GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. 300/8 Surface - Southern Orebody.

PLANNING

PROPOSER: R.E.S. Davies DEPTH: 450 m

LOCATION: Sea Dump

PURPOSE OF HOLE: To test for continuity of mine series sequence south

PROPOSED CO-ORDS: to 563 650 N
220 300.0E E 563 640.0 N N

INCLINATION: -90°

BEARING: °Grid °Mag

TARGET: 220 300.0 E 563 640 N

DEPTH: 450 m

CHECKED BY: S.G. Brown DATE: 06.01.82

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 310°36' °Grid °Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 563 659.80 N ~~E~~ 220 299.87 E ~~N~~

R.L. OF COLLAR: 11.04

INCLINATION OF HOLE: -89°29'

PICKED UP BY: J. Cook DATE: 29.01.82

SUMMARY

LOGGED BY: C.J. Kendall

RESULTS: No significant mineralisation.

DRILLING

DATE COMMENCED: 05.01.82 DATE TERMINATED:

DRILLER/CONTRACTOR: A.D.D.

CASING: SIZE: HW HO
DEPTH: 18 60

CORE: SIZE:
DEPTH: 468

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH:

REASON FOR TERMINATION:

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY:

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. 300/8 Surface - Southern Orebody.

Surveyed method: S.S.
Final depth:
Casing depth:

Depth surveyed to: 467 metres
Date surveyed: 25.03.82
Surveyed by: R. Drake
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.		N 563	E 220
77	16.00	N 6 E	-4° 00'		-66	660.3	299.3
107	355.00	N15 W	-1° 30'		-95.9	662.3	299.9
137	15.00	N 5 E	-1° 00'		-125.9	663.0	299.9
167	4.00	N 6 W	-1° 30'		-155.9	663.6	300.0
197	6.00	N 4 W	-1° 15'		-185.9	664.3	300.0
227	2.00	N 8 W	-1° 15'		-215.9	665.0	300.1
287	265.00	S75 W	-4° 00'		-275.8	666.3	300.2
317	255.00	S65 W	-5° 15'		-305.8	666.1	298.1
347	264.00	S74 W	-6° 30'		-335.6	665.4	295.4
377	266.00	S76 W	-7° 00'		-365.4	665.0	292.0
407	268.00	S78 W	-6° 30'		-395.2	664.8	288.4
437	268.00	S78 W	-6° 30'		-425.0	664.7	285.0
467	274.00	S84 W	-6° 45'		-454.8	664.6	281.6

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D300/8 Surface - Southern Orebody

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 37.00		0.35	
37.00 - 40.00	3.00	0.80	27.0
40.00 - 61.00	21.00	Zero (Sand)	Zero
61.00 - 64.20	3.20	1.40	44.0
64.20 - 66.60	2.40	0.90	38.0
66.60 - 67.40	0.80	0.80	100.0
67.40 - 69.80	2.40	1.00	42.0
69.80 - 70.55	0.75	0.60	86.0
70.55 - 70.90	0.35	0.45	134.0
70.90 - 71.70	0.80	0.50	63.0
71.70 - 71.90	0.20	0.20	100.0
71.90 - 72.40	0.50	0.70	140.0
72.40 - 73.10	0.70	0.40	57.0
73.10 - 73.55	0.45	0.40	89.0
73.55 - 74.10	0.55	0.45	82.0
74.10 - 75.34	1.24	1.10	89.0
75.34 - 76.20	0.86	0.70	81.0
76.20 - 77.24	1.04	1.00	96.0
77.24 - 78.04	0.80	0.80	100.0
78.04 - 79.60	1.56	1.50	96.0
79.60 - 80.95	1.35	1.10	81.0
80.95 - 81.35	0.40	0.40	100.0
81.35 - 82.27	0.92	0.75	82.0
82.27 - 83.67	1.40	1.40	100.0
83.67 - 85.05	1.38	1.20	87.0
85.05 - 85.20	0.15	0.15	100.0
85.20 - 85.40	0.20	0.20	100.0
85.40 - 86.96	1.56	1.50	97.0
86.96 - 88.80	1.84	1.75	82.0
88.80 - 89.20	0.40	0.22	55.0
89.20 - 90.00	0.80	0.45	56.0
90.00 - 90.70	0.70	0.70	100.0
90.70 - 92.45	1.75	1.75	100.0
92.45 - 93.09	0.64	0.64	100.0
93.09 - 94.53	1.44	1.44	100.0

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D300/8 Surface - Southern Orebody

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
94.53 - 95.49	0.96	0.80	83.0
95.49 - 96.55	1.06	0.60	57.0
96.55 - 97.16	0.61	0.13	21.0
97.16 - 99.36	2.20	1.74	79.0
99.36 - 100.55	1.19	0.95	80.0
100.55 - 102.10	1.55	1.35	87.0
102.10 - 102.15	0.05	0.05	100.0
102.15 - 103.15	1.00	1.00	100.0
103.15 - 105.10	1.95	1.80	92.0
105.10 - 106.55	1.45	1.30	90.0
106.55 - 106.78	0.23	0.15	65.0
106.78 - 109.53	2.75	2.50	91.0
109.53 - 112.55	3.02	2.90	96.0
112.55 - 114.18	1.63	1.40	86.0
114.18 - 117.02	2.84	2.75	97.0
117.02 - 119.42	2.40	2.40	100.0
119.42 - 119.47	0.05	0.05	100.0
119.47 - 119.52	0.05	0.05	100.0
119.52 - 120.07	0.55	0.55	100.0
120.07 - 120.65	0.58	0.50	86.0
120.65 - 122.76	2.11	2.00	95.0
122.76 - 124.55	1.79	1.70	89.0
124.55 - 126.90	2.35	2.30	98.0
126.90 - 127.56	0.66	0.55	83.0
127.56 - 128.95	1.39	1.39	100.0
128.95 - 130.55	1.60	1.70	106.0
130.55 - 132.07	1.52	0.90	59.0
132.07 - 132.78	0.71	0.90	127.0
132.78 - 133.52	0.74	0.70	95.0
133.52 - 135.28	1.76	1.70	97.0
135.28 - 136.55	1.27	1.10	92.0
136.55 - 139.24	2.69	2.69	100.0
139.24 - 140.30	1.06	1.06	100.0
140.30 - 140.86	0.56	0.40	71.0
140.86 - 141.50	0.64	0.60	94.0

CORE RECOVERY

D.D.H. No. 300/8 - Surface - Southern Orebody.

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
141.50 -141.86	0.36	0.36	100.0
141.86 -142.55	0.69	0.69	100.0
142.55 -144.62	2.07	2.07	100.0
144.62 -145.53	0.91	0.85	93.0
145.53 -146.43	0.90	0.75	83.0
146.53 -147.79	1.26	1.26	100.0
147.79 -150.83	3.04	2.95	97.0
150.83 -153.94	3.11	3.00	96.0
153.94 -154.54	0.60	0.60	100.0
154.54 -157.55	3.01	2.90	96.0
157.55 -160.55	3.00	2.80	93.0
160.55 -163.37	2.82	2.75	98.0
163.37 -164.83	1.46	1.30	89.0
164.83 -167.73	2.90	2.90	100.0
167.73 -169.55	1.82	1.65	91.0
169.55 -172.55	3.00	3.00	100.0
172.55 -175.55	3.00	3.00	100.0
175.55 -178.55	3.00	3.00	100.0
178.55 -181.55	3.00	3.00	100.0
181.55 -183.03	1.48	1.35	91.0
183.03 -183.27	0.24	0.24	100.0
183.27 -184.55	1.28	0.95	74.0
184.55 -184.98	0.43	0.50	116.0
184.98 -187.00	2.02	1.70	84.0
187.00 -188.78	1.78	1.65	92.0
188.78 -189.32	0.54	0.45	83.0
189.32 -190.55	1.23	1.10	89.0
190.55 -193.55	3.00	3.00	100.0
193.55 -196.55	3.00	3.00	100.0
196.55 -199.55	3.00	2.80	93.0
199.55 -202.10	1.55	1.75	113.0
202.10 -205.20	3.10	3.10	100.0
205.20 -207.88	2.68	2.68	100.0
207.88 -211.00	3.12	2.90	93.0
211.00 -211.15	0.15	0.15	100.0
211.15 -214.25	3.10	3.00	97.0

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. 300/8 Surface - Southern Orebody

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
214.25 - 217.00	2.85	2.55	89.0
217.00 - 219.85	2.85	2.85	100.0
219.85 - 220.20	0.35	0.30	86.0
220.20 - 221.23	1.03	1.03	100.0
221.23 - 223.55	2.32	2.32	100.0
223.55 - 225.30	1.75	1.75	100.0
225.30 - 228.35	3.05	3.00	98.0
228.35 - 231.46	3.11	3.00	96.0
231.46 - 234.58	3.12	3.12	100.0
234.58 - 236.83	2.25	2.25	100.0
236.83 - 238.55	1.72	1.72	100.0
238.55 - 241.55	3.00	3.00	100.0
241.55 - 244.55	3.00	3.00	100.0
244.55 - 247.55	3.00	3.00	100.0
247.55 - 250.55	3.00	3.00	100.0
250.55 - 253.55	3.00	3.00	100.0
253.55 - 256.55	3.00	3.00	100.0
256.55 - 259.55	3.00	3.00	100.0
259.55 - 262.55	3.00	3.00	100.0
262.55 - 265.55	3.00	3.00	100.0
265.55 - 268.55	3.00	3.00	100.0
268.55 - 271.55	3.00	3.00	100.0
271.55 - 274.55	3.00	3.00	100.0
274.55 - 277.55	3.00	3.00	100.0
277.55 - 280.55	3.00	3.00	100.0
280.55 - 283.55	3.00	3.00	100.0
283.55 - 286.55	3.00	3.00	100.0
286.55 - 289.35	2.80	2.75	96.0
289.35 - 292.50	3.15	2.90	92.0
292.50 - 295.55	3.05	3.00	98.0
295.55 - 298.55	3.00	3.00	100.0
298.55 - 301.55	3.00	3.00	100.0
301.55 - 303.55	2.00	2.00	100.0
303.55 - 304.55	1.00	1.00	100.0
304.55 - 307.55	3.00	2.60	87.0
307.55 - 310.55	3.00	3.00	100.0

CORE RECOVERY

D.D.H. No. 300/8 Surface - Southern Orebody

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
310.55 - 313.55	3.00	3.00	100.0
313.55 - 316.55	3.00	3.00	100.0
316.55 - 319.55	3.00	3.00	100.0
319.55 - 322.55	3.00	2.85	95.0
322.55 - 325.55	3.00	3.00	100.0
325.55 - 327.35	1.80	1.80	100.0
327.35 - 330.46	3.11	3.11	100.0
330.46 - 333.35	2.89	2.89	100.0
333.35 - 334.60	1.25	1.25	100.0
334.60 - 335.12	0.52	0.40	77.0
335.12 - 337.55	2.43	2.35	97.0
337.55 - 340.55	3.00	3.00	100.0
340.55 - 343.55	3.00	2.70	90.0
343.55 - 346.55	3.00	3.00	100.0
346.55 - 349.55	3.00	3.00	100.0
349.55 - 352.55	3.00	3.00	100.0
352.55 - 355.55	3.00	3.00	100.0
355.55 - 358.55	3.00	3.00	100.0
358.55 - 361.55	3.00	3.00	100.0
361.55 - 364.55	3.00	3.00	100.0
364.55 - 367.55	3.00	3.00	100.0
367.55 - 370.55	3.00	3.00	100.0
370.55 - 373.55	3.00	3.00	100.0
373.55 - 376.55	3.00	3.00	100.0
376.55 - 379.55	3.00	3.00	100.0
379.55 - 382.55	3.00	3.00	100.0
382.55 - 385.55	3.00	2.20	73.0
385.55 - 387.80	2.25	3.15	140.0
387.80 - 391.00	3.20	3.20	100.0
391.00 - 394.15	3.15	3.15	100.0
394.15 - 397.30	3.15	3.15	100.0
397.30 - 400.40	3.10	3.10	100.0
400.40 - 403.50	3.10	3.00	96.0
403.50 - 406.55	3.05	3.05	100.0
406.55 - 409.55	3.00	3.00	100.0
409.55 - 412.55	3.00	3.00	100.0

CORE RECOVERY

D.D.H. No. 300/8 Surface - Southern Orebody

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
412.55 - 413.57	1.02	1.10	108.0
413.57 - 415.55	1.98	1.98	100.0
415.55 - 418.55	3.00	3.00	100.0
418.55 - 420.00	1.45	1.45	100.0
420.00 - 421.55	1.55	1.55	100.0
421.55 - 424.55	3.00	3.00	100.0
424.55 - 427.55	3.00	3.00	100.0
427.55 - 429.10	1.55	1.55	100.0
429.10 - 432.25	3.15	3.15	100.0
432.25 - 435.36	3.11	3.15	101.0
435.36 - 438.50	3.14	3.14	100.0
438.50 - 440.00	1.50	1.50	100.0
440.00 - 441.62	1.62	1.62	100.0
441.62 - 444.75	3.13	3.13	100.0
444.75 - 447.90	3.15	3.15	100.0
447.90 - 449.90	2.00	2.00	100.0
449.90 - 453.00	3.10	3.10	100.0
453.00 - 454.55	1.55	1.35	87.0
454.55 - 457.55	3.00	2.95	98.0
457.55 - 460.55	3.00	3.00	100.0
460.55 - 463.55	3.00	3.00	100.0
463.55 - 466.55	3.00	3.00	100.0
466.55 - 468.00	1.45	1.45	100.0
E.O.H.			

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. 300/8 Surface - Southern Orebody

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
13768	267	268	1.0	1.0	0.13			
13769	268	269	1.0	1.0	0.14			
13770	349	350	1.0	1.0	0.11			
13771	350	351	1.0	1.0	0.12			
13772	351	352	1.0	1.0	0.08			
13773	352	353	1.0	1.0	0.08			
13774	353	354	1.0	1.0	0.09			
13775	354	355	1.0	1.0	0.11			
13776	355	356	1.0	1.0	0.10			
13777	356	357	1.0	1.0	0.12			
13778	357	358	1.0	1.0	0.10			
13779	358	359	1.0	1.0	0.10			
13780	359	360	1.0	1.0	0.07			
13781	360	361	1.0	1.0	0.09			
13782	361	362	1.0	1.0	0.05			
13783	362	363	1.0	1.0	0.11			
13784	363	364	1.0	1.0	0.06			
13785	364	365	1.0	1.0	0.06			
13786	365	366	1.0	1.0	0.08			
13787	366	367	1.0	1.0	0.06			
13788	367	368	1.0	1.0	0.11			
13789	368	369	1.0	1.0	0.07			
13790	369	370	1.0	1.0	0.10			
13791	370	371	1.0	1.0	0.06			
13792	371	372	1.0	1.0	0.09			
13793	372	373	1.0	1.0	0.06			
13794	373	374	1.0	1.0	0.15			
13795	343	344	1.0	1.0	0.11			
13796	344	345	1.0	1.0	0.08			
13797	345	346	1.0	1.0	0.06			
13798	346	347	1.0	1.0	0.08			
13799	347	348	1.0	1.0	1.60			
13800	348	348	1.0	1.0	0.08			

SPECIFIC GRAVITY

Depth (metres):
Rock Type:
S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. 300/8 Surface - Southern Orebody.

SUMMARY:

0	- 73 m	Overburden and beach sand
73	- 328 m	Volcanics
328	- 373.5 m	Mine Series
373.5	- 468 m	Granite
E.O.H.		

LITHOLOGICAL LOG:

0 - 73 m Overburden and sand.

73 m - 328 m Volcanics.

73 m - 148 m Grey green, actinolite rich sequence with a mottled appearance. Mottling by possible sulphide spotting.

The upper 10 cm shows effects of weathering.

Jointing: 30 LCA
60 LCA

Some joints show a breccia infilling of angular to sub-rounded quartz pebbles and volcanic clasts in a siliceous matrix.

From 91 m to 97 m the core is badly decomposed. This appears to be an original breccia zone with matrix material now weathered to clay. The remaining clasts appear to be volcanic in origin.

The core is heavily fractured to 107 m.

There appears to be some textural change from a more sugary feel in the upper zone to a more fine grained sequence from 109.53 to 114 m.

At 117 m there is a 10 cm thick aplite showing a chilled margin as top contact and a brecciated contact on the bottom. The aplite is pink in colour and very fine grained.

At 118 m there is a major vein infilling.

Core is badly broken and decomposed from 119 m to 143 m.

Jointing angles remain constant throughout the sequence. The mica and chlorite content increases between 132 m and 134 m with the core being reduced to rubble.

148 149.7 m Very fine grained, highly siliceous grey green unit showing possible crude banding at 45 degrees LCA.

At 149.5 m there is a 1 cm thick, extremely fine grained aplite.

..../2

149.7 - 238 m Heavily fractured, spotted volcanics. The major jointing sub parallel to the long core axis.

The spotting (possibly sulphide rich) shows some preferred orientation at 60 degrees LCA.

Jointing:
30° LCA
45° LCA
50° LCA
60° LCA
80° LCA

Similar texture and composition to the upper sequence.

At 183.3 m there is a medium to coarse grained aplite. The aplite appears to have been backed.

238 - 280.55 Light grey, highly competent unit with regularly spaced jointing at 55 degrees LCA.

The unit is strongly banded and spotted with spotting showing a definite orientation of 45 - 50 degrees LCA.

250.55 - 253.55 Major joint parallel to LCA. Core is fractured and heavily brecciated.

A similar joint exists from 255.5 to 256.4 but shows no disturbance.

A series of 3 parallel joints at 50 degrees LCA from 258.5 to 290 have caused minor disturbance.

268 m Breccia zone with minor scheelite visible.

280.55 - 284 Blue grey podded unit.
Many of the pods contain calcite.
There is some crude banding evident.

284 - 328 m Volcanics with numerous small aplites at 309 m, 315 m and 323.5 m.

The same mottled appearance exists as in the upper parts of the sequence with some preferred orientation being shown.

Core is broken and heavily jointed from 304 m to 313.55 m.

The base of the sequence is very heavily fractured.

328 - 373.55 Mine Series

..../3

328 - 373.55 Banded biotite pyroxene hornfels.
A heavily jointed biotite rich unit with small pyroxene bands.
Jointing 70 LCA
30 LCA

335 - 337 m Volcanics.
A grey green actinolite rich unit with sulphide (mostly pyrite) along joint planes and finely disseminated throughout.

The upper and lower contacts are concordant with bedding in the biotite hornfels at 35 degrees LCA.

337 - 344 m Biotite pyroxene hornfels.
Similar to above.

344.349.5 Mineralised garnet pyroxene hornfels.
A strongly banded unit with alternating biotite pyroxene bands with bands of andradite skarn interspersed.

The mineralisation appears to be confined to the andradite bands.

The grade increases with depth.

349.5 - 351 Spotted hornfels.
A mottled grey green material with minor scheelite visible under U/V.

351 - 373.5 Marble.
A streaked blue grey marble showing marked variation with depth.
Banding becomes obvious at 363.0 m.
Minor scheelite is visible in the more heavily banded zones.
The unit is heavily fractured at 367 m with the major joint parallel to the LCA. Minor jointing is at 60^{o} LCA.

373.5 - 468 m Granite.
Fresh granite showing a typical chill margin on the upper contact.
Colour is pink/grey with large feldspar phenocrysts throughout.
Grain size is medium throughout.
There is major jointing at various intervals at 30 degrees LCA.
The feldspar content appears to increase in the vicinity of the joints.

E.O.H.

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D300/7

PLANNING

PROPOSER: R.E.S. Davies DEPTH: 90 m

LOCATION: T7 Cuddy - 240 m level.

PURPOSE OF HOLE: Test Southern orebody

PROPOSED CO-ORDS: 220 300 E 563 900 N

INCLINATION: - 65

BEARING: 270 °Grid °Mag

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 266°10' °Grid °Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 300.22 E 563 897.77 N

R.L. OF COLLAR: R - 237.43

INCLINATION OF HOLE: -63°52'

PICKED UP BY: R Howman DATE: 4.1.82

SUMMARY

LOGGED BY: Geoff Boagle

RESULTS: 57 - 62 m 5 m @ 0.74% WO_3
C Lens Coast ore block Southern orebody

DRILLING

DATE COMMENCED: 14.12.81 DATE TERMINATED: 14.1.82

DRILLER/CONTRACTOR: J. Archer / A.D.D.

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 73.3 m

REASON FOR TERMINATION: In Granite

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: M/S

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 300/7

Surveyed method: M.S.
Final depth:
Casing depth: 6 m

Depth surveyed to: 73 m
Date surveyed: 15.1.82
Surveyed by: I. Williams
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
19	265.30	S75.30W	25.30	154.30			
28	266.30	S76.30W	25.30	154.30			
37	266.30	S76.30W	25.30	154.30			
46	266.30	S76.30W	25.30	154.30			
55	268.30	S78.30W	25.30	154.30			
64	266.00	S76.00W	26.00	154.00			
73	267.00	S77.00W	26.00	154.00			

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D300/7

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
00.0 - 3.5	3.5	3.4	97
3.5 - 4.9	1.4	1.3	93
4.9 - 7.0	2.1	2.5	119
7.0 - 10.0	3.0	2.7	90
10.0 - 13.0	3.0	3.1	103
13.0 - 16.0	3.0	3.0	100
16.0 - 19.0	3.0	3.1	103
19.0 - 22.0	3.0	3.0	100
22.0 - 25.0	3.0	3.0	100
25.0 - 25.7	0.7	1.0	143
25.7 - 27.0	1.3	1.0	77
27.0 - 30.0	3.0	3.5	117
30.0 - 31.1	1.1	1.0	91
31.1 - 33.7	2.6	2.6	100
33.7 - 34.1	0.4	0.4	100
34.1 - 37.0	2.9	3.1	107
37.0 - 39.8	2.8	2.9	104
39.8 - 40.9	1.1	1.1	100
40.9 - 43.6	2.7	2.0	74
43.6 - 46.6	3.0	3.1	103
46.6 - 49.6	3.0	3.2	107
49.6 - 52.6	3.0	3.1	103
52.6 - 55.6	3.0	3.0	100
55.6 - 58.6	3.0	3.0	100
58.6 - 61.3	2.7	2.8	96
61.3 - 64.3	3.0	3.0	100
64.3 - 67.3	3.0	3.0	100
67.3 - 70.3	3.0	3.1	103
70.3 - 73.3	3.0	3.0	100
EOH 73.3 m			

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No.

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC-TURES /m	JOINT ANGLE (WRT/ LAOC)	JOINT FILLING	BEDDING ANGLE (W. R. T./ L. A.O.C.)	% CORE RECO-VERY	R. Q. D.	REMARKS (WEATHERING)
0.0 - 5.0m	gph							
5.0 - 19.2m	ch							
19.2 - 28.5m	bh/ph							
28.5 - 45.1m	bh							
45.1 - 55m	pgh							
55 - 59.1m	gh							
59.1 - 66.4m	Mixed skarn							
66.4 - 73.3m	granite							

FURTHER DATA & REMARKS

1. Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
2. R.Q.D. (rock quality designation) $+= \frac{\text{Length Core} > 10 \text{ cm}}{\text{Length Drilled}}$
3. Core size.

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D300/7

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13759	61	62	1.0	1.0	0.73			
13760	62	63	1.0	1.0	0.08			
13761	63	64	1.0	1.0	0.10			
13762	64	65	1.0	1.0	0.21			
13763	65	66	1.0	1.0	0.19			
13764	0	1	1.0	1.0	0.14			
13765	1	2	1.0	1.0	0.18			
13766	2	3	1.0	1.0	0.19			
13767	3	4	1.0	1.0	0.45			
13692	53	54	1.0	1.0	0.05			
13693	54	55	1.0	1.0	0.07			
13694	55	56	1.0	1.0	0.22			
13695	56	57	1.0	1.0	0.39			
13696	57	58	1.0	1.0	0.69			
13697	58	59	1.0	1.0	0.43			
13698	59	60	1.0	1.0	0.21			
13699	60	61	1.0	1.0	2.00			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D300/7

0.00 - 5.00 m GARNET PYROXENE HORNFELS

A well fractured rock unit with joints and faults running at all angles. There is a major fault at 4.6 m containing mud and breccia. Many areas show black metamorphic spotting; and some sections are rich in calcium. Generally the rock is dark to pale green where rich in pyroxene and black to grey where the rock resembles biotite hornfels.

The rock contains hard sections with cores up to 20 to 30 cm and weak areas where the rock is well broken up.

Bedding is 60° to LCA at 2 m.

5.00 - 19.2 MARBLE

Most of the rock unit has much calcium and quartz as veins and joints. Some areas have good actinolite needles such as at 11.5 m. Overall the rock is a black, grey white colour but in some pyroxene rich areas the rock is pale green.

There are no large faults but some of the twisted mineral replacement gives the rock a similar look to fault breccia. Towards the end of the rock unit the pyroxene content increases. This unit is quite hard with cores up to 40 cm long.

19.2 - 28.5 BIOTITE HORNFELS/PYROXENE HORNFELS

A well bedded rock unit with interchanging rock types of biotite hornfels and pyroxene hornfels. There is good metamorphic spotting and some areas are riddled with joints and veins of replacement minerals. There are large pheno crystals and calcite pods especially around the 22 m level. There is a large fault with much breccia associated with it from 25.4 to 25.7 m.

Around this there are many joint planes and sulphide replacement is obvious. As the rock unit ends, more and more biotite hornfels becomes dominant.

Bedding is 53° to LCA at 22 m
58° to LCA at 25 m

28.5 - 45.1 BIOTITE HORNFELS

Changing from biotite hornfels/pyroxene hornefels to biotite hornfels is gradual. Pyroxene beds are not common and overall the rock unit is black to grey.

There are a few slickensides at 30.4 to 31.4 m with many joints indicating a possible fault area. After 32 m there is a metre of clearly bedded rock consisting of wavery dark bands. There is more breccia at 33 m indicating a small fault. This also occurs at 34 m where it is followed by an aplite dyke. This dyke is ½ m long, medium grained with

28.5 - 45.1 m BIOTITE HORNFELS

strong contact points with the surrounding rock. There are several smaller dykes at 38.5 and 35.1 metres but these are only a few cm long.

After 37.6 m the biotite hornfels is clearly spotted and more massive and continues this way to 42.9 m. Another small fault occurs at 40.8 m and bedding in this area is quite hard to see. At 43.8 m the rock is heavily jointed with much calcium replacement. The unit finishes with small pods of calcite and the pyroxene content increasing.

The biotite hornfels is usually hard with cores up to 40 cm long. Some areas are weaker but this is due to the faults or joints.

Bedding is 74^{o} LCA at 32 m
78^{o} LCA at 32.5 m

45.1 - 55.0 PYROXENE GARNET HORNFELS

After ½ metre in this unit podding becomes dominant and the colour of the rock goes to a pale green. There is no major faulting, but some slickensides and joints are seen. Some areas are heavily replaced by sulphides and calcite. The pods range to the size of a tennis ball and mainly consist of calcite, sulphides, grossular garnets and pyroxene. Bedding is not clear but can be found in a few areas. The unit is fine grained and joint planes are often parallel to the bedding. This unit is weaker than the biotite hornfels with cores up to 30 cm.

Bedding is at 78^{o} to LCA at 47 m
52^{o} to LCA at 52 m

55.0 - 59.1 GARNET HORNFELS

It is typical garnet hornfels where there are large garnet crystals interspaced with calcite and some quartz. There are no major faults but several joints can be seen at 75^{o} to LCA at 56 m.

The rock is massive with no trace of bedding. The contact with pyroxene garnet hornfels is clear and easily recognised. The garnet hornfels is coarse grained and mineralized with areas up to 1% WO_3. The mineralization occurs for 4.1 m and marks the boundaries of the rock unit. Generally the rock is quite dark and there are some sulphides associated with the garnet. The rock unit is quite hard with cores of 20 to 30 cm being common.

59.1 - 66.4 MIXED SKARN

There is a marked reduction of mineralization otherwise the boundary with the garnet hornfels is hard to define.

GEOLOGICAL LOG

D.D.H. No.D300/7

59.1 - 66.4 The garnet isn't so common but there is plenty of calcite and quartz with skarny dark material. The rock is massive and ranges from dark to light colours. It is medium to coarse grained and some small areas consist of quartzite as one gets closer to the granite. There are some small faults and joints but nothing major. The unit is poorly mineralized but where it is mineralized it consits of large crystals. The rock is hard with cores up to 50 cm long.

66.4 0 73.3 GRASSY GRANITE

The adamellite is typical of the Grassy granite. The boundary is hard to define as the mixed skarn slowly comes into granite. Sections of the granite are finer grained where close to the estimated contact.

There are many joints mostly running at 44^{o} and 42^{o} to LCA throughout the granite. There is one section greatly eroded caused by fault movement or due to a cavity from 70.6 to 71.4 m. In this area calcite crystals have grown and oxidation is evident. The rock is very hard with cores up to 55 cm long.

EOH 73.3 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 300/6

PLANNING

PROPOSER: R. E. S. Davies DEPTH: 120 m

LOCATION: T7 -240 m level

PURPOSE OF HOLE: Test Southern Orebody

PROPOSED CO-ORDS: 220 300 E 563 900 N

INCLINATION: -70°

BEARING: 180° °Grid °Mag

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: NA °Grid °Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 301.35 E 563 897.83 N

R.L. OF COLLAR: -237.37

INCLINATION OF HOLE: NA

PICKED UP BY: R. Howman DATE: 4.1.82

SUMMARY

LOGGED BY: R. E. S. Davies

RESULTS: No Economic Mineralisation

DRILLING

DATE COMMENCED: 1.12.81 DATE TERMINATED: 20.12.81

DRILLER/CONTRACTOR: J. Archer/A.D.D.

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 106 m

REASON FOR TERMINATION: In Granite

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: M/S

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 300/6

Surveyed method: M/S
Final depth: 97 m
Casing depth: 1 m

Depth surveyed to: 94 m
Date surveyed: 10.12.81
Surveyed by: I. Williams
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
10	175.00	165.00	20.00	160.00			
25	174.30	164.30	19.30	160.30			
40	174.30	164.30	19.30	160.30			
55	175.00	165.00	19.00	161.00			
70	174.30	164.30	19.00	161.00			
85	175.00	165.00	19.00	161.00			
94	175.00	165.00	14.00	166.00			

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 300/6

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.2	3.2	3.2	100
3.2 - 6.5	3.3		97
6.5 - 8.6	2.1	2.1	100
8.6 - 10.7	2.1	2.1	100
10.7 - 11.6	0.9	0.9	100
11.6 - 13.7	2.1	2.1	100
13.7 - 14.1	0.4	0.4	100
14.1 - 16.1	2.0	2.0	100
16.1 - 18.2	2.1	2.1	100
18.2 - 20.3	2.1	2.1	100
20.3 - 22.4	2.1	2.1	100
22.4 - 24.5	2.1	2.1	100
24.5 - 26.6	2.1	2.1	100
26.6 - 28.7	2.1	2.1	100
28.7 - 31.4	2.7	2.7	100
31.4 - 33.5	2.1	2.1	100
33.5 - 36.2	2.7	2.7	100
36.2 - 37.6	1.4	1.4	100
37.6 - 40.3	2.7	2.7	100
40.3 - 43.3	3.0	3.0	100
43.3 - 46.3	3.0	3.0	100
46.3 - 50.0	3.7		81
50.0 - 52.7	2.7	2.7	100
52.7 - 55.4	2.7	2.7	100
55.4 - 58.1	2.7	2.7	100
58.1 - 60.8	2.7	2.7	100
60.8 - 61.7	0.9		194
61.7 - 63.7	2.0	2.0	100
63.7 - 65.5	1.8	1.8	100
65.5 - 67.0	1.5	1.5	100
67.0 - 69.7	2.7	2.7	100
69.7 - 71.2	1.5	1.5	100
71.2 - 74.0	2.8	2.8	100
74.0 - 76.6	2.6		104
76.6 - 79.3	2.7	2.7	100
79.3 - 81.1	1.8	1.8	100
81.1 - 83.8	2.7	2.7	100
83.8 - 86.0	2.2	2.2	100
86.0 - 88.66	2.66	2.66	100
88.66 - 91.3	2.64	2.64	100
91.3 - 94.0	2.7	2.7	100
94.0 - 97.0	3.0	3.0	100

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 300/6

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13665	38	39	1.0	1.0	0.28			
66	39	40	"	"	0.28			
67	40	41	"	"	0.17			

SPECIFIC GRAVITY

Depth (metres):
Rock Type:
S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 300/6

Summary

0.0 -	15.3 m	Garnet Pyroxene Hornfels
15.3 -	38.3 m	Marble
38.3 -	43.1 m	Garnet Pyroxene Hornfels
43.1 -	71.1 m	Biotite Hornfels
71.1 -	73.2 m	Aplite
73.2 -	87.0 m	Banded Footwall Beds
87.0 -	106.0 m	Granite

0.00 - 15.3 m GARNET PYROXENE HORNFELS

Intermixed unit of pyroxene hornfels, biotite hornfels, marble and garnet hornfels with rare scattered scheelite at 3.6 m, 6 m, 12 m, 15.2 m.

Ground is fairly fractured, core sticks range from 5 - 20 cm.

Bedding is @ 45^{o} to LCA @ 2 m
" 60^{o} " 9.8 m

15.3 - 38.3 MARBLE

Fresh pale grey unaltered marble, mostly good ground with 20 - 30 cm core sticks.

Some white, pugy decomposed marble occurs from 36 - 38 m.

The unit is unmineralised.

Bedding angles are at 25^{o} to LCA @ 29 m

38.3 - 43.1 GARNET PYROXENE HORNFELS

A khaki green to brown unit consisting of an almost equal mix of pyroxene hornfels and andradite garnet. The core is often cracked and is broken in places. Fine grained scheelite occurs from 38.8 to 39.5 m.

43.1 - 71.1 BIOTITE HORNFELS

Typical massive, homogeneous biotite hornfels. Although the first 7 m contains thin (1 - 2 cm) interbeds of pyroxene hornfels.

Aplite occurs from 58.1 - 59.0 m. The unit is heavily faulted notably at 61 - 62 m, 63.5 - 65 m, and 69.7 - 71.0 m. Where the core is severley fractured and extensive slickenslides are developed.

Short core fragments (around 5 cm) also occur at 45 - 46 m, 56.5 m, 65.5 - 67 m.

Bedding	is	@	45^{o}	to	LCA	@ 51.0 m
"			45^{o}		"	60.0 m
"			45^{o}		"	70.0 m

The fault zone at 64 m is severe and contains fragments of aplite in the rehealed fragments.

71.1 - 73.2 APLITE

Fine grained pink aplite, fairly fractured core from 5 - 15 cm long.

73.2 - 87.0 BANDED FOOTWALL BEDS

Essentially unmineralised banded footwall beds consisting mostly of pyroxene hornfels with subsidiary garnet hornfels and biotite hornfels, minor marble is present. Small amounts of scheelite are present in the unit at 73.6 - 74.8 m, 82.5 m.

The ground is fairly good, core sticks range from 10 - 60 cm, averaging 30 c.

Bedding	is	@	55^{o}	to	LCA	@ 82.8 m
"			40^{o}		"	80.0 m
"			30^{o}		"	85.0 m

87.0 - 106.0 GRANITE

Coarse grained mainly pink, good ground 40cm sticks.

EOH 106.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 300/5

PLANNING

PROPOSER: R. E. S. Davies DEPTH: 90 m

LOCATION: T7 Drill Cuddy -240 m

PURPOSE OF HOLE: Test S.O.B.

PROPOSED CO-ORDS: 220 300 E 563 900 N

INCLINATION: -50^{o}

BEARING: 180^{o} ^{o}Grid ^{o}Mag

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 177^{o} 49' ^{o}Grid ^{o}Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 301.4 E 563 897.2 N

R.L. OF COLLAR: 237.4

INCLINATION OF HOLE: -49^{o} 27'

PICKED UP BY: R. Howman DATE: 9/11/81

SUMMARY

LOGGED BY: R. E. S. Davies

RESULTS: 43 - 118 m, 5 m @ 0.71% WO_3
123 - 129 m, 6 m @ 0.88% WO_3 gh Coast Oreblock

DRILLING

DATE COMMENCED: 3/11/81 DATE TERMINATED: 30/11/81

DRILLER/CONTRACTOR: J. Archer/A.D.D.

CASING: SIZE:
DEPTH:

CORE: SIZE:
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 154.0 m

REASON FOR TERMINATION: Abandoned due to Fault zone grabbing rods.

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: No Survey

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D300/5

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.00 - 3.00	3.0	3.0	100
3.00 - 5.70	2.7	2.7	100
5.70 - 8.70	3.0	3.0	100
8.70 - 11.70	3.0	3.0	100
11.70 - 13.70	2.0	2.0	100
13.70 - 16.30	2.6	2.2	84.62
16.30 - 18.10	1.8	2.1	117
18.10 - 19.90	1.8	1.8	100
19.90 - 21.80	1.9	1.9	100
21.80 - 23.85	2.05	2.05	100
23.85 - 26.70	2.38	2.65	113
26.20 - 28.40	2.2	2.2	100
28.40 - 30.90	2.5	2.5	100
30.90 - 32.90	2.0	2.0	100
32.90 - 35.00	2.1	2.1	100
35.00 - 37.80	2.8	2.8	100
37.80 - 40.40	2.6	2.6	100
40.40 - 42.80	2.4	2.4	100
42.80 - 45.50	2.7	2.7	100
45.50 - 48.20	2.7	2.9	107
48.20 - 50.80	2.6	2.6	100
50.80 - 53.10	2.3	2.3	100
53.10 - 55.00	1.9	1.9	100
55.00 - 57.70	2.7	2.7	100
57.70 - 60.20	2.5	2.5	100
60.20 - 62.70	2.5	2.5	100
62.70 - 65.20	2.5	2.5	100
65.20 - 71.80	2.6	2.6	100
71.80 - 74.30	2.5	2.5	100
74.30 - 77.20	2.9	2.5	86
77.20 - 79.80	2.6	2.6	100
79.80 - 82.80	3.0	3.0	100
82.80 - 84.30	1.5	1.5	100
84.30 - 87.30	3.0	3.0	100
87.30 - 90.30	3.0	3.0	100
90.30 - 93.30	3.0	3.0	100
93.30 - 96.30	3.0	3.0	100
96.30 - 99.30	3.0	3.0	100
99.30 - 102.30	3.0	3.0	100
102.30 - 105.30	3.0	3.0	100
105.30 - 108.30	3.0	3.0	100
108.30 - 110.60	2.3	2.3	100
110.60 - 113.60	3.0	3.0	100
133.60 - 116.60	3.0	3.0	100
116.60 - 119.60	3.0	3.0	100
119.60 - 123.00	2.4	3.2	94
123.00 - 126.00	3.0	3.0	100
126.00 - 129.10	3.1	3.1	100
129.10 - 132.10	3.0	3.0	100
132.10 - 135.10	3.0	3.0	100
135.10 - 138.00	2.9	2.9	100

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D300/5

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
138.00 - 141.00 m	3.0	3.0	100
141.00 - 144.00	3.0	2.8	93
144.00 - 147.00	3.0	3.0	100
147.00 - 148.00	1.0	1.0	100
148.00 - 150.50	2.5	2.7	108
150.50 - 153.50	3.0	3.0	100
153.50 - 154.00	0.5	0.35	70
EOH 154.0 m			

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D300/5

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13633	18	19	1.0	1.0	0.31			
34	19	20	"	"	0.08			
35	89	90	"	"	0.22			
36	97	98	"	"	0.16			
37	98	99	"	"	0.14			
38	108	109	"	"	0.10			
39	109	110	"	"	0.08			
40	110	111	"	"	0.15			
41	111	112	"	"	0.06			
42	112	113	"	"	0.07			
43	113	114	"	"	0.89			
44	114	115	"	"	0.61			
45	115	116	"	"	0.94			
46	116	117	"	"	0.44			
47	117	118	"	"	0.65			
48	118	119	"	"	0.16			
49	119	120	"	"	0.13			
50	120	121	"	"	0.06			
51	121	122	"	"	0.06			
53	122	123	"	"	0.19			
54	123	124	"	"	1.5			
55	124	125	"	"	0.60			
56	125	126	"	"	0.39			
57	126	127	"	"	0.45			
58	127	128	"	"	0.73			
59	128	129	"	"	1.6			
60	129	130	"	"	0.18			
61	130	131	"	"	0.11			
62	131	132	"	"	0.10			
63	132	133	"	"	0.18			
64	153	154	"	"	0.20			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D300/5

Summary

0.0	-	14.7 m	Garnet pyroxene hornfels
14.7	-	57.7	Marble
57.7	-	86.3	Biotite Hornfels
86.3	-	100.0	Pyroxene garnet hornfels
100.0	-	103.3	Aplite
103.3	-	110.0	Pyroxene garnet hornfels
110.0	-	117.5	Garnet hornfels
117.5	-	120.0	Aplite
120.0	-	128.2	Garnet hornfels
128.2	-	133.0	Garnet pyroxene hornfels
133.0	-	154.0	Banded Footwall Beds

0.0 - 14.7 m GARNET PYROXENE HORNFELS

Mixed unit of garnet pyroxene hornfels representing the top unit of B Lens. Dominant rock type is pyroxene hornfels with subsidiary garnet hornfels (grossular) biotite hornfels and marble. Small amounts of scheelite are present in veins and rare disseminated crystals.

The ground is generally fairly broken with core sticks around 20 cm long.

Bedding is @	35°	to LCA @	1 m
"	30°	"	3 m
"	25°	"	12 m

14.7 - 57.7 MARBLE

Essentially a large, monotonous unit of fresh grey marble locally altered to pyroxene hornfels.

Bedding is usually well displayed and ground is generally good (30 cm core sticks).

Rare crystals of scheelite occur in the unit, and from 18 - 20 m is the highest density, but is still below ore grade.

A major fault occurs at 39 - 40.2 m with some core loss. The fault zone consists of puggy, soft and friable decomposed marble and pyroxene hornfels and had to be cemented during drilling.

Broken ground at 54 - 55 m may indicate another fault. This zone consist of angular fragments 2.5 cm diameter of biotite hornfels.

The top and bottom contacts of this unit are gradational.

Bedding is @	25°	to LCA @	17 m
"	35°	"	22 m
"	35°	"	26.4 m
"	40°	"	30 m
"	10°	"	41 m
"	20°	"	49 m
"	30°	"	52 m
"	40°	"	54 m
"	55°	"	56 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D300/5

57.7 - 86.3 m **BIOTITE HORNFELS**

Generally massive homogeneous biotite hornfels but cut by many fractures. From 57.7 to 64 m thin (1 - 2 cm) beds of pyroxene hornfels are interbedded with the unit. Aplite occurs from 67.5 - 70 m.

Broken or fractured core occurs at 59.5 - 60 m, 67 - 68 m, 73 - 77 m (1 - 10 cm fragments). The remainder of the core consists of 15 - 30 cm core sticks interspersed with sections of small 1 cm fragments and angular 5 cm pieces of core.

Overall this to quite a badly broken unit.

86.3 - 110.0 **PYROXENE GARNET HORNFELS**

Typical podded, mainly green pyroxene garnet hornfels. Ground generally good 30 - 40 cm sticks. Scheelite occurs rarely at 89 m and from 97 - 98.5 m, and around 108 m.

A coarse grained aplite occurs at 100 - 103.3 m.

Possible bedding is at 40^{o} to LCA @ 107 m

110.0 - 128.2 **GARNET HORNFELS**

A typical garnet hornfels in that it is fine grained and has a pale appearance. The first 2 m from 111 - 113 appears to be barren of scheelite. A fine grained aplite occurs from 110 - 111 m and from 117.5 - 120 m and has rather diffuse contacts.
Visible scheelite commences at 113 m but is very fine grained, The unit is mineralised to about 0.8% from here to the end, with a slight increase in grain size at ground 120 m.

The garnet hornfels has a pale, leached appearance at 121 - 122 m.

Initially to about 120 m the ground is fairly good with 30 m core sticks.

Shorter core sticks 10 - 15 cm occur from 120 to 123 m.

128.2 - 133.0 **GARNET PYROXENE HORNFELS**

A rather mixed unit that carries scheelite as large infre ent crystals associated with quartz. The background is pyroxene hornfels with fine grained garnet hornfels (andradite).

Ground is fairly good, 30 cm sticks.

Bedding is @ 30^{o} to LCA @ 132 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D300/5

133.0 - 154.0 m **BANDED FOOTWALL BEDS**

By no means a typical banded footwall beds, this unit consists of fractured and broken biotite hornfels interbedded with unmineralised fine grained andradite garnet hornfels with or increasing amount of feldspar with depth.

Severly broken ground accurs at 133 - 134 m, 136 - 137.5 m, 142 - 142.5 m, 146 - 148 m.

Thin Jasper bands 2 - 5 cm thick occurs in the last 2 m of the unit.

Bedding	is	@	25^{o}	to LCA	133.5 m
"			10^{o}	"	141 m
"			45^{o}	"	148 m

Some chalcopyrite is present in the last 4 m of the unit.

EOH 154.0 m

KING ISLAND SCHEELITE

TO: G. Brown

FROM: J. D. Todd 24th February, 1982

X-R-F Scan on Drill Core
Sample Dolphin No. 13 664

Heavy Elements

Major Ca, Fe, Mn,

Minor W, Zn, (Sn)

Trace Mo, (ni) Cu, Zn

Elements in brackets possible presence.

J. D. Todd

22.2.82

KING ISLAND SCHEELITE

TO: G. Brown

FROM: J. D. Todd 24th February, 1982

X-R-F Scan on Drill Core
Sample Dolphin No. 13 664

Heavy Elements

Major Ca, Fe, Mn,
Minor W, Zn, (Sn)
Trace Mo, (ni) Cu, Zn
Elements in brackets possible presence.

J. D. Todd

22.2.82

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 300/4

PLANNING

PROPOSER: R.E.S. Davies DEPTH: 90m

LOCATION: T7 Drill Cuddy -240m Level

PURPOSE OF HOLE: Test Southern Orebody

PROPOSED CO-ORDS: 220 300 E 563 900 N

INCLINATION: -35°

BEARING: 270° °Grid °Mag

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 269°53' °Grid °Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 299.1 E 563 897.8 N

R.L. OF COLLAR: 237.4

INCLINATION OF HOLE: -34°23'

PICKED UP BY: R. Howman DATE: 6.11.81

SUMMARY

LOGGED BY: R.E.S. Davies

RESULTS: 41-54m, 13m @ 0.98% WO_3 gh Coast Oreblock

DRILLING

DATE COMMENCED: 23.10.81 DATE TERMINATED: 31.10 81

DRILLER/CONTRACTOR: J. Archer / A.D.D.

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH: 88

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 88m

REASON FOR TERMINATION: In Granite

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: M/S

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 300/4

Surveyed method: Multishot
Final depth: 88.0 m
Casing depth: 1.5

Depth surveyed to: 88.0
Date surveyed: 29.10.81
Surveyed by: R. Drake
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
0.0	269.88			124.38			
10.0	266.25	256°15'	55°	125.00	5.65		
19.0	267.25	257°15'	55°	125.00	10.81		
28.0	267.00	257°	55°	125.00	15.97		
37.0	267.00	257°	55°	125.00	21.13		
46.0	267.00	257°	55°	125.00	26.30		
55.0	267.00	257°	55°	125.00	31.46		
64.0	267.00	257°	55°	125.00	36.62		
73.0	274.00	264°	55°	125.00	41.78		
82.0	267.50	257°30	54°45'	125.00	46.94		
88.0	267.50	257°30	55°	125.00	50.41		

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 300/4

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 8.0	8.0	8.0	100
8.0 - 11.0	3.0	3.0	100
11.0 - 14.0	3.0	3.0	100
14.0 - 17.0	3.0	3.0	100
17.0 - 20.0	3.0	3.0	100
20.0 - 23.0	3.0	3.0	100
23.0 - 26.0	3.0	3.0	100
26.0 - 29.0	3.0	2.7	
29.0 - 32.0	3.0	3.0	100
32.0 - 34.6	2.6	2.0	77
34.6 - 37.6	3.0	2.8	93
37.6 - 40.6	3.0	3.0	100
40.6 - 43.6	3.0	3.0	100
43.6 - 46.6	3.0	3.0	100
46.6 - 49.6	3.0	3.0	100
59.6 - 52.6	3.0	3.0	100
52.6 - 55.6	3.0	3.0	100
55.6 - 58.6	3.0	3.0	100
58.6 - 61.4	2.8	2.8	100
61.4 - 64.4	3.0	3.0	100
64.4 - 67.4	3.0	3.0	100
67.4 - 70.4	3.0	3.0	100
70.4 - 73.4	3.0	3.0	100
73.4 - 76.4	3.0	3.0	100
76.4 - 79.4	3.0	3.0	100
79.4 - 82.4	3.0	3.0	100
82.4 - 85.3	2.9	2.9	100
85.3 - 88.0	2.7	2.7	100
EOH 88.0 m			

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 300/4

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13616	40	41	1.0	1.0	0.20			
17	41	42	"	"	0.92			
18	42	42	"	"	1.70			
19	43	44	"	"	2.10			
20	44	45	"	"	1.10			
21	45	46	"	"	1.20			
22	46	47	"	"	1.05			
23	47	48	"	"	1.00			
24	48	49	"	"	0.72			
25	49	50	"	"	0.62			
26	50	51	"	"	0.70			
27	51	52	"	"	0.48			
28	52	53	"	"	0.82			
29	53	54	"	"	0.33			
30	71	72	"	"	0.22			
31	72	73	"	"	0.05			
32	73	74	"	"	0.50			

SPECIFIC GRAVITY

Depth (metres):
Rock Type:
S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 300/4

Summary

0.0 - 17.3 m	Marble
17.3 - 22.1 m	Biotite Hornfels/Pyroxene Hornfels
22.1 - 41.2 m	Biotite Hornfels
41.2 - 53.5 m	Garnet Hornfels
53.5 - 84.3 m	Banded Footwall Beds
84.3 - 88.0 m	Granite

0.0 - 17.3 m B LENS MARBLE

Mostly a fresh grey, occasionaly bedded Marble. Pyroxene hornfels and minor garnet hornfels with rare scheelite occurs from 0.0 - 3.0 m and pyroxene hornfels alteration is present from 16 .0 - 17.3 m.

Minor amounts of scheelite are also present at 11.8 m.

The ground is moderate, core sticks range from 5 - 30 cm.

Bedding	is @	65°	to	LCA @	3.0 m
"		55°m		"	7.0 m
"		45°		"	11.0 m
"		30°		"	14.7 m

17.3 - 22.1 BIOTITE HORNFELS/PYROXENE HORNFELS

Interbedded and intermixed biotite hornfels and pyroxene hornfels with biotite hornfels > pyroxene hornfels. Pyroxene hornfels occurs as thin 1 - 5 cm beds and is occasionally associated with grossular garnet.

Ground is moderate, 10 - 30 cm sticks.

Bedding	is @	85°	to	LCA @	18.0 m
"		80		"	22.0 m

22.1 - 41.2 BIOTITE HORNFELS

This unit is badly broken throughout most of its length. The rock is a typical fine grained, black massive biotite hornfels but is rarely present in lengths greater than 20 cm.

Most partings have a coarse lining of chlorite. Thin aplites occur at 30.1 - 30.6 m, 38.2 - 38.6 m.

Particularly broken core occurs at 25 - 25.5 m, 27.7 - 28.5 m and 32 - 36.6 m.

Fragments in breccia zones are angular and generally 5 cm diameter. Gravel and clay is only present at 28 m in small amounts.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 300/4

The last 1.5 m shows some pyroxene hornfels and minor grossular developed probably indicating the hangingwall of the pyroxene garnet hornfels.

Bedding in this section is at 50° to LCA.

Broken core seperates this unit from the next and is a faulted contact.

41.2 - 53.5 GARNET HORNFELS

Competant well mineralised (0.9% WO_3) khaki green to brown andradite and pyroxene skarn.

Core sticks average 40 cm.

Top contact is faulted, the bottom is stratigraphic.

53.5 - 84.3 BANDED FOOTWALL BEDS (MINERALISED)

A well bedded unit is dominatly marble with minor pyroxene hornfels for the first 10 m carrying only a trace of scheelite. Followed by a mixture of interbedded, biotite hornfels, pyroxene hornfels, and grossular garnet which locally carries scheelite.

Mineralised intervals are 67.6 - 69.8, 70.2 - 74.7 m.

The first 1.7 m of the unit, 53.5 - 55.2 m consists of rather fractured biotite hornfels and pyroxene hornfels and probably represents the marble marker.

Ground is fairly good throughout with 20 - 30 cm sticks.

Bedding	is @	40°	to	LCA @	55.8 m
"		45°		"	63.0 m
"		55°		"	67.5 m
"		65°		"	77.0 m
"		50°		"	84.0 m

At 74 m is a good example of a thin aplite being absorbed into the footwall beds as a random feature with diffused contacts. It appears to alter beds of pyroxene hornfels or original marble to an "albitite".

84.3 - 88.0 GRANITE

Pink moderate grain size, recrystallised granite, fairly well jointed 15 cm sticks.

EOH 88.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D300/3

PLANNING

PROPOSER: R. E. S. Davies DEPTH: 65 m

LOCATION: T7 Drill Cuddy -240 m level

PURPOSE OF HOLE: Test Southern Orebody

PROPOSED CO-ORDS: 220 300 E 563 900 N

INCLINATION: -90°

BEARING: °Grid °Mag

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 0° °Grid °Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 300.8 E 563 897.7 N

R.L. OF COLLAR: 237.4

INCLINATION OF HOLE: -90°

PICKED UP BY: R. Howman DATE: 6.11.81

SUMMARY

LOGGED BY: R. E. S. Davies

RESULTS: 31 - 34 m 3 m @ 0.50% WO_3 B Lens Southern

DRILLING

DATE COMMENCED: 15.10.81 DATE TERMINATED: 23.10.81

DRILLER/CONTRACTOR: J. Archer/A.D.D.

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 75.6 m

REASON FOR TERMINATION: In Granite

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: M/S

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D300/3

Surveyed method: Multishot
Final depth: 75.6 m
Casing depth: 1.0 m

Depth surveyed to: 75.0
Date surveyed: 23/10/81
Surveyed by: C. O'Brien
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
0.0	180.00			180.00			
10.0	173.50	163° 30'	3°	177.00	10.0		
19.0	176.00	166°	3°	177.00	18.99		
28.0	176.00	166°	3°	177.00	27.98		
37.0	178.00	168°	3°	177.00	36.96		
46.0	178.00	168°	3°	177.00	45.95		
55.0	179.50	169° 30'	3°	177.00	54.94		
64.0	179.00	169°	3°	177.00	63.93		
75.0	180.00	170°	3°	177.00	74.91		
EOH							

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D300/3

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 4.4 m	4.4	4.0	91
4.4 - 6.6	2.2	2.2	100
6.6 - 9.0	2.4	2.0	83
9.0 - 12.0	3.0	3.0	100
12.0 - 15.0	3.0	3.0	100
15.0 - 18.0	3.0	3.0	100
18.0 - 20.1	2.1	2.1	100
20.1 - 22.5	2.4	2.4	100
22.5 - 25.5	3.0	3.0	100
25.5 - 28.5	3.0	3.0	100
28.5 - 31.5	3.0	3.0	100
31.5 - 34.5	3.0	3.0	100
34.5 - 37.1	2.6	2.6	100
37.1 - 39.6	2.5	2.5	100
39.5 - 42.1	2.5	2.5	100
42.1 - 45.1	3.0	2.8	93
45.1 - 48.1	3.0	3.0	100
48.1 - 51.1	3.0	3.0	100
51.1 - 54.1	3.0	3.0	100
54.1 - 57.1	3.0	3.0	100
57.1 - 60.1	3.0	3.0	100
60.1 - 63.1	3.0	3.0	100
63.1 - 66.1	3.0	3.0	100
66.1 - 69.1	3.0	3.0	100
69.1 - 72.0	2.9	2,9	100
72.0 - 75.0	3.0	3.0	100
75.0 - 75.6	0.6	0,6	100
EOH			

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D300/3

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13594	0	1	1.0	1.0	0.26			
95	1	2	"	"	0.15			
96	2	3	"	"	0.98			
97	5	6	"	"	1.14			
98	17	18	"	"	0.14			
99	18	19	"	"	0.13			
600	19	20	"	"	0.40			
13	31	32	"	"	0.46			
14	32	33	"	"	0.42			
15	33	34	"	"	0.62			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D300/3

Summary

0.0 - 6.6 m	Garnet pyroxene hornfels
6.6 - 36.5 m	Marble
36.5 - 42.0 m	Biotite hornfels/pyroxene hornfels
42.0 - 53.9 m	Biotite hornfels
53.9 - 54.8 m	Biotite hornfels/pyroxene hornfels
54.8 - 58.0 m	Aplite
58.0 - 67.2 m	Biotite pyroxene hornfels
67.2 - 75.6 m	Granite

0.0 - 6.6 m GARNET PYROXENE HORNFELS

Mixed unit of garnet hornfels and pyroxene hornfels with minor marble and rare grossular garnet.

Scattered subgrade scheelite is present.

The core is fairly fractured, most sticks being 5 - 15 cm long.

Bedding	is @	40^{o}	to	LCA @	2.5 m
"		30^{o}		"	5 m

6.6 - 36.5 MARBLE

A large unit consisting almost entirely of fresh grey marble but contains many sections of partly decomposed marble. The first 50cm of the unit is very broken (2 - 5 cm fragments) and is partly decomposed.

The bulk of the rock is moderatley competant with 20 cm sticks.

Poorly mineralised intervals of garnet pyroxene hornfels occur at 17 - 19.3 m and 30.7 - 34 m. From 35 m on the unit is dominantly pyroxene hornfels.

Well developed slickenslides in a biotite hornfels unit from 18 - 20 m in an area of broken core indicates a significant fault.

Bedding	is at	35^{o}	to	LCA @	12 m
"		40^{o}		"	15 m
"		40^{o}		"	29 m

36.5 - 42.0 BIOTITE HORNFELS/PYROXENE HORNFELS

Interbedded, unit of biotite hornfels with subsidiary pyroxene hornfels and minor garnet hornfels. It is unmineralised.

Ground is good, 10 - 30 cm sticks.

Bedding is @ 60^{o} to LCA 41 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D300/3

42.0 - 53.9 m **BIOTITE HORNFELS**

Mostly a massive homogeneous fine grained biotite hornfels. Ground is good 40 - 50 cm sticks apart from the interval 42 - 44.3 m where core is broken and occurs as 10 cm sticks.

An aplite occurs from 45.9 - 47.0 m

53.9 - 54.8 **BIOTITE HORNFELS/PYROXENE HORNFELS**

A continuation of the previous unit but with well developed.

Bedding at 60° to LCA

54.8 - 58.0 **APLITE**

Fine grained pink, re-crystallised aplite. 20 cm sticks.

58.0 - 67.2 **BIOTITE PYROXENE HORNFELS**

A well bedded but badly broken ground with biotite hornfels pyroxene hornfels and much cc veining. Some grossular garnet is erratically distributed through the unit.

Core sticks are rarely greater than 10 cm, breaks being on bedding planes and on chlorite lined fracture planes.

Bedding	is	@	50°	LCA	@ 58.5 m
"			75°	"	59.5 m
"			40°	"	61.0 m
"			45°	"	63.0 m
"			60°	"	66.0 m

The unit closely resembles, and probably is the biotite pyroxene hornfels footwall beds, and is seperated from the biotite hornfels above by the Central Fault, locally intruded in the drill core by the aplite dyke.

67.2 - 75.6 **GRANITE**

Coarse grained, mostly cream to pale pink granite with abundant feldspars.

Good ground 40 cm sticks.

EOH. 75.6 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 300/2

PLANNING

PROPOSER: R. E. S. Davies DEPTH: 70 m

LOCATION: S9 -240 m level

PURPOSE OF HOLE: Test Lower Central Orebody

PROPOSED CO-ORDS: 220 291 E 563 950 N

INCLINATION: -31°

BEARING: 270 °Grid °Mag

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 269° 55' °Grid °Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 563 949.9 N 220 289.4 E

R.L. OF COLLAR: -241.3

INCLINATION OF HOLE: 121° 08'

PICKED UP BY: J. Cook DATE: 10/4/81

SUMMARY

LOGGED BY: R. E. S. Davies

RESULTS: 21 - 30 m, 9 m @ 0.71% WO_3 Lower Central

DRILLING

DATE COMMENCED: 4/4/81 DATE TERMINATED: 22/4/81

DRILLER/CONTRACTOR: W. Gilligan/K.I.S.

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH: 70.5

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 70.5 m

REASON FOR TERMINATION: Hit granite

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: S/S

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 300/2

Surveyed method: Single shot
Final depth: 70.5 m
Casing depth: Nil

Depth surveyed to: 70.5 m
Date surveyed: 22/4/81
Surveyed by: R. Drake
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
0.00	269° 55'			121° 08'			
35.0	269° 00'	S79° W	57° 45'	122° 15'	18.07		
70.5	267° 00'	S77° W	57° 45'	122° 15'	37.01		

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 300/2

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 0.7 m	0.7	0.1	14
0.7 - 1.5	0.8	0.3	38
1.5 - 2.2	0.7	0.4	57
2.2 - 5.0	2.8	2.7	96
5.0 - 8.0	3.0	3.0	100
8.0 - 10.2	2.2	2.2	100
10.2 - 12.9	2.7	2.7	100
12.9 - 13.8	0.9	0.8	89
13.8 - 14.6	0.8	0.7	88
14.6 - 16.7	2.1	2.1	100
16.7 - 17.0	0.3	0.3	100
17.0 - 20.0	3.0	3.0	100
20.0 - 20.4	0.4	0.4	100
20.4 - 23.2	2.8	2.8	100
23.2 - 26.2	3.0	3.0	100
26.2 - 29.1	2.9	2.9	100
29.1 - 31.8	2.7	2.7	100
31.8 - 32.4	0.6	0.5	83
32.4 - 34.4	2.0	2.0	100
34.4 - 34.7	0.3	0.1	33
34.7 - 35.6	0.9	0.8	89
35.6 - 37.2	1.6	1.5	94
37.2 - 39.2	2.0	2.0	100
39.2 - 41.3	2.1	2.1	100
41.3 - 44.3	3.0	3.0	100
44.3 - 47.3	3.0	3.0	100
47.3 - 49.7	2.4	2.0	83
49.7 - 51.7	2.0	2.0	100
51.7 - 54.7	3.0	3.0	100
54.7 - 57.7	3.0	3.0	100
57.7 - 60.7	3.0	3.0	100
60.7 - 63.6	2.9	2.9	100
63.6 - 65.5	1.9	1.7	89
65.5 - 68.5	3.0	3.0	100
68.5 - 69.6	1.1	1.9	82
69.6 - 70.5	0.9	0.7	88
EOH 70.5 m			

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. D 300/2

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC-TURES /m	JOINT ANGLE (WRT/ LAOC)	JOINT FILLING	BEDDING ANGLE (W R T/ L A O C)	% CORE RECO-VERY	R Q D	REMARKS (WEATHERING)
0.0 - 12.8	bph	7					53	
12.8 - 14.0	Fault	15					0	
14.0 - 20.2	bh	6					42	
20.2 - 26.0	Pgh	5					64	
26.0 - 31.3	gh	5					45	
31.3 - 37.2	m/m	10					36	
37.2 - 42.0	gh (b)	4					79	
42.0 - 46.0	bph	8					60	
46.0 - 49.5	Ap	15					14	
49.5 - 68.6	bph	12					64	
68.6 - 70.5	Gr	8					52	

FURTHER DATA & REMARKS

1. Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
2. R.Q.D. (rock quality designation) $= \frac{\text{Length Core} > 10 \text{ cm}}{\text{Length Drilled}}$
3. Core size.

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 300/2

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13169	1	2	1.0	1.0	0.15			
70	2	3	"	"	0.62			
71	5	6	"	"	0.18			
72	6	7	"	"	0.16			
73	7	8	"	"	0.16			
74	8	9	"	"	0.16			
75	9	10	"	"	0.11			
76	10	11	"	"	0.13			
77	19	20	"	"	0.15			
78	20	21	"	"	0.13			
79	21	22	"	"	0.35			
80	22	23	"	"	1.06			
81	23	24	"	"	0.50			
82	24	25	"	"	0.40			
83	25	26	"	"	0.64			
84	26	27	"	"	0.37			
85	27	28	"	"	1.25			
86	28	29	"	"	1.03			
87	29	30	"	"	0.75			
88	30	31	"	"	0.03			
89	31	32	"	"	0.16			
90	32	33	"	"	0.14			
91	33	34	"	"	0.16			
92	34	35	"	"	0.14			
93	35	36	"	"	0.14			
94	36	37	"	"	0.15			
95	37	38	"	"	0.13			
96	38	39	"	"	0.07			
97	39	40	"	"	0.26			
98	40	41	"	"	0.20			
99	41	42	"	"	0.19			
200	42	43	"	"	0.07			

SPECIFIC GRAVITY

Depth (metres):
Rock Type:
S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 300/2

Summary

0.0 - 12.8	pgh
12.8 - 14.0	Fault
14.0 - 20.2	bh
20.2 - 26.0	pgh
26.0 - 31.3	gh
31.3 - 37.2	m/m
37.2 - 42.0	gh (b)
42.0 - 46.0	bph
46.0 - 49.5	ap
49.5 - 68.6	bph
68.6 - 70.5	gr

0.0 - 12.8 m GARNET PYROXENE HORNFELS

Fairly homogeneous dominantly pyroxene hornfels rock. Garnet hornfels present at 2 - 3 m are from 5.5 to 11 m and hence is poorly mineralised. The rock is generally competant but has a fairly high number of partings.

A small fault occurs at 10.2 m

Bedding	is @	44^{o}	to LCA	2.2 m
"		60		6.0 m
"		33		9.6

A rehealed breccia occurs at 12.2 - 12.4 m

12.8 - 14.0 FAULT

A region of broken core, consisting of angular, fragments of biotite hornfels, with chlorite slickenslides on broken faces. Most fragments are 5 - 10 cm long.

14.0 - 20.2 BIOTITE HORNFELS

A well bedded biotite hornfels dominant unit but with thin 2 mm interbeds of pyroxene hornfels.

Partings are fairly frequent. Aplite occurs from 14.9 to 15.2 m

Bedding	is @	50^{o}	to LCA @	15.7 m
"		60		17.7 m
"		50		20.0 m

20.2 - 26.0 PYROXENE GARNET HORNFELS

Poorly mineralised pyroxene garent hornfels, almost certainly subgrade. Generally good competant ground except for some fracturing at the top contact.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 300/2

26.0 - 31.3 m GARNET HORNFELS

Coarse grained, well mineralised (>1.0% WO_3). Khaki brown andradite garnet skarn.

This unit appears to be quite well fractured with breaks approximately every 10 - 15 cm.

31.3 - 37.2 MARBLE MARKER

Mostly barren well fractured biotite hornfels, almost fault like at 34 - 35 m. The section below that is sparsely mineralised pyroxene hornfels, fairly competant to 36 m but broken biotite hornfels/pyroxene hornfels to the base of the unit.

The first part of the unit is a biotite hornfels and pyroxene hornfels interbedded with a feldspar rich altered/ marble. This section is barren.

Bedding	is	@	65°	to LCA	@ 32.8 m
"			40		33.8 m

37.2 - 42.0 BANDED GARNET HORNFELS

This section is poorly mineraised and is probably sub grade. It consists of a few thick layers (30 cm) of poorly replaced marble - now consisting of pyroxene hornfels and andradite garnet but fine grained. These beds are interbedded with biotite hornfels and pyroxene hornfels units.

Bedding	is	@	55°	to LCA	@ 38.7 m
"			55		40.0 m

42.0 - 68.6 BIOTITE PYROXENE HORNFELS

Well bedded unit of biotite hornfels and pyroxene hornfels partings are fairly frequent, length of core vary from 2 cm to 40 cm, 25 cm being typical.

An aplite occurs from 45 - 49 m.

Rare scheelite is present in thin grossular garnet beds @ 59 - 63 m.

Fractured core is present @ 62.5 - 63 m, 65.5 m and @ 68 m.

Bedding	is	@	50°	to LCA	@ 44 m
"			60		53.5
"			60		61
"			55		67

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 300/2

68.6 - 70.5 GRANITE

This unit is taken to be the granite although it is fine grained and well fractured.

Calcite and a small browny red crystal are present on joint surfaces.

EOH 70.5 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 300/1

PLANNING

PROPOSER: R. E. S. Davies DEPTH: 45 m

LOCATION: S9 -240 m level

PURPOSE OF HOLE: Test Lower Central Orebody

PROPOSED CO-ORDS: 220 291 E 563 950 N

INCLINATION: 0°

BEARING: 270° $^{\circ}$GRID $^{\circ}$MAG

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 270° 06' $^{\circ}$GRID $^{\circ}$MAG

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 289.4 E 563 949.9 N

R.L. OF COLLAR: 240.2

INCLINATION OF HOLE: $+1^{\circ}$ 01'

PICKED UP BY: R. Howman DATE: 16/3/81

SUMMARY

LOGGED BY: I. Hart

RESULTS: 29 - 42 m, 13 m @ 1.05% WO_3 gh Lower Central

DRILLING

DATE COMMENCED: 22/3/81 DATE TERMINATED: 2/4/81

DRILLER/CONTRACTOR: W. Gilligan/K.I.S.

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 48.1 m

REASON FOR TERMINATION: Hit Wedge Fault

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: S/S

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 300/1

Surveyed method: Single shot
Final depth: 48.6 m
Casing depth: Nil

Depth surveyed to: 48.6 m
Date surveyed: 22/4/81
Surveyed by: R. Drake
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.		W	N
0.0	270° 06'			+1° 01'	0.00	0.00	0.00
48.6	266° 30'	S76° 30'W	90°	0°	0.87	48.59	0.00

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 300/1

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 0.2	0.2	0.2	100
0.2 - 0.5	0.3	0.1	33
0.5 - 0.7	0.2	0.1	50
0.7 - 1.2	0.5	0.5	100
1.2 - 2.6	1.4	0.8	57
2.6 - 3.5	0.9	0.9	100
3.5 - 4.5	1.0	1.0	100
4.5 - 5.5	1.0	1.1	110
5.5 - 6.5	1.0	1.1	110
6.5 - 8.7	2.2	2.15	98
8.7 - 10.2	1.5	.15	100
10.2 - 11.5	1.3	1.3	100
11.5 - 14.7	3.2	3.2	100
14.7 - 17.5	2.8	2. 7	96
17.5 - 19.3	1.8	1.8	100
19.3 - 22.1	2.8	2.8	100
22.1 - 25.1	3.0	3.0	100
25.1 - 27.8	2.7	1.5	56
27.8 - 28.3	0.5	0.3	60
28.3 - 29.4	1.1	1.05	95
29.4 - 31.6	2.2	2.15	98
31.6 - 32.1	0.5	0.5	100
32.1 - 35.0	2.9	2.9	100
35.0 - 36.4	1.4	1.3	93
36.4 - 36.9	0.5	1.0	200
36.9 - 39.9	3.0	3.0	100
39.9 - 41.5	1.6	.15	94
41.5 - 44.5	3.0	2.95	98
44.5 - 46.7	2.2	2.05	93
46.7 - 48.1	1.4	1.4	100
EOH 48.1 m			

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. D 300/1

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC-TURES /m	JOINT ANGLE (WRT/ LAOC)	JOINT FILLING	BEDDING ANGLE (W. R. T./ L. A. O. C.)	% CORE RECO-VERY	R. Q. D.	REMARKS (WEATHERING)
0.0 - 6.2	bph	12- 20		cc		90	39	
6.2 - 14.7	bh	4- 20		chl/cc		95	59	
14.7 - 29.4	pgh	1- 20		chl/cc		98	69	
29.4 - 48.1	gh	6- 20		chl/cc		90	61	

FURTHER DATA & REMARKS

1. Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
2. R.Q.D. (rock quality designation) += $\frac{\text{Length Core} > 10 \text{ cm}}{\text{Length Drilled}}$
3. Core size.

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 300/1

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13132	4	5	1.0	1.0	0.19			
33	5	6	"	"	0.09			
34	6	7	"	"	0.07			
45	19	20	"	"	0.39			
36	20	21	"	"	0.23			
37	21	22	"	"	0.17			
38	22	23	"	"	0.24			
39	23	24	"	"	0.14			
40	24	25	"	"	0.13			
41	25	26	"	"	0.16			
42	26	27	"	"	0.19			
43	27	28	"	"	0.27			
44	28	29	"	"	0.09			
45	29	30	"	"	1.04			
46	30	31	"	"	0.83			
47	31	32	"	"	0.45			
48	32	33	"	"	0.64			
49	33	34	"	"	0.88			
50	34	35	"	"	0.85			
51	35	36	"	"	0.77			
52	36	37	"	"	0.54			
53	37	38	"	"	7.0			
54	38	39	"	"	1.9			
55	39	40	"	"	0.69			
56	40	41	"	"	0.56			
57	41	42	"	"	0.44			
58	42	43	"	"	0.20			
59	43	44	"	"	0.15			
60	44	45	"	"	0.04			
61	45	46	"	"	0.02			
62	46	47	"	"	0.02			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 300/1

Summary

0.0 - 6.2 m	bph
6.2 - 14.7	bh
14.7 - 29.4	pgh
29.4 - 48.1	gh

0.0 - 6.2 m **BIOTITE PYROXENE HORNFELS**

Essentially a fine grained greenish rock consisting of pyroxene, ferromags and carbonate. Calcite as numeous irregular veins intersected by later chlorite veinlets, often sub-parrallel to bedding.

Sulphides (pyrite) occasionally developed on shear planes. Unmineralised.

Bedding is @ 20° to LCA @ 3.2 m

Fault, possibly Central @ 6.2 m

6.2 - 14.7 **BIOTITE HORNFELS**

Unmineralised very fine grained biotite rich hornfels showing little or no primary features irregular calcite veinlets weakly developed but chlorite veins occasionally developed parallel to direction of major shearing and or shear planes.

14.7 - 29.4 **PYROXENE GARNET HORNFELS**

Unmineralised pyroxene garnet hornfels to 19.4 m with calcareous Nodules varying from 0.5 cm to 5 cm in diameter. Rock is of a green-brown colouration with some grossularite garnet. Some nodules display a "reaction" rim of garnet?

Most obvious textural feature is nodules with little or no strongly developed veining. Scheelite mineralisation from 19.4 as large crystals and disseminations in the ground mass.

Rock appears more chloritic/diopsidic in the mineralised portion and is intensely sheared and brecciated from 26.0 - 28.3 m

29.4 - 48.1 **GARNET HORNFELS**

Essentially green-brown garnet hornfels consisting of black andradite garnet in a matrix of chlorite and carbonate.

Scheelite mineralisation present as disseminated crystals 2 mm in diameter and discontinues at about 45.1 m average grade for unit is 0.7%.

The core is generally competant with minor shears indicated by occasional pug zones common in the latter half of the unit.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 300/1

Veining is limited in the form of irregular fine chlorite veins with the occasional occurrence of calcite veins up to 1.5 cm in width.

After 42.5 m garnet hornfels becomes increasingly leached with pug zones 44.4 - 44.5 m and 45.9 - 46.7 m indicative of proximity to Wedge Fault.