NORTHWEST BAY CO.PTY.LTD.
Incorporated in Tasmania 1978 A.C.N 009 513 697

MAYDENA - TASMANIA

PINE HILL HIGH GRADE SILICA

JUNE, 1994

97-3974

REPORT-EL 14/88
PINE HILL HIGH GRADE SILICA
NORTHWEST BAY CO - ANON

Postal Address: "Lee Wave",RMB 341, KINGSTON,Tasmania. 7150
Telephone 002 396296 Facsimile 002 396568

THE PINE HILL SILICA DEPOSIT

MAYDENA

June 1994

Exploration Licence 14/88 is located near Maydena and was originally held by Pioneer Silicon Industries Pty. Ltd. with an area of 81 sq.km.

The purpose of the E.L. was for exploration for high grade silica rock for the production of silicon metal at P.S.I.'s Electrona smelter in southern Tasmania.

P.S.I. ceased production of silicon at Electrona during August,1991 after which E.L.14/88 was reduced to 25 sq.km. and transfered to Northwest Bay Co.Pty.Ltd. on 13th April,1992.

Exploration for rock silica was continued by Northwest Bay Co. in association with B.H.P.- TEMCO for a period after the closure of the Electrona smelter with the result that several outcrops of high grade silica rock were discovered on the eastern end of Pine Hill. During March,1992 excavations were made along strike from these outcrops and extensions of the rock silica were discovered.

The deposit was sampled over a length of about 500m and the resulting assays indicated high grade silica rock. It was then proposed to trial smelt a bulk sample of about 500t - 1000t at TEMCO, however a decision to convert the No.5 ferro-silicon furnace to manganese alloy was made and the trial smelting did not take place. No further exploration work for rock silica was undertaken after this date in April,1992.

Assays taken along the strike of the rock are given in the TEMCO Laboratory Report of 2/4/92 herewith.

Further work to prove up reserves of high grade silica rock could be undertaken progressively by drilling.

The approximate location of the hard rock section is indicated on the plans enclosed herewith.

Scout surveys westward of Pine Hill indicate that further deposits may be present in the area.

A complete report on the exploration work by Consulting Geologist P.D.Ellis for P.S.I. is given in his report, dated November,1988.

316003

TASMANIAN ELECTRO METALLURGICAL CO. PTY. LTD.

BELL BAY - TASMANIA

LABORATORY REPORT: D. Hassell DATE: 2/4/92

WORK NO:

MATERIAL: Maydena Qtz

Pine Hill - eastern ex dolomite Qtz

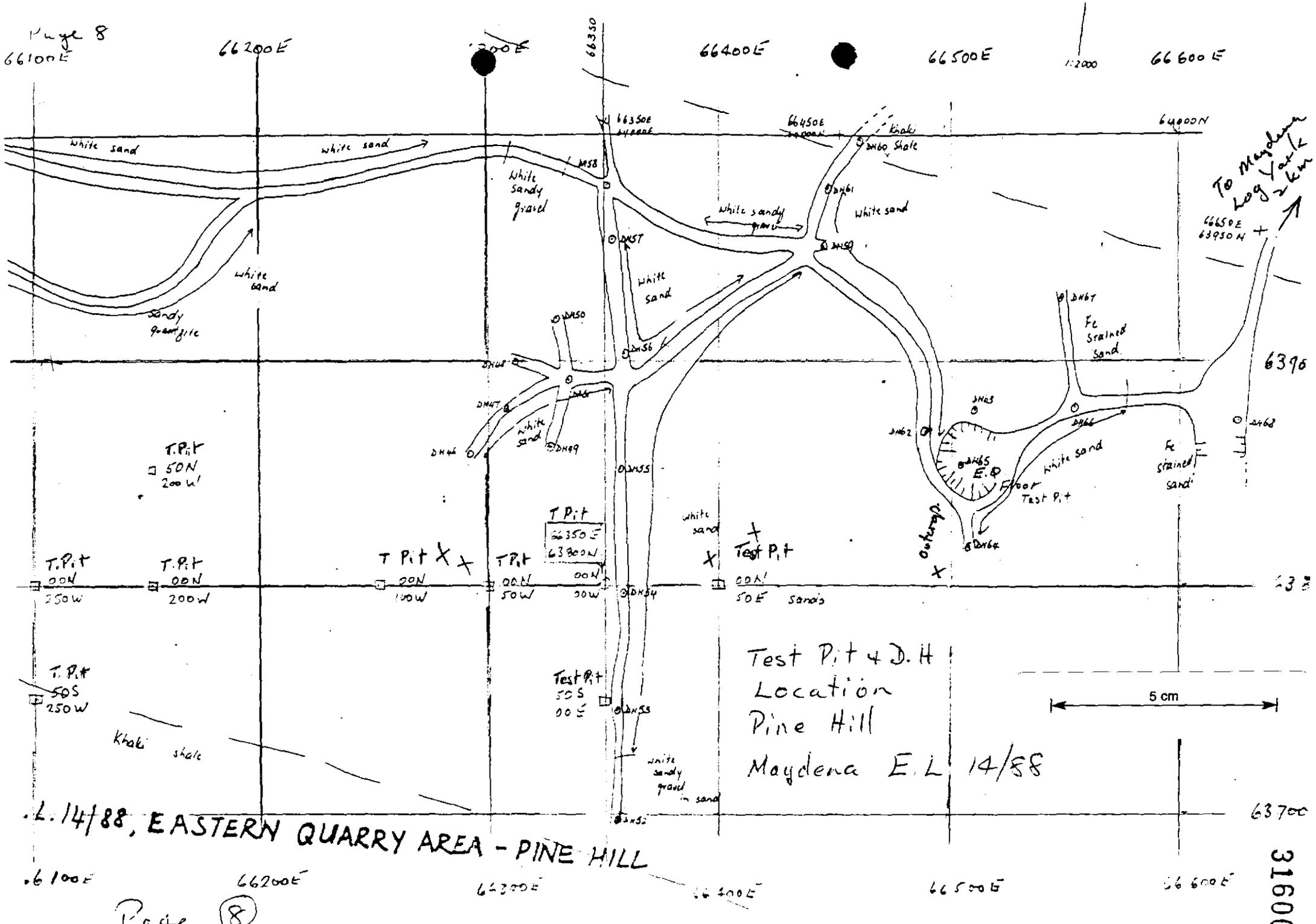
SAMPLE	SiO_2	Al_2O_3	Fe_2O_3	Cr_2O_3	TiO_2	CaO	MgO	Na_2O	K_2O	MnO	P_2O_5
27/3 # 1	99.2	.11	.3	.03	<.01	.10	.1	<.1	<.1	.05	<.01
27/3 # 2	99.3	.03	.3	.04	.01	.04	<.1	.1	<.1	.02	<.01
27/3 #3	99.1	.03	.4	.04	<.01	.08	.1	.2	<.1	.03	<.01
27/3 # 4	99.3	.12	.3	.04	<.01	.02	.1	.1	<.1	.03	<.01
27/3 #5	99.2	.08	.3	.04	.01	.02	.1	.2	<.1	.03	<.01
27/3 #6	99.2	.05	.3	.04	.09	.06	.1	.1	<.1	<.01	<.01
27/3 # 7	99.3	.09	.3	.04	.06	.03	.1	<.1	<.1	.01	<.01
27/3 # 8	99.3	.06	.3	.04	.04	.05	.1	.1	<.1	.01	<.01
27/3 # 9	99.1	.14	.3	.03	.12	.07	.1	<.1	<.1	.07	<.01
27/3 Bulk	99.5	.12	.2	.02	.02	.04	.1	<.1	<.1	.02	<.01
30/3 Sand	99.4	.05	.3	.04	.04	.04	<.1	<.1	<.1	.02	<.01

COMMENTS: $\frac{11}{9} = .08\%$

Various

ANALYST.

CHEMIST.



E.L. 14/88, EASTERN QUARRY AREA - PINE HILL

31600

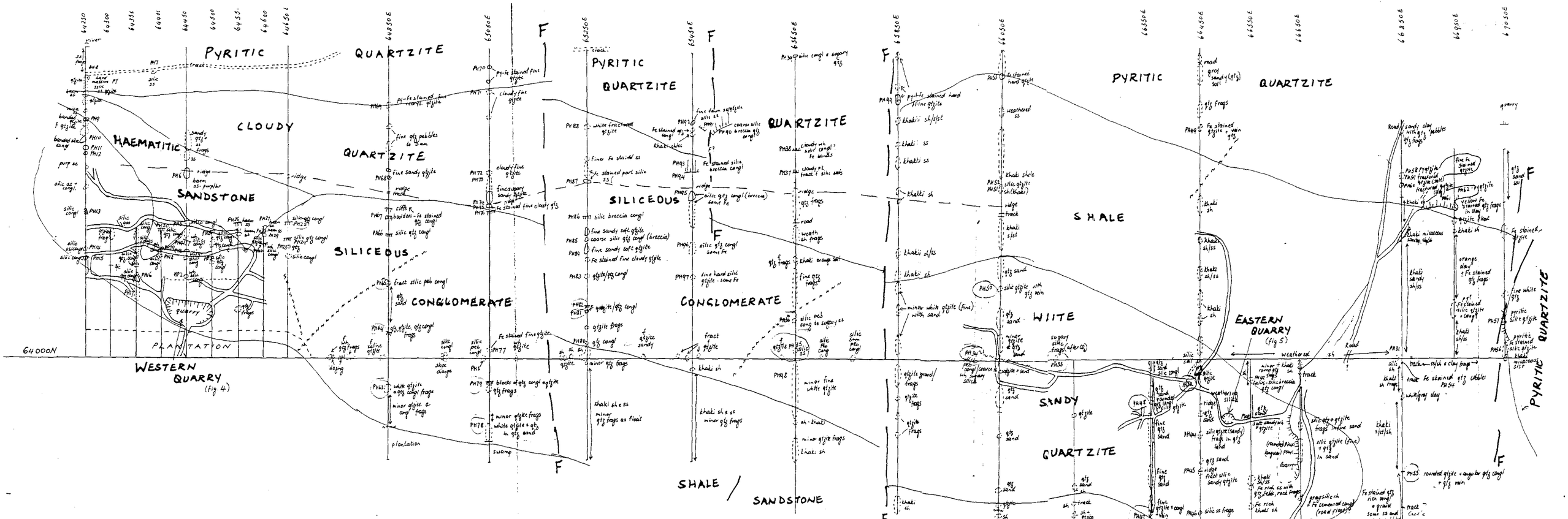


FIG. 3 MAYDENA E.L. 14/88

PINE HILL GRID - GEOLOGY

1:5,000

MAYDENA QUARTZITE SURVEY

316006

#	DRILL #	Al_2O_3	Fe_2O_3	TiO_2	CaO	COMMENTS
01	PH 1	.032	.27	.011	.061	
2	2	.12	.13	.011	.021	
3	3	.13	.50	.024	.042	
4	4	.095	.86	.011	.029	
5	5	.076	.68	.019	.029	
6	6	9.1	3.1	.40	.005	
7	7	.21	.11	.091	.008	
8	8	4.6	.72	.28	.006	
9	9	.71	.14	.049	.011	
10	10	.25	.047	.041	.011	
11	11	.60	.35	.048	.009	
12	12	.37	.071	.038	.008	
13	13	.29	.061	.024	.053	
14	14	.25	.057	.064	.008	
15	15	.14	.08	.015	.038	
16	23	—	—	—	—	lost
17	24	.042	.33	.009	.025	
18	25	.11	.022	.007	.017	
19	HP 16	.12	.94	.003	.048	
20	17	.12	.20	.015	.038	
21	18	.089	.30	.007	.034	
22	19	.16	.18	.015	.035	
23	20	.16	.12	.009	.043	
24	21	.17	2.2	.015	.037	
25	22	.19	.15	.040	.051	
26	New Mt Horsetop	.061	.11	1.1	.019	
27	PH 26	~~8.6~~	~~4.4~~	.34	~~.009~~ .19	good quality!
28	27	.82	.58	.053	.030	
29	28	.95	2.0	.085	.026	
030	29	.12	.65	.034	.007	

MAYDENA QUARTZITE SURVEY 316007

#	DRILL #	Al_2O_3	Fe_2O_3	TiO_2	CaO	COMMENTS
1	PH 30	.093	.29	.032	.092	
2	31	.27	.71	.072	.031	
3	32	.011	.028	.016	.023	
4	33	.010	.026	.020	.009	
5	34	.007	.016	.007	.020	
6	35	.010	.040	.007	.014	
7	36	.013	.017	.032	.065	
8	37	.12	.085	.057	.014	
9	38	.13	.097	.048	.010	
10	39	.86	.072	.071	.011	
11						
12						
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51						
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57						
58						
59						
060						

316008

MAYDENA QUARTZITE SURVEY SEP 19

DRILL #	Al_2O_3	Fe_2O_3	TiO_2	CaO	COMMENTS
PH 47	.019	.018	.16	.024	
48	.034	.019	.056	.013	
49	.31	.025	.026	.010	
50	.017	.012	.052	.038	
51,1	16.0	3.9	.51	.046	
51,2	15.3	4.4	.51	.046	
52	.89	.51	.042	.016	
53	1.2	1.5	.066	.024	
54	1.4	.26	.066	.024	
55	.061	.012	.091	.019	
56	.93	.33	.046	.013	
57	3.8	.45	.096	2.5	
58					
59	.25	.012	.18	.058	
60	.26	.028	.047	.017	
61	.63	.10	.063	.012	
62	1.0	.34	.078	.012	
63	.047	.061	.023	.041	
64,1	.16	.019	.026	.005	
64,2	.82	.24	.028	.042	
65	.039	.039	.007	.015	
66	.56	.082	.036	.013	
67	.91	1.74	.057	.012	
68	3.3	.17	.41	.009	
69	.53	.046	.19	.009	
70	.82	.14	.033	.013	
71	.40	.026	.042	.010	
72	.41	.078	.037	.008	
73	.16	.028	.16	.011	
74	.31	.019	.092	.007	
75	.32	.016	.036	.009	
76	.52	.064	.036	.012	

316009 MAYDENA

DRILL #	Al_2O_3	Fe_2O_3	TiO_2	LOI	COMMENTS
114 77	.53	.61	.067	.027	
78	.025	.007	.017	.054	
79	.018	.016	.006	.030	
80	.31	.10	.053	.009	
81	.024	.007	.007	.018	
82	.056	.66	2.2	.036	
83	.58	.73	.056	.009	
84	6.1	.97	.16	.012	
85	.59	.026	.048	.011	
86	1.1	.030	.088	.001	
87	7.2	.79	.39	.015	
88	.56	.018	.062	.010	
89	.33	.027	.086	.009	
90	1.7	.031	.14	.013	
91	.73	.049	.087	.011	
92					
93	1.3	.18	.066	.016	
94	6.5	.078	.083	.016	
95	.71	.027	.037	.004	
96	.79	.039	.056	.008	
96	.37	.014	.026	.008	
97	.40	.085	.063	.007	
98	.16	.021	.036	.008	
99	.82	.41	.042	.011	
100	.009	.010	.046	.019	
101	.013	.012	.072	.015	
102					
103	.032	.005	.013	.013	
104					
105					
106					
112	.027	.019	.006	.022	

5 cm

Kallista

landing ground

Lorkins Plain

3586 3587 3588 3589 3590 3591 3592 3593 3594 3611

timber yard

Rail Head

toll gate

tanks

3585

heath

3765

3584

RLY RES 3766

ROAD

River Road

Gordon

Creek

river reserve

3578

1396 P/m

350

Pine Hill

282

300m

AREA 2

Sample

3581

3582

3583

Carpenters

MAYNES ROAD

RISBYS

EXPLORATION LICENSE 14/88 - MAYDENA

PINE HILL - AREA B COSTEANING

SCALE ≈ 1:10,000

Existing M.L. boundary (approx)

PS: Freehold boundary

SILICA SAND EXPLORATION

During 1988 Pioneer Silicon Industries P/L prospected Pine Hill for hard rock silica and discovered a deposit of high grade silica sand on the eastern end of Pine Hill.

During this reporting period the deposit was further investigated to see if the sand could be suitable for A.G.M. in Hobart for tableware glass manufacture.

Test pits were put down with an excavator, and samples taken.

These were assayed by A.C.I., and also some grain size determinations were made.

The results proved that the sand would meet the A.C.I. Purchase Acceptance Standard No.P.A.S. 041-01 1.4.91 Tableware;

A.C.I. Specification-chemical composition :

(a)	SiO_2	99.8 %	Min.
	Fe_2O_3	0.014%	Max.
	Cr_2O_3	0.0005%	Max.
	Al_2O_3	Negotiable	

(b) Physical Properties

Nominal Size of Aperture mm	BSS English	USBS American	ACI Standard Specification
1.000	+16	+18	NIL
0.660	+25	+30	2% Max.
0.415	+36	+40	10% Max.
0.105	-150	-140	1% Max.

PARTICLE SIZE DISTRIBUTION
PINE HILL SAND FROM EASTERN QUARRY PH65

by ACI Mineral Div. 22 May,1992

	PH65 RAW %	PH65 PUMP WASHED %
19.0mm	Nil	
12.5	0.2	
9.5	0.4	
6.5	0.7	
4.75	1.2	
3.35	1.3	
2.36	1.4	
1.70	1.5	
1.18	1.6	
850 microns	1.4	Nil
600	2.3	Tr
500	2.1	2.6
425	1.8	3.3
300	6.7	11.1
212	10.3	18.2
150	11.9	20.8
106	13.4	24.4
75	12.1	18.1
53	9.2	Tr
Pan	19.9	1.3
APS No.		78.89
Dry Screened (before pump wash) +4.75mm		4.08%
Wet Screened (after pump wash)		
+ 600 microns		7.94%
- 600 + 75 micron		56.69%
- 75 microns		31.30%
		100.00%

RESULTS OF ANALYSIS OF SCREENED FRACTIONS

PINE HILL SAND FROM TEST PITS

AS SUPPLIED BY MAC FORSTER TO ACI INDUSTRIAL MINERALS 19 MAY 1992

SCREENED BY ACI ON -0.6mm +0.075mm

TEST PIT LOCATION	SiO2	Na2O	K2O	CaO	MgO	Al2O3	TiO3	Fe2O3	Cr2O3
50N200W	99.94	0.02	-0.01	0.02	-0.01	-0.01	-0.01	0.005	0.0001
00N200W	99.93	0.03	-0.01	0.02	-0.01	0.01	-0.01	0.006	0.0001
00N250W	99.94	0.03	-0.01	0.02	-0.01	-0.01	-0.01	0.004	0.0001
00N100W	99.90	0.03	-0.01	0.05	-0.01	0.01	-0.01	0.004	0.0002
00N 50W	99.93	0.03	-0.01	0.02	-0.01	0.01	-0.01	0.003	0.0001
00N 00W	99.94	0.02	-0.01	0.03	-0.01	-0.01	-0.01	0.005	0.0001
00N 50E	99.92	0.03	-0.01	0.02	-0.01	-0.01	0.02	0.004	0.0002
50S250W	99.93	0.03	-0.01	0.02	-0.01	-0.01	-0.01	0.005	0.0001
50S 00E	99.93	0.03	-0.01	0.02	-0.01	-0.01	0.01	0.004	0.0003
E.Q.Foor	99.97	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.003	0.0001
AVG.	99.93	0.03	-0.01	0.02	-0.01	0.01	-0.01	0.004	0.0001

CO-ORDINATES OF 00N 00W MAYDENA SHEET 66350E 63800N (See plan)