

GEOLOGY - KING ISLAND SCHEELITELOG OF D.D.H. No. D 160/22

PLANNING PROPOSER: R. E. S. Davies DEPTH: 110 m
 LOCATION: L6 Diamond Drill Drive
 PURPOSE OF HOLE: Test Southern Orebody and Granite Contact
 PROPOSED CO-ORDS: 220 160 E 563 850 N
 INCLINATION: -45°
 BEARING: 180° $^{\circ}$ Grid $^{\circ}$ Mag
 TARGET: E N
 DEPTH:
 CHECKED BY: DATE:

SURVEY SURVEY CO-ORDS: E N
 SURVEYED BEARING: $179^{\circ} 49'$ $^{\circ}$ Grid $^{\circ}$ Mag
 SURVEYED IN BY: DATE:
 ACTUAL CO-ORDS: 220 159.37 E 563 850.75 N
 R.L. OF COLLAR: 205.5 m
 INCLINATION OF HOLE: $-44^{\circ} 16'$
 PICKED UP BY: R. Howman DATE: 21/7/81

SUMMARY LOGGED BY: R. E. S. Davies
 RESULTS: 88 - 131 m, 43 m @ 0.72% WO_3 C Lens S.O.B.

DRILLING DATE COMMENCED: 15.7.81 DATE TERMINATED: 3.8.81
 DRILLER/CONTRACTOR: S. Batchelor/A.D.D.
 CASING: SIZE:
 DEPTH:
 CORE: SIZE: 46TT
 DEPTH:
 WEDGE PLACED: DEPTH: PROPOSER:
 EXTENSION:
 FINAL DEPTH: 151 m
 REASON FOR TERMINATION: Sufficient depth of granite
 CONDITION OF HOLE ON COMPLETION:
 CASING:
 CEMENTED:
 BORE HOLE SURVEY: M/S
 WATER:
 COMMENTS ON DRILLING CONDITIONS:

SUMMARY BORE HOLE SURVEY DATA

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Surveyed method: Multishot
 Final depth: 151.0 m
 Casing depth: 1.0 m

Depth surveyed to: 151.0 m
 Date surveyed: 3/8/81
 Surveyed by: c. O'Brien
 Checked by:

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.			
0.0	179.82			-44.27	0.0		
10.0	181.00	S9° E	-46.00	-44.00	7.0		
19.0	181.00	S9° E	-45.50	-44.50	13.2		
28.0	181.00	S9° E	-45.50	-44.50	19.5		
37.0	180.00	S10° E	-45.25	-44.75	25.8		
46.0	181.50	S8° 30' E	-45.00	-45.00	32.2		
55.0	182.00	S8° E	-45.00	-45.00	38.5		
64.0	181.50	S8° 30' E	-45.00	-45.00	44.9		
73.0	181.50	S8° 30' E	-45.00	-45.00	51.3		
82.0	181.50	S8° 30' E	-45.00	-45.00	57.6		
91.0	181.50	S8° 30' E	-45.00	-45.00	64.0		
100.00	181.50	S8° 30' E	-45.25	-44.75	70.4		
109.0	182.00	S8° E	-45.50	-44.50	76.7		
118.0	182.50	S7° 30' E	-45.25	-44.75	83.0		
127.0	184.00	S6° E	-45.50	-44.50	89.3		
139.0	181.50	S8° 30' E	-46.00	-44.00	97.8		
151.0	181.50	S8° 30' E	-46.00	-44.00	106.1		
EOH							

REMARKS:

CORE RECOVERY

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INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.6	2.6	2.6	100
2.6 - 4.5	1.9	1.9	100
4.5 - 6.0	1.5	1.5	100
6.0 - 8.0	2.0	2.0	100
8.0 - 10.2	2.2	2.1	95
10.2 - 12.0	1.8	1.8	100
12.0 - 15.0	3.0	3.0	100
15.0 - 16.8	1.8	1.8	100
16.8 - 19.8	3.0	3.0	100
19.8 - 22.8	3.0	3.0	100
22.8 - 25.8	3.0	3.0	100
25.8 - 28.8	3.0	3.0	100
28.8 - 31.8	3.0	3.0	100
31.8 - 34.8	3.0	3.0	100
34.8 - 36.5	1.7	1.7	100
36.5 - 39.5	3.0	3.0	100
39.5 - 42.5	3.0	3.0	100
42.5 - 45.5	3.0	3.0	100
45.5 - 48.5	3.0	3.0	100
48.5 - 51.5	3.0	3.0	100
51.5 - 54.5	3.0	3.0	100
54.5 - 57.5	3.0	3.0	100
57.5 - 60.5	3.0	3.0	100
60.5 - 63.5	3.0	3.0	100
63.5 - 66.5	3.0	3.0	100
66.5 - 69.5	3.0	3.0	100
69.5 - 72.3	2.8	2.8	100
72.3 - 75.0	2.7	2.7	100
75.0 - 77.0	2.0	2.0	100
77.0 - 77.1	0.1	0.1	100
77.1 - 80.0	2.9	2.9	100
80.0 - 83.0	3.0	3.0	100
83.0 - 86.0	3.0	3.0	100
86.0 - 89.0	3.0	3.0	100
89.0 - 91.0	2.0	2.0	100
91.0 - 94.0	3.0	3.0	100
94.0 - 97.0	3.0	3.0	100
97.0 - 100.0	3.0	3.0	100
100.0 - 102.0	2.0	2.0	100
102.0 - 105.0	3.0	3.0	100
105.0 - 108.0	3.0	3.0	100
108.0 - 111.0	3.0	3.0	100
111.0 - 114.0	3.0	3.0	100
114.0 - 117.0	3.0	3.0	100
117.0 - 120.0	3.0	3.0	100
12.0 - 123.0	3.0	3.0	100
123.0 - 126.0	3.0	3.0	100
126.0 - 129.0	3.0	3.0	100
129.0 - 132.0	3.0	3.0	100
132.0 - 135.0	3.0	3.0	100
135.0 - 136.5	1.5	1.5	100
136.5 - 139.5	3.0	3.0	100
139.5 - 142.5	3.0	3.0	100
142.5 - 145.5	3.0	3.0	100
145.5 - 148.5	3.0	3.0	100
148.5 - 150.0	1.5	1.5	100
150.0 - 150.0	1.0	1.0	100

ASSAY DATA

D.D.H. No. D 160/22

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO ₃	Mo		
D 13379	60	61	1.0	1.0	0.41			
80	61	62	"	"	0.56			
81	74	75	"	"	0.39			
82	75	76	"	"	0.74			
83	76	77	"	"	0.24			
84	77	78	"	"	0.18			
85	85	86	"	"	0.08			
86	86	87	"	"	1.6			
87	87	88	"	"	0.16			
88	88	89	"	"	0.36			
89	89	90	"	"	0.80			
90	90	91	"	"	0.92			
91	91	92	"	"	0.88			
92	92	93	"	"	2.0			
93	93	94	"	"	1.03			
94	94	95	"	"	0.98			
95	95	96	"	"	0.83			
96	96	97	"	"	0.33			
97	97	98	"	"	0.76			
98	98	99	"	"	1.32			
99	99	100	"	"	3.0			
400	100	101	"	"	0.11			
01	101	102	"	"	0.16			
02	102	103	"	"	0.76			
03	103	104	"	"	0.80			
04	104	105	"	"	0.80			
05	105	106	"	"	2.1			
06	106	107	"	"	0.79			
07	107	108	"	"	0.90			
08	108	109	"	"	0.80			
09	109	110	"	"	0.40			
10	110	111	"	"	0.21			
11	111	112	"	"	0.41			
12	112	113	"	"	0.44			
13	113	114	"	"	0.14			
14	114	115	"	"	0.36			
15	115	116	"	"	0.06			
16	116	117	"	"	0.64			
17	117	118	"	"	0.42			
18	118	119	"	"	0.13			
19	119	120	"	"	0.86			
20	120	121	"	"	0.83			
21	121	122	"	"	0.68			
22	122	123	"	"	0.65			
23	123	124	"	"	0.57			
24	124	125	"	"	0.83			
25	125	126	"	"	0.50			
26	126	127	"	"	0.16			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

ASSAY DATA

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SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO ₃	Mo		
D 13427	127	128	1.0	1.0	0.46			
28	128	129	"	"	0.68			
29	129	130	"	"	0.77			
30	130	131	"	"	0.31			
31	131	132	"	"	0.11			
32	132	133	"	"	0.07			
33	133	134	"	"	0.15			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

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0.0 - 7.0 m Bh/ph
 7.0 - 32.0 m Bh
 32.0 - 51.4 m Bh/ph
 51.4 - 89.0 m B Lens
 89.0 - 124.0 m Gh
 124.0 - 134.0 m B,F,B.
 134.0 - 151.0 m Gr.

0.0 - 7.0 m

BIOTITE HORNFELS/PYROXENE HORNFELS

Intermixed unit of biotite hornfels and pyroxene hornfels, biotite hornfels 0 - 1 m, 2.4 - 5.0 m, the remainder is a pale grey/ green pyroxene hornfels which contains rare scattered crystals of scheelite.

Bedding is @ 45° @ 60 m

Molybdenite is present on joint surface @ 2.7 m

The ground is good with sticks about 50 m long.

7.0 - 32.0

BIOTITE HORNFELS

Black, fine grained homogeneous biotite hornfels, mostly good ground with sticks 50 cm. long.

Local areas of broken core occur @ 10 - 10.2 m, 14 m, 16.4 m, and 28.4 m. None of them are very significant.

Bedding is @ 30° @ 20 m

32.0 - 51.4

BIOTITE HORNFELS/PYROXENE HORNFELS

A mixed unit of alternating biotite hornfels and pyroxene hornfels, no scheelite is present.

Good ground apart from local broken core at 36.7 and 50 m.

Bedding is @	30°	to LCA @	33 m
"	25°	"	39 m
"	35°	"	46 m

No fissility is developed on the biotite hornfels/pyroxene hornfels contacts, the rock is a solid unit with joints every 20 - 40 cm.

An aplite occurs from 47.9 - 48.6 m.

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51.4 - 89.0 m

B LENS

A mixed unit of biotite hornfels, pyroxene and garnet hornfels with pyroxene hornfels probably dominating. Patchy andradite garnet skarn occurs, and is mineralised. The longest intersection is from 75 - 77 m.

The interval from 78 m appears to contain some marble pods and could be interpreted as stratigraphic pyroxene garnet hornfels. However due to the absence of any obvious faults it is included here in B Lens.

The ground is moderately broken with sticks ranging from 40 - 10 cm with a number of small (5 - 10 cm) pieces.

Bedding is @	25°	to LCA @	54 m
"	30	"	59 m
"	25	"	63 m
"	40	"	67 m
"	35	"	73 m

Aplite occurs from 77.8 - 78.6 m. Beyond that, in the ?pyroxene garnet hornfels unit bedding cannot be definitely detected.

89.0 - 124.0

GARNET HORNFELS

A massive homogeneous unit of well mineralised (1%) khaki brown andradite garnet skarn.

The first 2 m are badly broken and indicate the presence of a significant fault.

The remainder of the unit is competent with only minor broken core @ around 100 m.

Aplite is present @ 111 - 111.8 m

Bedding cannot be easily distinguished anywhere in the unit.

124.0 - 134.0

MIXED UNIT (BANDED FOOTWALL BEDS?)

This unit grades into the overlying garnet hornfels. The upper contact is defined by the disappearance of yellow scheelite and the appearance of lower grade but blue scheelite @ 124 m

Sulphide (Pyrite and chalcopyrite) appear at the same point and increase in density to a maximum @ 129 - 130 m where they form approximately 25% of the core. This section has a background of pyroxene hornfels which fades away at about 130 - 131 m and the core becomes a pure cream marble to 132.5 m.

The last 1.5 m is mostly pyroxene hornfels with some sulphides and then grades into the granite contact.

Bedding is @ 30° to LCA @ 131 m

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134.0 - 151.0 m

GRANITE

Pink, medium grained granite/aplite.

EOH 151.0 m