

NORTH PROSPECTING PTY. LTD.

EXPLORATION LICENCE 1/75

REPORT FOR MONTH ENDED 30TH APRIL 1975

MICROFILMED

GEOLOGY

During the period, D.D.H. GF3 was completed at 90m vertical depth without having penetrated the Tertiary basalt cover. No further diamond drilling is planned, although this may be changed upon full assessment of the geochemical data obtained from the three holes drilled to date (see below).

The locations of D.D.H.'s GF1 to GF3 are shown on the attached geological plan TAS/G1c. Drilling logs for D.D.H.'s GF2 and GF3 are also included. Assay histograms for sludge samples are presented on exaggerated cross sections TAS/G2 and TAS/G3.

Some interest has been generated by assay results of sludge samples. D.D.H.'s GF2 and GF3 and D.D.H. GF1 from surface to 107m have approximate mean base metal values of 50 p.p.m. Cu, 20 p.p.m. Pb and 115 p.p.m. Zn. In contrast, D.D.H. GF1 from 107m to 149m shows a much higher mean base metal content of 100 p.p.m. Cu, 25 p.p.m. Pb and 265 p.p.m. Zn.

One sample in particular, from 107m to 110m is of interest with 950 p.p.m. Cu, 25 p.p.m. Pb, 900 p.p.m. Zn and 4 p.p.m. Ag. It is believed that these apparently anomalous values probably lie within the normal statistical distribution of metals in the basalt sequence. However, a petrologist specialising in Tertiary basalts in Eastern Australia has been given core specimens from the relevant intervals and asked to comment on the cause of the high geochemical values. It is also possible that the high results are produced by contamination of the samples by brass fragments generated by the drilling operation.

EXPENDITURE

A statement of expenditure to 30th April 1975 verified by statutory declaration is appended hereto.

I. G. Gould

for I. G. GOULD

- encls. Map No. TAS/G1c - Geological Plan, 1:250,000
- Map No. TAS/G2 - D.D.H.'s GF1, 2, Cross Section 1:25,000
- Map No. TAS/G3 - D.D.H.'s GF1, 3, Cross Section 1:25,000
- Diamond Drill Log D.D.H. GF2
- Diamond Drill Log D.D.H. GF3
- Statement of Expenditure

NORTH PROSPECTING PTY. LTD.

EXPLORATION LICENCE 1/75

FINAL REPORT

This report covers investigations carried out on Exploration Licence 1/75 over the four month period from 1st February to 31st May 1975. No further work is planned on the area.

AIMS

The area covered by E.L. 1/75 was selected for exploration because -

- (i) It was available.
- (ii) Although blanketed with Tertiary basalt, the underlying Palaeozoic(?) bedrock was considered highly prospective. Both the prolific copper-lead-zinc arc of Mt. Lyell - Roseberry, McIntosh and the tin arc of Renison - Cleveland - Mt. Bischoff appear to converge under the basalt.
- (iii) Flat topography and logging activities allow much easier access than the rest of the West Coast.

The first stage in exploration of the area was determination of the thickness of the basalt blanket. Our experience indicated that if the basalt were more than 90m thick, exploration would be impractical, even if the right rocks lay below. In order to quickly test this thickness, three diamond drill holes were bored into the basalt at separate locations (see Map No. TAS/G1c).

RESULTS

The three diamond drill holes reached their target depths of 152m, 90m and 90m respectively but all failed to penetrate the basalt cover. The rocks intersected consist of a series of interlayered basalt flows, usually several metres in thickness with frothy, scoriaceous and vesicular tops and more massive interiors. Some of the flow tops are oxidised and brecciated and a few possible bole layers were recorded. Obviously intrusive rock types or interbedded sediments do not occur. No evidence was found to indicate that drilling was nearing the base of the sequence. Copies of the drill logs of D.D.H.'s GF1, GF2 and GF3 are appended.

It was therefore clear that the thickness of basalt cover on E.L. 1/75 precluded effective exploration of the underlying stratigraphy. However, some geochemical results from sludge samples taken within the basalt were apparently anomalous. One sample in particular required explanation; viz. D.D.H. GF1, 107m to 110m which assayed 950 p.p.m. Cu and 900 p.p.m. Zn in contrast to the mean values established in these elements of only 20 p.p.m. and 115 p.p.m. respectively. Examination of the drilling contractor's work sheets revealed that a diamond bit had been burned in and subsequently drilled through at 107m in this hole. It is therefore considered that the high geochemical values were caused by contamination by metal particles from the burned-in bit matrix and have no economic significance.

CONCLUSION

Mineral exploration using existing techniques is not feasible in this area. No further work will be carried out.

EXPENDITURE

A statement of expenditure for the month of May 1975 and total expenditure on the project will be forwarded within ten days.

I. G. GOULD

Enclosures

- ✓ Map No. TAS/G1c - Geological Plan, 1:250,000
- Map No. TAS/G2 - D.D.H.'s GF1, GF2, Cross Section, 1:25,000
- Map No. TAS/G3 - D.D.H.'s GF1, GF3, Cross Section, 1:25,000
- Diamond Drill Log D.D.H. GF1
- Diamond Drill Log D.D.H. GF2
- Diamond Drill Log D.D.H. GF3

5048

003

STATE Tasmania AREA Guildford E.L. 1/75

GRID - CO-ORDS Guildford Town

RL Surface (creek) BEARING (Mag) - DIP Vertical (90°)

From m	To m	Recovery	CORE DESCRIPTION	C. to S. Angles $^{\circ}$
0	20.6	10%	Highly weathered basalt massive and pseudo-scoriaceous (vesicle fillings weathered out).	main jointing 90°
20.6	39.0		Dark grey basalt, massive, minor vesicles and amygdales only.	
39.0	152.0		<p>Basalt, dark grey to greenish, mainly amygdaloidal and pseudo-scoriaceous but some massive sections. Generally fine grained but some medium grained (doleritic) textures in middle of thicker flows. Vesicles retain more of original fillings as depth increases with almost all vesicles filled with chlorite, carbonate, quartz, zeolites (including ? prehnite). Vesicles usually subrounded with diameters 2mm to 10mm but locally range up to 2cm for irregular voids. Vesicles vary up to 40% of rock volume and if vesicular types represent frothy tops of individual flows, flow thickness generally averages only a few metres.</p> <p>Possible maximum flow thickness is 2m where vesicular flow top at 110m passes into massive basalt around 114m and finally passes into possible red oxidised basalt (bole), representing weathered top of underlying flow at 131m.</p> <p>Jointing is poorly developed but where present is usually horizontal. A few vertical, often zeolite - filled shears occur throughout. Possible boundaries between flows are approximately horizontal.</p> <p>The basalt is non-porphyrific and does not contain detectable olivine grains or xenoliths, although some may be disguised among the amygdales. Possibly this basalt is of tholeiitic affinities.</p> <p>Sediment layers or possible intrusive rock types are not represented in the succession so drilling does not appear to have either passed into a vent complex or to be close to the base of the sequence of flows.</p> <p style="text-align: center;">152m END OF HOLE</p> <p>NOTE: A flow of good water is issuing out of the hole at an estimated rate of 2500 g.p.h. as of 18/3/75.</p>	

ESTIMATED 95%

005

STATE Tasmania AREA Guilford E.L. 1/75

GRID Goderick Road CO-ORDS

R.L. Surface BEARING (Mag.) DIP 90°

From'	To'	Recovery	CORE DESCRIPTION	C. to B. Angles°
0	12	30%	Highly weathered basalt, mainly rubble, core loss heavy. Brown to greenish grey in colour, mainly highly vesicular with some remnant white calcite amygdales.	Joints Horizontal
12	18		Slightly to moderately weathered basalt, grey - green to brownish. Compact and non-vesicular from 12m to 17m.	
18	90		Series of fine grained, dark grey-greenish basalt flows with vesicular and amygdaloidal tops and more massive interiors. Amygdales very common, mainly calcite but chlorite and minor quartz and prehnite also occur. Most vesicles are rounded and about 5mm in diameter but larger (20mm), irregular cavities also occur and are lined with calcite crystals. Some highly vesicular tops have a red, oxidised colour but do not appear to be boles. Best examples occur at 23m, 33m, 82m. Red, powdery, low density layers, possibly boles occur at 77m and 86m. A few irregular areas of dark greenish black pitchstone, with a strong conchoidal fracture occur locally over a few cm and may represent devitrified tachylite. Jointing is weak and where present is flat. A few minor vertical shears are also recorded. Sedimentary bands and obviously intrusive sections are notably absent.	
		Est. > 90%	90m	END OF HOLE

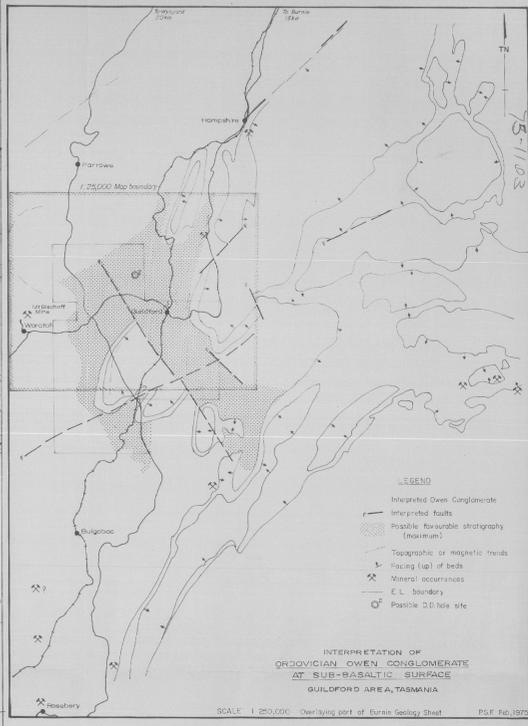
STATE Tasmania AREA Guildford E.L. 1/75

GRID Ney Road CO-ORDS _____

RL Surface BEARING (Mag.) _____ DIP 90°

From m	To m	Recovery	CORE DESCRIPTION	C. to B. Angles°
0	9	20%	Highly weathered basalt, brown to grey and green in colour. Mostly rubble, core loss very high	Joints
9	11		Basalt as above but weathering confined to area around flat-dipping joints,	horizontal
11	90		<p>Series of basalt flows, average thickness about 3m, with vesicular and amygdaloidal tops and more massive interiors. Vesicles are usually unfilled in this hole and generally less common than in GF-2. Vesicle fillings are calcite, chlorite, minor quartz and a light green, soapy zeolite mineral. They are mostly rounded, up to 10mm diameter and locally compose up to 50% by volume of the flow tops. Red oxidised tops occur on some flows and are especially pronounced at 21.5m, 35m, 48m and 60m. These sections may be difficult to distinguish from hole (as occurs at 83.3m). They contain pitchstone patches and it is possible that unstable, glassy, autobrecciated sections of the flows produce the red-oxidised and hole-like patches in the core. Jointing is not well developed and dips flatly.</p> <p>An <u>apparent</u> interflow contact occurs at 41m at an angle of 30° to the core axis.</p> <p>No sedimentary bands or intrusive sections are recorded.</p> <p style="text-align: center;">90m END OF HOLE</p>	

Est. > 90%



GEOLOGY

TERTIARY	Undifferentiated	IGNEOUS ROCKS	Basalt
PERMIAN-U CARBONIFEROUS	Undifferentiated	U. MESOZOIC	Diabase
SILURO-DEVONIAN	Bell siltstone	DEVONIAN	Hungate Hills granite
	Fairfax coarse		Pyroxenites & peridotites
	Stony quartzite	CAMBRIAN	Lavae
	Unassigned		Devonian quartz felsic porphyry dykes
OROVICIAN	Gordon limestone	JUNEA GROUP	
	Coakley Creek siltstone	QUANDA GROUP	
	Owen conglomerate		
CAMBRIAN	Laminated sandstone		
	Volcanic		
	Undifferentiated		
	Cambro-Ordovician		
	Undifferentiated		
	Pre-Cambrian		

- Geological contact
- Geological contact, approx.
- Fault, definite
- Fault, approx. strike
- Plunging fold
- Unconformity
- Strike & dip of bedding
- Trend lines
- Location No. 3

TOPOGRAPHY

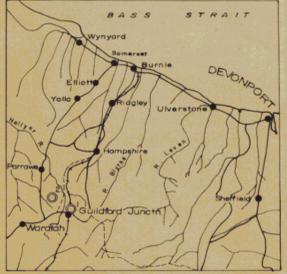
- As weathered, unsealed road
- Other roads and/or veh. cycle track
- Track
- Railway
- Old formation railway (not two track)
- Transmission line
- River
- Swamp
- Small cut
- Open cut
- Building
- Shed
- Elevation contours, interval 20 metres
- E.L. /75 boundary
- DGH 6F 1
- DGH 6F 2
- DGH 6F 3
- Diamond drill hole

GEOLOGY
GUILDFORD AREA, TASMANIA
NORTH PROSPECTING PTY. LTD.

BEARINGS → 127° true → 137° true → 129° true → 144° true



LOCATION



Basalt

DDH's GF 1 & GF 2
GUILDFORD AREA, TASMANIA
NORTH PROSPECTING PTY. LTD.

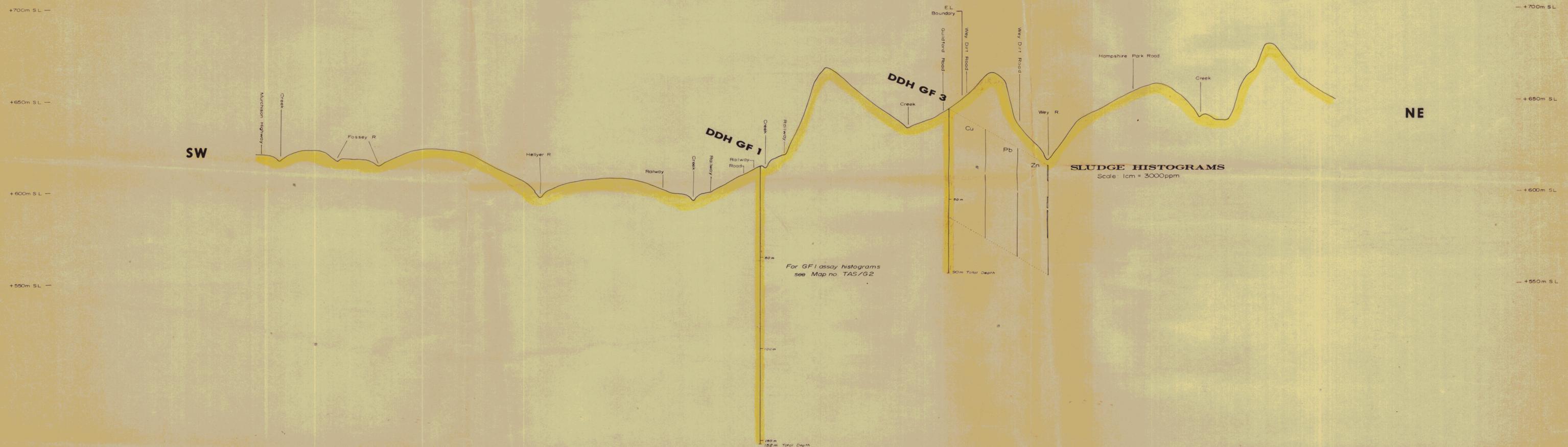
516008

3957



Horz scale 1:25,000 Vert scale 1:1000 or 1cm = 10m

SECTION LOOKS 330° true



LOCATION



DDH GF 3
GUILDFORD AREA, TASMANIA
NORTH PROSPECTING PTY. LTD.



Horz scale 1:25,000 Vert scale 1:1000 or 1cm = 10m