

MICROFILMED

QUARTERLY - REPORT

5-5-81 → 4-8-81

EXPLORATION ON EL 18/76

~~(BOAT HARBOUR)~~

THOMAS and NYE.

81-1588.

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QUARTERLY REPORT BY MINERAL HOLDINGS AUSTRALIA PTY. LTD. ON
EXPLORATION AND INVESTIGATIONS ON E.L. 18/76.

[BoAT HARBOUR]

5-5-81 → 4-8-81.

INTRODUCTION:

This report covers the second quarter of the current period of the Licence, namely 5/5/81 to 4/8/81. The area within the Licence contains numerous outcropping beds of quartzite, and the exploration is designed to locate the outcrops and to test them with the object of obtaining raw silica for production of alloys and silicon metal.

The exploration submitted in our application and/or letter of 4 August 1980 and 23 December 1980 for extension of the Licence contained the most important and essential item of searching the Licence area for outcrops of quartzite and endeavouring to locate the surface samplings, and the drill holes put down by B.H.P. when that company held the Licence. This important exploration and the concurrent sampling of the more important outcrops was completed by the beginning of the current Licence period.

The receipt of the analyses of the seven samples taken at the end of February completed the item of search and sampling.

The next item in the programme was the checking and investigation of the results of the B.H.P. company and those of Mineral Holdings with the objective of selecting the most favourable areas for detailed testing. This resulted in the preparation of a report of 2 June 1981 on the exploration and investigation carried out to date and the selection of two areas for testing and drilling. A copy of the report was sent to you on 11th June.

It was decided to obtain the services of Longworth & McKenzie for a geological survey of the two areas and to determine the area for drilling. Discussions were held with representatives of Longworth & McKenzie, and a letter was sent to that company by Mineral Holdings on 11 June 1981. The company replied on 26 June 1981 and a copy of the letters are attached.

Longworth & McKenzie had been drilling at Irishtown for Mineral Holdings but unfortunately the company ended its field season after that drilling. In its letter of 26 June, the company informed Mineral Holdings that it was prepared to consider the work on E.L.18.76 (and also on E.L.29/80) and desired information and discussions with Messrs. N.M. Thomas and P.B. Nye so that it could form a programme and prepare budget estimates and decide on a timing suitable to Mineral Holdings. The discussion will be arranged after the return of Mr. Thomas from overseas on 4 August. The time for the discussions will be also so that additional discussions on E.L. 29/80 can be held. In the meantime Mineral Holdings has sent Longworth and McKenzie a copy of the report of 2nd June 1981.

A further programme of work on E.L. 18/76 will be decided after the geological survey and the drilling have been completed.

FINANCIAL STATEMENT

(Attached). (10).

REPORT ON EXPLORATION AND INVESTIGATION ON E.L. 18/76 TO DATE (2.6.81)Introduction

This licence was taken over by Mineral Holdings Australia (MHA) from B.H.P. when the latter company had completed its investigations the B.H.P. Company prepared a map showing on the part dealing with the above Licence area the following -

1. the geology as shown on the 1 mile Geological 1 mile sheets Table Cape and Burnie and showing the Jacob Orthoquartzite in which the quartzites being investigated are present.
2. the traverses along which bulk surface chip samples were taken.
3. the positions of the percussion drill holes that were put down.

The map does not show the quartzite outcrops and the areas occupied by the quartzite, and M.H.A.'s first exploration was therefore a search to locate the main outcrops and areas containing scattered outcrops. At the same time, some preliminary chip samples were taken from some of the outcrops. The outcrops and the places where samples were taken were marked on a map. The searching was completed and 16 outcrops or areas of outcrop were marked on the map. They agree generally with the places where B.H.P. took bulk surface chip samples and drilled percussion holes.

B.H.P.'s Testing

The B.H.P. Company took 11 bulk surface chip samples and drilled 21 percussion holes on the Licence area; there was an additional chip sample (5444) to the north-east of the Licence area. There are three large tracts of Jacob Quartzite on the Licence area.

The quartzite tracts being investigated occur in Jacob Quartzite, and the distribution of chip samples and drill holes in the three tracts is shown in Table 1. For descriptive purposes, the three tracts will be termed the Northern, Central and Southern.

Table 1
B.H.P.'s Testing

	Bulk Chip Samplings		Percussion Holes	
	Number of places	Number given to each sampling	Holes	Number given to each hole
Northern	5	5503, 5440 5439, 5438	7	SC42, SC41, SC40 SC36, SC37, SC39 SC38
Central	5	5505, 5504 5478, 5477 5476	7	SC29, SC31, SC30 SC35, SC33, SC32 SC34, SC20, SC25 SC27, SC28
Southern	0	-	3	SC22, SC23, SC24

The positions of each sampling and drill hole are shown on Plate 1 (attached). The analyses of samples from the drill holes are shown on Table 5 (attached).

Outcrops of Quartzite Located by M.H.A.

The outcrops of quartzites located by M.H.A. have been numbered from (1) to (16), and the samples taken have been numbered from (1) to (7) and the positions of both are shown on Plate 2 (attached).

Some information about the outcrops are given in the attached table (Table 2).

Correlation of B.H.P.'s Testing Places and M.H.A.'s Outcrops

The correlation between M.H.A.'s quartzite outcrops and B.H.P.'s testing places is given in the following table (Table 3).

Table 3

B.H.P.	M.H.A.'s	B.H.P.'s	
Area of Jacob Quartzite	Outcrop Numbers	Chip Sample Number	Percussion Hole Number
Northern	1	None	None
	2	5440	
	3	5439	SC42
	4	5563	
	5	5438	SC36, 37, 40, 41
	6	-	SC38, 39
Central	7	-	SC29, 20, 31
	8	5505	SC25, 26
	9	-	
	10	5478	
	11	5504	SC25 and 26
	12	-	-
	13	5476	SC27 and 28
	14	5477	-
	15	-	SC32, 33, 34, 35
Southern	16	-	-
	-	-	SC22, 23, 24

Analyses of Samples

Some of the details of the samples taken by M.H.A. are shown in Table 2 (attached).

The details of the analyses by the Department of Mines laboratory in Launceston are given in the following table (Table 4).

Table 4

E.L. 18/76

Analyses of Silica Samples (M.H.A.'s)

Reg. No.	Sample No.	Analyses					MHA Outcrops	
		SiO ₂ %	Fe %	Al ₂ O ₃ %	Ti %	Ca %		
810,095	1	99.3	0.24	0.10	0.62	0.02	Outcrop Area	4
096	2	99.6	0.12	0.04	0.04	0.01	" "	7
097	3	98.9	0.46	0.10	0.04	0.01	" "	8
098	4	99.5	0.20	0.06	0.02	0.01	" "	10
099	5	99.7	0.19	0.02	0.01	0.01	" "	14
100	6	99.4	0.25	0.06	0.04	0.01	" "	16
101	7	99.4	0.26	0.06	0.02	<0.01	" "	16

Silica Content of Samples

The attached Table 5 giving the analyses of the B.H.P. drill hole samples shows that for the holes between 24 and 32 inclusive, excepting the top sample in hole 4 and the lowest samples in hole 32, the silica content is 99.0 percent or more. The average of the 17 samples is 99.2 percent, the highest content being 99.6 percent in hole 25. With the exception of the upper sample in hole 22, the holes are all situated on the Central area.

The remaining holes on the Central area (33, 34 and 35) could be included because of the six samples in them only one has a silica content below 99.0, and the average of the six is 99.1 percent.

Of the seven chip samples taken by M.H.A., only one (No. 3) had a silica sample less than 99.0, and its silica content was 98.9. The average of the six samples is 99.4. Of M.H.A.'s seven samples one is in the Northern, four in the Central area and two in the Southern area.

In the Southern area, there are three B.H.P. Holes with a total of 4 samples and all have a silica content below 99.0 percent. The two samples of M.H.A. in the same area have contents of 99.4 percent.

Selection of Best Holes and Areas for Further Testing

The selection of areas for further testing depends upon many factors including silica content, content impurities, hardness of material, suitability for open cutting, etc. Some of these factors have been discussed above.

Information on other factors such as hardness of quartzite and suitability of site for open cutting have been obtained from Mr. K. Pinner. In regards to hardness, Pinner stated that the hardest material was near M.H.A.'s outcrops 3, 5, 12, 13 and 15. Outcrops (3) and (5) may be parts of the same zone of quartzite. Similarly outcrops (12) and (13) may be parts of a zone. Outcrop (15) is in one and the same zone of quartzite between outcrops (7) and (14).

In regard to suitability of area for open cutting, Pinner states that outcrop (15) and area (16) which includes samples 6 and 7 are the best.

It will be noted that outcrop (or area) 15 is the only one that contains hard material and is in a suitable place for open cut operations.

In regard to the silica and alumina contents of the four zones or areas referred to above, the position may be summarised as follows :-

Area (3) - (5)

This area contains drill holes SC40, 41 and 42 that have average silica contents of 98.57, 92.6 and 98.37 percent respectively and average alumina contents of 0.87, 40 and 0.2 percent respectively. The silica content is low and the alumina content high.

Area (12) - (13)

This area contains drill holes SC27 and 28 that have average silica contents of 99.11 and 99.35 percent respectively and average alumina contents of 0.13 and 0.05 percent respectively.

Area (15)

This area contains drill holes SC29, 30, 31 and 35 but no results are given for hole 29. Holes 30, 31 and 35 contain average silica contents of 99.35, 99.4 and 99.4 percent respectively and alumina contents of 0.075, 0.05 and 0.05 percent respectively.

It is situated between M.H.A. samples (2) and (5) which have silica contents of 99.6 and 99.7 percent respectively and alumina content, of 0.1 and 0.1 percent respectively.

Area (16)

This area contains M.H.A.'s samples (6) and (7) that have silica contents of 99.4 percent and alumina contents of 0.01 and <0.01 percent respectively.

In the above summary of information, it will be noted that Area (15) and Area (16) are the only two considered to be generally suitable for open cut operations. Of these two, however, Area (15) contains hard quartzite material.

Further, in Area 15, M.H.A. samples show the highest silica contents (99.6 and 99.7%) and the drill holes SC30, 31 and 35 have silica contents of 99.30, 99.4 and 99.4% respectively. The alumina contents of Area 15 in the drill holes SC30, 31 and 35 are 0.075, 0.05 and 0.05 percent respectively. M.H.A.'s samples (2) and (5) are also high in silica (99.6 and 99.7% respectively) and low in alumina (0.1 and 0.1 respectively).

In area 16, the only testing has been M.H.A. samples (6) and (7), but they indicate that the silica content is high (99.4%) and the alumina content (0.01 and <0.01 is low).

It would appear therefore that Area (15) is the best for testing, and that some further sampling is justified on Area (16).



P.B. NYE

Melbourne
2nd June, 1981

Table 2
Outcrops of Quartzite

Number of Outcrop	Length fees	Width fees	Strike °	Dip °	Number of sample for Assay	Notes
1			180			Along ridge
2	90	50	200			In cutting
3	100	50	180			
4		30	195		1	
5		75	188			
6						Outcrops for low grade iron-stained quartzite
7		66			2	Very soft material
8	100				3	Iron-stained
9		40	220	Vert		
10		30	185		4	Pink-stained
11			190			Small outcrop
12	50	100	225	30 West		
13	100	100	235			Iron-stained
14	300	60	40	45	5	Base of outcrop about 200 ft. wide. Rises about 150 ft. above river level.
15						Scattered outcrop extend over 0.5 miles to north-east of Area 14.
16		40	Vert		(6 (7	Outcrop on western side of river and extends to 100 ft. above it. Sample 6 is on northern side and outcrop and 7 on southern side.

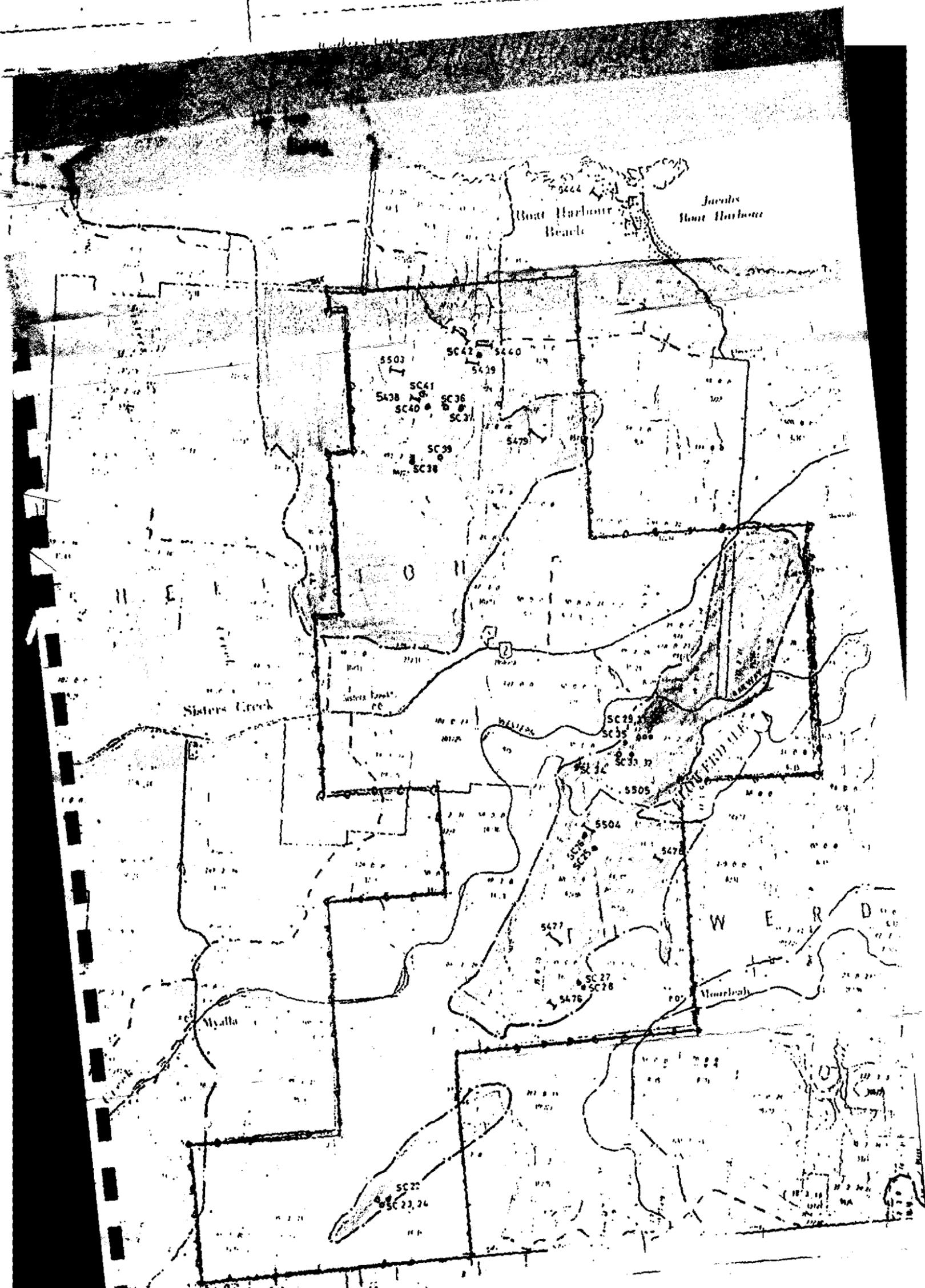
RESULTS OF ANALYSES

939008

OF

SAMPLES FROM DRILL HOLES BY B.H.P. ON E.L. 18/76

<u>Sample Marked</u>	<u>SiO₂</u>	<u>Fe₂O₃</u>	<u>Al₂O₃</u>
SC22 3-6m	98.9	0.19	0.10
SC22 6-12m	98.8	0.25	0.15
SC22 12-15m	98.9	0.25	0.25
SC23 0-6m	98.7	0.25	0.15
SC23 6-12m	97.0	0.35	1.3
SC24 0-6m	98.8	0.20	0.05
SC24 6-12m	99.3	0.15	0.05
SC25 0-6m	99.4	0.10	0.05
SC25 6-12m	99.5	0.15	0.05
SC25 12-18m	99.6	0.15	0.05
SC25 18-21m	99.0	0.20	0.10
SC26 0-6m	99.2	0.05	0.05
SC26 6-12m	99.3	0.10	0.05
SC26 12-15m	99.3	0.15	0.05
SC27 0-3m	99.4	0.10	0.10
SC27 3-9m	99.0	0.15	0.15
SC28 0-6m	99.3	0.15	0.05
SC28 6-12m	99.2	0.15	0.05
SC30 0-6m	99.3	0.10	0.10
SC30 6-12m	99.4	0.05	0.05
SC31 3-6m	99.4	0.30	0.05
SC32 0-3m	99.3	0.30	0.10
SC32 12-15m	99.1	0.25	0.15
SC32 18-21m	98.9	0.25	0.15
SC33 6-9m	99.2	0.45	0.10
SC33 9-15m	99.3	0.20	0.05
SC33 18-21m	98.1	0.20	0.70
SC34 3-9m	99.1	0.25	0.10
SC34 9-15m	99.4	0.25	0.05
SC35 0-3m	99.4	0.20	0.05
SC36 0-6m	99.1	0.35	0.20
SC36 6-12m	98.8	0.25	0.25
SC36 12-18m	95.6	0.35	2.0
SC39 3-6m	99.0	0.25	0.10
SC39 9-12m	94.5	0.30	2.7
SC40 0-6m	98.3	0.30	0.55
SC40 9-12m	98.7	0.25	0.15
SC41 3-6m	95.7	0.35	2.3
SC41 6-12m	91.1	0.75	4.8
SC42 3-6m	98.9	0.15	0.10
SC42 6-12m	98.1	0.20	0.25
SC42 12-18m	97.1	0.45	0.95



1:31,680 (1 INCH = 40 CHAINS)
 Boundary of Jacob Quartzite }
 Percussion Drill Hole Location }
 Bulk chip sample traverse location }

SC 40
 SC 38

5 cm

E.L. 18/76 E.L. Boundary
 PART OF B.H.P.'S MAP
 (SHOWING E.L. 18/76.)

E.L. 18/76

PLATE 2

939010

- 1. QUARTZITE OUTCROPS
- NUMBER OF OUTCROP.
- " " SAMPLE

PASS STRAIT.

FLOWERDENE RIVER

JACOBS BOAT HARBOUR



5 cm

Based on surveys
 by K. Pinner
 18/50
 18/51