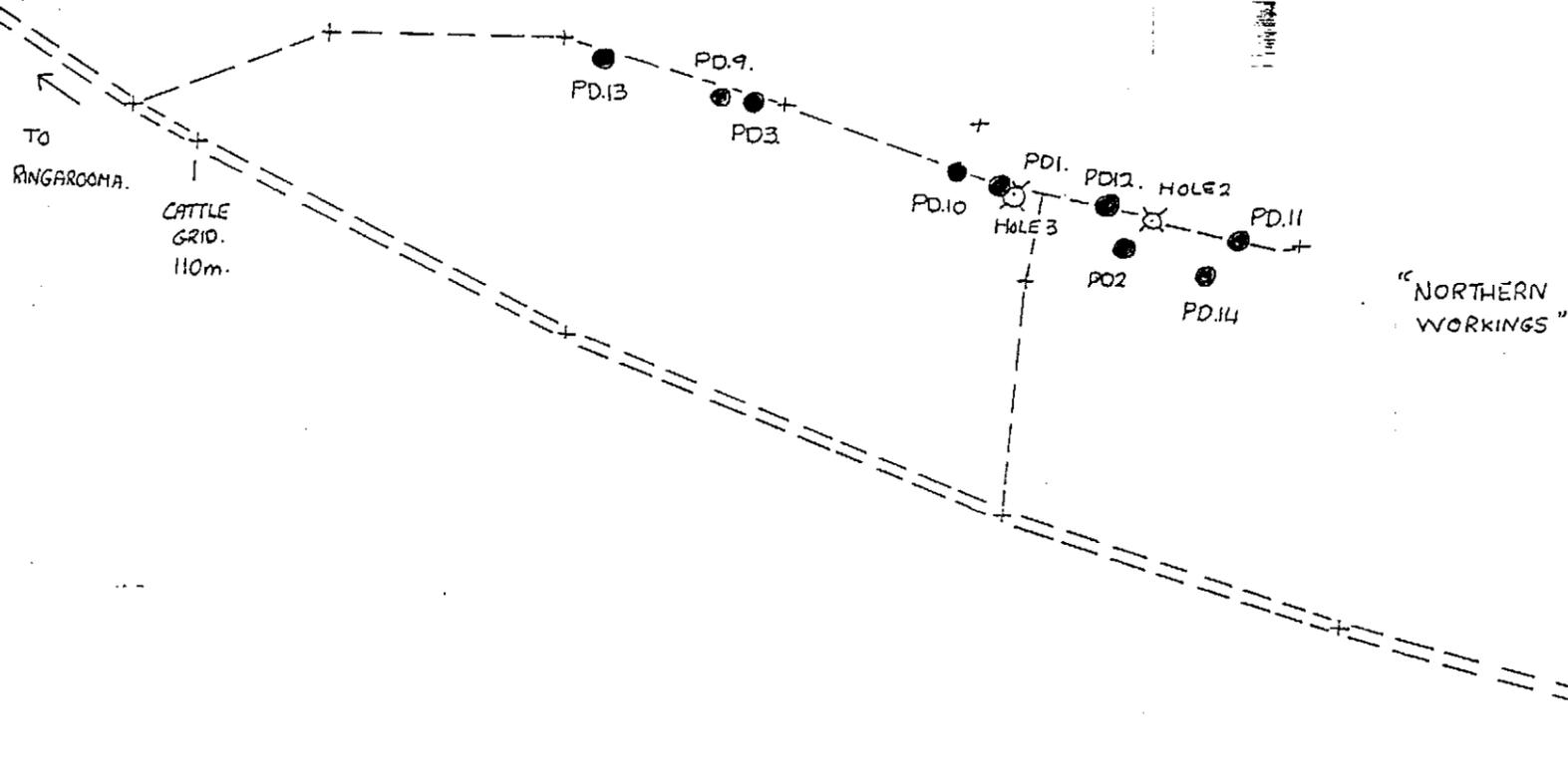
## Sampling:-

- Total drill sample (dry and wet) collected and retained (Sample A).
- Representative sample (5 - 6kg) collected on site (Sample B)
- Sample B riffled, 2kg rep sample collected (Sample C) for assay, remainder of sample sieved for chip samples (for future lithological work) and panned for heavy mineral examination)

## M.L. 1305P/M S. RINGAROOMA DRILL STATISTICS

## DRILL PROGRAMME - AUGUST 1988

<u>HOLE NO.</u>	<u>DEPTH DRILLED M</u>	<u>NO. OF SAMPLES (3m INTERVALS)</u>	<u>INCLINATION</u>	<u>DATE DRILLED</u>
GP/PD 1	27.0	9	90°	17.8.88
GP/PD 2	33.0	11	90	18.8.88
GP/PD 3	32.0	11	90	18.8.88
GP/PD 4	30.0	10	70	19.8.88
GP/PD 5	30.0	10	70	19.8.88
GP/PD 6	30.0	10	70	20.8.88
GP/PD 7	21.0	7	70	20.8.88
GP/PD 8	15.0	5	70	21.8.88
GP/PD 9	30.0	10	70	21.8.88
GP/PD 10	24.0	8	70	21.8.88
GP/PD 11	30.0	10	70	22.2.88
GP/PD 12	26.0	9	90	22.2.88
GP/PD 13	30.0	10	90	22.2.88
GP/PD 14	18.0	6	70	23.8.88
GP/PD 15	30.0	10	70	23.8.88
GP/PD 16	20.0	7	70	24.8.88
GP/PD 17	38.0	13	70	24.8.88
Total	464m	156		



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MINING LEASE 1305 P1M - S. RINGAROOMA.

DRILL PROGRAM - AUGUST. 1988.

NUMBER OF HOLES = 17.  
TOTAL METRES DRILLED = 464 metres.

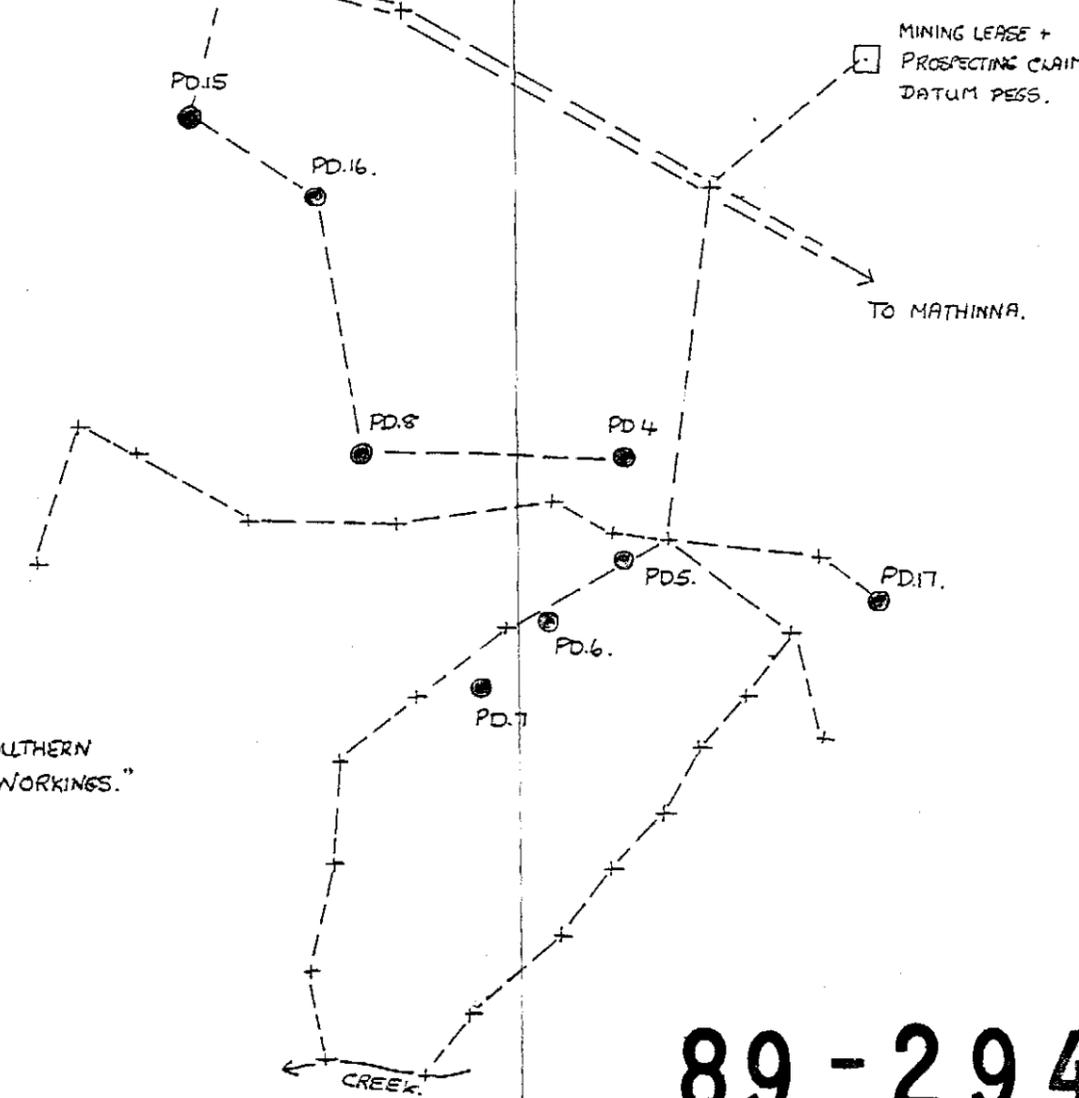
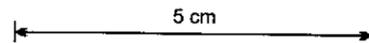
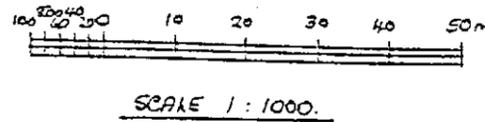
PRELIMINARY PLAN.

DRILL SITE LOCATIONS - M.L. 1305 P1M/87.

DRILL PROGRAM - AUGUST. 1988.

LEGEND.

- PD.6 = GOLDSEARCH DRILL HOLE.
- ⊗ = P. HEYES DRILL SITE.
- + = SURVEY STATION
- == = DIRT ROAD.
- - = OLD TRACK
- ~ = CREEK.



COMPILED - C.H. WHITEHEAD. AUG. 1988.

GOLDSEARCH LTD - E.L. 31/88.

DRILL HOLE      ANG DRILL COORDINATES.

<u>HOLE N<sup>o</sup>.</u>	<u>NORTHING</u>	<u>EASTING.</u>
PD1	5425841	563197
2	803	195
3	873	173
4	584	327
5	559	315
6	545	310
7	530	302
8	608	280
9	874	159
10	842	196
11	803	230
12	821	210
13	886	148
14	801	220
15	679	260
16	654	283
17	867	380



































034

# ANALABS

APPENDIX B  
650035

Phone (09) 458 7999

A division of MacDonald Hamilton & Co. Pty. Ltd.  
52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

FAX: 004 31 8890

ANALYTICAL REPORT No. 999.51.08.05825

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

P.R. Darby  
Goldsearch Ltd.,  
9th Floor, 3 Bowen Cres  
Melbourne  
Victoria 3004

ORDER No.	PROJECT
49/50	
DATE RECEIVED	RESULTS REQUIRED
09/11/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	14/11/88	1	39

STATE OF SAMPLES <small>REFER BELOW</small>	SAMPLE NUMBERS	PRE-TREATMENT							ANALYSIS			
		DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD	
Various		SO	Prep: 006,010,011,012,013,016							Au, AuChk/313		
Various		SO	Prep: 006,010,011,012,013,016							Au, AuChk/313		

**RESULTS TO**  
G. Mamm  
Goldsearch Ltd.,  
P.O. Box 274  
Maryborough  
Victoria 3465

**RESULTS TO**  
P.R. Darby  
Goldsearch Ltd.,  
9th Floor, 3 Bowen Cres  
Melbourne  
Victoria 3004

REMARKS

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
hole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting rock CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	calorimetry COL
oil SO	nitric-perchloric A5	chromatography CHR
slip PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHEM
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUOR
heavy mineral HM		inductively coupled plasma ICP

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## ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

999.51.08.05825

14/11/88

49/50

1 OF 2

TUBE No.	SAMPLE No.	Au	AuChk						
1	H1 0.4	<0.005	-						
2	H1 4.8	<0.005	-						
3	H1 8.12	0.005	-						
4	H1 12.16	<0.005	<0.005						
5	H1 <sup>16</sup> <del>18</del> .20	<0.005	-						
6	H1 20.24	<0.005	-						
7	H1 26.28	<0.005	-						
8	H1 28.30	<0.005	-						
9	H1 30.32	<0.005	-						
10	H1 32.34	<0.005	-						
11	H1 34.36	<0.005	-						
12	H1 36.38	<0.005	-						
13	H1 38.40A	<0.005	-						
14	H1 38.40B	<0.005	-						
15	H1 40.42	<0.005	-						
16	H1 42.44	<0.005	-						
17	H1 44.46	<0.005	-						
18	H1 46.48	<0.005	-						
19	H1 48.50	<0.005	-						
20	H1 50.52	<0.005	-						
21	H2 0.4	<0.005	-						
22	H2 4.8	<0.005	-						
23	H2 12.16	<0.005	-						
24	H2 16.20	<0.005	-						
25	H2 20.24	<0.005	<0.005						

NOTE: SAMPLE H2 8-12 MISSING. GRADE IS  
LIKELY TO BE LOW OR VERY LOW  
BECAUSE:

(1) No "TAIL" OF MINERALISATION IN 12-16 m.

(2) THE NEAREST HOLE DRILLED BY WHITEHEAD  
(No. 12) ASSAYED 0.009g/t IN THE INTERVAL  
9-12 m.

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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036

**ANALABS**

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650037

**ANALYTICAL DATA**

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

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14/11/88

49/50

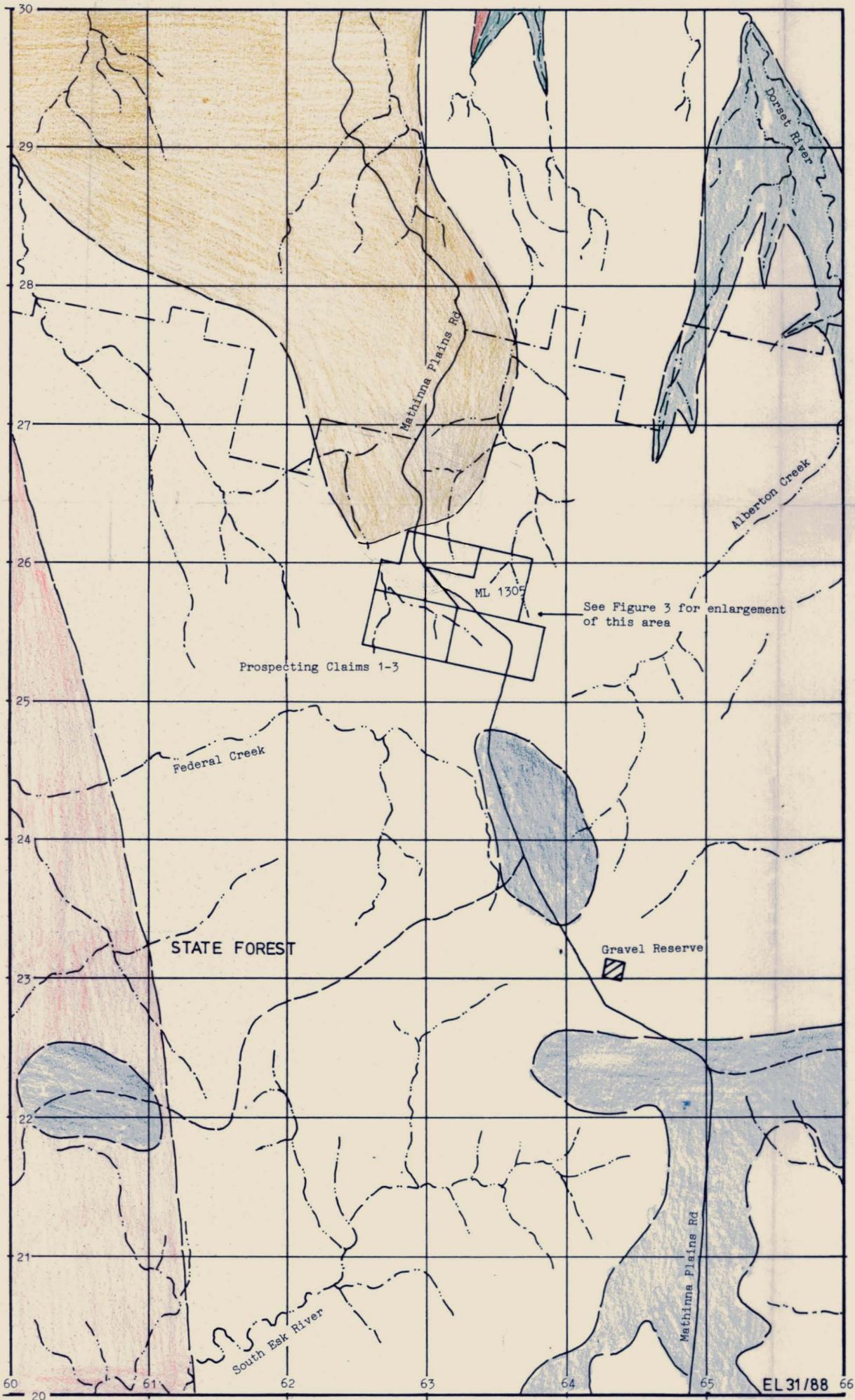
2 OF 2

TUBE No.	SAMPLE No.	Au	AuChk						
1	H2 24.26	<0.005	-						
2	H2 26.28	<0.005	-						
3	H2 28.30	<0.005	-						
4	H2 30.32	<0.005	-						
5	H2 32.34	<0.005	<0.005						
6	H2 34.36	<0.005	-						
7	H2 36.38	<0.005	-						
8	H2 38.40	<0.005	-						
9	H2 40.42	<0.005	-						
10	H2 42.44	<0.005	-						
11	H2 44.46	<0.005	-						
12	H2 46.48	<0.005	-						
13	H2 48.50	<0.005	-						
14	H2 50.52	<0.005	-						
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	0.005	0.005						
24	UNITS	PPM	PPM						
25	METHOD	313	313						

Results in ppm unless otherwise specified  
T = element present; but concentration too low to measure  
X = element concentration is below detection limit  
- = element not determined

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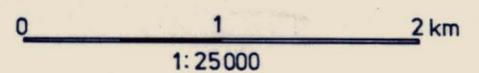


GOLDSEARCH LTD  
GEOLOGIC MAP OF EL 31/88

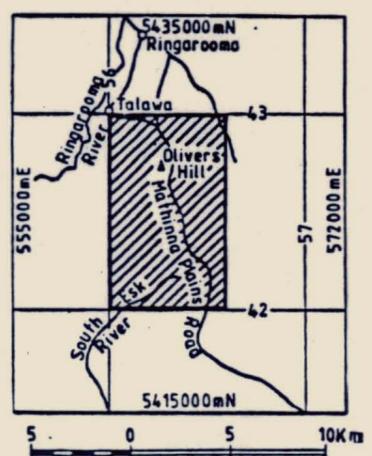
LEGEND

- Pleistocene-Recent alluvium
- Tertiary basalt and related rocks
- Tertiary non-marine sands and gravels
- Permo-Carboniferous non-marine sediments
- Upper Devonian Scottsdale Granodiorite
- Lower-Middle Devonian Mathinna Beds

- geological boundary
- major road
- minor road
- creek
- State Forest Boundary



LOCATION DIAGRAM



650038

FIGURE 2

89-2947