

**EXPLORATION LICENCE 15/85 - MEUNNA  
FINAL REPORT**

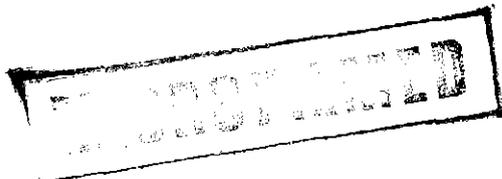
The exploration licence was taken up to search for glass grade silica sand. This material was found as a friable or unconsolidated member in parts of the Jacob Othoquartzite in the Rocky Cape Group. The other members of the Rocky Cape Group whilst containing silica sand could not be exploited for that purpose even though silica sand is released by erosion of those members.

The only economic deposit of silica sand was located at Lapoinya and a retention licence has been applied for until the economic conditions are appropriate.

Gold mineralisation was a remote possibility but was checked for. Potential target areas were identified from aerial photographs then panned stream concentrates were analysed for gold. The analysis of the concentrates showed that there was no evidence of gold mineralisation in the target areas.

There appears to be little prospect for commercial mineral deposits apart from construction materials such as sand, gravel and aggregate.

*B R Hanson*



88-2857

<b>MINES</b>	
File Ref. <b>EL 15/85</b>	
<b>12 SEP 1988</b>	
Doc. Ref.	
Action Officer	Initials
<b>LETTER</b>	
<b>9. 12. '88</b>	
<b>REFERS</b>	
Resubmit to	Date

## MINES

File Ref.

13 OCT 1988

Doc. Ref.

Action Officer

Initials

Refer to

LETTER 6-10-88

FROM AMATEK

## EXPLORATION LICENCE 15/85 RELINQUISHMENT

## FINAL REPORT

Exploration Licence 15/85 of 182 square kilometres is situated in N.W. Tasmania. It is roughly bounded by Rocky Cape National Park to the North, Takone to the South, Myalla, Lapoinya and Preolenna to the east and the Dip Range and the Arthur River to the West.

The commonest rock type is tertiary basalt which has blanketed a large part of North West Tasmania. The second most common rock type is ortho quartzites and mudstones which are unmetamorphosed in the northern part and metamorphosed in the southern part. There is some pebbly mudstone and sandstone and limestone from the Permian and Upper Carboniferous in the south and a small amount of Precambrian dolerite also in the south.

Exploration Aims

The exploration licence was taken out to assess the Precambrian sediments for their silica sand potential. During the course of exploring for silica sand any other findings that appeared to present an opportunity would be followed up.

Exploration Activity

All of the identified areas of Precambrian sedimentary rocks from geological maps, aerial photographs and general reconnaissance were traversed and chip sampled to assess their silica sand potential. Streams draining off these rocks were also assessed.

After the silica sand programme was completed aerial photographs of the whole exploration licence were used to pinpoint possible gold exploration targets. These target areas were stream sampled and pan concentrated prior to assay.

Silica Sand Results

It was found that only the Jacob orthoquartzite member in the Rocky Cape Group carries friable quartzite which can easily be reduced to silica sand in large enough deposits to warrant extraction. The Detention Quartzite has small pockets of friable sandstone within fairly competent quartzite which are of a higher purity than the Jacob Orthoquartzite.

Samples of friable sandstone in the Detention Orthoquartzite can be found along the Bass Highway where it crosses Sisters Hills east of Montumana. Better examples can be found in the Dip Range where it was proposed to mine the quartzite and have silica sand as a byproduct.

In the exploration licence Jacob Orthoquartzite occurs at Maynes Creek between Lapoinya and Milabena and in the Meunna Hills where it is exposed in several gravel and sand pits.

The Meunna Hills deposits are small and too far from the N.W. coast to be viable apart from local specialised uses. The Maynes Creek deposit contains in the order of 4 million tonnes of fine sand and a retention

licence has been applied for so that development can take place when the economic climate is appropriate.

Typical analyses are for the as mined material:

Expressed in parts per million :

	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>
Sisters Hills	250	210	550
Meunna Hills	340	270	440
Maynes Creek - Lapoinya	550	120	230

After attritioning, washing and heavy media separation the impurity levels reduce to less than half those of the as mined samples.

e.g.

	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>
Sisters Hills	120	85	150
Meunna Hills	151	76	80
Maynes Creek - Lapoinya	300	60	80

Typical physical gradings are :

	<u>Sisters Hills</u>	<u>Meunna Hills</u>	<u>Maynes Creek</u>
+600	18.6%	3.8%	2.5%
+425	19.2%	14.1%	7.4%
+300	22.2%	25.1%	24.0%
+212	20.6%	33.3%	45.6%
+150	11.6%	13.1%	12.4%
+106	3.1%	7.4%	5.0%
+75	2.7%	2.2%	2.0%
-75	2.2%	1.0%	1.1%

Each of these sands would be suitable for float glass and tableware production. However, the Tasmanian market could not support a fine silica operation and export markets will be required.

#### Gold Results

Longworth & McKenzie of Sydney carried out an aerial photograph interpretation of the exploration licence to determine any areas that may have some gold potential. The positions were marked on aerial photographs and panned creek samples taken from each of the identified areas.

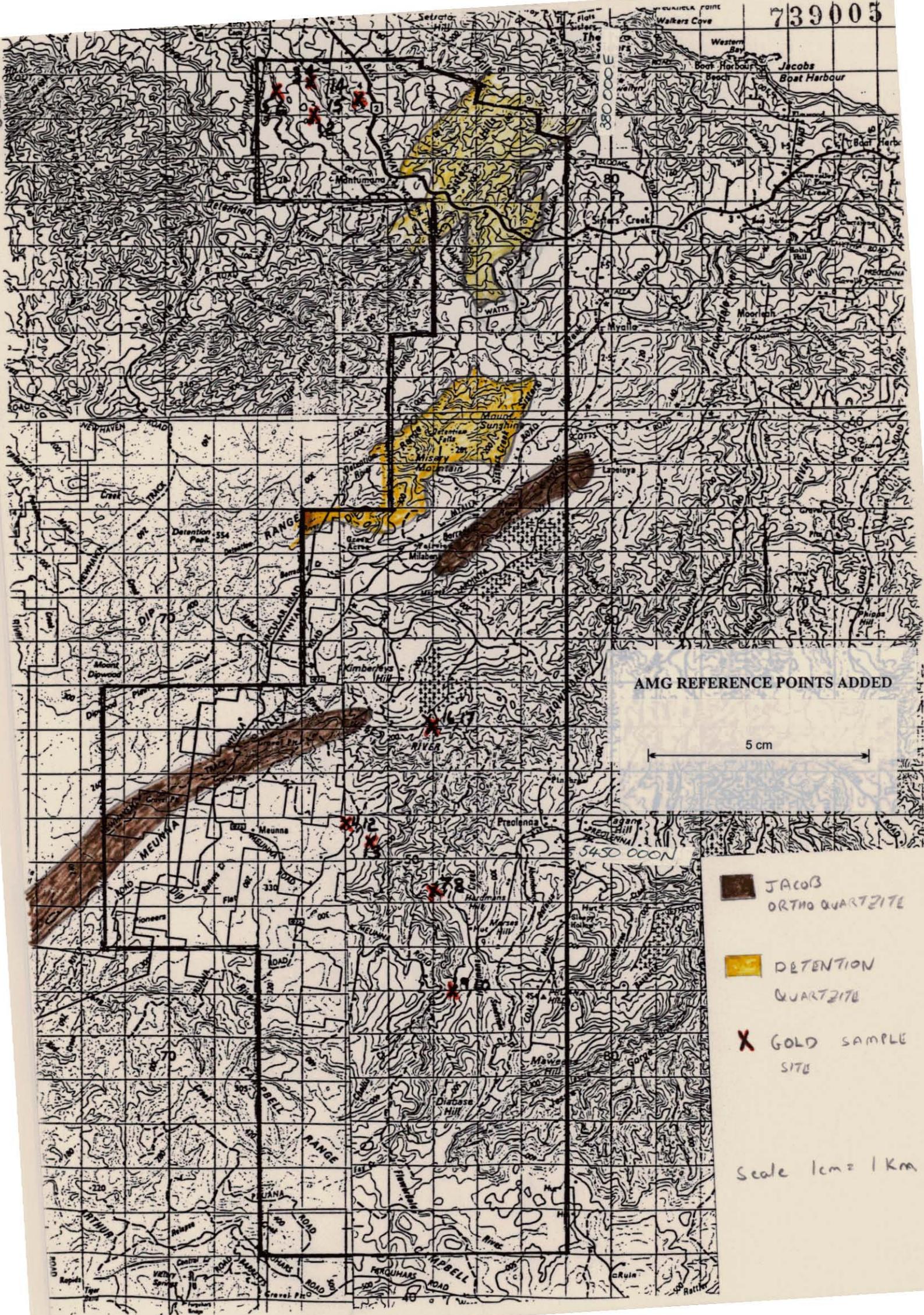
The sample analysis in each case indicated that there was no evidence of gold mineralisation as the highest result was 40 ppb.

<u>Sample</u>	<u>Photograph</u>	<u>Map Sheet</u>	<u>Grid Reference</u>	<u>Analysis</u>
1	1064 137	7916	735670	7 ppb ✓
2	1064 137	7916	735670	<1 ✓
3	1064 137	7916	733678	14 ✓
4	1064 137	7916	733677	10 ✓
5	1064 137	7916	724675	23 ✓
6	1064 137	7916	724675	7 ✓
7	940 177	8015	760493	18 ✓
8	940 177	8015	760493	6 ✓
9	940 94	8015	764470	8 ✓
10	940 94	8015	740508	19 ✓
11	940 175	8015	740508	28 ✓
12	940 175	8015	746505	25 ✓
14	1064 137	8016	743674	<1 ✓
15	1064 137	8016	742675	8 ✓
16	760 530	8015	760530	<1 ✓
17	760 530	8015	760530	40 ✓

Conclusion

No further work is recommended on the area as the only potential would appear to be very limited sand extraction in the future apart from the Maynes Creek - Lapoinya deposit.

B.R. HARRISON  
 Development Manager  
Construction Materials Division



AMG REFERENCE POINTS ADDED

5 cm

-  JACOB ORTHO QUARTZITE
-  DETENTION QUARTZITE
-  GOLD SAMPLE SITE

Scale 1cm = 1km

739006

## Exploration Licence 15/85

## Quarterly Report to end of June 1987

Introduction

The silica sand potential in the Lapoinya area of N.W. Tasmania was further investigated, mainly to determine whether the silica sand was friable or had been resiliicified making it unusable for glass purposes.

Site Location

Drilling was carried out near the eastern boundary of exploration licence 15/85 approximately 2.5 kilometres S.W. of Lapoinya and in the Dip Range under an arrangement with Mineral Holdings. The rock type in both areas in the steeply dipping Proterozoic Jacob Orthoquartzite.

Method of Investigation

The difficulty encountered in getting drillers contracted to do the drilling to turn up continued in this quarter. Eventually a production drill rig was borrowed from the Scheelite mine at Kara.

Due to the steep and unstable nature of the target areas the "airtrak" drill rig and compressor had to be winched up and down by bulldozer. This is not recommended and alternative means of access will be required if further work is done.

The "airtrak" drill overcame problems previously encountered with auger drilling where the firmly compacted silica sand could not be penetrated. However, it suffered from clogging of the air holes due to the sand grains being much larger and heavier than dust resulting in the need for continued purging of the drill string. Also, the sand after being drilled, collapsed back around the drill rods making removal of the rods extremely difficult and time consuming and limiting the hole depth to 12 metres.

Samples

Samples were collected every 3 metres by taking sand from the top of the cone around the drill rods whilst the drill bit was going down to ensure that the material taken was not falling down from higher up the hole.

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13 OCT 1988	
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Dated 5.10.88	
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Tasmania	
the silica	
usable	
Resubmit to	Date

Sample Analysis

The samples were analysed by S.G.S. in Sydney after washing in 1 N Hydrochloric acid to remove drill steel contamination but not any clay or other impurities such as iron or heavy minerals.

It had been determined previously that the sand was amenable to beneficiation with water attritioning and washing and that the grading was appropriate for glass manufacture.

Market Evaluation

Following the demise of the Shelburne Bay project, Nippon Sheet Glass (NSG) are now looking to start a new joint venture in Australia for silica sand through Sumitomo Corporation. Any interest in the material in N.W. Tasmania will be known by the end of July 1987.

Sample Evaluation

It is apparent from the sample analysis that the material in the Dip Range is superior but the resource appears to be mainly a quartzite rock with pockets of sand and therefore difficult and expensive to mine if only producing silica sand.

The Lapoinya material whilst being a free sand has more impurities, most of which will wash out.

Further Work

If the talks with Japanese sand users are encouraging a core drilling system using mud will be used to fully evaluate the Lapoinya sand and establish the size of the deposit and its total depth.

aha!

.../...

## Sample Analysis

Drill Hole	Depth (Metres)	Fe <sub>2</sub> O <sub>3</sub> ppm
52	3	164
52	6	106
53	3	768
53	6	369
53	9	721
53	12	944
53	3	215
55	6	265
55	9	283
55	12	784
56	3	227
56	6	3289
56	9	878
56	12	712
DR 2	3	159
DR 2	6	133
DR 2	9	136
DR 2	12	273
DR 3	3	134
DR 3	6	152
DR 3	9	143
DR 4	6	126
DR 4	9	249

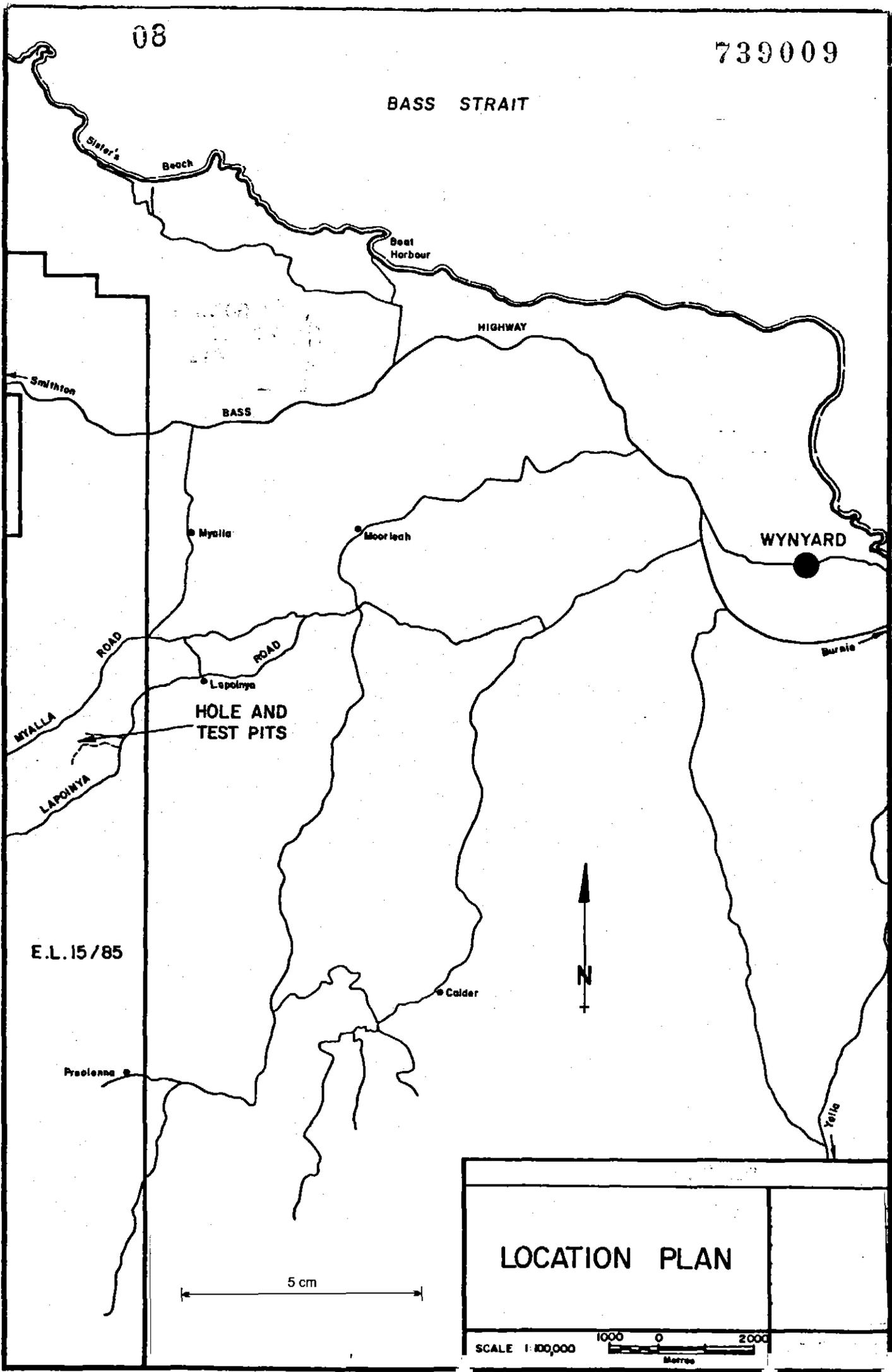
BRH 6.7.87

15/14

08

739009

BASS STRAIT



E.L. 15/85

5 cm

LOCATION PLAN

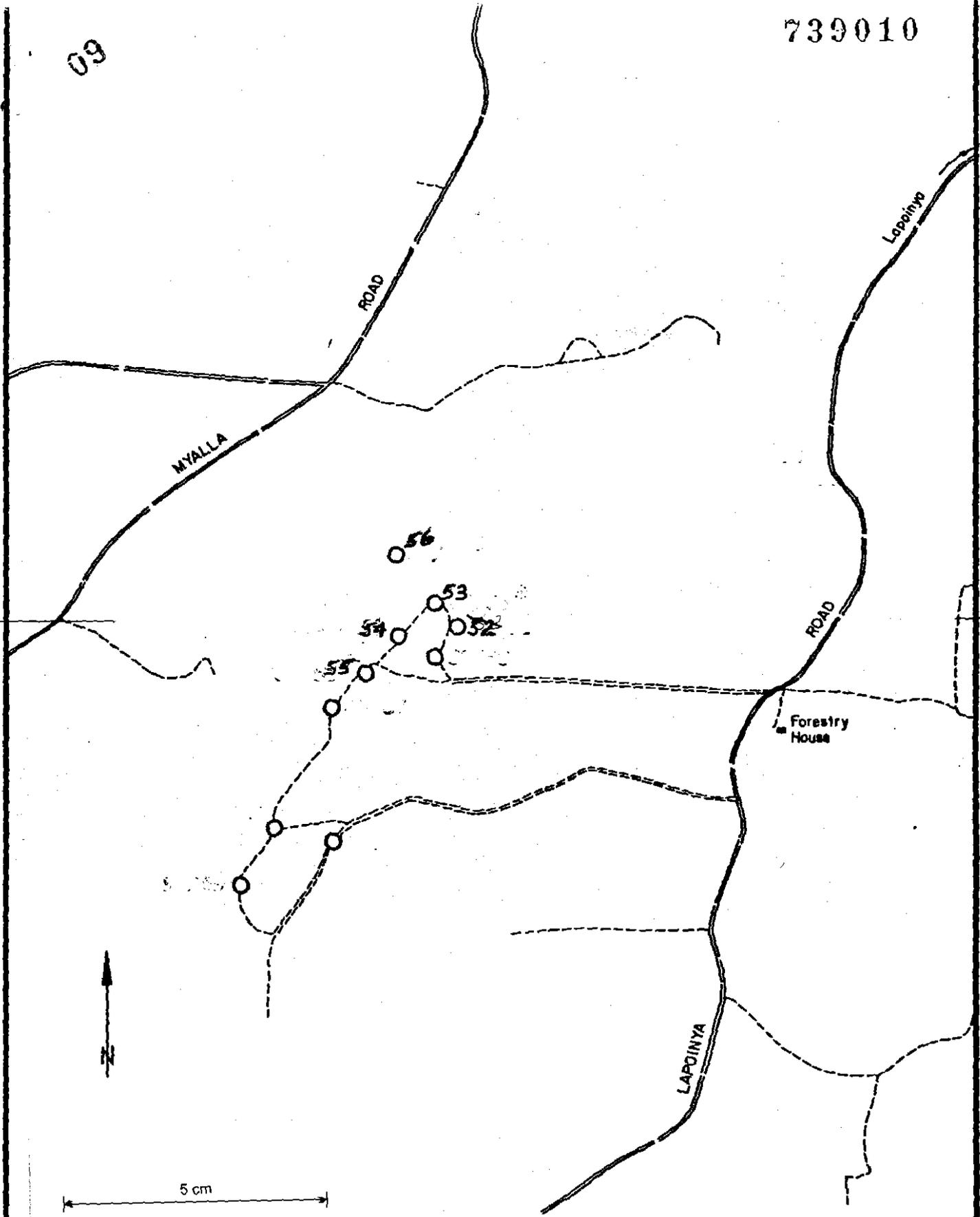
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Meters

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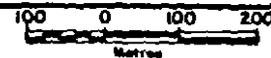


**LEGEND**

52 Bore Hole

LAPOINYA AREA (E.L. 15/85)  
LOCATION OF DRILL HOLES

SCALE 1:10,000



## BOREHOLE LOG SHEET

CLIENT: WOLSTON DEVELOPMENTS		HOLE NO 53		
PROJECT: GLASS SAND		SHEET 1 OF 1		
LOCATION: LAPOINYA		SURFACE ELEVATION 200 m		
POSITION SAND DUNE		DATE STARTED: 12/3/87 DATE COMPLETED: 12/3/87 LOGGED BY: BRH		
RIG TYPE (MOUNTING) AIRTRAK		CONTRACTOR: M. MAXFIELD		
Progress	Sample or Test	Depth (RL) Metres	Strata	DESCRIPTION (Moisture, colour, consistency, structure, soil type, origin)
2	SAMPLE			GREY - OFF WHITE, DENSELY COMPACTED SILICA SAND
4				
6	SAMPLE			
8				
10	SAMPLE			
12	SAMPLE		E.O.H.	
14				
16				
18				
20				

# BOREHOLE LOG SHEET

CLIENT: WOLSTON DEVELOPMENTS		HOLE NO 54		
PROJECT: GLASS SAND		SHEET 1 OF 1		
LOCATION: LAPOINYA		SURFACE ELEVATION 200 m		
POSITION SAND DUNE		DATE STARTED: 12.3.87		
DATE COMPLETED: 12.3.87		LOGGED BY: BRH		
RIG TYPE (MOUNTING) AIRTRAK		CONTRACTOR: M. MAXFIELD		
Progress	Sample or Test	Depth (RL) Metres	Strata	DESCRIPTION (Moisture, colour, consistency, structure, soil type, origin)
2			SILTSTONE	HARD, WELL CEMENTED SILTSTONE - QUARTZITE, COLOUR VARYING FROM OFF WHITE THROUGH YELLOW TO BROWN
4	NO SAMPLES		QUARTZITE	
12				E.O.H.
20				

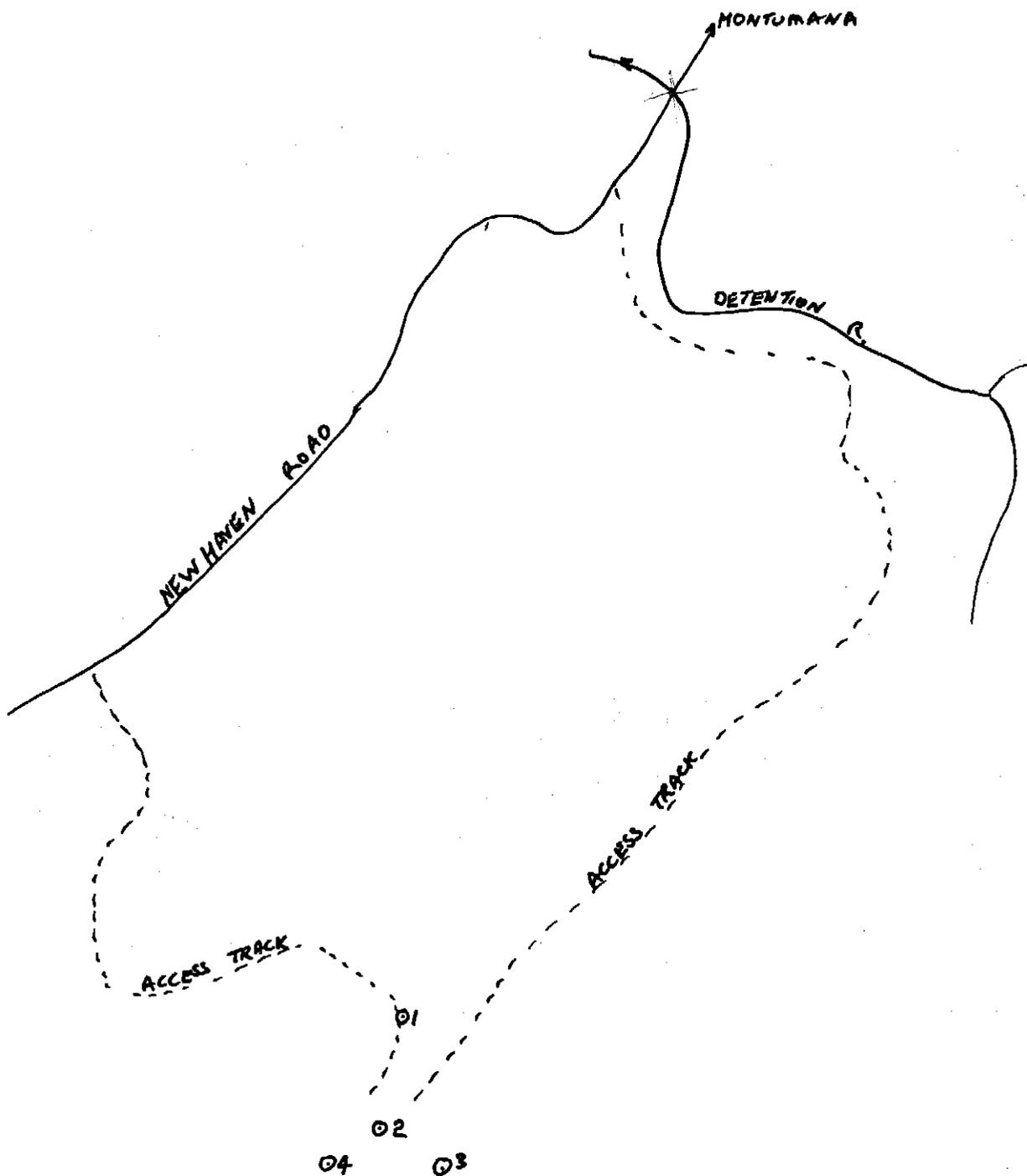
## BOREHOLE LOG SHEET

CLIENT: WOLSTON DEVELOPMENTS				HOLE NO <u>55</u>
PROJECT: GLASS SAND				
LOCATION: LAPOINYA		SHEET <u>1</u> OF <u>1</u>		
POSITION SAND DUNE		SURFACE ELEVATION 200 m		
DATE STARTED: 12.3.87		DATE COMPLETED: 12.3.87		LOGGED BY: BRH
RIG TYPE (MOUNTING)		AIRTRAK		CONTRACTOR: M. MAXFIELD
Progress	Sample or Test	Depth (RL) Metres	Strata	DESCRIPTION (Moisture, colour, consistency, structure, soil type, origin)
2	SAMPLE			GREY - OFF WHITE SILICA SAND DENSELY COMPACTED
4				
6	SAMPLE			
8				
10	SAMPLE			
12	SAMPLE			E.O.H.
14				
16				
18				
20				

## BOREHOLE LOG SHEET

CLIENT: WOLSTON DEVELOPMENTS				HOLE NO <u>56</u>
PROJECT: GLASS SAND				
LOCATION: LAPOINYA		SHEET 1 OF 1		
POSITION SAND DUNE		SURFACE ELEVATION		
DATE STARTED: 12/3/87		DATE COMPLETED: 12/3/87		LOGGED BY: BRH
RIG TYPE (MOUNTING)		AIRTRAK		CONTRACTOR: M. MAXFIELD
Progress	Sample or Test	Depth (RL) Metres	Strata	DESCRIPTION (Moisture, colour, consistency, structure, soil type, origin)
2	SAMPLE			GREY - OFF WHITE SILICA SAND
4				
6	SAMPLE			LIGHT YELLOW IN COLOUR
8				GREY - OFF WHITE
10	SAMPLE			
12	SAMPLE			LIGHT YELLOW
14				
16				
18				
20				

14



LOCATION OF DIP RANGE  
DRILL HOLES  
ORI - DR 4

# BOREHOLE LOG SHEET

CI

CLIENT: WOLSTON DEVELOPMENTS	<b>HOLE NO</b> <u>DR 1</u>
PROJECT: GLASS SAND	
LOCATION: DIP RANGE	SHEET <u>1</u> OF <u>1</u>
POSITION HOGARTH CREEK	SURFACE ELEVATION <u>400 m</u>
DATE STARTED: <u>13.3.87</u>	DATE COMPLETED: <u>13.3.87</u> LOGGED BY: <u>BRH</u>
RIG TYPE (MOUNTING) <u>AIR TRAK</u>	CONTRACTOR: <u>M. MAXFIELD</u>

Progress	Sample or Test	Depth (RL) Metres	Strata	DESCRIPTION (Moisture, colour, consistency, structure, soil type, origin)
2				OCCASIONALLY WHITE, GENERALLY GREY - YELLOW BROWN, SILTSTONE, WITH QUARTZ PEBBLES
4	NO SAMPLES		SILTSTONE PEBBLY SANDSTONE	
6				
8				
10				
12				E.O.H.
14				
16				
18				
20				

# BOREHOLE LOG SHEET

16

CLIENT: <u>WOLSTON DEVELOPMENTS</u>		<b>HOLE NO</b> <u>DR 2</u>
PROJECT: <u>GLASS SAND</u>		
LOCATION: <u>DIP RANGE</u>	SHEET <u>1</u> OF <u>1</u>	
POSITION <u>HOGARTH CREEK</u>	SURFACE ELEVATION <u>400 m</u>	
DATE STARTED: <u>13.3.87</u>	DATE COMPLETED: <u>13.3.87</u>	LOGGED BY: <u>BRH</u>
RIG TYPE (MOUNTING) <u>AIRTRAK</u>	CONTRACTOR: <u>M. MAXFIELD</u>	

Progress	Sample or Test	Depth (RL) Metres	Strata	DESCRIPTION (Moisture, colour, consistency, structure, soil type, origin)
2	SAMPLE		DENSE SAND WITH PEBBLES	DENSELY COMPACTED SAND WITH PEBBLES GREY- OFF WHITE
4				
6	SAMPLE			
8				
10	SAMPLE			DENSELY COMPACTED SAND
12	SAMPLE			E.O.H.
14				
16				
18				
20				

# BOREHOLE LOG SHEET

CLIENT: WOLSTON DEVELOPMENTS	<b>HOLE NO</b> DR 3
PROJECT: GLASS SAND	
LOCATION: DIP RANGE	SHEET 1 OF 1
POSITION HOGARTH CREEK	SURFACE ELEVATION 400 m
DATE STARTED: 13.3.87	DATE COMPLETED: 13.3.87 LOGGED BY: BRH
RIG TYPE (MOUNTING) AIR TRAK	CONTRACTOR: M. MAXFIELD

Progress	Sample or Test	Depth (RL) Metres	Strata	DESCRIPTION (Moisture, colour, consistency, structure, soil type, origin)
2	SAMPLE			SOFT SILICA SAND GREY- OFF WHITE
4				
6	SAMPLE			
8				
10	SAMPLE			E.O.H. - HOLE COLLAPSING AND RODS JAMMING
12				
14				
16				
18				
20				

# BOREHOLE LOG SHEET

CLIENT: WOLSTON DEVELOPMENTS	<b>HOLE NO</b> <u>DR 4</u>
PROJECT: GLASS SAND	
LOCATION: DIP RANGE	SHEET <u>1</u> OF <u>1</u>
POSITION HOGARTH CREEK	SURFACE ELEVATION 400 m
DATE STARTED: 13.3.87	DATE COMPLETED: 13/3/87
	LOGGED BY: BRH
RIG TYPE (MOUNTING) AIR TRAK	CONTRACTOR: M. MAXFIELD

Progress	Sample or Test	Depth (RL) Metres	Strata	DESCRIPTION (Moisture, colour, consistency, structure, soil type, origin)
2				WHITE QUARTZITE
4				FIRM SILICA SAND GREY- OFF WHITE
6	SAMPLE			
8				
10	SAMPLE			GREY QUARTZITE, SAND ABOVE COLLAPSING E.O.H. AND JAMMING RODS
12				
14				
16				
18				
20				



SGS Australia Pty Ltd

Sydney

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Alexandria, N.S.W. 2015  
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Tel.: 699 7625  
Telex: AA22395  
Cables: Supervise

Monier Limited  
6-8 Thomas Street  
CHATSWOOD NSW 2067

ATTN: B R HARRISON

Our Ref: La 5651

Your Ref:

Date Received: 24/5/87

Date Completed: 2/6/87

Issued At: Sydney

SAMPLE SUPPLIED BY CLIENT

ANALYTICAL REPORT

SAMPLE REF	ppm Fe <sub>2</sub> O <sub>3</sub>
DR 2/20	133
DR 2/10	159
DR 2/30	136
DR 2/40	273
DR 3/10	134
DR 3/30 (1)	152
DR 3/30 (2)	143
DR 4/20	126
DR 4/30	249
52/10	164
52/20	106
53/10	768
53/20	369
53/30	721
53/40	944
55/10	215
55/20	265
55/30	283
55/40	784
56/10	227
56/20	3289
56/30	878
56/40	712

  
B Lonnon  
Manager Sydney Laboratory