



611001

RELINQUISHMENT OF EL 99/87 - KELSO

RELINQUISHMENT OF EL 98/87 - MT DIRECTION

89-2989

**OPEN FILE**

AMG REFERENCE POINTS ADDED

TASMANIA DEPARTMENT OF MINES

611B

000

611002

①

MR. PH W-nyly.

Dear Sir,

Relinquishment of EL 99/87 - Nelsa.  
" of EL 98/87 MT Direction

All drilling was done by the Mines Dept  
as were sampling of cores del to H. Hart.

I have details of Nelsa. - but to date I have not  
received details of MT Direction cores. From the Mines Dept

I have had the Mines Dept 3 cheques for drilling

① 28,800-00

② 14,400

③ 90

Actual \$43,290-00.

Your geologist has told me that MT Direction was no B- grade.  
Perhaps you could ask him for details, as set out by Nelsa report  
I have given ANALABS (Burnie) photo of MT Direction core for a report  
but to date I have received no reply. But as soon as they let me know  
I will forward details to you.

Yours truly

*[Signature]*

89-2989

MINES	
File Ref. EL 98/87	
- 7 JUL 1989	
Doc. Ref. 422	
Action Officer	Initials
PW	
REG	
RB	
Resubmit to	Date

38 Working.

6/7/89.

611003

*Handwritten mark*

-6 JUL 1989

(2):JH

Mr F Bardenhagen  
Westbury Gem & Mineral Display  
61 Main Road  
WESTBURY TAS 7303

Dear Sir,

PETROLOGICAL INVESTIGATIONS

Three rock samples, registered as G400389-400391, were submitted for identification. All were prepared and examined as thin sections while samples G400389 and 391 were also polished and examined under reflected light and sample G400390 was also analysed by X-ray diffraction. The results are:

**G400389: Pyritised Tuff from Mt Direction Borehole**

This sample, from the bottom of the borehole, is a cream coloured, fine grained, slightly banded rock in hand specimen. In thin section it exhibits excellent glass shard textures and minor crystal fragments (quartz, feldspar, biotite and (?) altered hornblende), all of a very fine grain size. It has an interesting spotted texture due to devitrification (to fine grained phyllosilicates) of about half of the glass. There are a few percent of probable metasedimentary clasts (quartzite, phyllite and muscovite), although the volcanogenic material shows no signs of transport. About 5% pyrite is disseminated throughout the rock, mainly as framboids (very fine grained aggregates), and some is replacing unidentified clasts. No other indications of economic mineralisation could be identified. The rock is a fine grained crystal vitric tuff, probably dacitic in origin.

**G400390: Pyrolusite-cemented sandstone**

This rock, from an undisclosed locality, contains about 60-70% of very coarse sand in a matrix of pyrolusite (a manganese oxide). The sand is mostly quartz with about 5-10% each of feldspars and lithics (metasedimentary rocks) and a trace of muscovite. The pyrolusite is fine grained to cryptocrystalline, with a few small crystals in vughs, partly replaces feldspars and lithics and completely replaces some unidentified clasts. The rock probably contains about 20-30% manganese.

611004

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**Basaltoid Basalt, Gads Hill area**

The rock is typical of the zeolite-bearing basalts of Tasmania, with abundant amygdules/vesicles (about 40% of the rock) partly to completely filled with various zeolites (probably chabazite and natrolite) and clay minerals (probably celadonite and montmorillonite). The basalt is somewhat altered, containing albitised plagioclase laths in brown devitrified glass with clays (celadonite and serpentines?) completely replacing intergranular pyroxene and phenocrystic olivine. Some minor calcite and clinozoisite also appear to be replacing some feldspars. The zeolites would only comprise a few percent of the rock and are unlikely to be of any commercial value other than a little for specimens.

Please find enclosed Invoice No. 17814 for \$180.00, for two polished thin sections @ \$60.00, one thin section @ \$20.00, one XRD @ \$40.00 and three descriptions @ \$60.00.

Yours faithfully,

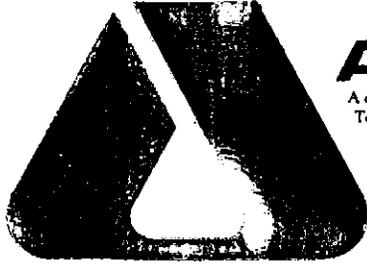
R.S. Bottrill  
MINERALOGIST/PETROLOGIST

Encl.

611005

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003



# ANALABS

A division of Inchcape Inspection and Testing Services, Australia, Pty. Ltd.

Perth Head Office:  
52 Murray Road, Welshpool, Western Australia 6106.  
Tel: (09) 458 7999. Telex: AA92560. Fax: (09) 458 2922.  
P.O. Box 210 Bentley, W.A. 6102.

P.O. Box 929,  
BURNIE TAS 7320

31st July, 1989

Mr. Bardenhagen,  
C/- Westbury Gemstone & Mineral Display,  
61 Main Road,  
WESTBURY TAS 7303

Dear Sir,

With reference our Job No. 06311.

We wish to advise that the rock specimen you submitted for analysis is a SILTSTONE, comprising quartz, plagioclase, micas, chlorite, opaques, (including graphite).

Our invoice 00145 for \$124.25 is also enclosed and we would appreciate its payment by return.

Thanking you.

Yours faithfully,

Peter Dzwonczyk,  
Manager - Tasmania

Encs.

HOLE NO 3  
MT. DIRECTION

Received.  
3/8/89  
APP  
Cheque already  
Posten  
APP

**ANALABS TASMANIA**

A Division of Inchcape Inspection &amp; Testing Services Pty. Ltd.

611006

⑤

P.O. Box 210  
Bentley, W.A. 6102

004

Account enquiries - (004) 31 6837

**INVOICE**Mr Bardenhagen  
C/- Westbury Gemstone and Minerals  
61 Main Road  
Westbury  
Tasmania 7303Invoice No: 08-00145  
Job ref: J 999.65.08.06311  
Date: 31/07/89Page: 1 of 1  
Order No:  
Project:

Qty	Code	Description	Unit Price	Total	Discount	Net
5	009	Crushing Sample to 2 Kg	0.70	3.50		3.50
5	016	Ring Pulv.- 75 microns /150g	1.35	6.75		6.75
1	199	Misc. Analysis	46.00	46.00		46.00
5	309	Au Fire assay fusion/AAS	9.20	46.00		46.00
1	9900	Service Charge	22.00	22.00		22.00
				124.25		124.25
<b>TOTAL DUE</b>						<b>\$ 124.25</b>

**NET PAYMENT 7 DAYS**

A Member of the Inchcape Group



A Member of the Inchcape Group

005

# ANALABS

611007

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Phone (08) 458 7999

A division of MacDonaid Hamilton & Co. Pty. Ltd.  
52 Murray Road, Welshpool, W.A. 6106  
FAX: 004 31 8890

Telex AA92560

## ANALYTICAL REPORT No. 999.05.08.10311

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

Mr Bardenhagen  
C/- Westbury Gemstone and Minerals  
61 Main Road  
Westbury  
Tasmania 7303

ORDER No.	PROJECT
DATE RECEIVED	RESULTS REQUIRED
27/06/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
1	30/06/89	1	6

STATE OF SAMPLES	SAMPLE NUMBERS	PRE-TREATMENT							ANALYSIS		
		DRY	CRUSH	SPLIT	PULVERISE	SIENE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
175		SC	Prep: 009,011,016						Au/309		
5		RD							I.D. 199		

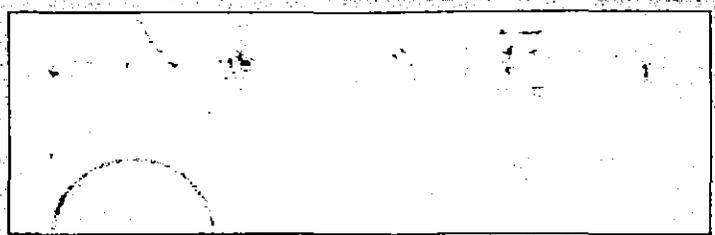
### RESULTS

TO

Mr Bardenhagen  
C/- Westbury Gemstone and Minerals  
61 Main Road  
Westbury  
Tasmania 7303

### RESULTS

TO



### REMARKS

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
hole core	perchloric acid A1	atomic absorption AAS
split core	hydrochloric acid A2	x-ray fluorescence XRF
cutting	nitric acid A3	spectrophotometry SPEC
rock	aqua regia A4	colorimetry COL
soil	nitric-perchloric A5	chromatography CHR
slip	HF mixture A6	titration TTN
water	HF under pressure A7	other chemicals means CHEM
sludge	fusion A8	miscellaneous MISC
stream sediment		fluorescence FLUOR
heavy mineral		inductively coupled plasma ICP

AUTHORISED OFFICER

# ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

52 Murray Road, Welshpool, W.A. 6106

FAX: 004 31 8890

Telex AA92560

Phone (09) 458 7989

006

**ANALYTICAL REPORT No.** 579.65.08.06311

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

ORDER No.

PROJECT

Mr Bardenhagen  
C/- Westbury Gemstone and Minerals  
61 Main Road  
Westbury  
Tasmania 7303

DATE RECEIVED

RESULTS REQUIRED

27/06/89

ASAP

No. OF PAGES OF RESULTS

DATE REPORTED

No. OF COPIES

TOTAL No. OF SAMPLES

1

30/06/89

1

6

REFER BY NO	SAMPLE NUMBERS	PRE-TREATMENT							ANALYSIS		
		DRY	CRUSH	SPLIT	PUL- VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
1/5		SC	Prep: 009,011,016						Au/309		
6		RG							1.0./199		

REMARKS

RESULTS

TO

Mr Bardenhagen  
C/- Westbury Gemstone and Minerals  
61 Main Road  
Westbury  
Tasmania 7303

RESULTS

TO

STATE OF SAMPLES		ANALYSIS—PREPARATION				ANALYSIS—METHOD	
whole core	WC	perchloric acid	A1	cold acid	CA	atomic absorption	AAS
split core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
cutting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
rock	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
slurries	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
pulp	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemicals means	CHEM
tissue	TI	fusion	AB	glass fusion (XRF)	GF	miscellaneous	MISC
slurry sediment	SS					fluorescence	FLUOR
heavy mineral	HM					Inductively coupled plasma	ICP

AUTHORISED OFFICER



A Member of the Inchcape Group

611008

# ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

Phone (07) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

FAX: 004 31 8890

**ANALYTICAL REPORT No. 999.65.08.06311**

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

Mr Bardenhagen  
C/- Westbury Gemstone and Minerals  
61 Main Road  
Westbury  
Tasmania 7303

ORDER No.	PROJECT
DATE RECEIVED	RESULTS REQUIRED
27/06/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
1	30/06/89	1	6

REFER BE W	SAMPLE NUMBERS	PRE-TREATMENT							ANALYSIS			
		DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD	
1/5		SC	Prep: 009,011,016							Au/309		
6		RD								I.D./199		

Mr Bardenhagen  
C/- Westbury Gemstone and Minerals  
61 Main Road  
Westbury  
Tasmania 7303

REMARKS

RESULTS TO	
RESULTS TO	

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

AUTHORISED OFFICER

008

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611010

# ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

## ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

999.65.08.06311

30/06/89

1 OF 1

TUBE No.	SAMPLE No.	Au							
1	1	<0.008							
2	2	<0.008							
3	3	<0.008							
4	4	<0.008							
5	5	<0.008							
6	6	-							
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	0.008							
24	UNITS	PPM							
25	METHOD	309							

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

AUTHORISED OFFICER



# ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

## ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

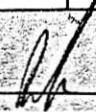
999.65.08.06311

30/06/89

1 OF 1

TUBE No.	SAMPLE No.	Au							
1	1	<0.008							
2	2	<0.008							
3	3	<0.008							
4	4	<0.008							
5	5	<0.008							
6	6	-							
7									
8									
9									
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15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	0.008							
24	UNITS	PPM							
25	METHOD	309							

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

AUTHORISED OFFICER: 

010

# ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

611012

(11)

## ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

999.65.08.06311

30/06/89

1 OF 1

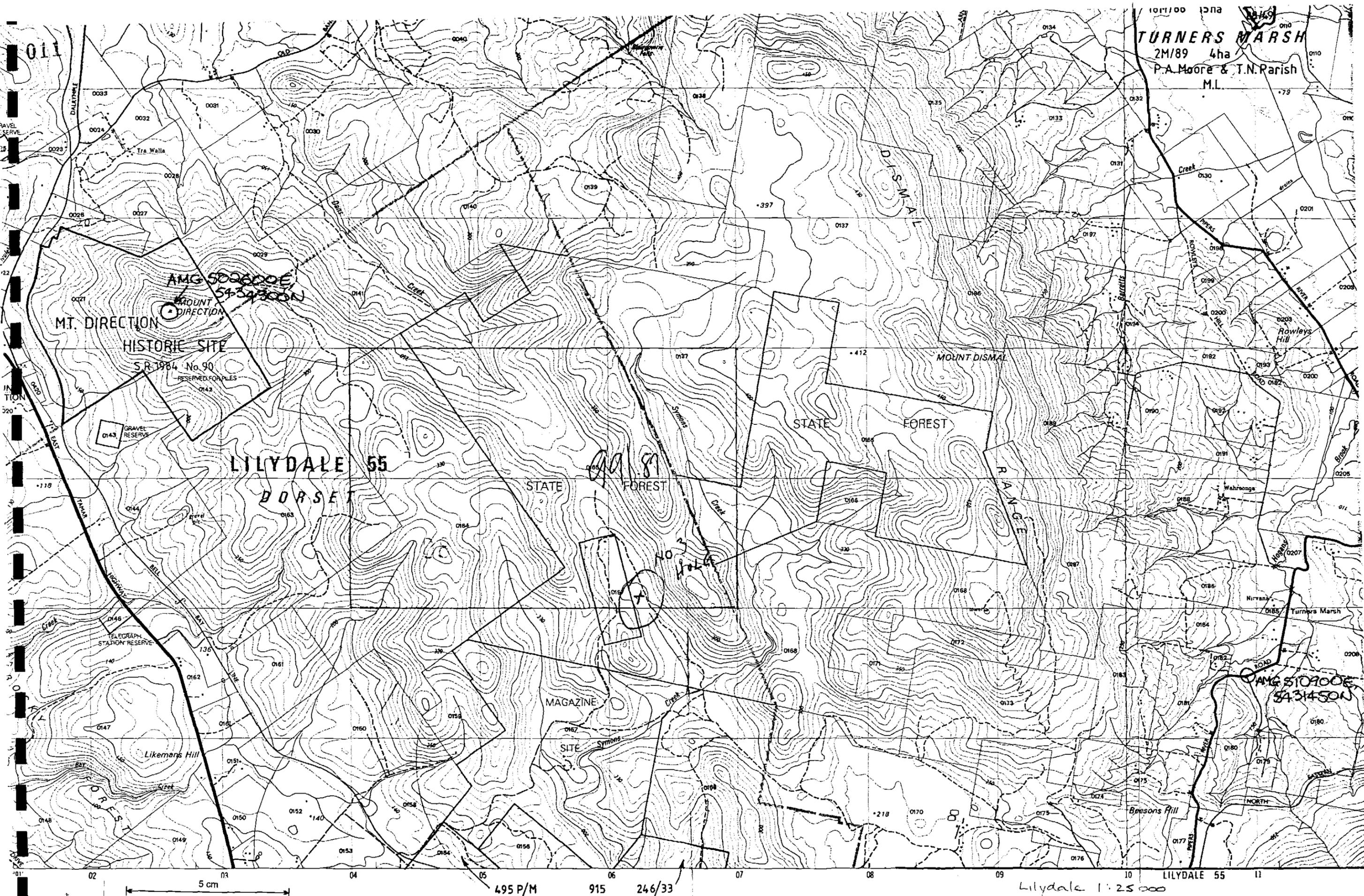
TUBE No.	SAMPLE No.	Alt							
1	1	<0.008							
2	2	<0.008							
3	3	<0.008							
4	4	<0.008							
5	5	<0.008							
6	6								
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	0.008							
24	UNITS	PPM							
25	METHOD	309							

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

AUTHORISED OFFICER



**TURNERS MARSH**  
 2M/89 4ha  
 P.A. Moore & T.N. Parish  
 M.L.



PROJECTION: Universal Transverse Mercator (UTM).  
 HORIZONTAL DATUM: Australian Geodetic Datum 1966.  
 VERTICAL DATUM: Australian Height Datum (Tasmania) excepting offshore islands whose datum is mean sea level.  
 GRID: 1000 metre intervals of the Universal Transverse Mercator Grid, Zone 55 (Australian Map Grid), Australian National Spheroid.

Built-up area with commercial centre  
 Roads maintained for continuous public use  
 Primary road  
 Secondary road; Bridge  
 Minor road  
 Caravan park  
 Camping ground

AMG REFERENCE POINTS ADDED

1000 750 500 250 0 metres

SCALE 1:25 000  
 1 millimetre represents 25 metres

G11013



Head Office:

Gordons Hill Road,  
P.O. Box 56,  
ROSNY PARK 7018

Enquiries: R. Bottrill,  
Phone: 30 8359  
Your ref  
Our file: RSB(1):AT

Mr F. Bardenhagen,  
Westbury Gem & Mineral Display,  
61 Main Road,  
WESTBURY.  
Tasmania. 7303

20 APR 1989

Dear Sir,

PETROGRAPHY OF BASALTS FROM KELSO  
(G400350, 356)

Two samples of basalt from boreholes at Kelso were submitted for identification; the exact locations and depths are unknown. Both samples were prepared as thin sections and one polished (G400350); microscopic descriptions follow.

Sample G400350 is a basalt (or possibly a dolerite) with relatively coarse plagioclase (labradorite), augite and (?)monticellite in a subordinant matrix of devitrified (very finely recrystallised) volcanic glass. The monticellite (tentative optical identification) is uncommon and partly altered to calcite and 'iddingsite'; it needs analytical confirmation. A vein of stilbite cuts the rock and appears related to some pyritisation, calcite veining and enhanced 'iddingsite' alteration. Pyrite is very fine to medium grained and partly replaces ilmenite, haematite, augite and possibly magnetite.

Sample G400356 (884882) is a particularly glassy basalt with subordinant fine to medium grained skeletal crystals of olivine and plagioclase (labradorite). The lava is blocky, with cavities and vesicles now partly infilled with opaline silica, minor clays and a trace of pyrite. This rock is interesting for the pristine nature of some of the glass: much is undevitrified yellow glass, perfectly clear in thin section. This grades into dark brown devitrified glass over a millimetre or two, as the crystallites nucleate about plagioclase.

Both samples are particularly interesting and further work will be done on them for our own benefit, so we would appreciate it if you could send us details as to the precise location and depth of these samples. No minerals of economic interest were observed.

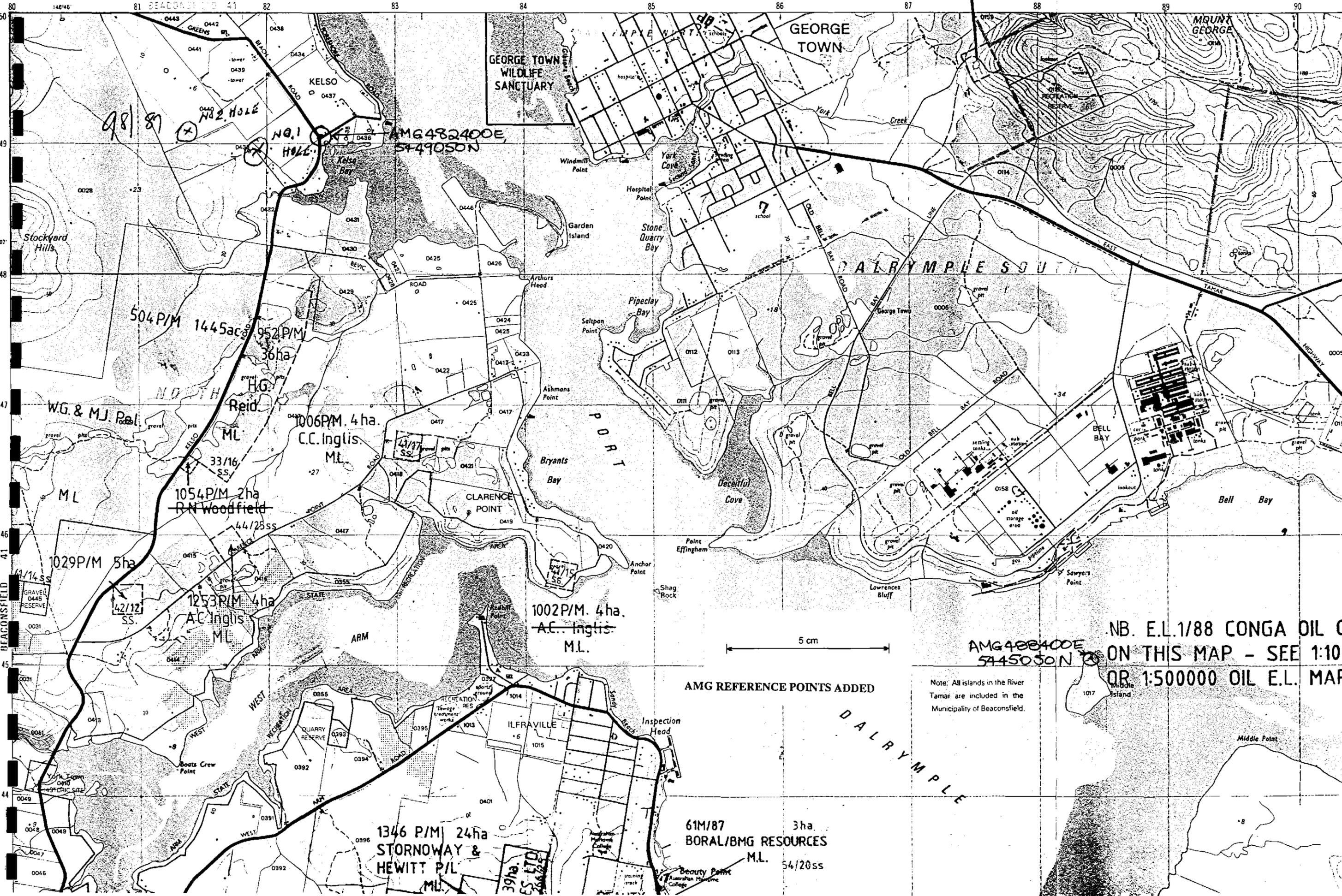
Please find enclosed Invoice No. 17651 for \$90.00 for one standard thin section, one polished thin section and two petrographic descriptions.

Yours faithfully,

R. Bottrill  
MINERALOGIST/PETROLOGIST

013

611015



AMG 482400E, 5449050N

AMG 488400E 5445050N

AMG REFERENCE POINTS ADDED

Note: All islands in the River Tamar are included in the Municipality of Beaconsfield.

NB. E.L. 1/88 CONGA OIL C ON THIS MAP - SEE 1:100 000 OR 1:500000 OIL E.L. MAP

61M/87 3ha BORAL/BMG RESOURCES M.L. 54/20ss

1346 P/M 24ha STORNOWAY & HEWITT P/L M.L.

504 P/M 1445ac 952 P/M 36ha

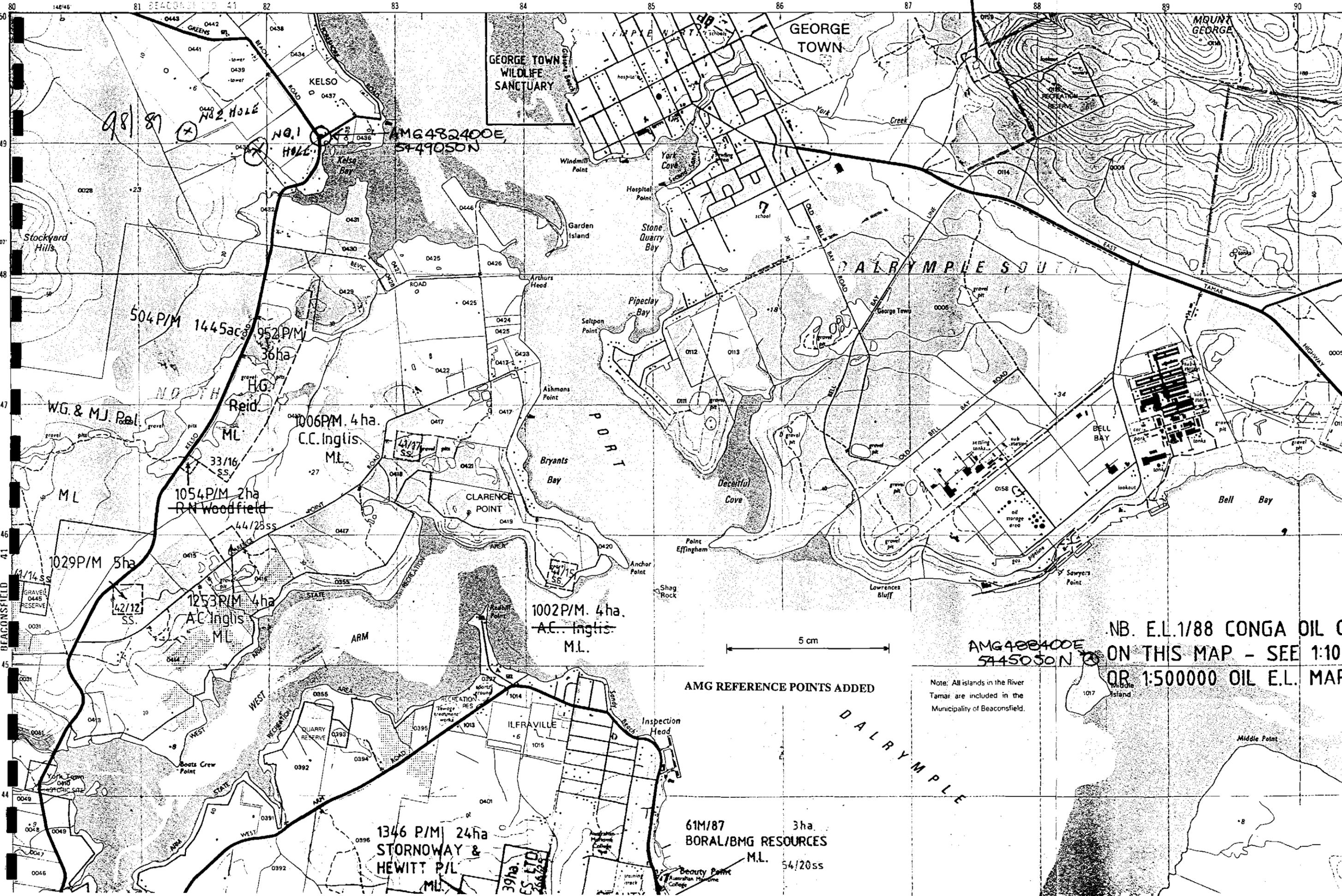
1006 P/M 4 ha. C.C. Inglis M.L.

1054 P/M 2ha R.N. Woodfield

1029 P/M 5ha

1253 P/M 4ha A.C. Inglis M.L.

1002 P/M 4ha. A.C. Inglis M.L.



AMG 482400E, 5449050N

AMG 488400E 5445050N

AMG REFERENCE POINTS ADDED

Note: All islands in the River Tamar are included in the Municipality of Beaconsfield.

NB. E.L. 1/88 CONGA OIL C ON THIS MAP - SEE 1:100 000 OR 1:500000 OIL E.L. MAP

61M/87 3ha BORAL/BMG RESOURCES M.L. 54/20ss

1346 P/M 24ha STORNOWAY & HEWITT P/L M.L.

504 P/M 1445ac 952 P/M 36ha

1006 P/M 4 ha. C.C. Inglis M.L.

1054 P/M 2ha R.N. Woodfield

1029 P/M 5ha

1253 P/M 4ha A.C. Inglis M.L.

1002 P/M 4ha. A.C. Inglis M.L.