

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 160/28

PLANNING PROPOSER: R. E. S. Davies DEPTH: 100 m
LOCATION: L6 Diamond Drill Drive
PURPOSE OF HOLE: Test Southern Orebody
PROPOSED CO-ORDS: 220 160 E 563 850 N
INCLINATION: -55°
BEARING: 090° $^{\circ}$ Grid $^{\circ}$ Mag
TARGET: E N
DEPTH:
CHECKED BY: DATE:
SURVEY SURVEY CO-ORDS: E N
SURVEYED BEARING: $94^{\circ} 14'$ $^{\circ}$ Grid $^{\circ}$ Mag
SURVEYED IN BY: DATE:
ACTUAL CO-ORDS: 220 160.1 E 563 852.2 N
R.L. OF COLLAR: -205.6
INCLINATION OF HOLE: $-55^{\circ} 47'$
PICKED UP BY: R. Howman DATE: 25.9.81
SUMMARY LOGGED BY: R. E. S. Davies
RESULTS: No Economic Mineralisation

DRILLING DATE COMMENCED: 19.9.81 DATE TERMINATED: 25.9.81
DRILLER/CONTRACTOR: J. Archer/A.D.D.
CASING: SIZE:
DEPTH:
CORE: SIZE: 46TT
DEPTH:
WEDGE PLACED: DEPTH: PROPOSER:
EXTENSION:
FINAL DEPTH: 94 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 160/28

Surveyed method: Multishot
 Final depth: 94.0 m
 Casing depth: 1.0 m

Depth surveyed to: 94.0 m
 Date surveyed: 25.9.81
 Surveyed by: R. Drake
 Checked by:

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.			
0.0	94.23				0.00		
10.0	97.25	87° 15'	38° 30'	-55.50	8.27		
19.0	96.00	86°	34° 08'	-55.87	15.69		
28.0	95.00	85°	34°	-56.00	23.14		
37.0	96.00	86°	34°	-56.00	30.60		
46.0	95.25	85° 15'	34°	-56.00	34.06		
55.0	96.50	86° 30'	33° 53'	-56.12	45.52		
64.0	95.75	86° 45'	33° 38'	-56.37	52.99		
73.0	96.25	86° 15'	33° 15'	-56.75	60.49		
82.0	96.25	86° 15'	33°	-57.00	68.01		
94.0	96.75	86° 45'	33°	-57.00	78.08		
EOH							

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D160/28

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 4.2	4.2	4.0	100
4.2 - 7.2	3.0	3.0	100
7.2 - 10.2	3.0	3.0	100
10.2 - 13.2	3.0	3.0	100
13.2 - 16.2	3.0	3.0	100
16.2 - 19.2	3.0	3.0	100
19.2 - 22.2	3.0	3.0	100
22.2 - 25.2	3.0	3.0	100
25.2 - 28.2	3.0	3.0	100
28.2 - 31.2	3.0	3.0	100
31.2 - 34.2	3.0	3.0	100
34.2 - 37.2	3.0	3.0	100
37.2 - 40.2	3.0	3.0	100
40.2 - 43.2	3.0	3.0	100
43.2 - 46.2	3.0	3.0	100
46.2 - 49.0	2.8	2.7	96
49.0 - 52.0	3.0	2.8	93
52.0 - 55.0	3.0	3.0	100
55.0 - 58.0	3.0	3.0	100
58.0 - 61.0	3.0	3.0	100
61.0 - 64.0	3.0	3.0	100
64.0 - 67.0	3.0	3.0	100
67.0 - 69.5	2.5	2.5	100
69.5 - 72.5	3.0	3.0	100
72.5 - 73.2	0.7	0.7	100
73.2 - 76.0	2.8	2.8	100
76.0 - 79.0	3.0	3.0	100
79.0 - 82.0	3.0	3.0	100
82.0 - 85.0	3.0	3.0	100
85.0 - 88.0	3.0	3.0	100
88.0 - 91.0	3.0	3.0	100
91.0 - 94.0	3.0	3.0	100
EOH 94.0 m			

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/28

Summary

0.00 - 14.8 m Biotite Hornfels
14.8 - 23.9 m Garnet Pyroxene Hornfels
23.9 - 59.4 m Marble
59.4 - 85.3 m Biotite Hornfels
85.3 - 88.2 m Pyroxene Garnet Hornfels
88.2 - 94.0 m Granite

0.00 - 14.8 m BIOTITE HORNFELS

Dominantly black, massive homogeneous fine grained biotite hornfels with thin (1 cm) interbeds of pale green pyroxene hornfels.

The ground is mostly fairly good throughout with 50 cm core sticks, although short zones of shorter sticks occur indicating a local heavily jointed areas

Bedding is @	35 ^o	to LCA @	5 m
"	35 ^o	"	7 m
"	45 ^o	"	12 m
"	40 ^o	"	14 m

14.8 - 23.9 m GARNET PYROXENE HORNFELS

This greenish unit is the stratigraphic hangingwall of B Lens and consists mostly of pyroxene and amphiboles with subordinate grossular and andradite garnets and rare scheelite, less than 0.1% WO₃.

Ground conditions are good with 60 cm sticks being typical.

Bedding is @	45 ^o	to LCA @	16.5 m
"	45 ^o	"	20.0 m
"	35 ^o	"	22.0 m

23.9 - 59.4 m MARBLE

A fresh, clear, grey well bedded marble, essentially unmineralised apart from a small veins from 37 - 40 m.

Ground is mostly good 40 cm sticks, although local areas of broken core at 29 m, and from 46.5 - 49.5 m. This section probably represents the tuffite band as it is chloritic, and carries small (1 mm) brown alteration minerals in a finer grained material.

Bedding is @	55 ^o	to LCA @	25 m
"	40 ^o	"	32.5 m
"	35 ^o	"	45 m
"	40 ^o	"	52.5 m

GEOLOGY - KING ISLAND SCHEELITE

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59.4 - 85.3 m BIOTITE HORNFELS

Massive fine grained homogeneous biotite hornfels occasionally showing bedding, ground is good throughout 70 cm sticks, apart from the initial 6 m where 20 cm sticks were recovered.

Bedding is @ 40° to LCA @ 69.5 m

85.3 - 88.2 m PYROXENE GARNET HORNFELS

Characteristic pink green podded and intermixed rock, a small amount of scheelite occurs @ 85 m otherwise the unit is barren.

The last metre from 87.0 - 88.2 m is entirely biotite hornfels.

Ground fairly good 40 cm sticks.

88.2 - 94.0 m GRANITE

Medium grained, very pink rock initially, tending to yellowish in the latter part.

Ground slightly broken 30 cm sticks.

EOH 94.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D160/27

PLANNING PROPOSER: R. E. S. Davies DEPTH: 85 m
LOCATION: L6 Diamond Drill Drive
PURPOSE OF HOLE: Test Southern Orebody
PROPOSED CO-ORDS: 220 160 E 563 850 N
INCLINATION: -45°
BEARING: 270° $^{\circ}$ Grid $^{\circ}$ Mag
TARGET: E N
DEPTH:
CHECKED BY: DATE:
SURVEY SURVEY CO-ORDS: E N
SURVEYED BEARING: $264^{\circ} 27'$ $^{\circ}$ Grid $^{\circ}$ Mag
SURVEYED IN BY: DATE:
ACTUAL CO-ORDS: 220 157,5 E 563 851,6 N
R.L. OF COLLAR: -205.5
INCLINATION OF HOLE: $-35^{\circ} 55'$
PICKED UP BY: R. Howman DATE: 15.9.81
SUMMARY LOGGED BY: R. E. S. Davies
RESULTS: No Economic Mineralisation

DRILLING DATE COMMENCED: 10.9.81 DATE TERMINATED: 18.9.81
DRILLER/CONTRACTOR: A.D.D./J. Archer
CASING: SIZE:
DEPTH:
CORE: SIZE: 46TT
DEPTH:
WEDGE PLACED: DEPTH: PROPOSER:
EXTENSION:
FINAL DEPTH: 94 m
REASON FOR TERMINATION: In Granite
CONDITION OF HOLE ON COMPLETION:
CASING:
CEMENTED:
BORE HOLE SURVEY: M/S
WATER: Hit water at 35 m
COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/27

Surveyed method: Multishot
 Final depth: 94.0 m
 Casing depth: 1.0 m

Depth surveyed to: 94.0 m
 Date surveyed: 18/9/81
 Surveyed by: C. O'Brien
 Checked by:

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.			
0.0	264.45			125.92	0.00		
10.0	251.50	251° 30'	54°	126.00	5.87		
19.0	264.00	254°	54°	126.00	11.16		
28.0	264.50	253° 30'	54°	126.00	16.45		
37.0	263.00	253°	54°	126.00	21.74		S 73 W
46.0	263.00	254°	54°	126.00	27.03		S 74 W
55.0	264.00	254°	54°	126.00	32.32		S 74 W
64.0	266.00	256°	54°	126.00	37.61		S 76 W
73.0	265.00	255°	54°	126.00	42.90		S 75 W
82.0	265.00	255°	54°	126.00	48.19		S 75 W
91.0	266.0	256°	54°	126.00	53.48		S 76 W
94.0	267.00	257°	54°	126.00	55.24		S 77 W

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 160/27

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 5.0 m	5.0	5.0	100
5.0 - 8.0	3.0	3.0	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	3.0	100
29.0 - 31.0	3.0	3.0	100
31.0 - 34.0	3.0	3.0	100
34.0 - 37.0	3.0	3.0	100
37.0 - 40.0	3.0	3.0	100
40.0 - 43.0	3.0	3.0	100
43.0 - 46.0	3.0	3.0	100
46.0 - 49.0	3.0	3.0	100
49.0 - 50.5	1.5	1.5	100
50.5 - 53.2	2.7	2.7	100
53.2 - 56.2	3.0	3.0	100
56.2 - 59.2	3.0	3.0	100
59.2 - 62.2	3.0	3.0	100
62.2 - 65.2	3.0	3.0	100
65.2 - 68.2	3.0	3.0	100
68.2 - 71.2	3.0	3.0	100
71.2 - 74.2	3.0	3.0	100
74.2 - 77.2	3.0	3.0	100
77.2 - 80.2	3.0	3.0	100
80.2 - 83.2	3.0	3.0	100
83.2 - 86.2	3.0	3.0	100
86.2 - 89.2	3.0	3.0	100
89.2 - 92.2	3.0	3.0	100
92.2 - 94.0	1.8	1.8	100
EOH 94.0 m			

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ASSAY DATA

D.D.H. No. D 160/27

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO ₃	Mo		
D 13507	32	33	1.0	1.0	0.17			
08	33	34	"	"	0.17			
09	80	81	"	"	0.09			
10	81	82	"	"	0.08			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/27

Summary

0.0 - 30.8 m Biotite Hornfels
30.8 - 35.0 m Pyroxene Hornfels
35.0 - 53.2 m Aplite
53.2 - 70.5 m Biotite Hornfels
70.5 - 75.6 m Aplite
75.6 - 80.4 m Biotite Hornfels
80.4 - 85.8 m Pyroxene Garnet Hornfels
85.8 - 94.0 m Granite

0.00 - 30.8 m BIOTITE HORNFELS

Massive fine grained competent biotite hornfels, with occasional thin interbeds of pyroxene hornfels. The ground is uniformly good, core sticks typically 20 - 50 cm. Although minor fracturing of the core is present at 20.0 m.

Bedding is @	50°	to LCA @	3.0 m
"	35°	"	10.0 m
"	30°	"	17.0 m
"	55°	"	24.0 m
"	45°	"	30.0 m

30.8 - 35.0 PYROXENE HORNFELS

This unit consists mostly of dark green pyroxene hornfels with some small amount of scheelite scattered through it. Only trace amounts of garnet are present.

The unit has a disturbed look overall and is probably the top contact of B Lens.

The driller recorded water inflow at 35.0 m.

Significant amounts of marble are still present in the unit.

The ground is fairly good core sticks averaging 20 cm.

35.0 - 53.2 APLITE

Mostly fresh, pink and coarse grained. Large amounts of quartz occur from 49.5 - 51.5 m.

Ground is mostly good 40 cm core sticks, although shorter lengths of core (10 cm) occur from 40 - 42.5 m

53.2 - 70.5 BIOTITE HORNFELS

Massive, fine grained homogeneous biotite hornfels.

Good ground, core sticks mostly 30 - 40 cm long except for a short interval at 59.5 - 62 m of 10 - 20 cm core sticks.

Bedding is @	35°	to LCA @	59.0 m
"	45°	"	65.0 m

A rehealed, quartz filled breccia occurs at 68.0 m

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GEOLOGICAL LOG

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70.5 - 75.6 m

APLITE

A fine grained pink aplite. Good ground throughout with 40 cm core sticks.

75.6 - 80.4

BIOTITE HORNFELS

Massive fine grained homogeneous biotite hornfels.

Again good competent ground.

This unit has a transitional contact with the pyroxene garnet hornfels below.

80.4 - 85.8

PYROXENE GARNET HORNFELS

A well podded unit, consisting mostly of grossular garnet and amphibole/pyroxene alteration, with small (5 cm) cc clasts.

A small amount of scheelite occurs from 80 - 82 m.

The ground is good with 30 cm sticks.

85.8 - 94.0

GRANITE

Fresh coarse grained, pink grained with large (4 cm) Orthoclase phenocrysts

Good competent ground 30 cm sticks.

EOH 94.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D160/26

PLANNING PROPOSER: R. E. S. Davies DEPTH: 85 m
LOCATION: L6 Diamond drill drive
PURPOSE OF HOLE: Test Southern Orebody
PROPOSED CO-ORDS: 220 160 E 563 850 N
INCLINATION: -55°
BEARING: 360° $^{\circ}$ Grid $^{\circ}$ Mag
TARGET: E N
DEPTH:
CHECKED BY: DATE:

SURVEY SURVEY CO-ORDS: E N
SURVEYED BEARING: $3^{\circ} 22'$ $^{\circ}$ Grid $^{\circ}$ Mag
SURVEYED IN BY: DATE:
ACTUAL CO-ORDS: 220 158.94 E 563 853.13 N
R.L. OF COLLAR: 205.74
INCLINATION OF HOLE: $-54^{\circ} 31'$
PICKED UP BY: R. Howman DATE: 9.9.81

SUMMARY LOGGED BY: R. E. S. Davies
RESULTS: 49 - 52 m, 3 m @ 0.81% WO_3 gh (b) Southern

DRILLING DATE COMMENCED: 1.9.81 DATE TERMINATED: 9.9.81
DRILLER/CONTRACTOR: D. Wood/A.D.D.
CASING: SIZE:
DEPTH:
CORE: SIZE: 46TT
DEPTH:
WEDGE PLACED: DEPTH: PROPOSER:
EXTENSION:
FINAL DEPTH: 69 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 160/26

Surveyed method: Multishot
 Final depth: 69.0 m
 Casing depth: 1.0

Depth surveyed to: 69.0 m
 Date surveyed: 9.9.81
 Surveyed by: C. O'Brien
 Checked by:

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.			
0.0	3.37	-	-	144.52			
10.0	6.50	N3°30'W	36°	144.00	8.14		
19.0	4.75	N5°15'W	36°	144.00	15.42		
28.0	6.62	N3°23'W	35° 45'	144.25	22.71		
37.0	4.75	N5°15'W	35°	145.00	29.71		
46.0	4.75	N5°15'W	35° 53'	144.12	37.38		
55.0	5.00	N5°00'W	35° 15'	144.75	44.67		
64.0	6.00	N4°00'W	35° 08'	144.87	52.02		
69.0	5.00	N5°00'W	35° 15'	144.75	57.75		

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 160/26

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.0	3.0	3.0	100
3.0 - 6.0	3.0	3.0	100
6.0 - 9.0	3.0	3.0	100
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 - 21.0	3.0	3.0	100
21.0 - 24.0	3.0	3.0	100
24.0 - 27.0	3.0	3.0	100
27.0 - 30.0	3.0	3.0	100
30.0 - 33.0	3.0	3.0	100
33.0 - 36.0	3.0	3.0	100
36.0 - 39.0	3.0	3.0	100
39.0 - 42.0	3.0	3.0	100
42.0 - 45.0	3.0	3.0	100
45.0 - 48.0	3.0	3.0	100
48.0 - 51.0	3.0	3.0	100
51.0 - 54.0	3.0	3.0	100
54.0 - 57.0	3.0	3.0	100
57.0 - 60.0	3.0	3.0	100
60.0 - 63.0	3.0	3.0	100
63.0 - 66.0	3.0	3.0	100
66.0 - 69.0	3.0	3.0	100
EOH 69.0 m			

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 160/26

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO ₃	Mo		
D 13475	11	12	1.0	1.0	0.35			
76	12	13	"	"	0.09			
77	13	14	"	"	0.22			
78	47	48	"	"	0.12			
79	48	49	"	"	0.20			
80	49	50	"	"	0.90			
81	50	51	"	"	0.73			
82	51	52	"	"	0.81			
83	52	53	"	"	0.15			
84	53	54	"	"	0.20			
85	54	55	"	"	1.11			
86	55	56	"	"	0.31			
87	56	57	"	"	0.10			
88	57	58	"	"	0.16			
89	58	59	"	"	0.42			
90	59	60	"	"	0.13			
91	60	61	"	"	0.18			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

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0.0 - 9.4 m Biotite Hornfels
9.4 - 16.0 Biotite Pyroxene Hornfels
16.0 - 31.8 Marble
31.8 - 34.6 Tuffite
34.6 - 48.0 Biotite Hornfels
48.0 - 59.4 Garnet Hornfels (banded)
59.4 - 69.0 Granite

0.0 - 9.4 m BIOTITE HORNFELS

Massive competent biotite hornfels with thin beds of pyroxene hornfels (2 cm). The ground is competent (80 cm sticks)

Bedding is @ 45° to LCA @ 2 m
" " 80° " 6 m

9.4 - 16.0 BIOTITE PYROXENE HORNFELS

A stratigraphic contact with the biotite hornfels above, basically marked by an increasing pyroxene hornfels contact with that pyroxene hornfels dominates. Minor garnet hornfels and biotite hornfels does occur in thin beds. Small amounts of scheelite occur in garnet hornfels beds at 11 m, 11.8 m, 13.9 m.

The ground is good, slightly more broken than the biotite hornfels but core sticks average 50 cm.

Bedding is @ 90° to LCA @ 12 m
" " 65° " 14.5 m

16.0 - 31.8 MARBLE

Fresh clear grey marble with well defined bedding.

Small amount of scheelite associated with grossular garnet and pyroxene hornfels at 27 - 27.4 m.

Strat contacts top and bottom. Ground moderately broken, core sticks average 30 cm.

Bedding is @ 80° to LCA @ 18.0 m
" " 90° " 24.0 m
" " 85° " 31.0 m

GEOLOGICAL LOG

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31.8 - 34.6

TUFFITE

Highly broken (2 - 5 cm fragments) core with a large amount of greenish clay inbetween fragments.

The rock is fine grained with a brown mineral finely dispersed throughout.

The clay presumably represent decomposed mafic minerals.

34.6 - 48.0

BIOTITE HORNFELS

Massive homogeneous fine grained biotite hornfels, very competent ground 70 cm sticks, apart from broken core at 44.2 - 45.0 m

Intradal by aplite from 42,7 - 44,1 m

48.0 - 59.4

BANDED GARNET HORNFELS

Well bedded garnet hornfels/pyroxene hornfels with minor biotite hornfels. A significant amount of quartzite is present.

Mineralisation is present throughout, locally high grade in thin beds (20 cm) but probably about 0,3% WO₃ overall.

The upper contact is about with 1 break in the core. The piece above the contact is biotite hornfels and the piece below is garnet hornfels (banded). no evidence of shearing or brecciation.

This is probably the Duck Fault.

Bedding is	@	45 ^o	to	LCA	@	50 m
"		65		"		54 m
"		55		"		56.5 m
"		50		"		58 m

Ground is fairly competent 40 cm sticks.

59.4 - 69.0

GRANITE

A heterogeneous and generally broken unit, core stick average 20 cm. Initially a fine grained pink rock it changes at around 65 m to a coarser grained yellow rock. The yellow colour thought to be due to epidote alteration

EOH 69.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D160/25

PLANNING PROPOSER: R. E. S. Davies DEPTH: 100 m
LOCATION: L6 Diamond Drill Drive
PURPOSE OF HOLE: Test Southern Orebody
PROPOSED CO-ORDS: 220 160 E 563 850 N
INCLINATION: -70°
BEARING: $^{\circ}$ Grid $^{\circ}$ Mag
TARGET: E N
DEPTH:
CHECKED BY: DATE:

SURVEY SURVEY CO-ORDS: E N
SURVEYED BEARING: $283^{\circ} 40'$ $^{\circ}$ Grid $^{\circ}$ Mag
SURVEYED IN BY: DATE:
ACTUAL CO-ORDS: 220 159.36 E 563 851.95 N
R.L. OF COLLAR: -205.7
INCLINATION OF HOLE: $-88^{\circ} 59'$
PICKED UP BY: R. Howman DATE: 25/8/81

SUMMARY LOGGED BY: R. E. S. Davies
RESULTS: 15 - 18 m, 3 m @ 0.63% WO_3 B Lens Southern

DRILLING DATE COMMENCED: 24/8/81 DATE TERMINATED:
DRILLER/CONTRACTOR: S. Batchelor/A.D.D.
CASING: SIZE:
DEPTH:
CORE: SIZE: 46TT
DEPTH:
WEDGE PLACED: DEPTH: PROPOSER:
EXTENSION:
FINAL DEPTH: 76.4 m
REASON FOR TERMINATION: In Granite
CONDITION OF HOLE ON COMPLETION:
CASING:
CEMENTED:
BORE HOLE SURVEY: M/S
WATER: Strong infloor @ 40.4 m
COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/25

Surveyed method: Multishot
 Final depth: 76.0 m
 Casing depth: 1.0 m

Depth surveyed to: 76.0 m
 Date surveyed: 1/9/81
 Surveyed by: C. O'Brien
 Checked by:

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.			
0.0	283.67				178.98		
10.0	298.00	N72° W	2°		178.00	10.00	
19.0	296.00	N74° W	2°		178.00	18.99	
28.0	297.00	N73° W	2°		178.00	27.99	
37.0	298.00	N72° W	2°		178.00	36.98	
46.0	294.00	N76° W	2°		178.00	45.98	
55.0	292.00	N78° W	2°		178.00	54.97	
64.0	289.00	N81° W	2°		178.00	63.97	
76.0	291.00	N79° W	2°		178.00	75.96	

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 160/25

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 1.8	1.8	1.8	100
1.8 - 3.3	1.5	1.5	100
3.3 - 6.3	3.0	3.0	100
6.3 - 9.3	3.0	3.0	100
9.3 - 12.3	3.0	3.0	100
12.3 - 15.3	3.0	3.0	100
15.3 - 18.3	3.0	3.0	100
18.3 - 19.8	1.5	1.5	100
19.8 - 22.8	3.0	3.0	100
22.8 - 25.8	3.0	3.0	100
25.8 - 28.4	2.6	2.6	100
28.4 - 31.4	3.0	3.0	100
31.4 - 34.4	3.0	3.0	100
34.4 - 37.4	3.0	3.0	100
37.4 - 40.4	3.0	3.0	100
40.4 - 43.4	3.0	3.0	100
43.3 - 46.4	3.0	3.0	100
46.4 - 49.4	3.0	3.0	100
49.4 - 52.4	3.0	3.0	100
52.4 - 55.4	3.0	3.0	100
55.4 - 58.4	3.0	3.0	100
58.4 - 61.4	3.0	3.0	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
EOH 76.4 m			

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 160/25

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO ₃	Mo		
D 13463	15	16	1.0	1.0	0.59			
64	16	17	"	"	0.63			
65	17	18	"	"	0.68			
66	22	23	"	"	0.36			
67	23	24	"	"	0.24			
68	24	25	"	"	0.18			
69	25	26	"	"	0.14			
70	45	46	"	"	0.14			
71	46	47	"	"	0.70			
72	47	48	"	"	1.74			
73	48	49	"	"	0.12			
74	49	50	"	"	6.08			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/25

0.0 - 11.8 m Biotite Hornfels
11.8 - 35.7 m B Lens
35.7 - 45.4 m Biotite Hornfels
45.4 - 58.8 m Banded Footwall Bedded
58.8 - 64.4 m Lower Volcanics
64.4 - 76.4 m Granite

0.0 - 11.8 m BIOTITE HORNFELS

A dominantly biotite hornfels unit with thin (0.5 - 2.0 cm) interbeds of pyroxene hornfels. Good core, sticks, 40.0 - 60.0 cm long.

Bedding is @ 45° to LCA @ 6 m
" " 50° " 10 m

11.8 - 35.7 B LENS

A typically mixed unit of interbedded marble, pyroxene hornfels and garnet hornfels. Pyroxene hornfels and garnet hornfels occurs at 11.8 - 18.0 m, 21 - 27 m, 35 - 35.7 m, the remainder is almost entirely marble.

Scattered mineralisation occurs with garnet hornfels in the pyroxene hornfels areas at 15.0 - 18.0 m, and 22.0 - 25.3 m.

The core is moderately competent, sticks averaging 30 - 40 cm.

Bedding is @ 55° to LCA @ 14 m
" " 45° " 16
" " 60° " 20
" " 60° " 28
" " 45° " 34

35.7 - 45.4 BIOTITE HORNFELS

Mostly a massive homogeneous biotite hornfels but containing a re-cemented breccia zone from 38.4 - 41.4 m. This consists of angular biotite hornfels fragments set in a matrix of quartzite clinohumite and ? Feldspar.

The driller reported a strong inflow of water at 40.4 m.

Bedding is @ 65° to LCA @ 37.5 m

Broken core is associated with the fault zone, otherwise core is good.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/25

45.4 - 58.8 m BANDED FOOTWALL BEDS

Patchily mineralised, well interbedded banded footwall beds unit containing marble, pyroxene hornfels, biotite hornfels and garnet hornfels.

The upper contact shows some brecciation over about 20 cm and is probably a fault contact.

The unit is below ore grade.

Bedding is @	60 ^o	to	LCA @	48,4 m
"	70 ^o		"	53,0 m
"	60 ^o		"	58,4 m

58.8 - 64.4 LOWER VOLCANICS

A green, homogeneous fine grained rock containing small 2 mm mafic crystals in a finer grained ground mass. Both contacts are sharp with no significant brecciation.

Ground is reasonable, core stick vary from 10 - 50 m

64.4 - 76.4 GRANITE

Medium grained pink granite, fairly well jointed, core stick averaging 30 cm.

EOH 76.4 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D160/24

PLANNING PROPOSER: R. E. S. Davies DEPTH:
LOCATION: L6 Diamond Drill Drive
PURPOSE OF HOLE: Test Southern Orebody
PROPOSED CO-ORDS: 220 160 E 563 850 N
INCLINATION: -70°
BEARING: 180 $^{\circ}$ Grid $^{\circ}$ Mag
TARGET: E N
DEPTH:
CHECKED BY: DATE:

SURVEY SURVEY CO-ORDS: E N
SURVEYED BEARING: 179 $^{\circ}$ 14' $^{\circ}$ Grid $^{\circ}$ Mag
SURVEYED IN BY: DATE:
ACTUAL CO-ORDS: 220 159.37 E 563 851.44 N
R.L. OF COLLAR: -205.69
INCLINATION OF HOLE: -70° 08'
PICKED UP BY: R. Howman DATE: 14/8/81

SUMMARY LOGGED BY: R. E. S. Davies
RESULTS: 22 - 25 m, 3 m @ 0.89% WO_3 B Lens Southern

DRILLING DATE COMMENCED: 13/8/81 DATE TERMINATED:
DRILLER/CONTRACTOR: S. Batchelor/A.D.D.
CASING: SIZE:
DEPTH:
CORE: SIZE:
DEPTH: BQ
WEDGE PLACED: DEPTH: PROPOSER:
EXTENSION:
FINAL DEPTH: 82.5 m
REASON FOR TERMINATION: In granite
CONDITION OF HOLE ON COMPLETION:
CASING:
CEMENTED:
BORE HOLE SURVEY: M/S
WATER:
COMMENTS ON DRILLING CONDITIONS: Good

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/24

Surveyed method: Multishot
 Final depth: 82.0 m
 Casing depth: 1.0 m

Depth surveyed to: 82.0 m
 Date surveyed: 24/8/81
 Surveyed by: C. O'Brien
 Checked by:

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.			
0.0	179.23			160.13			
10.0	183.50	S6° 30' E	20° 15'	159.75	9.40		
19.0	181.75	S8° 15' E	20° 15'	159.75	17.85		
28.0	181.75	S8° 15' E	20° 15'	159.75	26.29		
37.0	181.75	S8° 15' E	20° 15'	159.75	34.74		
46.0	182.00	S8° E	20° 15'	159.75	43.18		
55.0	183.00	S7° E	20° 23'	159.62	51.62		
67.0	180.50	S9° 30' E	20° 23'	159.62	62.87		
76.0	181.87	S8° 08' E	20° 38'	159.37	71.31		
82.0	182.00	S8° E	20° 38'	159.37	76.92		
		o	o				
		o	o				
		o	o				
		o	o				

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 160/24

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.7	2.7	2.7	100
2.7 - 5.0	2.3	2.3	100
5.0 - 8.0	3.0	3.0	100
8.0 - 10.5	2.5	2.5	100
10.5 - 13.5	3.0	3.0	100
13.5 - 16.5	3.0	3.0	100
16.5 - 19.5	3.0	3.0	100
19.5 - 22.5	3.0	3.0	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 - 37.5	3.0	3.0	100
37.5 - 40.5	3.0	3.0	100
40.5 - 43.5	3.0	3.0	100
43.5 - 46.5	3.0	3.0	100
46.5 - 49.5	3.0	3.0	100
49.5 - 52.5	3.0	3.0	100
52.5 - 55.5	3.0	3.0	100
55.5 - 58.5	3.0	3.0	100
58.5 - 61.5	3.0	3.0	100
61.5 - 64.5	3.0	3.0	100
64.5 - 67.5	3.0	3.0	100
67.5 - 70.5	3.0	3.0	100
70.5 - 73.5	3.0	3.0	100
73.5 - 76.5	3.0	3.0	100
76.5 - 79.5	3.0	3.0	100
79.5 - 82.5	3.0	3.0	100
EOH 82.5 m			

ASSAY DATA

D.D.H. No. D 160/24

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO ₃	Mo		
D 13450	22	23	1.0	1.0	0.51			
51	23	24	"	"	0.95			
52	24	25	"	"	1.2			
53	25	26	"	"	0.30			
54	45	46	"	"	0.36			
55	66	67	"	"	1.13			
56	67	68	"	"	0.10			
57	68	69	"	"	0.55			
58	69	70	"	"	0.15			
59	70	71	"	"	0.11			
60	71	72	"	"	0.70			
61	72	73	"	"	0.15			
62	73	74	"	"	0.09			

SPECIFIC GRAVITY

Determined by:

Depth (metres):

Rock Type:

S.G.:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/24

Summary

0.0 - 19.7 m Biotite Hornfels
19.7 - 35.2 m Biotite Pyroxene Hornfels
35.2 - 60.5 m Marble
60.5 - 64.2 m Biotite Hornfels
64.2 - 74.8 m Banded Footwall Beds (Mineralised)
74.8 - 82.5 m Granite

0.0 - 19.7

BIOTITE HORNFELS

Massive fairly well bedded biotite hornfels, mostly good core averaging 40 - 50 cm sticks.

Thin pale green interbeds of pyroxene hornfels are present.

Bedding is @	40 ^o	to LCA @	3 m
"	50 ^o	"	10 m
"	50 ^o	"	17 m

19.7 - 35.2

BIOTITE PYROXENE HORNFELS

A generally broken unit, core commonly 10 - 30 cm, long, consisting of well intermixed biotite hornfels and pyroxene hornfels with occasional garnet skarn. Scheelite is associated with the skarn eg at 23 - 25 m, and 28 m. But does not reach ore grade.

Bedding is @	35 ^o	to LCA @	24 m
"	60 ^o	"	28 m
"	40 ^o	"	32 m

35.2 - 60.5

MARBLE

Dominantly a fresh grey bedded marble, but containing some pyroxene hornfels alteration eg at 37 - 37.5 m, 43.4 - 46.2 m and 57.5 - 60.0 m.

Minor amounts of scheelite are associated with the pyroxene hornfels particularly from 44.0 - 46.0 m but does not reach ore grade.

The core is competent (60 cm sticks) apart from the pyroxene hornfels areas and pug zone at 54.5 m.

Bedding is @	35 ^o	to LCA @	39 m
"	40 ^o	"	43 m
"	50 ^o	"	52 m
"	50 ^o	"	59 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/24

60.5 - 64.2 BIOTITE HORNFELS

This is a rather broken unit and like the previous units has a stratigraphic upper contact.

The core is recovered as sticks 5 - 20 m long.

The bottom contact is an area of broken core but is not an obvious fault zone. The lithology change is also not great. Biotite hornfels > biotite pyroxene hornfels.

Bedding is @ 45° to LCA @ 62.5 m

64.2 - 74.8 BANDED FOOTWALL BEDS (MINERALISED)

A rather disturbed unit of garnet hornfels, pyroxene hornfels with minor biotite hornfels. It is not particularly well bedded and although well mineralised locally, it is probably not ore grade overall.

Bedding is @ 40° to LCA @ 67 m
" " 35° " 70.7 m
" " 40° " 74

74.8 - 82.5 GRANITE

Pink fine grained granite, initially fairly fractured.

EOH 82.5 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 160/23

PLANNING PROPOSER: R. E. S. Davies DEPTH: 120 m
LOCATION: L6 Diamond Drill Drive -200 m level
PURPOSE OF HOLE: Test Southern Orebody
PROPOSED CO-ORDS: 220 160 E 563 850 N
INCLINATION: -55
BEARING: 180° °Grid °Mag
TARGET: E N
DEPTH:
CHECKED BY: DATE:

SURVEY SURVEY CO-ORDS: E N
SURVEYED BEARING: 181° 00' °Grid °Mag
SURVEYED IN BY: DATE:
ACTUAL CO-ORDS: 220 159.35 E 563 851.04 N
R.L. OF COLLAR: 205.63
INCLINATION OF HOLE: -55° 48'
PICKED UP BY: R. Howman DATE: 14/8/81

SUMMARY LOGGED BY: R. E. S. Davies
RESULTS: 70 - 82 m, 12 m @ 0.58% WO₃ S. O. B.

DRILLING DATE COMMENCED: 5/8/81 DATE TERMINATED: 13/8/81
DRILLER/CONTRACTOR: S. Batchelor/A.D.D.
CASING: SIZE:
DEPTH:
CORE: SIZE: 46TT
DEPTH:
WEDGE PLACED: DEPTH: PROPOSER:
EXTENSION:
FINAL DEPTH: 100 m
REASON FOR TERMINATION: In granite
CONDITION OF HOLE ON COMPLETION:
CASING:
CEMENTED:
BORE HOLE SURVEY: M/S
WATER:
COMMENTS ON DRILLING CONDITIONS: Good

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/23

Surveyed method: Multishot
 Final depth: 100.0 m
 Casing depth: 1.0 m

Depth surveyed to: 100,0 m
 Date surveyed: 13/8/81
 Surveyed by: C. O'Brien
 Checked by:

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.			
0.0	181.0				145,80		
10.0	182.25	S7° 45'E	34° 45'	145,25	8,27		
19.0	182.75	S7° 15'E	34° 15'	145,75	15,67		
28.0	182.50	S7° 30'E	34° 23'	145,62	23,10		
37.0	181.0	S9° 'E	34° 45'	145,25	30,53		
46.0	182.75	S7° 15'E	34° 15'	145,25	37,93		
55.0	182.84	S7° 10'E	34°	146,0	45,32		
64.0	182.00	S8° 'E	34°	146,0	52,78		
73.0	182.0	S7° 45'E	34° 15'	145,75	60,24		
82.0	180.50	S9° 30'E	45° 15'	145,75	67,68		
88.0	183.0	S7° 'E	34° 15'	145,75	72,64		
91.0	183.0	S7° 'E	34° 30'	145,50	75,12		
100.0	183.0	S7° E	34° 30'	145,50	82,54		

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 160/23

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.3	3.3	3.3	100
3.3 - 6.3	3.0	3.0	100
6.3 - 9.3	3.0	3.0	100
9.3 - 10.8	1.5	1.5	100
10.8 - 13.8	3.0	3.0	100
13.8 - 15.3	2.0	2.0	100
15.3 - 18.3	3.0	3.0	100
18.3 - 21.3	3.0	3.0	100
21.3 - 24.3	3.0	3.0	100
24.3 - 27.3	3.0	3.0	100
27.3 - 30.3	3.0	3.0	100
30.3 - 33.3	3.0	3.0	100
33.3 - 36.3	3.0	3.0	100
36.3 - 39.3	3.0	3.0	100
39.3 - 42.3	3.0	3.0	100
42.3 - 45.3	3.0	3.0	100
45.3 - 48.3	3.0	3.0	100
48.3 - 51.3	3.0	3.0	100
51.3 - 54.3	3.0	3.0	100
54.3 - 57.3	3.0	3.0	100
57.3 - 60.3	3.0	3.0	100
60.3 - 63.3	3.0	3.0	100
63.3 - 66.3	3.0	3.0	100
66.3 - 68.2	1.9	1.8	95
68.2 - 71.0	2.8	2.8	100
71.0 - 72.3	1.3	1.1	85
72.3 - 75.3	3.0	3.0	100
75.3 - 78.3	3.0	3.0	100
78.3 - 81.3	3.0	3.0	100
81.3 - 84.3	3.0	3.0	100
85.3 - 87.3	3.0	3.0	100
87.3 - 90.3	3.0	3.0	100
90.3 - 92.0	1.7	1.3	76
92.0 - 95.0	3.0	3.0	100
95.0 - 98.0	3.0	3.0	100
98.0 - 100.0	2.0	2.0	100

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 160/23

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO ₃	Mo		
D 13434	69	70	1.0	1.0	0.13			
35	70	71	"	"	0.35			
36	71	72	"	"	0.51			
37	72	73	"	"	0.27			
38	73	74	"	"	0.59			
39	74	75	"	"	0.74			
40	75	76	"	"	0.53			
41	76	77	"	"	0.19			
42	77	78	"	"	0.17			
43	78	79	"	"	0.32			
44	79	80	"	"	0.92			
45	80	81	"	"	1.21			
46	81	82	"	"	1.13			
47	82	83	"	"	0.16			
48	90	91	"	"	0.34			
49	91	92	"	"	0.27			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/23

Summary

0.0 - 18.2 m bh
18.2 - 38.0 bph
38.0 - 65.5 B Lens
65.5 - 69.7 bh
69.7 - 70.4 pgh
70.4 - 81.3 gh
81.3 - 93.8 bfb
93.8 - 100.0 Gr

0.0 - 18.2 m

BIOTITE HORNFELS

Massive, black, homogeneous biotite hornfels, good ground with core sticks commonly 40 - 60 cm long. Some scattered areas of pale rock tending towards pyroxene hornfels at 4 m, 12 m.

Bedding is @	55°	to LCA @	1 m
"	35°	"	12 m
"	35°	"	14 m

18.2 - 38.0

BIOTITE PYROXENE HORNFELS

An intermixed unit of biotite hornfels and pyroxene hornfels although still massive with few bedding planes. Although not a competent as the biotite hornfels it is still good ground with core sticks mostly 40 - 70 cm long. A few pieces of broken core (2 cm) separate this unit from the biotite hornfels.

Broken core (10 cm of 1 - 3 cm fragments) also occurs at 32 m.

Some rare grossular garnet is interbedded with the pyroxene hornfels units which comprise about half of the unit.

Bedding is @	35°	to LCA @	20.5 m
"	30	"	25.0 m
"	15	"	28.0 m
"	30	"	32.0 m
"	35	"	35.0 m
"	40	"	36.5 m

38.0 - 65.5

B LENS

Typical well mixed unit of B Lens containing pyroxene hornfels (dominant) garnet hornfels, biotite hornfels, marble, scattered mineralisation is present throughout, although none of ore grade.

The unit is well bedded and the interval from 57 - 63 m is almost entirely marble.

Bedding is @	40°	to LCA @	41.3 m
"	40	"	42.0 m
"	35	"	52.0 m
"	45	"	57.4 m
"	55	"	63.0 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/23

65.5 - 69.7

BIOTITE HORNFELS

A rather sheared unit containing thin beds (1 cm) of pale material with what appear to be small clasts (1 cm diameter).

The unit is generally broken (20 m sticks) with a particularly fragmented interval from 67.5 - 68.2 m.

Both upper and lower contacts appear to be stratigraphic, although breaks in the core occur near both contacts.

Fabric is	@	50°	to	LCA	@	65.6 m
"		60		"		69.5 m

69.7 - 70.4

GARNET PYROXENE HORNFELS

This unit appears to have stratigraphic upper and lower contacts. It is dominantly pyroxene hornfels with vague intermixing of andradite garnet. A poorly defined podded texture is present. The unit is barren and has no fabric.

70.4 - 81.3

GARNET HORNFELS

A well mineralised, khaki brown andradite skarn.

Bedding is not discernible. Several areas of broken core occur. These are @ 72 - 72.3 m, 74.5 m, 76.5 - 77.8 m.

A high percentage of quartzite is present in the last 3 m.

One 10 cm bedded unit occurs @ 80.3 and is @ 50° to LCA

81.3 - 93.8

BANDED FOOTWALL BEDS

All rocks types are represented in this unit, marble, biotite hornfels, pyroxene hornfels, and garnet hornfels. It is well bedded with partings 20 - 30 m, the unit is mostly barren apart from some mineralised garnet hornfels at 91.5 - 91.9 and odd veins of garnet hornfels and scheelite.

Bedding is	@	45°	to	LCA	@	82.0 m
"		50		"		85.0 m
"		50		"		88.0 m
"		40		"		93.0 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/23

93.8 - 100.0 m

GRANITE

Pink, fine grained, probably re-silicified granite. There is a 80 cm quartzite rich transitional contact.

Core sticks are 10 - 50 cm long.

EOH 100.0 m

To G. Brown from JD Todd 31

Drill Core Sample 13429.

An XRF Scan ^{for Base metals} showed the following

Major elements (approx 1% →)

Fe, Ca, Mn, Cu, W.

Minor Elements (less than 1%).

Sr, Bi,

An analysis was performed for Cu
and Bi.

Cu 0.6%

Bi 0.06%

JD Todd

9/9/81.

(2) 9-130m in D160/22

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 160/21

PLANNING PROPOSER: R. E. Sandell Davies DEPTH: 60 m
LOCATION: N13 Drive
PURPOSE OF HOLE: Test Southern Orebody
PROPOSED CO-ORDS: 220 160 E 563 902 N
INCLINATION: -45°
BEARING: 180° GRID MAG
TARGET: E N
DEPTH:
CHECKED BY: T. Potter DATE: 15/5/80

SURVEY SURVEY CO-ORDS: E N
SURVEYED BEARING: $178^{\circ} 40'$ GRID MAG
SURVEYED IN BY: DATE:
ACTUAL CO-ORDS: 563 899.25 N 220 160.22 E
R.L. OF COLLAR: -208.65
INCLINATION OF HOLE: $-52^{\circ} 13'$
PICKED UP BY: J. Cook DATE: 11/6/80

SUMMARY LOGGED BY: R. E. S. Davies
RESULTS: 5 - 8 m, 3 m @ 0.33% WO_3 B Lens
53 - 60 m, 7 m @ 1.12% WO_3 C Lens

DRILLING DATE COMMENCED: 9/6/80 DATE TERMINATED: 23/6/80
DRILLER/CONTRACTOR: Joe Penna/KIS
CASING: SIZE:
DEPTH:
CORE: SIZE: 46TT
DEPTH:
WEDGE PLACED: DEPTH: PROPOSER:
EXTENSION:
FINAL DEPTH: 84.5 m
REASON FOR TERMINATION: In Granite
CONDITION OF HOLE ON COMPLETION:
CASING:
CEMENTED:
BORE HOLE SURVEY: Single Shot
WATER:
COMMENTS ON DRILLING CONDITIONS:

SUMMARY BORE HOLE SURVEY DATAD.D.H. No. D 160/21

Surveyed method: Single shot
 Final depth: 84.50 m
 Casing depth: Nil

Depth surveyed to: 84.50 m
 Date surveyed: 24/6/80
 Surveyed by: R. Drake
 Checked by:

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.			
20	178° 30'	168° 30'	37°	-53°			
40	179°	169°	36°	-54°			
60	178° 30	168° 30	36°	-54°			
84.5	179°	169°	36° 10	-53° 50'			

REMARKS:

CORE RECOVERY

D.D.H. No. D 160/21

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 5.1 m	5.1	4.9	96
5.1 - 7.8	2.7	2.7	100
7.8 - 10.8	3.0	3.0	100
10.8 - 13.8	3.0	3.0	100
13.8 - 16.8	3.0	3.0	100
16.8 - 19.8	3.0	3.0	100
19.8 - 22.0	2.1	2.0	95
22.0 - 24.3	2.3	2.0	87
24.3 - 25.1	0.8	0.7	88
25.1 - 26.0	0.9	0.8	89
26.0 - 27.0	1.0	1.0	100
27.0 - 29.8	2.8	2.8	100
29.8 - 32.5	2.7	2.7	100
32.5 - 33.6	1.1	1.1	100
33.6 - 34.6	1.0	0.9	90
34.6 - 37.3	2.7	2.7	100
37.3 - 40.2	2.9	2.9	100
40.2 - 43.2	3.0	3.0	100
43.2 - 44.5	1.3	1.3	100
44.5 - 47.4	2.9	2.8	97
47.4 - 50.2	2.8	2.8	100
50.2 - 53.1	2.9	2.8	97
53.1 - 56.1	3.0	3.0	100
56.1 - 59.0	2.9	2.9	100
59.0 - 61.9	2.9	2.9	100
61.9 - 64.9	3.0	3.0	100
64.9 - 67.8	2.9	2.9	100
67.8 - 70.8	3.0	3.0	100
70.8 - 73.8	3.0	3.0	100
73.8 - 76.8	3.0	3.0	100
76.8 - 79.7	2.9	2.9	100
79.7 - 82.6	2.9	2.9	100
82.6 - 84.5	1.9	1.8	95
EOH 84.5 m			

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. D 160/21

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)
0.00 - 17.00 m	B Lens Marble						84	
17.00 - 22.40	Tuffite						17	
22.40 - 27.00	Aplite						2	
27.00 - 28.55	bh						58	
28.55 - 29.80	Ap						88	
29.80 - 34.80	bh						82	
34.80 - 35.85	Ap						100	
35.85 - 45.80	Bedded bh						91	
45.80 - 69.00	Bfb (m)						91	
69.00 - 75.60	LV						80	
75.60 - 84.50	Ap						65	
EOH 84.50 m								

FURTHER DATA & REMARKS

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

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 160/21

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO ₃	Mo		
D 12460	0	1	1.0	1.0	1.04	<.01		
61	1	2	"	"	0.1	<.01		
62	2	3	"	"	0.08	<.01		
63	3	4	"	"	0.06	<.01		
64	4	5	"	"	0.07	<.01		
65	5	6	"	"	0.35	<.01		
66	6	7	"	"	0.29	<.01		
67	7	8	"	"	0.34	<.01		
68	8	9	"	"	0.10	<.01		
69	9	10	"	"	0.14	<.01		
70	10	11	"	"	0.12	0.01		
71	11	12	"	"	0.07	<0.01		
72	12	13	"	"	0.07	0.01		
73	13	14	"	"	0.10	<0.01		
74	14	15	"	"	0.11	0.01		
75	15	16	"	"	0.08	0.02		
76	16	17	"	"	0.18	<0.01		
77	17	18	"	"	0.11	0.06		
78	45	46	"	"	0.07	<0.01		
79	46	47	"	"	0.06	<0.01		
80	47	48	"	"	0.17	<.01		
81	48	49	"	"	0.13	<.01		
82	49	50	"	"	0.06	<.01		
83	50	51	"	"	0.10	<.01		
84	51	52	"	"	0.39	<.01		
85	52	53	"	"	0.02	<.01		
86	53	54	"	"	0.54	<.01		
87	54	55	"	"	1.20	<.01		
88	55	56	"	"	1.40	<.01		
89	56	57	"	"	2.89	<.01		
90	57	58	"	"	0.42	<.01		
91	58	59	"	"	1.06	<.01		
92	59	60	"	"	0.30	<.01		
93	60	61	"	"	0.03	<.01		
94	61	62	"	"	0.81	<.01		
95	62	63	"	"	0.02	<.01		
96	63	64	"	"	0.03	<.01		
97	64	65	"	"	0.07	0.01		
98	65	66	"	"	0.06	<0.01		
99	66	67	"	"	0.06	<0.01		
500	67	68	"	"	0.05	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/21

0.0 - 17.0 m B LENS MARBLE

This unit consists almost entirely of fresh grey bedded marble. Small amounts of scheelite are scattered through the unit, but do not reach ore grade.

Pyroxene alteration has occurred at fracture zones @ 5.5 m, 13.3 m, 8 m. 16.0 - 17.0 m.

Bedding is at	24 ^o	to LCA @	1.7 m
"	48 ^o	"	4.7 m
"	28 ^o	"	9.8 m
"	22 ^o	"	13.8 m
"	34 ^o	"	16.0 m

17.0 - 22.4 TUFFITE

This is a dark green, spotty (2 mm spots) micaceous rock and is commonly sheared.

22.4 - 27.0 APLITE

Fine grained and very fractured pale grey to pink, quartz rich aplite. The first 1 m is extensively brecciated.

27.0 - 28.55 BIOTITE HORNFELS

Black fine grained biotite hornfels. Thin pyroxene hornfels beds define bedding as 40^o to LCA.

28.55 - 29.8 APLITE

Pale grey/green, fine grained aplite. Intergranular texture

29.8 - 34.8 BIOTITE HORNFELS

Black fine grained massive biotite hornfels.

34.8 - 35.85 APLITE

Quartz rich recrystallised pale pink aplite.

35.85 - 45.8 BEDDED BIOTITE HORNFELS

Dark grey biotite hornfels with bedding defined by pale beds of pyroxene hornfels rich material.

Bedding is @	36 ^o	to LCA @	37.4 m
"	32 ^o	"	39.5 m
"	50 ^o	"	44.7 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 160/21

45.8 - 69.0 m MINERALISED BANDED FOOTWALL BEDS

Although the whole unit is mineralised it probably only attains ore grade from about 54 m - 62 m.

Rock types present in order of dominance ore: garnet hornfels, marble, pyroxene hornfels, biotite hornfels.

Beds are generally thin 1 - 10 cm. The first 5 m of the unit are mostly composed of marble.

Bedding is @	44 ^o	to LCA @	47.5 m
"	54 ^o	"	53.0 m
"	35 ^o	"	57.8 m
"	56 ^o	"	60.0 m
"	47 ^o	"	64.0 m
"	40 ^o	"	67.7 m

Bedding planes are often disrupted by small shears.

69.0 - 75.6 LOWER VOLCANCIS

A pale green, spotted (1 mm) rock, with visible mica and sulphides.

From 40 - 60 cm below the top of the unit is a zone containing numerous white alteration spots of 1 - 3 mm diameter.

75.6 - 84.5 APLITE

This pale pink, fine grained aplite is taken to be the chilled margin of the granodiorite. It contains a number of fractures.

EOH 84.5 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 160/20 E

PLANNING PROPOSER: D. Bedford DEPTH:

LOCATION:

PURPOSE OF HOLE: Test Sandfill in Wedge Area

PROPOSED CO-ORDS: 220161 E 564193 N

INCLINATION: +19°

BEARING: 155° °GRID °MAG

TARGET: E N

DEPTH: 10.80 m

CHECKED BY: DATE:

SURVEY SURVEY CO-ORDS: E N

SURVEYED BEARING: 154° 47' °GRID °MAG

SURVEYED IN BY: J. Cook DATE: 10/12/79

ACTUAL CO-ORDS: 220160.63 E 564193.07 N

R.L. OF COLLAR: -131.92

INCLINATION OF HOLE: +18° 52'

PICKED UP BY: J. Cook DATE: 11/12/79

SUMMARY LOGGED BY: R. H. Davies

RESULTS: Not Split.

DRILLING DATE COMMENCED: Dec. 1979 DATE TERMINATED: Dec. 1979

DRILLER/CONTRACTOR: KIS

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH: 10.80

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 10.80 m

REASON FOR TERMINATION:

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: Not Surveyed

WATER:

COMMENTS ON DRILLING CONDITIONS: Good

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. D 160/20E

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TURES /m	JOINT ANGLE (WRT/ LAOC)	JOINT FILLING	BEDDING ANGLE (W. R. T./ L. A. Q. C.)	% CORE RECO- VERY	R. Q. D.	REMARKS (WEATHERING)
0.00 - 3.60 m	L V	6.39	Sub- parallel 22° 90°	Carb/pyrite		91 %	0.75	
3.60 - 7.10	Bfb	12.0	45° 68°	Chl/pyrite	90° 60°	100	0.69	
7.10 - 10.80	Gh(b)	8.0	40° 56	Carb	25° 40	80	0.58	Minor faults

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

GEOLOGICAL LOG

D.D.H. No. D 160/20E

0.0 - 3.60 m LOWER VOLCANICS

This unit consists of a massive dark olive green/black rock. Small knots of altered dark green ferro magnesian minerals can be seen in a light grey fine grained matrix. The unit is criss crossed by veins of calcite and quartz. Many of these quartz veins have chloritic alteration zones accompanying them.

In two areas 2.90 - 2.70 m and 3.20 - 3.30 m, large rounded whitish knots may be observed. These are probably zeolites, and could represent flow tops?

Major Joints	0.30 m	subparallel	LCA
	1.70 m	22°	LCA
	2.10 m	90°	LCA

3.60 - 7.10 m BANDED FOOTWALL BEDS

This unit consists of fine grained biotite hornfels and pyroxene hornfels bands.

Minor scheelite mineralisation occurs between 5.60 - 5.80 m

Bedding is prominent in the unit. Some of the pyroxene hornfels and biotite hornfels bands appear to be disturbed at 6.10 m and this may be due to minor slumping prior to consolidation.

Bedding	4.40 m	90°	LCA
	7.00 m	60°	LCA

Major Joints	3.90 m	45°	LCA
	5.40 m	68°	LCA

7.10 - 10.80 GARNET HORNFELS (BANDED)

From 7.10 m the bands of olive green garnet skarn begin to predominate over the biotite hornfels and pyroxene hornfels bands. The skarn is well mineralised and has a matrix of medium grained andradite garnet, calcite and quartz with minor iron oxides. It probably represents the more complete mineralisation of the Banded Footwall Beds.

Bedding	7.30 m	25°	LCA
	9.00 m	40°	LCA

Major Joints	7.60 m	40°	LCA
	10.60 m	56°	LCA

EOH 10.8 m.

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/19

Survey method: Multishot Camera
Final depth: 109.7 m
Casing depth: 1.0 m

Depth surveyed to: 109.70 m
Date surveyed to: 6-4-78
Surveyed by: Lance Denby
Checked by: G. J. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		S	E
3	180	170	39	-51	2.33	1.86	0.33
26	180	170	39	-51	20.20	16.11	2.84
47	180	170	38.5	-51.5	36.63	28.98	5.11
68	179	169	39.0	-51	52.95	41.96	7.63
89	180	170	39	-51	69.27	54.98	9.92
109.7	181	171	38.75	51.25	85.41	67.78	11.95

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. 0-160/19

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.7	2.7	2.1	78
2.7 - 3.1	0.4	0.55	138
3.1 - 4.7	1.6	1.6	100
4.7 - 4.8	0.1	0.1	100
4.8 - 5.6	0.8	0.9	113
5.6 - 8.5	2.9	2.95	102
8.5 - 9.4	0.8	0.8	89
9.4 - 10.3	0.9	1.0	111
10.3 - 10.9	0.6	0.6	100
10.9 - 12.2	1.3	1.3	100
12.2 - 14.0	1.8	1.75	97
14.0 - 17.0	3.0	3.1	103
17.0 - 17.6	0.6	0.65	108
17.6 - 20.6	3.0	3	100
20.6 - 23.6	3.0	3	100
23.6 - 26.6	3.0	3	100
26.6 - 29.6	3.0	3	100
29.6 - 32.6	3.0	3	100
32.6 - 35.5	2.9	2.85	98
35.5 - 38.1	2.6	2.75	106
38.1 - 38.4	0.3	0.3	100
38.4 - 40.0	1.6	1.7	106
40.0 - 41.0	1.0	1.0	100
41.0 - 42.1	1.1	0.95	86
42.1 - 43.9	1.8	1.85	102
43.9 - 46.5	2.6	2.6	100
46.5 - 47.3	0.8	0.65	81
47.3 - 50.2	2.9	3.0	103
50.2 - 53.2	3.0	2.95	98
53.2 - 54.8	1.6	1.7	106
54.8 - 56.6	1.8	2.0	111
56.6 - 59.6	3.0	3.0	100
59.6 - 62.2	2.6	2.7	103
62.2 - 64.8	2.6	2.55	98
64.8 - 65.8	1.0	0.9	90
65.8 - 67.0	1.2	1.25	104
67.0 - 70.0	3.0	2.85	95
70.0 - 71.7	1.7	1.8	105
71.7 - 74.0	2.3	2.3	100
74.0 - 77.0	3.0	2.9	96
77.0 - 79.1	2.1	2.15	102
79.1 - 82.1	3.0	3.0	100
82.1 - 85.1	3.0	3.0	100
85.1 - 88.1	3.0	2.95	98
88.1 - 91.1	3.0	3.0	100
91.1 - 92.0	0.9	0.85	94
92.0 - 94.0	2.0	1.85	92

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. 0-160/19

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
98.0 - 99.0	1.0	0.9	90
99.0 - 100.8	1.8	1.9	105
100.8 - 103.5	2.7	2.9	107
103.5 - 104.5	1.0	0.95	95
104.5 - 102.0	2.5	2.45	98
107.0 - 109.7	2.7	2.8	103
			<hr/> 100.93%

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/19

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo		
D 7293	10	11	1.0	1.0	<0.01	<0.01		
94	11	12	"	"	<0.01	<0.01		
95	12	13	"	"	0.28	0.02		
96	13	14	"	"	<0.01	<0.01		
97	24	25	"	"	<0.01	<0.01		
98	25	26	"	"	0.02	<0.01		
99	26	27	"	"	0.03	<0.01		
300	27	28	"	"	0.14	0.05		
302	28	29	"	"	<0.01	<0.01		
303	29	30	"	"	0.02	<0.01		
304	30	31	"	"	0.06	<0.01		
305	31	32	"	"	0.29	0.01		
306	32	33	"	"	1.18	0.04	2m at 4.24% WO ₃	
307	33	34	"	"	7.3	0.25		
308	34	35	"	"	<0.01	<0.01		
309	35	36	"	"	<0.01	<0.01		
310	70	71	"	"	0.22	<0.01		
311	71	72	"	"	0.12	<0.01		
312	72	73	"	"	0.11	<0.01		
313	73	74	"	"	1.48	0.05	- 1m at 10.48% WO ₃	
314	74	75	"	"	0.09	<0.01		
315	78	79	"	"	0.39	0.01		
316	79	80	"	"	0.23	<0.01		
317	80	81	"	"	0.50	0.01		
318	81	82	"	"	<0.01	<0.01		
319	82	83	"	"	0.05	<0.01		
320	88	89	"	"	0.10	<0.01		
321	89	90	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 160/19

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 - 5.6 Whole unit probably a shear zone.	Sheared bh	20+		Carb, clay, Sulp, chl	40°	100	29	highly sheared
5.6 - 11.3 Sheared zone 10.3 - 11.75 Swan Fault	Transitional bh/pgh	12	30°-60°	Carb, clay, sulph, chl.	35°	100	68	
11.3 - 12.8	Blens gph	9	30°	Chl, clay, carb.	40°	100	53	
12.8 - 25.3 Marble 6 major shears 14.5-18.8 m	Blens Marble	5	60°-70°	Clay, carb	25°	100	82	
25.3 - 33.6	B lens gph	5	90°	Clay, carb, chl.	-	100	89	
33.6 - 70.1	Bh	6	40°-50°	Carb, Sulp, clay, chl		100	61	
70.1 - 74.1	B lens banded gh	4	60-80	Chl, clay, carb		100	80	

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) $\pm \frac{\text{Length Core } 10 \text{ cm}}{\text{Length Drilled}} \%$
- Core size 46 TT

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 160/19

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TURES /m	JOINT ANGLE (WRT I.A.O.C.)	JOINT FILLING	BEDDING ANGLE (W.R.T. L.A.O.C.)	% CORE RECO- VERY	R.Q.D.	REMARKS (WEATHERING)
74.1 - 99.0	B lens Marble	4	70°-90°	Clay, carbonate,	20°-35°	100	80	
99.0 - 101.95	B lens? Tuffite? Sheared	12	30°	Clay, chl		100	32	Very high sheared.
101.95 - 106.25	Ap-gte	25+	30°	Clay, quartz		100	42	
106.25 - 107.5	B lens Marble	8	60°-70°	Carb, chl		100	76	
107.5 - 108.25	gte	6	30°	chl		100	80	
108.25 - 109.7	Bh	5	60°-70°	Minor carb	50°	100	89	

FURTHER DATA & REMARKS

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

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/19

0.0 - 5.6 m

Biotite Hornfels

Normal fine grained biotite hornfels which has been highly fractured and broken. The fractures have chlorite, sulphide and carbonate fill mostly with some minor clay. Carbonate veining and carbonate cemented breccia zones occur at 2.1 m and 5.2 m respectively. The fracture / metre rate is estimated in excess of 20, at any angle to LCA.

Banding occurs 2.75 m at 40° to the LCA but may be a stress foliation.

5.6 - 11.3 m

Podded Biotite Hornfels

This unit contains the fine grained hornfels texture and also carbonate fragments which have undergone slight metasomatic alteration.

It is inferred to be part of the Upper Pyroxene garnet hornfels unit prior to the pyroxene garnet hornfels / biotite hornfels contact. The groundmass is virtually all biotite hornfels, with minor lithic fragments 6.2 m (tuffs?) and only a few dispersed carbonate fragments occur.

The banding present at 6.4 m is at 35° to the LCA.

Broken and sheared zones representing faulting occur 7.6, 9.3, 10.3, 10.8 - 10.9 and 11.2 m. These zones have fills of clay, carbonate with minor sulphide and chlorite.

The fracture / metre rate is about 12 at 30°-60° to the LCA. Swan Fault: 10.3 - 11.2 m.

11.3 - 12.8 m

Garnet Pyroxene Hornfels B lens

This grossular garnet and pyroxene skarn has weak scheelite mineralization. There is minor development of the andradite garnet skarn at 12.2 m as chloritization and minor sulphides.

The unit is highly sheared and broken between 11.25 and 11.70 m.

The fracture / metre average 9 at about 30° to the LCA. About 0.1 m of biotite hornfels is in conformable contact with the upper surface of the garnet pyroxene hornfels units this contact is about 40° to the LCA.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/19

12.8 - 25.3 m

B lens Marble

Fine to medium grained relatively unaltered grey white marble.

Minor solution occurs in association with the shears at 13.5, 13.7, 14.4 to 14.95, 15.1, 15.3 - 15.8, 16.4 - 16.8, 17.1 - 17.6 and 18.8 m.

These shears are all heavily filled with clay pug and carbonate. Other solution and alteration zones occur 24.5 m close the contact with the garnet pyroxene hornfels. unit at 25.3 m.

Probable bedding occurs 19.8 m and is at 25° to the LCA. Fractures / metre average 5 mostly at about 60-70° to the LCA.

25.3 - 33.6 m

Garnet Pyroxene Hornfels

This section of B lens has undergone irregular alteration and mineralization.

Very minor andradite garnet skarn occurs but most is grossular garnet and pyroxene. Mineralization ranges from poor to good over short sections with a vein of massive scheelite at 33.1 to 33.15 m.

Minor fractures occur at 25.4, 26.6, 27.2, 29.0, 31.3 and 31.4 m. Most are filled with clay, carbonate and minor chlorite. Fracture / metre average 5 and are mostly at 90° to the LCA eg 29.5 m.

33.6 - 70.1

Biotite Hornfels

Typical grey - brown biotite hornfels with minor calcite veining 33.6 - 39.3 m, ph units 47.0 - 52.0, and 59.0 - 70.1 m, spotting 43.0 - 46.5 m and an aplite dyke 69.75 - 69.95 m.

The first 0.3 m is highly sheared and reconsolidated by chlorite. There are few broken zones eg 38.0 - 38.45 m 47.1 - 47.2 m, 55.55 - 55.65 m. Many surfaces show slicken sides as traces of movement eg 39.2, 42.3, 45.35, 48.5. F/M Average 6 of about 40-50° to the LCA.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/19

70.1 - 74.1

B lens Banded Garnet Hornfels

Sequence of pyroxene hornfels, garnet hornfels; both andradite and grossular, and minor biotite hornfels at the start, very similar to banded footwall beds.

Mineralization is weak and patchy, some coarsely crystalline, some finely disseminated.

Fractures / m average about 4 with angles of 60°-80° to the LCA and a small shear zone from 71.4 - 71.65 m.

74.1 - 99.0

B lens Marble

Typical unmineralized grey marble with minor pyroxene hornfels / garnet hornfels alteration areas eg 79.1 - 81.8 m, 5.65 - 86.2 m and 88.2 - 88.6 m.

Rolic bedding varies from 20-35° to the LCA at 82.4 m and 96.0 m respectively.

F/M Average about 4 and one about 70-90° to the LCA. Sheared, clay, and carbonate filled zones occur 75.9-76.0, 76.9 -77.1, 80.0 - 80.4, 85.2 - 85.3, 91.8 - 92.2 m, 94.0 - 94.25 m, 98.6 - 99.7 m.

An aplite dyke occurs 85.25 - 85.7 m.

99.0 - 101.95 m

Sheared? Tuffite?

Heavily sheared, greenish, waxy unit which has weathered mainly to chlorite. Reconsolidation has occurred as shown by an aplite dyke 101.35 - 101.6 m which has been recemented.

Traces of scheelite occur as disseminated flecks only.

F/M are about 12 and mostly at about 30° LCA . All surfaces are chloritic and slicken sided.

101.95 - 106.25 m

Aplite / Granite

Transition zone of aplite, granite, and granite assimilated sediment. Heavily broken ground from 103-104.5 m.

F/M 25+ at all angles LCA.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/19

106.25 - 107.5 m

B lens Marble

Marble with minor grossular garnet and pyroxene zones. Has 30° LCA granite contact on lower surface with granite sheared zone 107.4 - 107.5 m.

F/M 8 mostly at 60°-70° LCA.

107.5 - 108.25 m

Granite

Minor granite intrusion tongue with pyroxene bed and aplite contained within.

108.25 - 109.7

Biotite Hornfels

Typical biotite hornfels after 0.20 m pyroxene grossular garnet contact zone with granite intrusion is passed.

F/M averages at about 60°-70° to the LCA.

Very weak relic bedding at 108.9 m has an angle of 50° to the LCA.

E.O.H.

GEOPEKO DIVISION - King Island

LOG OF D.D.H. No. D 160/18

PLANNING Proposer: .. G. J. Bujtor Depth:
Location: .. -150m R.L. Drill Drive
.....
Purpose of Hole: .. To define C lens south of the swan fault.....
Co-ords: 220160 E .. 563950 N
Inclination: -64°
Bearing: 180° °Grid °Mag
Target: E N
Depth:
Approved by: Date:

SURVEY Survey Co-ords: E N
Surveyed Bearing: .. 175° 10' °Grid °Mag
Surveyed in by: Date
Actual Co-ords: ... 220160.54 E .. 563949.19 N
R.L. of Collar: ... R-146.5
Inclination of Hole: -63° 00'
Picked up By: R.J.H. Date .. 1-3-1978

SUMMARY Logged By: .. G. J. Bujtor Date
Results: .. 58 - 61 m, 3m @ 0.79% WO₃
..... 63 - 65 m, 2m @ 0.54% WO₃ } B lens
..... 68 - 71 m, 3m @ 0.65% WO₃ }
..... 107 - 113 m, 6m @ 0.55% WO₃ - C lens

DRILLING Date Commenced: .. 23-2-78 Date Terminated .. 6-3-78
Driller/Contractor .. A.D.D.

Casing:	Size :	BQ		
	Depth :	1m		
Core:	Size :	46TT		
	Depth :	131.5m		

Wedge Runoff:
Wedge placed: Depth
Proposed by: Approved by
Reason .

Extension: Nil
Final Depth: 131.50m
Reason for Termination: Successfully intersected C lens southern orebody.

Condition of hole on completion:
Casing;
Cemented:
Bore hole survey: Surveyed to 120.0 m
Water: Normal
Comments on Drilling Conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/18

Survey method: Multishot
Final depth: 131.50
Casing depth: 1.0m

Depth surveyed to: 120m
Date surveyed: 14-3-78
Surveyed by: L. Denby
Checked by: G. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		S	E
15	177	167	27.25	-62.75	13.35	6.70	1.36
30	179	169	27.25	-62.75	26.71	13.37	2.76
45	180	170	28.0	-62.0	39.95	20.30	3.98
57	181	171	27.50	-62.5	50.58	25.81	4.86
75	181	171	27.0	-63.0	66.62	33.88	6.14
90	182	172	27.0	-63.0	79.97	40.46	7.16
102	182	172	27.0	-63.0	90.66	46.04	7.90
120	183	173	27.0	-63.0	106.70	54.14	8.99
131.50	183	173	27.0	-63.0	116.95	59.32	9.63

REMARKS:

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/18

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo		
D 7223	51	52	1.0	1.0	0.01	0.01		
24	52	53	"	"	0.01	0.01		
25	53	54	"	"	0.08	0.01		
26	54	55	"	"	0.20	0.01		
27	55	56	"	"	0.01	0.01		
28	56	57	"	"	0.01	0.01		
29	57	58	"	"	0.02	0.01		
30	58	59	"	"	0.52	0.03	3m @	} B/LENS
31	59	60	"	"	0.68	0.03	0.79% WO ₃	
32	60	61	"	"	1.16	0.05		
33	61	62	"	"	0.02	0.01		
34	62	63	"	"	0.02	0.01		
35	63	64	"	"	0.59	0.03	2m @	
36	64	65	"	"	0.48	0.02	0.54% WO ₃	
37	65	66	"	"	0.01	0.01		
38	66	67	"	"	0.21	0.01		
39	67	68	"	"	0.09	0.01		
40	68	69	"	"	0.35	0.02	3m @	} C/LENS
41	69	70	"	"	0.56	0.02	0.65% WO ₃	
42	70	71	"	"	1.04	0.04		
43	71	72	"	"	0.17	0.01		
44	72	73	"	"	0.09	0.01		
45	73	74	"	"	0.12	0.01		
46	74	75	"	"	0.08	0.01		
47	75	76	"	"	0.01	0.01		
48	76	77	"	"	0.12	0.01		
49	77	78	"	"	0.17	0.01		
50	78	79	"	"	0.01	0.01		
51	79	80	"	"	0.01	0.01		
52	103	104	"	"	0.01	0.01		
53	104	105	"	"	0.01	0.01		
54	105	106	"	"	0.01	0.01		
55	106	107	"	"	0.01	0.01		
56	107	108	"	"	0.66	0.03	6m @	} C/LENS
57	108	109	"	"	0.64	0.02	0.55%	
58	109	110	"	"	0.60	0.02	WO ₃	
59	110	111	"	"	0.18	0.01		
60	111	112	"	"	0.73	0.02		
61	112	113	"	"	0.50	0.02		
62	113	114	"	"	0.03	0.01		
63	114	115	"	"	0.01	0.01		

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. 160/12

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.9	2.9	2.9	100
2.9 - 5.9	3.0	3.0	100
5.9 - 8.9	3.0	3.0	100
8.9 - 11.9	3.0	3.0	100
11.9 - 14.9	3.0	3.0	100
14.9 - 17.9	3.0	3.0	100
17.9 - 20.9	3.0	3.0	100
20.9 - 23.9	3.0	3.0	100
23.9 - 26.9	3.0	3.0	100
26.9 - 29.9	3.0	3.0	100
29.9 - 32.9	3.0	3.0	100
32.9 - 35.9	3.0	3.0	100
35.9 - 38.0	2.1	2.1	100
38.0 - 41.0	3.0	3.0	100
41.0 - 43.0	3.0	3.0	100
43.0 - 46.0	3.0	3.0	100
46.0 - 48.6	2.6	2.6	100
48.6 - 50.7	2.1	2.1	100
50.7 - 53.7	3.0	3.0	100
53.7 - 56.7	3.0	3.0	100
56.7 - 59.7	3.0	3.0	100
59.7 - 62.7	3.0	3.0	100
62.7 - 65.7	3.0	3.0	100
65.7 - 68.7	3.0	3.0	100
68.7 - 71.7	3.0	3.0	100
71.7 - 74.7	3.0	3.0	100
74.7 - 77.7	3.0	3.0	100
77.7 - 80.7	3.0	3.0	100
80.7 - 83.6	2.9	2.9	100
83.6 - 86.6	3.0	3.0	100
86.6 - 89.6	3.0	3.0	100
89.6 - 91.3	1.7	1.7	100
91.3 - 94.3	3.0	3.0	100
94.3 - 97.3	3.0	3.0	100
97.3 - 100.3	3.0	3.0	100
100.3 - 103.3	3.0	3.0	100
103.3 - 106.3	3.0	3.0	100
106.3 - 109.3	3.0	3.0	100
109.3 - 112.3	3.0	3.0	100
112.3 - 115.3	3.0	3.0	100
115.3 - 118.3	3.0	3.0	100
118.3 - 120.7	2.4	2.4	100
120.7 - 121.5	0.8	0.8	100
121.5 - 124.5	3.0	3.0	100
124.5 - 126.7	2.2	2.2	100
126.7 - 129.7	3.0	3.0	100
129.7 - 131.5	1.8	1.8	100
EOH 131.5 m			

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No.D 160/18

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TJRES /m	JOINT ANGLE (WRT I.AOC)	JOINT FILLING	BEDDING ANGLE (W.R.T. L.A.O.C.)	% CORE RECO- VERY	R.Q.D.	REMARKS (WEATHERING)
0.0 - 33	Bh	8		Chl,carb,sulph		100	73	
3.3 - 22.9	PGH	4-5		Chl,carb,sulph		100	93	
22.9 - 26.9	SWAN / FAULT	ZONE						
26.9 - 51.25	Bh	8		Chl,sulph,carb		100	73	
51.25- 57.20	Bh/Ph	5		Chl,carb,sulph		100	82	
57.20- 77.85	B lens	6-7		Chl,carb,clay	55° :74.55m	100	74	
77.85-103.0	Bh	5-6		Clay,carb,chl,sul		100	80	
103.0 -106.7	PGH	4-5		Chl		100	95	
106.7 -113.25	Gh,BFB	5		Chl,clay,carb,sul	45° :110.8m	100	94	
113.25-118.30	Granite/sed	10		Chl,sulph,carb		100	55	
118.30-131.50	Gran/Adam	6-8		qtz,mica,clay		100	70	
EOH 131.50								

FURTHER DATA & REMARKS

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

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GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/18

0.00 - 3.30

BIOTITE HORNFELS

Fine grained grey to brown coloured biotite hornfels.

3.30 - 22.90

PYROXENE GARNET HORNFELS

Typical pyroxene garnet hornfels with angular fragments of marble ranging from 1mm to 15cm in size. Reaction rims of grossular garnet are common.

From 3.3 - 8.9m, the fragments are rather small and sparse and consist mainly of sulphide masses with ?actinolite /?pyroxene alteration zones.

From 13.0 - 22.9m, the pyroxene garnet hornfels is quite pyroxene rich and obviously slightly altered/?bleached. Very rare scheelite mineralization is present.

At the base of the unit (ie 22.9 - 23.0 m) the pyroxene garnet hornfels is very sheared and pyroxene rich with whitish carbonate veins (Swan Fault?).

22.9 - 26.9 m

SWAN FAULT ZONE

Swan Fault position may be at the base of the pyroxene garnet hornfels above, but also could be within the above zone (ie 22.9 - 26.9m) where brecciated, broken and leached core is common. The worst zone are from 25.5 - 26.3 m and 26.4 - 26.7 m. Small sediment fragments within the biotite hornfels are common. Carbonate veining is common.

26.9 - 51.25 m

BIOTITE HORNFELS

Fine grained dark grey to light brown coloured biotite (?actinolite) hornfels with well developed spotting in places (ie 42.0 - 49.0 m and 36.7 - 37.1 m).

A possible fault may be present around 48.3 - 48.4 m and also around 43.75 m (sheared and carbonate veins).

51.25 - 57.20 m

BIOTITE HORNFELS / PYROXENE HORNFELS

Intermixed zone of biotite hornfels with abundant pyroxene hornfels alteration zones and patches. Minor grossular garnet is developed in places and some marble occurs around 54.15 - 54.20 m.

This unit may be part of B lens (below) but most probably is part of the biotite hornfels overlying.

Minor scheelite mineralization is present.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/18

57.20 - 77.85 m

B LENS Consisting of the following broad subdivisions.

57.20 - 64.3 m. Pyroxene hornfels with minor biotite hornfels and coarse patchy andradite garnets. Minor grossular is also present.

Badly broken core occurs from 62.0 - 62.25 m (fault) and 62.45 - 62.70 m.

Scheelite mineralization is present.

64.3 - 66.4 m. Marble - well bedded and greyish in colour. Virtually barren of scheelite mineralization.

So 37° to LCA at 65.7 m.

Soft clayey joint fillings are common.

66.4 - 77.0 m. Pyroxene hornfels with abundant andradite, and minor grossular garnet and marble. Intermixing and patchiness is the norm. Good scheelite mineralization is present.

77.0 - 77.85 m. Marble - dominant with minor grossular and pyroxene hornfels. A pinkish aplite vein occurs from 76.05 - 76.50 m.

Soft clayey pug joint fillings are present. Patchy coarse andradite occurs in the lower 1m of the unit. Some scheelite mineralization is present.

So 55° to LCA at 74.85 m.

77.85 - 103.00 m

BIOTITE HORNFELS

Fine grained grey to light brown coloured biotite hornfels with numerous pyroxene hornfels / garnet reaction veins (or channel way) at the top of the unit from 77.85 - 103.00m.

Probable Fault zones occur from 78.15 - 78.85 m (sheared, broken and abundant carbonate veins), 91.0 - 91.30 m (badly broken core) and 101.55 - 101.65 m (sheared, clay and carbonate veining).

Minor metamorphic spotting occurs from 93.0 - 99.0 m.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/18

103.00 - 106.70 m

PYROXENE GARNET HORNFELS

Typical pyroxene garnet hornfels with marble fragments up to 30cm in size.

The top 1.5m of the unit contains very sparse fragments consisting of sulphide and / or quartz (siliceous fragments) dominantly. Very little scheelite mineralization is present.

106.7 - 113.25 m

BANDED SKARN

Banded skarn or mineralized banded footwall beds. Extremely well bedded sequence with numerous coarse andradite garnet interbeds. Sulphides are common. Good patchy scheelite mineralization is present.

So 45° to LCA at 110.8 m.

113.25 - 118.30 m

INTERMIXED GRANITE / SEDIMENTS

Highly intermixed zone of grey coloured granite and mine series sediments (some pyroxene hornfels). No visible scheelite mineralization is present. The unit is somewhat broken.

118.30 - 131.50 m

GRANITE, APLITE, ADAMELLITE

Pink to whitish, and yellowish - green adamellite, granite and aplite. The intrusive is very micaceous and contains no visible scheelite mineralization.

EOH 131.50 m.

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/17

Survey method: Eastman Multishot
Final depth: 128.7 m
Casing depth: 1.0 m

Depth surveyed to: 128.7
Date surveyed: 22-2-78
Surveyed by: L. Denby 14-3-78
Checked by: G.J.Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		S	E
18	180	170	14.3	-75.7	17.45	4.36	0.77
21	181	171	14.3	-75.7	20.36	5.09	0.89
33	182	172	14.3	-75.7	31.99	8.01	1.30
45	184	174	14.3	-75.7	43.61	10.99	1.61
49.5	184	174	14.3	-75.7	47.97	12.11	1.73
57	187	177	14.8	-75.2	55.22	14.02	1.83
69	187.7	177.7	15.0	-75.0	66.81	17.13	1.97
81	190	180	15.3	-74.7	78.39	20.29	1.97
96	190	180	15.3	-74.7	92.86	24.24	1.97
102	188	178	15.0	-75.0	98.66	25.79	2.02
114	191	181	15.0	-75.0	110.25	28.90	1.97
122	191	181	15.0	-75.0	116.05	30.45	1.94
128.7	191	181	15.0	-75.0	122.52	32.18	1.91

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/17

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.7	2.7	2.7	100
2.7 - 5.7	3.0	3.0	100
5.7 - 8.7	3.0	3.0	100
8.7 - 9.8	1.1	1.1	100
9.8 - 12.8	3.0	2.9	97
12.8 - 15.7	2.9	3.0	103
15.7 - 16.6	0.9	0.9	100
16.6 - 19.6	3.0	3.0	100
19.6 - 22.6	3.0	3.0	100
22.6 - 25.6	3.0	3.0	100
15.6 - 28.6	3.0	3.0	100
28.6 - 31.6	3.0	3.0	100
31.6 - 34.6	3.0	3.0	100
34.6 - 37.5	2.9	2.9	100
35.7 - 40.5	3.0	3.0	100
40.5 - 43.5	3.0	3.0	100
43.5 - 45.7	2.2	2.2	100
45.7 - 47.1	1.4	1.4	100
47.1 - 49.0	1.9	1.9	100
49.0 - 52.0	3.0	3.0	100
52.0 - 55.0	3.0	3.0	100
55.0 - 57.2	2.2	2.2	100
57.2 - 59.5	2.3	2.3	100
59.5 - 63.5	4.0	3.15	79
63.5 - 64.7	1.2	1.3	108
64.7 - 67.5	2.8	2.7	96
67.5 - 70.5	3	3.05	102
70.5 - 73.3	2.8	2.75	98
73.3 - 73.5	0.2	0.12	60
73.5 - 75.8	2.3	2.3	100
75.8 - 78.8	3.0	3.0	100
78.8 - 81.2	2.4	2.85	119
81.2 - 84.8	3	3.0	160
84.8 - 87.8	3	3.00	100
87.8 - 90.8	3	3	100
90.8 - 93.8	3	3	100
93.8 - 96.8	3	3	100
96.8 - 99.8	3	3	100
99.8 - 102.8	3	3	100
102.8 - 105.8	3	2.95	98
105.8 - 108.8	3	2.95	98
108.8 - 110.5	1.7	1.70	100
110.5 - 113.5	3	3.1	103
113.5 - 116.5	3	3	100
116.5 - 119.5	3	2.9	97
119.5 - 122.5	3	2.85	95
122.5 - 123.5	1	0.9	90
123.5 - 126.3	2.8	2.6	93
126.3 - 128.1	1.8	1.5	83

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/17

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo		
D 7175	23	24	1.0	1.0	0.03	<0.01		
76	24	25	"	"	0.07	<0.01		
77	25	26	"	"	<0.01	<0.01		
78	26	27	"	"	<0.01	<0.01		
79	27	28	"	"	<0.01	<0.01		
80	28	29	"	"	<0.01	<0.01		
81	29	30	"	"	<0.01	<0.01		
82	30	31	"	"	0.01	<0.01		
83	31	32	"	"	0.41	0.01	10m @ 0.95% WO ₃	
84	32	33	"	"	0.93	0.03		
85	33	34	"	"	0.93	0.03		
86	34	35	"	"	0.99	0.04		
87	35	36	"	"	1.57	0.06		
88	36	37	"	"	1.81	0.06		
89	37	38	"	"	1.35	0.05		
90	38	39	"	"	0.60	0.03		
91	39	40	"	"	0.25	0.01		
92	40	41	"	"	0.62	0.01		
93	41	42	"	"	0.20	0.01		
94	42	43	"	"	0.06	<0.01		
95	43	44	"	"	<0.01	<0.01		
D 7282	93	94	"	"	<0.01	<0.01	5m @ 0.78% WO ₃	
83	94	95	"	"	0.03	<0.01		
84	95	96	"	"	0.29	0.01		
85	96	97	"	"	0.12	<0.01		
86	97	98	"	"	0.44	0.02		
87	98	99	"	"	0.17	<0.01		
88	99	100	"	"	1.12	0.05		
89	100	101	"	"	1.47	0.05		
90	101	102	"	"	0.69	0.02		
91	102	103	"	"	0.01	<0.01		
92	103	104	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 160/17

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TURES /m	JOINT ANGLE (WRT IAOC)	JOINT FILLING	BEDDING ANGLE (W.R.T. L.A.O.C.)	% CORE RECO- VERY	R.Q.D.	REMARKS (WEATHERING)
0.0 - 3.05	Bh	5		Chl, Carb		100	82	
3.05 - 30.35	Pgh	5		Chl, Carb		100	82	
30.35 - 42.85	Gh	5-6				100	81	
<u>Upper C lens</u>								
42.85 - 59.5	Bh	10		Clay, Chl, Carb, Sulp.		100	50	
59.5 - 94.2	Bh	9	36°	Clay, carb, sulph, chlorite.		95	57	
<u>Major Faults</u>								
48.95 - 49.1			45°					
60.1 - 64.7			30°-40°					
94.2 - 99.1	Pgh	12+	45°	Chl, clay, carb, Sulph.		100	53	
99.1 - 102.2	Gh	15	70°	Clay, carb, sulph, chl,	40°	100	60	
<u>Upper C lens</u>								
102.2 - 119.6	Ph/Bh	10	30°-70°	Clay, sulph, chl.	30°	100	67	
119.6 - 128.1	Gh/adamellite	6	20°	Clay, epidote		93	62	

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) $\pm = \frac{\text{Length Core 10 cm}}{\text{Length Drilled}} \%$
- Core size. 46TT

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/17

0.0 - 3.05m

Biotite Hornfels

Dark fine grained biotite hornfels with minor actinolite/pyroxene alteration zones and patches.

?Smb/?So 45° to LCA at 1.45 m

3.05 - 30.35

Pyroxene Garnet Hornfels

Typical pyroxene garnet hornfels with irregularly shaped, and poorly sorted pods / fragments of marble in a pyroxene rich matrix. Reaction veins of grossular garnet are common.

From 3.05 - 10.0 m, the pyroxene garnet hornfels is only slightly altered. From 10.0 - 30.35 m, alteration within the pyroxene garnet hornfels increases towards massive skarn. Mineralization is rather poor and patchy with the big majority being sub - grade. Pyroxene alteration and garnets increase towards the base.

The lower 1-2 m may well be placed with Upper C lens. Alteration is so intense that individual pods cannot be identified

30.35 - 42.85 m

Upper C lens - Garnet Hornfels

Massive androdite garnet skarn with good disseminated scheelite mineralization. The skarn consists dominantly of andradite garnet with minor calcite, quartz, epidote and chlorite.

The top of the unit grades imperceptibly into mineralized / replaced Pgh, while the base of the unit grading into a pyroxene hornfels / garnet mixture.

Towards the base of the unit, carbonate veining is common.

42.85 - 94.20 m

Biotite Hornfels

Fine to medium grained grey to dark brown coloured biotite hornfels.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/17

42.85 - 43.15 m Banded pyroxene hornfels/biotite hornfels with banding (?shearing) at 42° to LCA.

43.15 - 48.95 Biotite hornfels. Broken and fractured with abundant carbonate veining. Worst areas are 45.5 - 45.7 m, 46.35 - 46.55 m, 46.70 - 46.85 m, around 47.1 m.

Banding or shearing at 47.75 m is 36° to LCA.

48.95 - 49.1 Fault Sheared chlorite breccia pug with carbonate veining. Shearing at 45° to LCA.

49.1 - 94.2 Biotite hornfels. Slightly fractured and broken biotite hornfels. Worst areas are 51.05 - 51.25 m (possible fault), 53.0 - 53.3 (fractured carbonate/quartz veining) and around 57.2 m (broken core) also 69.5 m, and 73.3 - 73.5 m. Minor spotting occurs from 51.9 - 52.3, (whitish ghost spots), 55.15 - 55.75 m (dark ?biotite spots), and 67.6 - 68.9.

Some minor units show a slightly coarser original grain size eg; 85.4 - 87.8 m and have a grey brown coloration. Several pods of altered material occur close to the biotite hornfels/pyroxene garnet hornfels boundary and are probably products of the metasomatism forming the skarn at 70.6 m a joint is coated with small well formed pale green crystals, possibly a zeolite of some type.

60.1 - 64.7 Fault Zone

This is a major shear zone of chloritized biotite hornfels, clay pug and carbonate veining. The shearing seems to be mainly at about 30°-40° to the LCA.

94.2 - 99.1

Pyroxene Garnet Hornfels - Pyroxene Garnet Hornfels

Normal pyroxene garnet hornfels with podded fragments of marble in a pyroxene rich matrix. The grossular garnet rims on pods are common. In places where matrix is relatively pyroxene poor and biotite rich there are pyroxene rims around the grossular garnet rims.

Andradite garnet uncommon. Mineralization is patchy.

Fractures / metre rate is about 12. generally at 45° to LCA eg; at 81.6 metres.

Broken zones occur at 94.7 m and 94.9 metres.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/17

99.1 - 102.2

Garnet Hornfels - C lens

Massive andradite garnet skarn with variable disseminated scheelite mineralization.

Minor calcite, quartz epidote chlorite and pyrite occur throughout with grossular garnet and pyroxene increasing towards base of unit until dominant. The grossular garnet and pyroxene form a banded section very similar to the banded footwall beds or lower C lens.

Banding 40° to LCA at 101.3 m.

Broken zones occur at 98.35 m 98.65 m and 101.5 m.

Fractures / metre average 15 generally at about 70° to LCA eg; 99.9 m.

102.2 - 119.6

BANDED PYROXENE HORNFELS/BIOTITE HORNFELS

Fine grained interbedded units of pyroxene hornfels and biotite hornfels with minor grossular garnet units eg; 107.3 and 119.1 metres.

Fractures / metre average and generally form angles of 70° and 30° to the LCA. eg 116.3 m and 114.7 respectively.

Broken zones occur 102.3, 107.8, and 108.8, 110.5, 113.2, and 119.4 m. possibly indicating faults.

Quartz and carbonate filled fractures occur 103.9 (minor breccia) 107.85, 108.2, 109.2, and 114.3 m.

Most joint and fracture surfaces have coatings of sulphid clay and chlorite.

119.6 - 128.1

ADAMELLITE

Normal orthoclase rich, highly jointed crassy granite. Minor epidote alterations around some joints and traces of scheelite mineralization. A quartz and clay filled fracture zone occurs 123.45 m.

Fractures / metre average 6 and are mostly at about 20° to the LCA eg 123.7 m.

128.1 EOH

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/16

Survey method: Eastman Multishot
Final depth: 72.2 m
Casing depth: Nil

Depth surveyed to: 72.2 m
Date surveyed to: 16.2.78
Surveyed by: L. Denby
Checked by: G. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		N	W
12	360	350	69	-21°	4.3	11.03	1.94
24	360	350	69	-21°	8.6	22.06	3.88
36	360	350	69	-21°	12.9	33.09	5.82
48	359	349	69	-21°	17.2	44.08	7.96
60	359	349	68.75	-21.25°	21.55	55.05	10.09
72.2	360	350	68.5	-21.5°	26.02	66.23	12.06

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/16

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.8	2.8	2.8	100
2.8 - 5.6	2.8	2.8	100
5.6 - 8.6	3.0	3.0	100
8.6 - 9.6	1.0	1.0	100
9.6 - 11.6	2.0	2.0	100
11.6 - 14.0	2.4	2.4	100
14.0 - 17.0	3.0	3.0	100
17.0 - 19.0	2.0	2.0	100
19.0 - 22.0	3.0	2.8	93
22.0 - 24.2	2.2	2.2	100
24.2 - 27.0	2.8	2.8	100
27.0 - 30.0	3.0	3.0	100
30.0 - 33.0	3.0	3.0	100
33.0 - 36.0	3.0	3.0	100
36.0 - 39.0	3.0	3.0	100
39.0 - 42.0	3.0	3.0	100
42.0 - 44.8	2.8	2.8	100
44.8 - 47.8	3.0	3.0	100
47.8 - 50.8	3.0	3.0	100
50.8 - 53.8	3.0	3.0	100
53.8 - 56.8	3.0	3.0	100
56.8 - 59.9	3.1	3.1	100
59.9 - 62.9	3.0	3.0	100
62.9 - 66.0	3.1	3.0	97
66.0 - 67.0	1.0	1.0	100
67.0 - 69.2	2.2	2.2	100
69.2 - 72.2	3.0	3.0	100
EOH 72.2 metres			

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/16

Sample No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo	
D 7104	8	9	1.0	1.0	<0.01	<0.01	
5	9	10	"	"	0.39	0.02	
6	10	11	"	"	0.15	<0.01	
7	11	12	"	"	0.06	<0.01	
8	12	13	"	"	0.80	0.03	
9	13	14	"	"	0.09	<0.01	
10	14	15	"	"	2.87	0.10	
11	15	16	"	"	0.25	<0.01	
12	16	17	"	"	0.36	0.01	
13	17	18	"	"	0.58	0.05	
14	18	19	"	"	0.07	<0.01	
15	19	20	"	"	0.74	0.03	
16	20	21	"	"	0.25	<0.01	
17	21	22	"	"	<0.01	<0.01	
18	22	23	"	"	0.12	<0.01	
19	23	24	"	"	0.04	<0.01	
20	24	25	"	"	0.01	<0.01	
21	25	26	"	"	0.06	<0.01	
22	26	27	"	"	0.02	<0.01	
23	27	28	"	"	<0.01	<0.01	
24	28	29	"	"	0.02	<0.01	
25	29	30	"	"	0.01	<0.01	
26	30	31	"	"	0.10	<0.01	
27	31	32	"	"	0.15	<0.01	
28	32	33	"	"	0.02	<0.01	
29	33	34	"	"	0.99	0.02	
30	34	35	"	"	2.08	0.06	
31	35	36	"	"	2.13	0.05	
32	36	37	"	"	2.21	0.05	
33	37	38	"	"	1.63	0.03	
34	38	39	"	"	1.85	0.04	
35	39	40	"	"	2.45	0.07	
36	40	41	"	"	1.74	0.06	
37	41	42	"	"	2.78	0.12	
38	42	43	"	"	2.09	0.08	
39	43	44	"	"	1.92	0.07	
40	44	45	"	"	1.97	0.07	
41	45	46	"	"	1.74	0.05	
42	46	47	"	"	1.78	0.04	
43	47	48	"	"	1.10	0.02	
44	48	49	"	"	0.84	0.01	
45	49	50	"	"	0.63	0.01	

20 m @
1.64% WO₃

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:



GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/16

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo		
D 7146	50	51	1.0	1.0	1.13	0.02	↑	
47	51	52	"	"	0.90	0.01		
48	52	53	"	"	0.75	<0.01		
49	53	54	"	"	0.11	<0.01		
50	54	55	"	"	0.15	<0.01		
51	55	56	"	"	0.28	<0.01		
52	56	57	"	"	0.30	<0.01		
53	57	58	"	"	0.12	<0.01		
54	58	59	"	"	0.11	<0.01		
55	59	60	"	"	0.30	<0.01		
56	60	61	"	"	0.70	0.02	↑ 7m @ 0.65% WO ₃ ↓	
57	61	62	"	"	1.84	0.07		
58	62	63	"	"	0.35	<0.01		
59	63	64	"	"	0.05	<0.01		
60	64	65	"	"	0.41	<0.01		
61	65	66	"	"	0.87	<0.01		
62	66	67	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D160/16

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 - 33.0	Pgh	6		clay, chl	30°:1.0 m	100	76	
33.0 - 48.35	Gh Upper C lens	6-8		clay, carb, chl, sul,		100	73	
48.35 - 65.50	Skarn ?Lower C lens	5		clay, sulp, garnet		100	83	
65.4 m	<u>PROBABLE FAULT</u>		Fractured and broken ground adjacent					
65.5 - 72.2	Bh	8		chl, sulp		100	49	
EOH 72.2 m								

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) $\pm = \frac{\text{length core} > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size. **46 TT**

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/16

0.0 - 1.75 m

Biotite Hornfels

Dark fine grained biotite hornfels with some small alteration zones and patches of ?pyroxene/? actinolite hornfels.

?S₁ / ?So 30° to LCA at 1.0 m.

1.75 - ?33.0 m

Pyroxene Garnet Hornfels

Typical pgh with calcite fragments ranging from 1 cm to 22 cm in size. The pods / fragments are angular and randomly orientated and rimmed by light honey-brown coloured grossular garnet.

The pgh appears to be unmineralized down to 8.6 m from 8.6 - 33.0 m, the pgh is mineralized to varying degrees containing abundant pyroxene and grossular garnet with patchy scheelite mineralization. The scheelite mineralization appears to be sub ore grade. Broken core occurs from 11.3 - 13.8 m, and 16.0 - 17.0 metres.

?33.00 - ?48.35 m

Garnet Skarn - Upper C lens

Massive coarse grained andradite garnet skarn with good disseminated scheelite mineralization throughout.

Broken core occurs from 44.6 - 44.85 (probable minor fault) and around 47.8 (possible fault).

?48.35 - 65.40 m

Skarn - pyroxene Hornfels

Skarnetised unit consisting of andradite garnet, pyroxene hornfels, chlorite, calcite and minor ?grossularite. Calcite and chlorite is common.

The unit is not banded, and not a massive skarn like that above. Probably a skarnetised / mineralized marble marker horizon.

Patchy disseminated scheelite mineralization occurs throughout.

From 64.8 - 65.4 m, fracturing, sulphide veining and calcite veining is abundant and indicates the proximity of a fault.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/16

65.9 m

Probable Fault

65.4 - 72.2 m

Biotite Hornfels

Fine grained dark brown to grey coloured biotite hornfels.

From 65.4 - 67.0 m, the core is sheared, badly broken and fractured. Calcite, clay and ? sulphides are common along joints / fracture surfaces.

Broken ground also occurs around 69.0 - 69.2 m and 71.4 - 72.2 m,

A siliceous quartz vein (?aplite) occurs at the base from 72.12 - 72.20 m.

EOH 72.20 metres.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO. D 160/15

PLANNING

Proposer: G. J. Bujtor

Depth: 70 metres

Location: -150 metres R.L.

Purpose of hole: C lens Oreblocking

Co-ordinates: 220 160 E 563 950

Inclination: Horizontal

Bearing 360° Grid

Target: E

Approved by:

N

Magnetic:

Target Depth:

N

Date:

SURVEY

Survey Co-ords: E

Survey bearing: 359°20' Grid

Surveyed in by:

Actual Co-ords: 220 159.73 E 563 954.14

R.L. of Collar: W - 144.8

Picked up by: R.J.H.

N

Magnetic:

Date:

N

Inclination of Hole: -0°00'

Date: 11-1-1978

SUMMARY

Logged by: G. J. BUJTOR

Results: B lens 26 - 28 metres 2 metres @ 0.54% WO₃

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 10-1-1978

Date terminated: 13-1-1978

Casing: Size: B
Depth: 1.0

Core: Size: 46TT
Depth: 70.8

Wedge Runoff: Nil

Wedge placed:

Proposed by:

Reason:

Depth:

Approved by:

Extension: Nil

Reason for termination:

Condition of hole on completion:

Final depth: 70.8 metres

Casing:

Cemented: No

Bore hole survey: Survey to 70.8 metres

Water: Normal water return

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/15

Survey method: Eastman Single Shot Camera
Final depth: 70.8 metres
Casing depth: 1.0

Depth surveyed to: 70.80 m
Date surveyed to: 14-1-1978
Surveyed by: L. Denby
Checked by: G. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		N	W
7	0	350	90.0°	0.0°	0.0	6.89	1.22
28	0	350	90.0°	0.0°	0.0	27.57	4.87
49	356	346	90.0°	0.0°	0.0	47.95	9.95
70.8	359	349	89.0°	-1.0°	0.38	69.35	14.11

REMARKS:

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/15

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo		
D 7013	22	23	1.0	1.0	<0.01	<0.01		
4	23	24	"	"	<0.01	<0.01		
5	24	25	"	"	<0.01	<0.01		
6	25	26	"	"	<0.01	<0.01		
7	26	27	"	"	0.67	0.03	2 m @ 0.54% WO ₃	
8	27	28	"	"	0.41	<0.01		
9	28	29	"	"	0.01	<0.01		
D 7020	29	30	"	"	0.04	0.02		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/15

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.6	2.6	2.6	100
2.6 - 5.6	3.0	3.0	100
5.6 - 8.6	3.0	3.0	100
8.6 - 10.5	1.9	1.9	100
10.5 - 11.6	1.1	1.4	127
11.6 - 14.6	3.0	3.0	100
14.6 - 17.6	3.0	3.0	100
17.6 - 20.6	3.0	3.0	100
20.6 - 23.6	3.0	3.0	100
23.6 - 26.6	3.0	3.0	100
26.6 - 29.6	3.0	3.0	100
29.6 - 32.6	3.0	3.0	100
32.6 - 35.6	3.0	3.0	100
35.6 - 38.6	3.0	3.0	100
38.6 - 41.6	3.0	3.0	100
41.6 - 44.6	3.0	3.0	100
44.6 - 45.5	0.9	0.9	100
45.5 - 47.7	2.2	2.17	99
47.7 - 50.7	3.0	3.0	100
50.7 - 53.7	3.0	3.0	100

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 160/15

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 - 14.6	bh	10		clay/chlorite	5°:7.4m 5°:8.6m 27°:12.8m	100	65	
14.6 - 29.9	ch/ah	5		clay, chlorite epidote, carb		100	81	
29.9 - 70.8	bh	5-6		clay.chlorite	37° 68.8m	100	76	

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) $\pm = \frac{\text{length core} > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size.

46 TT = 36 mm dia.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/15

0.0 - ?14.60

Biotite Hornfels

Dark brown coloured fine grained biotite hornfels with some small patch of green - grey pyroxene hornfels /actinolite hornfels alteration zones and patches.

The unit is disturbed to some extent as evidenced by the numerous small sediments ' breccia ' fragments within the original sediment.

Broken and fractured core is common from 10.5 - ?14.60m
No chlorite - pug fault zones appear to be present.

?SO 5° to LCA at 7.4 metres
?So 5° to LCA at 8.6 metres
?So 27° to LCA at ?12.8 metres

?14.60 - 22.45

?Actinolite Hornfels

A medium grained grey coloured? actinolite hornfels with some alteration zones and patches (pyroxene hornfels with minor grossular garnet) in the lower 2 metres of the unit.

The unit may be part of B lens and could be a rather dirty, marly sediment which does not react under acid attack.

The top of the unit from 14.60 - 15.10 metres is broken and ?sheared and may well be a faulted contact.

Some chloritic, clay rich zones are present and there may also be minor faults, in around 16.8 metres, and 20.6 - 20.8 metres.

22.45 - 29.90

B lens

Dominantly grey coloured marble with minor andradite skarn from 26.55 - 27.20 metres and pyroxene hornfels from 28.5 - 29.9 metres. Zones of 'soft' chloritic, clayey, ?epidote rich material occurs in patches from 23.6 - 24.55 metres and around 26.6 metres.

Very minor disseminated scheelite is present but is probably only ore grade within the andradite garnet skarn from 26.55 - 27.22 metres.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/15

29.90 - 70.80

Biotite Hornfels

Dark brown to grey coloured fine grained biotite hornfels with minor pyroxene hornfels alteration zones below B lens from 29.9 - 35.0 metres. The biotite hornfels is rather distinctive, particularly around 34.0 - 40.0 metres where angular sediment fragments up to 5 centimetres across (averaging 1 centimetre) are common.

The top of the unit from 29.90 - 30.4 metres is very sheared and disturbed.

Cross cutting calcite and ?quartz tension filled gashes and veins are common within the zones.

44.6 - 50.7

and

54.0 - 55.2 metres. These tension filled gashes may possibly be due to faulting especially around 47.95 metres (breccia), 49.25 (breccia and weathered out veins / gashes, 49.85 metres (breccia), and 54.0 - 54.50 metres (broken core, ?quartz and calcite filled tension gashes and some weathered out gashes).

?So 37° to LCA at 68.8 metres.

EOH 70.80 metres.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO. D 160/14

PLANNING

Proposer: M. Danielson

Depth: 95 metres

Location: -150 metres R.L.

Purpose of hole: C lens oreblocking

Co-ordinates: 220 160 E 563 950

Inclination: -35°

Bearing 360° Grid

Target: E

Approved by: M.C.R.

N

Magnetic:

Target Depth:

N

Date: 1-7-77

SURVEY

Survey Co-ords: E

Survey bearing: $5^{\circ} 10'$ Grid

Surveyed in by:

Actual Co-ords: 220 160.22 E 563 951.75

R.L. of Collar: R-146.6

Picked up by: R.J.H.

N

Magnetic:

Date:

N

Inclination of Hole: $-36^{\circ} 10'$

Date: 16-12-77

SUMMARY

Logged by: G. Bujtor

Results: Upper C lens 28 - 42 metres 14 metres @ 1.28% WO_3

Lower C lens 47 - 59 metres 12 metres @ 0.94% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 15-12-1977

Date terminated: 22-12-77

Casing: Size: B

Depth: 1.0

Core: Size: 46TT

Depth: 94.0

Wedge Runoff: Nil

Wedge placed:

Proposed by:

Reason:

Depth:

Approved by:

Extension: Nil

Reason for termination: Successfully intersected C lens

Condition of hole on completion:

Final depth: 99.00 metres

Casing: No

Cemented: No

Bore hole survey: surveyed to 94.00

Water: Normal

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/14

Survey method: Singleshot
Final depth: 94.00 metres
Casing depth: 1.00 metres

Depth surveyed to: 94.0 metres
Date surveyed to: 22-12-77
Surveyed by: J. Wijniewski
Checked by: G. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		N	W
0	005	355	53.80	-36.2°	0	0	0
61	005	355°	53.25°	-36.75°	36.75	48.69	4.26
94	005	355	52.75°	-37.25°	56.47	74.86	6.56

REMARKS:

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/14

Sample No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo	
D 6849	9	10	1.0	1.0	0.13	<0.01	
50	10	11	"	"	0.11	<0.01	
51	11	12	"	"	0.20	<0.01	
52	12	13	"	"	0.42	0.01	
53	13	14	"	"	0.15	<0.01	
54	14	15	"	"	0.15	<0.01	
55	15	16	"	"	0.03	<0.01	
56	16	17	"	"	0.01	<0.01	
57	17	18	"	"	0.02	<0.01	
58	18	19	"	"	<0.01	<0.01	
59	19	20	"	"	<0.01	<0.01	
60	20	21	"	"	0.12	<0.01	
61	21	22	"	"	0.35	0.02	
62	22	23	"	"	0.10	<0.01	
63	23	24	"	"	0.01	<0.01	
64	24	25	"	"	0.01	<0.01	
65	25	26	"	"	0.39	<0.01	
66	26	27	"	"	0.21	0.01	
67	27	28	"	"	0.01	<0.01	
68	28	29	"	"	0.73	0.03	↓
69	29	30	"	"	1.62	0.06	
70	30	31	"	"	1.94	0.06	
71	31	32	"	"	2.2	0.11	
72	32	33	"	"	0.84	0.06	
73	33	34	"	"	1.63	0.07	14m @ 1.28% WO ₃
74	34	35	"	"	1.38	0.07	
75	35	36	"	"	1.82	0.10	
76	36	37	"	"	0.78	0.06	
77	37	38	"	"	0.50	0.04	
78	38	39	"	"	1.58	0.09	
79	39	40	"	"	1.46	0.07	
80	40	41	"	"	0.60	0.04	
81	41	42	"	"	0.85	0.05	↑
82	42	43	"	"	0.15	<0.01	
83	43	44	"	"	<0.01	<0.01	
84	44	45	"	"	<0.01	<0.01	
85	45	46	"	"	<0.01	<0.01	
86	46	47	"	"	0.13	<0.01	
87	47	48	"	"	1.02	0.06	↓
88	48	49	"	"	1.54	0.07	
89	49	50	"	"	0.94	0.05	
90	50	51	"	"	0.80	0.05	

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/14

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo		
D 6891	51	52	1.0	1.0	0.47	0.03		↓ 12m, @ 0.94% WO ₃ ↑
92	52	53	"	"	0.18	0.01		
93	53	54	"	"	0.68	0.02		
94	54	55	"	"	1.58	0.07		
95	55	56	"	"	1.64	0.07		
96	56	57	"	"	0.39	0.02		
97	57	58	"	"	1.53	0.06		
98	58	59	"	"	0.50	0.02		
99	59	60	"	"	0.10	<0.01		
D 6900	60	61	"	"	0.17	<0.01		
1	61	62	"	"	0.27	0.01		
2	62	63	"	"	<0.01	<0.01		
D 6903	69	70	"	"	0.05	<0.01		
D 6904	70	71	"	"	0.15	<0.01		
5	71	72	"	"	0.54	0.02		
6	72	73	"	"	0.04	<0.01		
7	73	74	"	"	0.24	0.01		
8	74	75	"	"	0.07	<0.01		
9	75	76	"	"	0.20	<0.01		
10	76	77	"	"	0.02	<0.01		
11	77	78	"	"	0.24	<0.01		
12	78	79	"	"	0.07	<0.01		
13	79	80	"	"	0.25	0.01		
14	80	81	"	"	0.11	0.01		
15	81	82	"	"	0.01	<0.01		
16	82	83	"	"	0.01	0.01		
17	83	84	"	"	0.04	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/14

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.3	2.3	2.3	100
2.3 - 5.2	2.9	2.9	100
5.2 - 8.2	3.0	3.0	100
8.2 - 11.2	3.0	3.0	100
11.2 - 14.2	3.0	3.0	100
14.2 - 16.5	2.3	2.35	102
16.5 - 19.2	2.7	2.57	95
19.2 - 19.9	0.7	0.78	111
19.9 - 22.2	2.3	2.26	98
22.2 - 22.4	0.2	0.25	125
22.4 - 25.4	3.0	2.70	90
25.4 - 26.2	0.8	1.07	134
26.2 - 28.4	2.2	2.10	95
28.4 - 31.2	2.8	2.70	96
31.2 - 31.4	0.2	0.32	160
31.4 - 34.2	2.8	2.63	94
34.2 - 37.2	3.0	3.0	100
37.2 - 40.2	3.0	3.0	100
40.2 - 43.2	3.0	3.0	100
43.2 - 45.0	1.8	1.8	100
45.0 - 47.2	2.2	2.2	100
47.2 - 49.6	2.4	2.4	100
49.6 - 51.3	1.7	1.8	106
51.3 - 52.6	1.3	1.4	108
52.6 - 53.1	0.5	0.5	100
53.1 - 54.1	1.0	1.05	105
54.1 - 55.9	1.8	1.75	97
55.9 - 56.4	0.5	0.5	100
56.4 - 57.7	1.3	1.4	108
57.7 - 58.6	0.9	0.9	100
58.6 - 60.0	1.4	1.5	107
60.0 - 61.6	1.6	1.7	106
61.6 - 62.7	1.1	1.1	100
62.7 - 64.6	1.9	2.0	105
64.6 - 67.2	2.6	2.7	104
67.2 - 70.2	3.0	3.0	100
70.2 - 73.2	3.0	3.0	100
73.2 - 76.0	2.8	2.8	100
76.0 - 79.0	3.0	3.0	100
79.0 - 82.0	3.0	3.0	100
82.0 - 85.0	3.0	3.0	100
85.0 - 88.0	3.0	3.0	100
88.0 - 91.0	3.0	3.0	100
91.0 - 94.0	3.0	3.0	100

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 160/14

Depth Interval (metres)	Rock Type	Fractures /m.	Joint Angle (wrt LAOC)	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery	R.Q.D.	Remarks (weathering)
0.0 - 28.4	ggh	5-6		clay, calcite chlorite		99	78	fractured & puggy core around 26.6 metres
28.4 - 43.2	gh	3		clay, chlorite sulphides		99	92	
43.2 - 49.6	ch/bh/ph	6-8			45.5m:62°	100	68	
49.6 - 61.8	banded skarn	10-12		clay, chlorite carbonate	49m:65° 53m:60° 56.55m:58°	104	29	Fractured & broken
61.8 - 85.0	Banded footwall beds	6-8		clay, chlorite carbonate sulphides	63.9m:45° 68m:39° 75.9m:49° 82.2m:75°	100	71	
85.0 - 94.0	Bh/Lv	10-12		clay, chl carb		100	50	Possible fault around 92.75 metres
E.O.H. 94.0 metres								

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) $\pm = \frac{\text{length core } > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size. 46 TT

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/14

0.0 - ? 2.30

Biotite Hornfels

Fine grained dark brown coloured hangingwall biotite hornfels with rare green pyroxene hornfels reaction zones.

?2.30 - 28.40

Pyroxene Garnet Hornfels

Typical pgh with pods and fragments of marble ranging from 1 centimetre up to 13 centimetres in size. Reaction rims of grossular garnet are common. Some of the marble fragments contain isolated grossular garnets others are completely replaced.

Slightly skarnetised pgh occurs from 8.0 - 28.40 m where the core is light greenish to cream - light honey brown in colour.

Isolated blobs of chlorite - andradite garnet calcite and associated scheelite + sulphides occur in the lower half of the unit from 20.0 - 28.4 metres. The blobs are up to 20 centimetres in size and may be intrusive masses. Two well developed scheelite crystals (hexagonal with side 1.5 centimetres across) are developed at 23.35 metres. The base of the pgh grades in perceptibly into massive garnet skarn below.

28.40 - 42.20

Garnet Skarn - Upper C lens

Massive coarsely crystalline andradite garnet skarn with good disseminated scheelite. Minor calcite, quartz pyroxene, epidote and ?grossular is present throughout.

42.20 - 47.30

Marble / Biotite Hornfels / Pyroxene Hornfels

Interbedded sequence of grey marbles (42.2 - 43.3), green pyroxene hornfels and brown biotite hornfels. Minor grossular garnet is also present. Possible greyish actinolite hornfels may also occur.

Very minor scheelite specks are present.

So 62° to LCA at 45.55 metres

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/14

47.30 - ?61.80

Banded Skarn - Lower C lens

Banded / bedded skarn consisting of interbeds of andradite garnet, grossular garnet, marble, biotite hornfels and pyroxene hornfels.

Disseminated scheelite mineralization occurs throughout. Pyroxene and grossular garnet is common at the base of the unit.

The following banding / bedding angles were noted-

So 65° to LCA at 49.0 metres
So 60° to LCA at 53.0 metres
So 58° to LCA at 56.55 metres

The unit as a whole is somewhat fractured and broken mainly along bedding planes.

61.80 - ?83.40

Banded Footwall Beds

Well bedded and banded sequence of biotite hornfels, pyroxene hornfels, marble, and grossular garnet with minor epidate. Patchy scheelite mineralization is present. From 61.80 - 71.0 metres, the unit consists of mainly biotite hornfels with minor pyroxene hornfels and some grossular (ie banded biotite hornfels / Pyroxene hornfels).

The following bedding angles were noted -

So 45° to LCA at 63.9 metres
So 39° to LCA at 68.05 metres
So 52° to LCA at 72.0 metres
So 49° to LCA at 75.9 metres
So 75° to LCA at 82.2 metres

?83.40 - ?91.00

Biotite Hornfels

Dark fine grained biotite hornfels with very minor pyroxene hornfels / actinolite hornfels and abundant cream - yellowish coloured quartz / aplite monzonite vein / veins from 87.25 - 88.85 metres.

Some fracturing of the core is common. A possible minor fault with some shearing and minor chlorite pug occurs from 90.0 - 90.05 metres

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/14

?91.00 - 94.00

?Lower Volcanics

Dark greenish coloured, medium to coarse grained
? lower metavolcanics with intrusive intermixed
quartz and cream - yellow coloured aplite manzonite
(feldspars?) vein / veins from 91.8 - 92.7 metres.

Minor ?quartz spots are developed adjacent to
the above intrusive veins.

A possible fault with minor breccia occurs around
92.75 metres

EOH 94.00 metres

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO. D 160/13

PLANNING

Proposer: M. J. Danielson

Depth: 65 metres

Location: -150 m R.L.

Purpose of hole: C lens oreblocking

Co-ordinates: 220 160 E 563 950

Inclination: -62°

Bearing Grid

Target: E

Approved by: M.C.R.

N

Magnetic:

Target Depth:

N

Date: 1-12-77

SURVEY

Survey Co-ords: E

Survey bearing: 7°20' Grid

Surveyed in by:

Actual Co-ords: 220 160.16 E 563 950.73

R.L. of Collar: R-146.8

Picked up by: R.J.H.

N

Magnetic:

Date:

N

Inclination of Hole: -62°30'

Date: 15-12-77

SUMMARY

Logged by: G. J. Bujtor

Results: Upper C lens 24 - 31 m, 7 m @ 0.88% WO₃

Lower C lens 48 - 54m, 6 m @ 0.66% WO₃

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 9-12-77

Date terminated:

Casing: Size:	B		
Depth:	1.0 m		
Core: Size:	46 TT		
Depth:	68.70 m		

Wedge Runoff: Nil

Wedge placed:

Proposed by:

Reason:

Depth:

Approved by:

Extension: Nil

Reason for termination: Successfully intersected C lens.

Condition of hole on completion:

Final depth: 68.7 metres

Casing:

Cemented:

No

Bore hole survey:

Surveyed to 68.7 metres

Water:

Normal water return

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/13

Survey method: Singleshot Camera
Final depth: 68.70 m
Casing depth: 1.0 m

Depth surveyed to: 68.70 m
Date surveyed to: 14-12-77
Surveyed by: L. DENBY
Checked by: G. BUJTOR

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		N	W
26	007	357	27.0	-63.0	23.17	11.78	0.62
47	006	356	27.0	-63.0	41.88	21.29	1.29
68.7	004	354	25.75	-64.25	61.43	30.67	2.28

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/13

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.7	2.7	2.6	96
2.7 - 5.6	2.9	2.9	100
5.6 - 8.6	3.0	2.93	98
8.6 - 11.6	3.0	2.95	98
11.6 - 12.5	0.9	0.70	78
12.5 - 14.6	2.1	2.50	119
14.6 - 17.6	3.0	3.0	100
17.6 - 20.3	2.7	3.0	111
20.3 - 22.6	2.3	2.18	95
22.6 - 25.6	3.0	3.0	100
25.6 - 28.6	3.0	3.0	100
28.6 - 29.8	1.2	1.28	107
29.8 - 31.6	1.8	1.82	101
31.6 - 32.0	0.4	0.43	108
32.0 - 34.6	2.6	2.60	100
34.6 - 37.6	3.0	3.0	100
37.6 - 40.6	3.0	3.1	103
40.6 - 43.6	3.0	2.76	92
43.6 - 44.6	1.0	1.20	120
44.6 - 45.2	0.6	0.65	108
45.2 - 47.6	2.4	2.3	96
47.6 - 49.6	2.0	2.1	105
49.6 - 51.3	1.7	1.58	93
51.3 - 53.6	2.3	2.38	103
53.6 - 55.5	1.9	1.9	100
55.5 - 56.5	1.0	1.0	100
56.5 - 56.9	0.3	0.35	117
56.9 - 57.5	0.6	0.6	100
57.5 - 57.7	0.2	0.2	100
57.7 - 58.5	0.8	0.75	94
58.5 - 59.0	0.5	0.55	110
59.0 - 60.6	1.6	1.6	100
60.6 - 62.2	1.6	1.62	101
62.2 - 62.6	0.4	0.45	113
62.6 - 63.1	0.5	0.55	110
63.1 - 64.6	1.5	1.15	77
64.6 - 65.0	0.4	0.7	175
65.0 - 66.6	1.6	1.7	106
66.6 - 68.7	0.8	1.05	131

Fault zone
breccia

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 160/13

Depth Interval (metres)	Rock Type	Fractures /m.	Joint Angle (wrt LAOC)	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery	R.Q.D.	Remarks (weathering)
0.0 - 8.6	pgh	4-5		clay		98	85	Broken ground 0.0 - 0.2 m
8.6 - 12.5	pgh	17		clay, chlorite		88	18	
12.5 - 22.6	pgh	7		clay, chlorite		106	74	
22.6 - 31.6	pgh, gh	3-4		clay		102	90	
31.6 - 43.6	ch, bh, ph.	7		clay, chlorite calcite.		99	77	
43.6 - 53.6	banded skarn	11		clay, chlorite calcite	51.5m:50°	102	60	
53.6 - 68.7	Banded footwall hornfels	13		clay, chlorite		99	48	
<u>Probable Faults</u> occur at 56.5 m, 57.4 - 57.7 m and 66.5 - 66.75 m								

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) $\pm = \frac{\text{length core } > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size. 46 TT = 36 mm dia.

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/13

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo		
D 6789	8	9	1.0	1.0	1.24	0.05		
D 6790	9	10			0.12	<0.01		
1	10	11			0.37	0.02		
2	11	12			2.3	0.08		
3	12	13			0.12	0.01		
4	13	14			0.08	0.01		
5	14	15			<0.01	<0.01		
6	15	16			<0.01	<0.01		
7	16	17			0.06	<0.01		
8	17	18			0.09	<0.01		
9	18	19			0.11	0.01		
D 6800	19	20			0.04	<0.01		
1	20	21			0.10	0.01		
2	21	22			0.10	<0.01		
3	22	23			0.05	<0.01		
4	23	24			0.01	<0.01		
5	24	25			1.56	0.07		
6	25	26			1.35	0.06		
7	26	27			0.69	0.04	7 m, @	0.88% WO ₃
8	27	28			0.65	0.04		
9	28	29			0.70	0.04		
D 6810	29	30			0.66	0.03		
11	30	31			0.54	0.03		
12	31	32			0.23	0.01		
13	32	33			<0.01	<0.01		
D 6814	41	42			0.14	<0.01		
15	42	43			0.11	0.01		
16	43	44			0.36	0.01		
17	44	45			0.24	0.01		
18	45	46			0.04	<0.01		
19	46	47			<0.01	<0.01		
20	47	48			<0.01	<0.01		
21	48	49			0.46	0.02		
22	49	50			0.62	0.02		
23	50	51			0.11	<0.01	6m @	0.66% WO ₃
24	51	52			1.87	0.03		
25	52	53			0.43	0.01		
26	53	54			0.46	0.01		
27	54	55			0.05	<0.01		
28	55	56	1.0	1.0	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/13

0.0 - 24.12

PYROXENE GARNET HORNFELS

Typical podded pgh with calcite fragments ranging from 1 cm to 15 cm in size. Pyroxene and grossular garnet alteration - reaction zones are common. Broken and 'leached' core 7.6 - 13.5 m and 17.0 - 20.5 metres.

The top 1.5 metres may be biotite hornfels.

24.12 - 31.60 meters

GARNET SKARN

Massive upper C lens andradite garnet skarn with minor quartz and calcite, epidote and sulphides. Fine disseminated scheelite occurs throughout.

31.60 - 38.57

MARBLE

Massive and well bedded grey to cream - yellowish unreplaced marble with minor patches of pyroxene hornfels and isolated garnets towards the base.

64° to LCA at 32.0 m

38.57 - 42.25

BIOTITE HORNFELS / PYROXENE HORNFELS / MARBLE

Interbedded zone of biotite and pyroxene hornfels with minor marble. Minor grossular garnet is also developed. No mineralization present.

42.25 - 54.90

BANDED SKARN - LOWER C lens

Lower C lens horizon consisting of massive banded skarn, minor biotite and pyroxene hornfels and some unreplaced marbles. The following subdivisions are present.

42.25 - 44.85	Banded skarn
44.85 - 45.70	Biotite hornfels minor pyroxene hornfels
45.70 - 48.00	Grey unreplaced marble
48.00 - 53.85	Banded skarn 50° to LCA at 51.5 m (50)
53.85 - 54.90	Greenish garnet pyroxene hornfels.

Broken core occurs from 43.25 - 45 m, 48 - 50 m and 52.6 - 54.7 metres.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/13

54.90 - 55.50

VOLCANICS

Possible volcanics consisting of dark grey - black coarse recrystallized? biotite and minor grey pyroxene. May possibly be sheared and recrystallized biotite hornfels associated with faulting.

55.50 - 68.60

BANDED FOOTWALL HORNFELS

Interbedded pyroxene and actinolite (±pyroxene) hornfels with individual bands varying from 1 mm to 1 cm in width.

Possible shearing of the biotite hornfels occurs from? 55.5 - 57.0 metres adjacent to a probable fault at 56.5 metres. (Shearing S₁ 28° to LCA at 56.65 m).

Badly broken and fractured core occurs from 56.4 - 57.7 metres, 62.2 - 63.1 metres and 66.5 - 66.8 metres.

Probable Faults occur around 56.5 metres (brecciated chlorite pug zone), 57.4 - 57.7 metres (badly fractured and chloritic) and 66.5 - 66.75 metres (brecciated and fractured)

S₀ 67° LCA at 59.3 metres
S₀ 60° LCA at 60.3 metres
S₀ 66° LCA at 67.6 metres

68.60 - 68.70

ADAMELLITE

Coarse grained whitish adamellite or aplite vein.

EOH

68.70 metres.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO. D 160/12

PLANNING

Proposer: M. Danielson Depth: 100 m

Location: - 150 m R.L.

Purpose of hole: C lens oreblocking

Co-ordinates: 220 160 E 563 950 N
Inclination: -90 Magnetic;
Bearing Grid Target Depth:
Target: E N
Approved by: M.C.R. Date: 1-12-77

SURVEY

Survey Co-ords: E N
Survey bearing: Grid Magnetic;
Surveyed in by: Date:
Actual Co-ords: 220 160.09 E 563 949.92 N
R.L. of Collar: R-146.7 Inclination of Hole:
Picked up by: R.J.H. Date: 15-12-77

SUMMARY

Logged by: D. Cowan
Results: 27-39 m 12m @ 0.89% WO₃

DRILLING

Driller/Contractor: A.D.D.
Date commenced: 1-12-77 Date terminated: 7-12-77

Casing:	Size:	BX		
	Depth:	1m		
Core:	Size:	46 TT		
	Depth:	106.6 m		

Wedge Runoff:

Wedge placed: Depth:
Proposed by: Approved by:
Reason:

Extension: Nil
Reason for termination: In unmineralized footwall hornfels.

Condition of hole on completion: Final depth: 106.6 m

Casing: Nil
Cemented: No
Bore hole survey: Singleshot to 100 m
Water: No

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY FORE HOLE SURVEY DATA

D.D.H. No. D 160/12

Survey method: Singleshot Camera
Final depth: 106.6 m
Casing depth: 1 m

Depth surveyed to: 100 m
Date surveyed to: 8-12-77
Surveyed by: L. Denby
Checked by: M. Danielson

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		S	E
24	133	123	0.75	-89.25	24.00	0.17	0.26
79	190	180	0.75	-89.25	78.99	0.89	0.26
100	219	209	1.0	-89	99.99	1.04	0.08

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/12

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 2.9	2.9	2.54	88
2.9 - 5.8	2.9	2.87	99
5.8 - 8.8	3.0	2.95	98
8.8 - 11.8	3.0	3.11	104
11.8 - 14.8	3.0	3.01	100
14.8 - 17.8	3.0	3.00	100
17.8 - 20.8	3.0	2.95	98
20.8 - 23.8	3.0	2.97	99
23.8 - 26.5	2.7	3.12	115
26.5 - 28.6	2.1	2.17	103
28.6 - 31.6	3.0	2.95	98
31.6 - 34.6	3.0	3.00	100
34.6 - 37.6	3.0	2.97	99
37.6 - 40.5	2.9	2.85	98
40.5 - 43.5	3.0	2.94	98
43.5 - 46.5	3.0	2.97	98
46.5 - 48.6	2.1	2.19	104
48.5 - 51.6	3.1	3.30	110
51.6 - 54.6	3.0	3.11	103
54.6 - 57.6	3.0	3.07	102
- 60.6	3.0	3.0	100
- 63.6	3.0	2.95	98
- 66.6	3.0	3.0	100
- 69.5	2.9	2.95	102
- 72.2	2.7	2.8	104
- 74.5	2.3	2.4	104
- 77.5	3.0	3.0	100
- 80.5	3.0	3.0	100
- 83.5	3.0	3.0	100
- 86.0	2.5	2.5	100
- 89.0	3.0	3.0	100
- 92.0	3.0	3.0	100
- 95.0	3.0	3.0	100
- 98.0	3.0	3.0	100
-100.2	2.2	2.2	100
-103.2	3.0	3.0	100
-106.2	3.0	3.0	100
-106.6	0.4	0.4	100
EOH			

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 160/12

Depth Interval (metres)	Rock Type	Fractures /m.	Joint Angle (wrt LAOC)	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery	R.Q.D.	Remarks (weathering)
0 - 26.5	bh, pgh	4		clay		100	79	broken ground 9 - 11 metres.
26.5 - 46.5	gh	4		clay		99	89	
46.5 - 60.6	gph, lv	4		clay		104	92	
	Possible minor fault	59.4	- 59.45 metres					
60.6 - 106.6	Banded footwall Hornfels	6		clay	61m:30° 70m:50° 75m:65° 90m:45°	100	77	Broken ground 71.5 - 72.2
	Fractures parallel bedding							

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) \pm $\frac{\text{length core } > 10 \text{ cms}}{\text{length drilled}} \%$

3. Core size. 46 TT \pm = 36 mm dia.

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 160/12

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO ₃	Mo		
D 6754	9	10	1.0	1.0	0.59	0.02		
5	10	11	"	"	0.09	<0.01		
6	11	12	"	"	0.45	0.01		
7	12	13	"	"	0.15	<0.01		
D 6758	13	14	"	"	<0.01	<0.01		
D 6759	20	21	"	"	<0.01	<0.01		
60	21	22	"	"	0.04	<0.01		
1	22	23	"	"	0.04	<0.01		
2	23	24	"	"	0.07	<0.01		
3	24	25	"	"	0.10	<0.01		
4	25	26	"	1.4	0.01	<0.01		
5	26	27	"	1.0	0.12	<0.01		
6	27	28	"	"	1.14	0.04		↓
7	28	29	"	"	1.04	0.04		
8	29	30	"	"	1.74	0.07		
9	30	31	"	"	1.01	0.05	12 m	
70	31	32	"	"	1.34	0.06	@	
1	32	33	"	"	0.84	0.04	0.89% WO ₃	
2	33	34	"	"	0.48	0.02		
3	34	35	"	"	0.50	0.02		
4	35	36	"	"	0.42	0.02		
5	36	37	"	"	0.38	0.02		
6	37	38	"	"	0.98	0.06		
7	38	39	"	"	0.84	0.04		↑
8	39	40	"	"	0.22	<0.01		
9	40	41	"	"	0.21	<0.01		
80	41	42	"	"	0.21	<0.01		
1	42	43	"	"	0.05	<0.01		
2	43	44	"	"	0.03	<0.01		
3	44	45	"	"	0.07	<0.01		
4	45	46	"	"	0.19	<0.01		
D 6785	46	47	"	"	0.08	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/12

- 0 - 2.15 Biotite hornfels
A brownish coloured, reasonably well - bedded rock containing small (up to 0.5 centimetres) siliceous pods.
- 2.15 - 8.72 Pyroxene hornfels
A distinctive greenish coloured rock containing pods of calcite up to 3 centimetres diameter. Some of the calcite pods are rimmed with grossular garnet.
- 8.72 - 13.68 Pyroxene - garnet hornfels
A typical pgh unit containing a few pods of calcite (up to 2.5 centimetres diameter). Weak scheelite mineralization is present between 9.85 - 13.00 metres.
- 13.68 - 20.64 Pyroxene hornfels
This ph contains, more biotite and smaller (average approx. 0.5 centimetres) calcite pods than that between 2.15 - 8.72.
The interval is barren of scheelite mineralization.
- 20.64 - 27.00 Pyroxene garnet hornfels
This unit contains few pods of calcite. Scheelite mineralization occurs between:
23.18 - 24.76
- 27.00 - 40.0 Garnet hornfels
Medium grained massive andradite garnet hornfels containing abundant finely disseminated scheelite.
- 40.0 - 47.0 Garnet pyroxene hornfels
Strongly pyroxene rich units containing abundant pale pink grossular garnet.
Very minor disseminated scheelite and this unit would be sub oregrade.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/12

47.0 - 58.5

Lower Metavolcanics

Barren massive grey green unit flecked with abundant brown biotite. Good quality core.

58.5 - 106.6

Banded footwall hornfels

Barren thinly bedded biotite actinolite hornfels.
Below: 85 metres unit contains more green pyroxene and pale pink grossular garnet with occasional speck of scheelite.

106.6 metres EOH.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 160/11

PLANNING

Proposer: M.J. Danielson.

Depth: 70m.

Location: W2083

Purpose of hole: Test Lower C lens adjacent to Northern Boundary Fault.

Co-ordinates: 220 160 E 564 190 N

Inclination: -35° Magnetic

Bearing: 360° Grid Target depth:

Target: E N

Approved by: M.C. Rogers.

Date: 26/2/75

SURVEY

Survey Co-ords: 220 158.914 E 564 193.132 N

Survey bearing: $4^{\circ}49'13''$ Grid Magnetic

Surveyed in by: R.J.H.

Date: 6/3/75

Actual Co-ords: 220 158.91 E 564 193.13 N

R.L. of collar: -74.581

Inclination of hole:
 $-34^{\circ}43'24''$

Picked up by : R.J.H.

Date: 6/3/75

SUMMARY

Logged by : M.J. Danielson

Results: Lower C lens: 27 - ~~3~~8m, 11m @ 0.69% WO_3
Upper C lens 1 - 23m 22m @ 1.69% "

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 25/2/75

Date terminated: 5/3/75

Casing: Size : BQ
Depth : 1.2

Core:	Size :	NQ	BQ	
	Depth :	1.2	51.03	

Wedge Runoff:

Wedge placed: NIL

Depth:

Proposed by :

Approved by:

Reason:

Extension: NIL

Hole passed into quartzites

Reason for termination: north of Northern Boundary Fault. Final depth: 51.03m.

Condition of hole on completion: Boundary Fault.

Casing : 1.2m Bx remains.

Cemented : Yes.

Bore hole survey: Surveyed to 50.9m.

Water: NIL.

Comments on drilling conditions:

GEOPEKO LIMITED - DOLPHIN MINE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 160/11

Survey method : Multishot camera.

Final depth : 51.03m.

Casing depth : 1.52m.

Depth surveyed to : 50.90m.

Date surveyed : 5/3/75

Surveyed by : V.J. Powell.

Checked by : G.L. Buckland.

DEPTH	Bearing		Inclination		True Vertical Depth	Co-ordinates	
	Grid	Mag.	Read	Corrected		N	W
15.24	004°30'	355°30'	55°	-35°	8.74	12.45	0.86
30.48	004°30'	355°30'	55°45'	-34°15'	17.43	24.93	1.75
45.72	005°	356°	56°	-34°	25.97	37.52	2.66
51.03	005°30'	356°30'	56°30'	-33°30'	28.82	41.83	2.97

REMARKS

GEOPEKC LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 160/11

Depth Interval (metres)	Rock Type	Fractures/m.	Joint Angle (w.r.t. L.A.O.C.)	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery	R.Q.D.	Remarks (weathering)
0 - 18.06	pgh/ gh	2		clay. pyrite @ 17 - 18m.		97	59	
18.06 - 27.81	bh/gh marble marker	7		clay pyrite in bh	18m:30°	97	51	bad ground: 24.0 - 24.76
27.81 - 47.07	banded gh / bph	3		clay chlorite below 40m.		100	82	
47.07 - 51.03	bph/q	+ 20		pyrite in quart- zites.		93	26	

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designator). = $\frac{\text{length core} > 10 \text{ cms}}{\text{length recovered}}$ %
Drilled
- Core size. NQ 0 - 1.2m.
BQ 1.2 - 51.03m.

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D. D. H. No. D 160/11

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	RECOVERED % CORE
0 - 3.96	3.96	3.56	90
7.10	3.14	3.02	96
7.77	.67	.76	113
10.06	2.29	2.27	99
13.11	3.05	2.94	96
14.94	1.83	1.78	97
18.08	3.14	3.15	100
19.89	1.81	1.82	100
22.25	2.36	2.36	100
22.94	.69	.61	88
24.76	1.82	1.67	92
27.81	3.05	3.05	100
29.64	1.83	1.85	101
30.94	1.30	1.32	102
33.76	2.82	3.05	108
36.88	3.12	3.06	98
40.01	3.13	3.11	99
43.13	3.12	3.12	100
46.25	3.12	2.99	96
47.07	.82	.73	89
48.59	1.52	1.31	86
49.81	1.22	1.22	100
51.03	1.22	1.15	94

E.O.H.

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 160/11

SAMPLE No.	DEPTH (METRES)				ELEMENTS				COMMENTS
	From	To	Length	Length Recovered	WO ₃	Mo			
D3186	0	1	1.0	0.70	0.10	0.03	*		
7	1	2	"	1.0	0.66	0.08			Upper C lens: 1 - 23m, 22m @ 1.69% WO ₃ 0.13% Mo
8	2	3	"	"	0.73	0.05			
9	3	4	"	"	1.64	0.11			
90	4	5	"	"	0.97	0.09			
1	5	6	"	"	3.68	0.25			
2	6	7	"	"	4.50	0.26			
3	7	8	"	"	4.10	0.24			
4	8	9	"	"	4.10	0.28			
5	9	10	"	"	3.60	0.26	*		
6	10	11	"	"	1.74	0.12			
7	11	12	"	0.90	1.46	0.11			
8	12	13	"	1.0	1.30	0.09			
9	13	14	"	"	1.18	0.09	*		
3200	14	15	"	"	1.58	0.11			
1	15	16	"	"	1.26	0.09			
2	16	17	"	"	0.94	0.09			
3	17	18	"	"	1.37	0.23	*		
4	18	19	"	"	0.03	0.02			
5	19	20	"	"	0.01	0.01			
6	20	21	"	"	0.78	0.07			
7	21	22	"	"	0.66	0.12			
8	22	23	"	"	0.88	0.08			
9	23	24	"	"	0.17	0.03			
10	24	25	"	"	1.03	0.10			
1	25	26	"	"	0.01	0.02			
2	26	27	"	"	0.01	0.02			
3	27	28	"	"	0.25	0.06			
4	28	29	"	"	0.96	0.09			
5	29	30	"	"	1.36	0.11			
6	30	31	"	"	0.89	0.07			
7	31	32	"	"	0.43	0.05			
8	32	33	"	"	0.95	0.08			
9	33	34	"	"	1.01	0.09			
20	34	35	"	"	0.64	0.07			
1	35	36	"	"	0.37	0.06	*		
2	36	37	"	"	0.39	0.05			
3	37	38	"	"	0.29	0.05			
D3224	38	39	"	"	0.14	0.02			

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/11

LAB. K.I.S.			LAB. K.I.S.			LAB. A.M.D.L.			LAB. A.C.S.L.		
Original Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo
D 3186	0.10	0.03	D 3476	0.08	0.01	D 3477	0.09	0.008	D 3478	0.09	0.006
3195	3.60	0.26	3479	3.87	0.15	3480	3.60	0.147	3481	4.14	0.15
3199	1.18	0.09	3482	1.13	0.04	3483	0.96	0.051	3484	1.22	0.056
3203	1.37	0.23	3485	1.31	0.16	3486	1.18	0.175	3487	1.58	0.19
3221	0.37	0.06	D 3488	0.43	0.02	D 3489	0.38	0.034	D 3490	0.48	0.034

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/11

- 0.0 - 5.70 PYROXENE GARNET HORNFELS
Sporadic mineralization in a medium grained pyroxene rich rock which shows minor andradite garnet skarn development and also some significant barren white carbonate pods.
No bedding.
- 5.70 - 18.06 GARNET HORNFELS
Medium to coarse grained andradite garnet hornfels. Very finely disseminated high grade mineralization.
No bedding.
- 18.06 - 20.20 BIOTITE HORNFELS
Finely bedded barren grey biotite hornfels.
Minor iron sulphides on bedding surfaces.
Bedding 18.1m 30° L.A.O.C.
- 20.20 - 22.70 GARNET HORNFELS
Weakly banded pyroxene rich andradite garnet hornfels.
- 22.70 - 27.0 MARBLE MARKER (?)
A mixture of barren white marble and grey black biotite hornfels as below
22.70 - 22.94 biotite hornfels
22.94 - 23.65 marble
23.65 - 25.10 a very weakly mineralized pyroxene rich skarn.
25.10 - 27.0 barren grey biotite hornfels.
- 27.0 - 39.0 BANDED GARNET HORNFELS
Banded pyroxene rich andradite garnet skarn of the Lower C lens. Moderate to high grade mineralization finely disseminated.
This unit has a high marble content below 37m and is unmineralized below 37.51m.
- 39.0 - 48.10 BIOTITE PYROXENE HORNFELS
A barren light green and dark grey biotite pyroxene rock. The bedding is very disturbed.
The upper contact of this unit appears stratigraphic and not faulted.
- 48.10 - 51.03 QUARTZITE
Barren grey quartzites, very heavily fractured with moderate pyrite on joint surfaces.
- E.O.H. 51.03m.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 160/10

PLANNING

Proposer: M.J Danielson. Depth: 40m.
Location: 220 160E (N14) cuddy B lens
drive, -75m R.L.

Purpose of hole: Exploration of B lens.

Co-ordinates: 220 160 E 564 100 N
Inclination: +40° Magnetic
Bearing: 360° Grid Target depth:
Target: E N
Approved by: M.C. Rogers Date: 2/1/75

SURVEY

Survey Co-ords: E N
Survey bearing: Grid Magnetic
Surveyed in by: Date:
Actual Co-ords: 220 160.89 E 564 108.54 N
R.L. of collar: -73.99 Inclination of hole:
Picked up by : J. Cook. Date: + 39°59'44"
12/2/75

SUMMARY

Logged by : M.J. Danielson.
Results: No significant B lens intersection.

DRILLING

Driller/Contractor: A.D.D.
Date commenced: 11/2/75 Date terminated: 14/2/75

Casing: Size :	NIL		
Depth :			
Core: Size :	A17		
Depth :	33.22		

Wedge Runoff:
Wedge placed: NIL Depth:
Proposed by : Approved by:
Reason:

Extension: NIL
Reason for termination: Hole passed into hanging-Final depth: 33.22m
wall of B lens sequence.
Condition of hole on completion:
Casing : NIL
Cemented : NO

Bore hole survey: NO
Water: Inflow at 26.21m - 345 gal/hr.
Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 160/10

Depth Interval (metres)	Rock Type	Fractures/m.	Joint Angle (w.r.t. L.A.O.C.)	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery	R.Q.D.	Remarks (weathering)
00 - 1.98	ch	8		carbonate		96	39	
1.98 - 24.38	ch/ acid dyke/ gph/ pch.	4		sulphide: 2.5 - 6.5m, other- wise clay. minor carbonate.	14m:4.5° 21m:30° 15m:40°	98	71	
24.38 - 29.87	bph	8		clay, minor pyrite.	27m:28°	96	59	<u>NOTE:</u> At 26.2, drillers reported a water inflow of 345gal/hr
29.87 - 33.22	bh	+ 15		clay, minor carbonate.	31m:20°	71	18	Too much core loss to accurately count no. of J/m. Very poor ground.

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designator). = $\frac{\text{length core} > 10 \text{ cms}}{\text{length recovered}} \%$
DRILLED
- Core size. 0 - 33.22m A17.

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/10

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	RECOVERED % CORE
0 - 1.98	1.98	1.90	96
5.03	3.05	3.00	98
8.08	3.05	2.85	93
11.12	3.04	2.96	97
14.17	3.05	3.03	99
15.24	1.07	1.08	101
18.29	3.05	3.03	99
21.34	3.05	3.12	103
24.38	3.04	3.00	99
27.43	3.05	3.03	99
29.87	2.44	2.27	93
31.09	1.22	.85	70
32.61	1.52	1.09	72
33.22	.61	.44	72
E.O.H.			

GEOPEKO LIMITED - Dolphin Mine

ASSAY DATA

D.D.H. No.D 160/10

SAMPLE No.	DEPTH (METRES)				ELEMENTS				COMMENTS
	From	To	Length	Length Recovered	WO ₃	Mo			
D3048	7	8	1.0	0.78	0.02	0.03			
9	8	9	"	1.0	0.21	0.04			
50	9	10	"	"	0.43	0.06			
D3052	10	11	"	0.90	0.07	0.02			
D3053	21	22	"	1.0	0.12	0.07			
4	22	23	"	"	0.34	0.07			
5	23	24	"	0.53	0.18	0.08			
D3056	24	25	"	1.0	0.16	0.05			

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/10

LAB. K.I.S.			LAB. K.I.S.			LAB. A.M.D.L.			LAB. A.C.S.L.		
Original Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo
D 3049	0.21	0.04	D 3470	0.20	0.01	D 3471	0.23	0.013	D 3472	0.29	0.014
3053	0.12	0.07	3473	0.08	0.01	3474	0.12	0.042	3475	0.16	0.037

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/10

- 0 - 2.52 **MARBLE**
Barren grey B lens marble. Very minor green pyroxene and pink grossular garnet.
Many joint surfaces are coated with a white soft incompetent carbonate sludge.
- 2.52 - 6.60 **ACID DYKE**
Barren fine to medium grained grey rock with a volcanic texture. This unit is the same as that intersected in D 160/9.
- 6.60 - 15.25 **GARNET PYROXENE HORNFELS**
Moderate disseminated mineralization 8.1 - 10.0 where the rock is pyroxene rich andradite skarn.
Otherwise this unit is predominantly a green pyroxene hornfels with some minor white carbonate and pink grossular garnet.
- 15.25 - 24.38 **PYROXENE - CALCITE HORNFELS**
A mixture of barren white marble and pale green pyroxene hornfels. Isolated specks of mineralisation 21.4 - 24.4m.
Bedding: 21m 30° L.A.O.C.
- 24.38 - 29.87 **BIOTITE PYROXENE HORNFELS**
Mostly a barren dark grey biotite hornfels with some pale green pyroxene interbeds.
Bedding: 26m 35° L.A.O.C.
- 29.87 - 33.22 **BIOTITE HORNFELS**
Very bad ground R.Q.D. 18%.
Core recovery 71%.
A dark brown fine grained biotite hornfels.
No mineralization.
- 33.22m **E.O.H.**

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D160/9

PLANNING

Proposer: M.J. Danielson. Depth: 30m.
Location: 220 160E (N14) cuddy B lens drive, 75m level.

Purpose of hole: Exploration B lens and locate Central Fault above -75mR.L.

Co-ordinates: 220 160 E 564 100 N
Inclination: + 30° Magnetic
Bearing: 180 Grid Target depth:
Target: E N
Approved by: M.C. ROGERS. Date: 20/1/75

SURVEY

Survey Co-ords: E N
Survey bearing: Grid Magnetic
Surveyed in by: Date:
Actual Co-ords: 220 159.4 E 564 099.4 N
R.L. of collar: -72.5 Inclination of hole:
Picked up by : M.G.M. Date: 25/2/75

SUMMARY

Logged by : M.J. Danielson.
Results: Central Fault (?) 15m.
B lens: 7 - 9m, 2m @ 0.67% WO₃
12 - 15m, 3m @ 3.96% WO₃

DRILLING

Driller/Contractor: A.D.D.
Date commenced: 30/1/75 Date terminated: 10/2/75

Casing: Size :	NIL		
Depth :			
Core: Size :	A17		
Depth :	32.61		

Wedge Runoff:
Wedge placed: Depth:
Proposed by : Approved by:
Reason:

Extension: NIL
Reason for termination: Hole passed out of B lens sequence. Final depth: 32.61m.
Condition of hole on completion:
Casing : NIL
Cemented : NO

Bore hole survey: NO
Water: NO
Comments on drilling conditions:

GEOPEKC LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No.D 160/9

Depth Interval (metres)	Rock Type	Fractures/m.	Joint Angle (w.r.t. L.A.O.C.)	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery	R.Q.D.	Remarks (weathering)
0 - 9.60	gph/ marble/ gph.	8		mainly carbonate.		94	68	leached carb- onate: 3.61 - 3.64, 4.75 - 5.00.
9.60 - 16.15	Acid dyke/ ph	14		clay, minor carbonate.		84	33	
16.15 - 26.21	bh	+ 15		clay, minor carbonate.		75	41	Core is badly broken in this section with abundant <u>core loss</u> . 24.30 - 24.60: core displays some intricate fine carbonate veining. Fault?
26.21 - 32.61	bh	6		some carbonate, minor clay.		99	74	
E.O.H.								

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designator). = $\frac{\text{length core } > 10 \text{ cms}}{\text{length recovered}} \%$
- Core size.

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/9

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	RECOVERED % CORE
0 - 2.44	2.44	2.28	93
5.49	3.05	2.95	97
9.60	4.11	3.75	91
11.58	1.98	1.94	98
16.15	4.57	3.58	78
18.90	2.75	2.11	77
20.12	1.22	1.06	87
21.95	1.83	1.53	84
24.69	2.74	2.24	82
26.21	1.52	.61	40
29.56	3.35	3.35	100
32.61	3.05	3.00	98
E.O.H.			

GEOPEKO LIMITED - Dolphin Mine

ASSAY DATA

D.D.H. No. D 160/9

SAMPLE No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	To	Length	Length Recovered	WO ₃	Mo	
D2966	0	1	1.0	0.87	0.19	0.05	
7	1	2	"	1.0	0.54	0.06	
8	2	3	"	"	0.17	0.21	
9	3	4	"	"	0.13	0.03	
70	4	5	"	"	0.16	0.07	
1	5	6	"	"	0.03	0.03	
2	6	7	"	"	0.05	0.03	
3	7	8	"	0.94	0.66	0.08	B lens 7 - 9m, 2m @ 0.67% WO ₃ 0.08% Mo.
4	8	9	"	0.68	0.68	0.08	
5	9	10	"	1.0	0.17	0.05	
6	10	11	1.0	"	0.04	0.02	
7	11	12	"	"	0.08	0.03	
8	12	13	"	"	0.32	0.05	B lens 12 - 15m, 3m @ 3.96% WO ₃ 0.22% Mo.
9	13	14	"	0.56	4.86	0.27	
80	14	15	"	0.52	6.70	0.35	
D2981	15	16	"	0.92	0.03	0.03	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/9

LAB.		K.I.S.		LAB.		K.I.S.		LAB.			A.C.S.L.	
Original Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	
D 2971	0.03	0.03	D 3464	0.01	0.01	D 3465	0.04	0.006	D 3466	0.06	0.009	
2974	0.68	0.08	3467	0.65	0.01	3468	0.63	0.031	3469	0.80	0.033	
2980	6.70	0.35	3461	6.70	0.20	3462	5.45	0.176	3463	6.82	0.17	

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No.D 160/9

0. - 2.44 GARNET PYROXENE HORNFELS
 A very weakly mineralized pyroxene rich skarn.
- 2.44 - 7.0 MARBLE
 Barren to weakly mineralized grey marble.
 2.44 - 2.70 is grossular garnet rich with some
 moderate disseminated molybdenite.
 Some leached marble 3.61 - 3.64 & 4.75 - 5.00
 probably minor core loss associated.
- 7.0 - 9.50 GARNET PYROXENE HORNFELS
 Pyroxene rich fine grained andradite garnet skarn.
 Moderate disseminated scheelite.
- 9.5 - 11.75 ACID DYKE
 Pale grey rock with a fine to medium grained
 volcanic texture.
 Similar rock to that intersected in D 160/7,
 D 160/6 and D 160/10.
 No mineralization.
- 11.75 - 15.0 PYROXENE HORNFELS
 Mostly a pale green pyroxene hornfels with some pale pink
 grossular garnet.
 Some coarse scheelite 14.4 - 14.9m.
 There is significant core loss in this section.
 11.58 - 16.15 = 22% lost. Some particularly bad ground
 about 12.5m which maybe area of core loss.
- 15.0 - 32.61 BIOTITE HORNFELS
 A fine grained purple brown barren hornfels.
 Core is very broken to 26.5 with significant core lost.
 e.g. 16.15 - 18.90 = 23% lost.
 18.90 - 20.12 = 13% "
 20.12 - 21.95 = 16% "
 21.95 - 24.69 = 18% "
 24.69 - 26.21 = 60% lost.
 Intricate carbonate veining 24.3 - 24.6 may indicate a
 fault.
 Core recovery improves significantly beyond 26.5m.
 R.Q.D. 16.15 - 26.21 41%
 26.21 - 32.61 74%

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 160/9

15.0 - 32.61 cont'd.

weakly spotted 28 - 29m.

Aplite: 29.18 - 29.27.

Bedding: 31m 35° L.A.O.C.

E.O.H. 32.61m.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D160/8

PLANNING

Proposer: M.J. Danielson.

Depth: 30m

Location: 220 160E (N14) cuddy.

Purpose of hole: Exploration B lens.

Co-ordinates: 220 160 E 564 100 N

Inclination: Vertical (+90⁰) Magnetic

Bearing: Grid Target depth: 0 - 30m

Target: E N

Approved by: M.C. Rogers. Date: 20/1/75

SURVEY

Survey Co-ords: E N

Survey bearing: Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 159.2 E 564 101.1 N

R.L. of collar: -72.7m Inclination of hole: Vert.

Picked up by : M.G.M. Date: 25/2/75

SUMMARY

Logged by : M.J. Danielson.

Results: B lens 8 - 12m 4m @ 1.04% WO₃

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 23/1/75

Date terminated: 30/1/75

Casing: Size : NIL

Depth :

Core: Size : A.17

Depth : 31.49

Wedge Runoff:

Wedge placed: NIL

Depth:

Proposed by :

Approved by:

Reason:

Extension: NIL

Reason for termination: Hole passed out of B lens final depth: 31.49m. sequence.

Condition of hole on completion:

Casing : NIL

Cemented : NO

Bore hole survey: NO

Water: NO.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. NOD160/8

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
0 - 18.13	gph/ marble	7		mostly carbonate, minor clay.		97	67	
18.13 - 31.49	gph/ bh/ volcanics	7		clay, carbonate.		99	71	

FURTHER DATA & REMARKS (Compression Tests)

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/8

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 3.43	3.43	3.45	101
5.94	2.51	2.45	98
8.99	3.05	2.58	85
11.96	2.97	2.92	98
15.09	3.13	3.01	96
18.13	3.04	3.16	104
21.18	3.05	3.02	99
23.39	2.21	2.30	104
24.54	1.15	1.07	93
26.21	1.67	1.67	100
28.45	2.24	2.18	97
31.49	3.05	3.05	100

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No.D 160/8

SAMPLE No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	To	Length	Length Recovered	WO ₃	Mo	
D2934	0	1.0	1.0	1.0	0.22	0.03	
5	1.0	2.0	"	"	< 0.01	< 0.01	
6	2.0	3.0	"	"	< 0.01	< 0.01	
7	3	4	"	"	0.11	0.24	
8	4	5	"	"	0.09	0.20	
9	5	6	"	"	0.01	0.01	
40	6	7	"	"	0.01	0.02	
1	7	8	"	0.75	0.20	0.03	
2	8	9	"	"	0.66	0.07	B lens:
3	9	10	"	1.0	1.60	0.11	8 - 12m,
4	10	11	"	"	1.18	0.09	4m @
5	11	12	"	"	0.70	0.08	1.04% WO ₃
6	12	13	"	"	0.17	0.04	0.09% Mo
7	13	14	"	0.90	0.33	0.05	
8	14	15	"	1.0	0.09	0.03	
9	15	16	"	"	0.19	0.03	
50	16	17	"	"	0.24	0.05	
D2951	17	18	"	"	0.04	0.05	
D2965	18	19	"	"	0.01	0.08	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/8

LAB. K.I.S.			LAB. K.I.S.			LAB. A.M.D.L.			LAB. A.C.S.L.		
Original Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo
D 2942	0.66	0.07	D 3455	0.71	0.02	D 3456	0.65	0.035	D 3457	0.73	0.036
2945	0.70	0.08	3458	0.79	0.03	3459	0.64	0.05	3460	0.77	0.049

GEOPEKO LIMITED - KING ISLAND

GEOLOGY LOG

D.D.H. No. 160/8 DBE

0 - 1.0m

GARNET PYROXENE HORNFELS

Greenish brown pyroxene grossular garnet skarn. Very minor mineralisation.

1.0 - 3.50

MARBLE

Typical pale grey very weakly mineralized B lens marble. Contact with following unit is gradational.

3.50 - 18.63

GARNET PYROXENE HORNFELS

Greenish brown pyroxene grossular garnet hornfels. For the most part weakly mineralized but ore grade (+ 0.5% WO_3) between 8 - 12m.

Below 12m some grey black biotite hornfels begins to appear.

Free MoS_2 at 4.9m. 18.63m is top of B lens sequence.

18.63 - 24.65

BIOTITE HORNFELS

Typical fine grained grey black barren biotite hornfels. No noticeable bedding.

24.65 - 31.49

LOWER METAVOLCANICS (?)

This of course is not the Lower Metavolcanics usually found at the base of the Mine Series but yet the texture of this unit is very similar.

It is a grey brown rock, generally massive and barren. It has a flecked brown appearance typical of the lower metavolcanics and is also of similar grain size - which is slightly more coarse than the typical biotite hornfels.

Aplite: 27.0 - 27.12
29.85 - 30.0

31.49 metres.

E.O.H.

GEOPEKO LIMITED - KING ISLANDLOG OF D.D.H. NO:D 160/7PLANNING

Proposer: M. J. Danielson Depth: 100m

Location: 220 160E FW diamond drill cuddy

Purpose of hole: Locate No. 3 Fault and Wedge Faults and oreblocking.

Co-ordinates: 220 160 E564 110 N

Inclination: -17° Target depth:

Bearing: 360 °Grid °Magnetic

Target: E N

Approved by: M. C. Rogers Date: 25.6.74

SURVEY

Survey Co-ords: E N

Survey bearing: °Grid °Magnetic

Surveyed in by: Date:

Actual Co-ords: 220159.627E564113.953N

R.L. of collar: -76.928 Inclination of hole:

Picked up by: D. Brown Date: 2.7.74

SUMMARY

Logged by: M. J. Danielson

Results: C lens: 48 - 96m 48m at 1.23% WO₃DRILLING

Driller / Contractor: A.D.D.

Date commenced: 24.6.74

Date terminated: 8.7.74

Casing: Size : NIL

Depth:

Core: Size : BQ

Depth: 124.82

Wedge Runoff:

Wedge placed:

Depth:

Proposed by:

Approved by:

Reason:

Extension: NIL

Final depth: 124.82

Reason for termination: Hole passed into quartzites north of the Northern Fault.

Condition of hole on completion:

Casing : NIL

Cemented: 2 hours cementing but hole still making 0.3gal/min

Bore hole survey: surveyed to on completion 121.92m

Water: Hole making approx. ½ gallon/min.

Comments on drilling conditions:

GEOPEKO LIMITED - DOLPHIN MINESUMMARY BORE HOLE SURVEY DATAD.D.H. NO.D 160/7

Survey method : Multishot Camera

Depth surveyed to : 121.92m

Final depth : 124.82m

Date surveyed : 8.7.74

Casing depth : NIL

Surveyed by : V. Powell

Checked by : G. Buckland

DEPTH	Bearing		Inclination		True Vertical depth	Co-ordinates	
	Grid	Mag.	Read	Corrected		N	W
15.24	003 ⁰	354 ⁰	71 ⁰ 15'	-18 ⁰ 45'	4.90	14.31	1.50
30.48	004 ⁰ 45'	355 ⁰ 45'	71 ⁰	-19	9.86	28.68	2.84
45.72	003 ⁰	354 ⁰	71 ⁰ 30'	-18 ⁰ 30'	14.70	43.06	4.36
60.96	002 ⁰	353 ⁰	72 ⁰	-18 ⁰	19.41	57.44	6.12
76.20	003 ⁰ 30'	354 ⁰ 30'	72 ⁰	-18 ⁰	24.16	71.86	7.59
91.44	003 ⁰	354 ⁰	72 ⁰	-18 ⁰	28.86	86.27	9.10
106.68	004 ⁰	355 ⁰	72 ⁰	-18 ⁰	33.57	100.69	10.57
121.92	004 ⁰	354 ⁰	72 ⁰	-18 ⁰	38.28	115.12	11.93

REMARKS

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. NO. D 160/7

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
0 - 21.34	bh	8		carbonate minor pyrite	17m 25° L.A.O.C.	101	77	
21.34 - 27.28	bh	16		minor clay	25m 15° L.A.O.C.	110	30	poor ground
27.28 - 35.81	bh	17		clay carbonate minor chlorite at 34.4m		108	11	very poor ground
35.81 - 41.55	bh	10		carbonate minor chlorite		99	72	
41.55 - 45.41	q	13		carbonate pyrite		104	54	Fault zone
45.41 - 70.79	gh	6		pyrite minor carbonate		99	89	
70.79 - 104.85	gh/bh/ch/ bph	7		carbonate pyrite	73m 20° L.A.O.C. 101m 60° 103m 55° 104m 40°	101	79	bad ground 101.4 - 103m
104.85-117.65	mineralised footwall beds/bph	11		minor carbonate	105m 30° 107m 25° 110m 35° 111m 45°	91	66	108.20m-109.11m, see footnote.
117.65-121.62	breccia/q	+20		pyrite	113m 55° 115m 60°	94	14	very poor ground

FURTHER DATA & REMARKS (Compression Tests)

1. Core size Bq (36.5mm)
2. 108.20 - 109.11 At 108.20m depth of hole was corrected to 109.11m owing to a drillers error. This core is not lost but distributed over the interval 0.0 to 108.20m.

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. NO. D 160/7

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
121.62-124.82 F.O.H.	q	16		pyrite minor carbonate		105	43	

FURTHER DATA & REMARKS (Compression Tests)

DOLPHIN MINE

DDH D160/7

CORE RECOVERY

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 1.83	1.83	1.60	87
- 3.66	1.83	2.16	118
- 6.71	3.05	3.28	107
- 9.14	2.43	2.30	95
- 12.19	3.05	3.30	108
- 15.24	3.05	3.10	102
- 17.83	2.59	2.53	98
- 18.29	0.46	0.55	120
- 21.34	3.05	2.81	92
- 21.79	0.45	0.59	131
- 23.01	1.22	1.26	103
- 24.69	1.68	1.80	107
- 27.28	2.59	2.90	112
- 29.26	1.98	2.07	105
- 31.08	1.82	1.98	109
- 33.68	2.60	3.04	117
- 35.81	2.13	2.12	100
- 37.74	1.93	1.76	91
- 40.84	3.10	3.15	102
- 41.55	0.71	0.76	107
- 44.50	2.95	3.05	103
- 45.41	0.91	0.96	105
- 46.02	0.61	0.48	79
- 49.22	3.22	3.29	102
- 52.34	2.12	3.15	101
- 53.87	1.53	1.56	102
- 55.40	1.53	1.47	96
- 58.45	3.05	3.05	100
- 61.49	3.04	3.00	99
- 64.24	2.75	2.79	101
- 67.67	3.43	3.20	93
- 70.79	3.12	3.15	101
- 73.38	2.59	2.57	99
- 76.50	3.12	3.20	103
- 78.03	1.53	1.65	108
- 79.55	1.52	1.50	99
- 82.68	3.13	3.16	101
- 85.77	3.09	3.20	104
- 88.87	3.10	3.18	103
- 91.95	3.08	3.18	103
- 94.99	3.04	3.06	101
- 98.07	3.08	3.16	103
- 101.19	3.12	3.01	96
- 103.02	1.83	2.07	113
- 104.85	1.83	1.53	84
- 107.29	2.44	2.44	100
- 108.20	0.91	0.86	95
108.20 to 109.11 core block discrepancy - see engineering log.			
109.11 - 112.17	3.06	3.14	103
- 112.47	0.30	0.22	73
- 112.80	0.33	0.38	115
- 113.11	0.31	0.28	90
- 115.82	2.71	2.63	97
- 116.92	1.10	0.92	84
- 117.12	0.20	0.23	115
- 120.22	3.10	3.20	103
- 120.70	0.48	0.48	100
- 121.11	0.31	0.31	100

- 121.00	0.30	0.30	100
- 121.62	0.62	0.30	48
- 124.82	3.20	3.36	105
E.O.H.			

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. NO. D160/7

SAMPLE NO.	DEPTH (METRES)			ELEMENTS						COMMENTS	
	From	To	Length	Length recovered	WO ₃	Mo		CAD No	Check WO ₃		Mo
C1774	46	47	1.0	1.0	0.15	<0.01		C1931	0.17	<0.01	
5	47	48	"	"	0.02	<0.01					
6	48	49	"	"	0.72	0.11					
7	49	50	"	"	2.9	0.11					
8	50	51	"	"	1.38	0.05					
9	51	52	"	"	1.64	0.06					
80	52	53	"	"	0.74	0.03					
1	53	54	"	"	0.78	0.04					
2	54	55	"	"	1.95	0.07					
3	55	56	"	"	0.56	0.02					
4	56	57	"	"	0.66	0.02					
5	57	58	"	"	1.24	0.04					
6	58	59	"	"	2.6	0.10					
7	59	60	"	"	5.1 ^a	0.18	1.6	C1932	0.86	0.03	
8	60	61	"	"	4.9 ^a	0.16					
9	61	62	"	"	3.7	0.13					
90	62	63	"	"	1.70	0.04					
1	63	64	"	"	1.68	0.05					
2	64	65	"	"	2.1	0.08					
3	65	66	"	"	1.44	0.04					
4	66	67	"	0.74	0.36	<0.01					
5	67	68	"	1.0	0.81	0.01					
6	68	69	"	"	0.72	0.01		C1933	2.30	0.07	
7	69	70	"	"	1.93	0.07					
8	70	71	"	"	0.87	0.03					
9	71	72	"	"	0.87	0.02					
1800	72	73	"	"	0.76	0.02					
1861	73	74	"	"	0.08	<0.01					
2	74	75	"	"	0.60	0.02					
3	75	76	"	"	0.01	<0.01					
4	76	77	"	"	0.16	0.01					
5	77	78	"	"	0.78	0.05					
6	78	79	"	"	0.95	0.06		C1934	1.01	0.03	
7	79	80	"	"	0.68	0.03					
8	80	81	"	"	0.45	0.02					
9	81	82	"	"	0.95	0.02					
70	82	83	"	"	1.49	<0.01					
1	83	84	"	"	0.62	0.02					
2	84	85	"	"	3.4	0.16					
3	85	86	"	"	1.15	0.07					
4	86	87	"	"	0.52	0.06					
5	87	88	"	"	0.21	0.01					
6	88	89	"	"	0.93	0.06		C1935	0.01	<0.01	
7	89	90	"	"	0.05	0.02					

C lens
48m @
1.23 WO₃

SPECIFIC GRAVITY

Determined by:

Depth (m) :

GEOPEKO LIMITED - DOLPHIN MINEASSAY DATAD.D.H. NO.D 160/7

SAMPLE NO.	DEPTH (METRES)				ELEMENTS						COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo		Chas. No.	Chas. No.	Mo	
1878	90	91	1.0	1.0	0.36	0.01					
9	91	92	"	"	0.17	0.01					
80	92	93	"	"	1.44	0.08	0.08				
1	93	94	"	"	1.05	0.07					
2	94	95	"	"	0.39	0.01					
3	95	96	"	"	0.49	0.02					
4	96	97	"	"	0.21	<0.01					
5	97	98	"	"	0.01	<0.01					
1886	103	104	"	"	0.27	<0.01					
7	104	105	"	"	1.24	<0.01					
8	105	106	"	"	0.61	0.02					
9	106	107	"	1.30	0.08	<0.01					
90	107	108	"	0.96	0.02	<0.01					
1	108	109	"	0.20	<0.01	<0.01					
2	109	110	"	1.0	0.31	<0.01					
3	110	111	"	"	0.09	<0.01					
4	111	112	"	"	0.31	<0.01					
5	112	113	"	0.92	0.98	0.02					
1896	113	114	"	1.0	0.06	<0.01					

SPECIFIC GRAVITY

Determined by:

Depth (m) :

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/7

LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1774	0.15	← 0.01		0.12		C 1931	0.17			0.10	
1786	2.60	0.10		2.60		1932	0.86			3.50	
1796	0.72	0.01		0.81		1933	2.30			0.81	
1866	0.95	0.06		0.96		1934	1.01			0.25	
1876	0.93	0.06		1.04		1935	0.01			0.95	
1895	0.98	0.02		1.04		1936	5.6			1.01	
C 1774	0.15	← 0.01	C 1073	0.16	← 0.01		0.15				
1786	2.60	0.10	1074	3.8	0.13		3.70				
1796	0.72	0.01	1075	0.81	0.03		0.79				
1866	0.95	0.06	1076	0.26	0.01		0.24				
1876	0.93	0.06	1077	0.93	0.05		0.93				
1895	0.98	0.02	1078	1.40	0.05		1.37				

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D160/7

LAB. K.I.S.			LAB. K.I.S.			LAB.			LAB.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1880	1.44	0.08	D 2094	1.55	0.11						
1870	1.49	0.01	2095	1.48	0.08						
1892	0.31	0.01	2096	0.34	0.01						
1800	0.76	0.02	2097	0.76	0.03						
1790	1.70	0.04	2098	1.16	0.04						
1779	1.64	0.06	2099	1.60	0.07						

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/7

LAB. K.I.S.			LAB. A.C.S.L.			LAB. A.M.D.L.			LAB.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1786	2.60	0.10	C 1057	4.29	0.10	D 0234	3.97	0.12			
C 1800	0.76	0.02	D 0246	0.79	0.018	D 0245	0.86	0.05			

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/7

LAB. K.I.S.			LAB. K.I.S.			LAB. A.M.D.L.			LAB. A.C.S.L.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1776	0.72	0.11	D 0103	0.77	0.05	D 0102	0.93	0.04	D 0101	0.77	0.018
1785	1.24	0.04	0100	1.25	0.09	0099	1.32	0.07	0098	1.18	0.031
1795	0.81	0.01	0088	1.02	0.05	0087	0.86	0.04	0086	0.74	0.011
1865	0.78	0.05	0097	0.97	0.10	0096	1.03	0.08	0095	1.07	0.054
1875	0.21	0.01	0085	0.21	0.02	0084	0.28	0.02	0083	0.29	0.008
1884	0.21	< 0.01	0091	0.22	0.03	0090	0.28	0.02	0089	0.25	0.010
1887	1.24	< 0.01	0094	1.23	0.08	0093	1.32	0.06	0092	1.32	0.028

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NOD 160/7Core size: \emptyset - E.O.H. BQ

0 - 8.54

B LENS

This is the base of the B lens sequence and is represented by a variety of pyroxene, grossular and biotite hornfels. No significant mineralisation.

The predominant rock type is a banded ph and bh with thin bands (av. 0.8 - 1.0m) of carbonate and grossular garnet. Bedding:

4.5m 10^o L.A.O.C.
8.0m 20^o L.A.O.C.

8.54 - 25.39

BIOTITE HORNFELS

Mostly a dark purplish grey brown rock, fine grained with no mineralisation. Generally structureless but bedding is occasionally apparent. Bedding:

17m 25^o L.A.O.C.
25m 15^o L.A.O.C.

25.39 - 27.16

ACID DYKE

Pale grey, massive, barren with a volcanic texture. This unit also occurs in DDH D 160/6.

Lower contact of this unit makes an angle of 25^o with L.A.O.C. - similar to bedding.

27.16 - 41.25

BIOTITE HORNFELS

Typical grey brown bh. No bedding apparent and no mineralisation. Core is badly broken particularly 27.28 - 35.81 which has RQD = 11%.

41.25 - 42.19

NO. 3 FAULT (?)

Core is very heavily brecciated with abundant fine carbonate veining and moderate sulphides (pyrite). The actual rock type is difficult to determine but is probably bh. Abundant chlorite on joint surfaces.

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO. D 160/7

42.19 - 45.0

QUARTZITE

The upper 0.8m of this unit is mainly a pale pink fine grained siliceous aplite. This aplite is a common accessory with the No. 3 Fault. c.f. (1) DDH D160/6.

(2) The -75m X cut at 220 120E where the No. 3 Fault is intersected.

The quartzite in this unit is pale grey, only moderately siliceous and appears to have pieces of bh caught up within it.

45.0 - 45.5

FAULT

Heavily brecciated core with minor carbonate veining but no sulphides. Abundant chlorite on joint surfaces.

45.5 - 48.20

PYROXENE GARNET HORNFELS

A green (ph) pale brown (gh) rock with occasional carbonate pods. Very weak disseminated mineralisation.

48.20 - 62.20

GARNET HORNFELS

Medium to coarse grained andradite skarn with moderate to high grade scheelite. No bedding apparent.

62.20 - 63.48

MARKER HORIZON (?) (bh)

The uppermost 0.15m is a grossular garnet pyroxene hornfels with very minor mineralisation. This passes into a barren well bedded grey biotite hornfels. Bedding: 63m 25° L.A.O.C.

63.48 - 72.85

GARNET HORNFELS

A fine to medium grained andradite skarn. Moderate to high grade mineralisation and very weak bedding evident. Becomes more ph rich and less mineralised 71 - 73m and is more indicative of lower C lens.

72.85 - 73.98

BIOTITE HORNFELS

Barren pale grey brown biotite hornfels with some minor green pyroxene. Bedding 73m 20° L.A.O.C.

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO. D 160/7

73.98 - 76.70

MARBLE

The uppermost 0.5m of this unit is a weakly mineralised pyroxene rich skarn which grades into a pale grey barren marble.

76.70 - 84.0

BANDED GARNET HORNFELS

A banded mineralised andradite skarn. Medium to coarse grained becoming more pyroxene rich with depth. Bedding:
78m 20° L.A.O.C.

84.0 - 96.40

MINERALISED FOOTWALL BEDS

Variably mineralised andradite skarn interbedded with barren sections of pyroxene grossular garnet hornfels. There is little carbonate and biotite hornfels. Bedding: 90m 50°
94m 35°
Bedding in this unit is not as clearly defined as the footwall beds in the open pit.

96.40 - 99.70

MOTTLED BIOTITE PYROXENE HORNFELS

A mottled white or very pale green and brown rock. The unit has a very high mica content. No mineralisation.

99.70 - 104.15

BANDED BIOTITE PYROXENE HORNFELS

Thinly banded bh/ph. The unit is predominantly a dark grey to black bh with thin (up to 1cm wide) bands of ph. No mineralisation.
Bedding: 101m 60°
103m 55°
104m 40°

104.15 - 112.80

MINERALISED FOOTWALL BEDS

Mineralised andradite skarn interbedded with unmineralised biotite, pyroxene, grossular hornfels. Bedding: 105m 30°
107m 25°
110m 35°
111m 45°

At 108.20m depth of hole corrected to 109.11m. This interval of core is not lost.

GEOPEKO LIMITED - DOLPHIN MINE

GEOLOGICAL LOG

D.D.H. NO. D 160/7

112.80 - 117.67

BANDED BIOTITE PYROXENE HORNFELS

Thinly banded bh/ph. No mineralisation. Bedding: 113m 55° *
115m 60° *
* L.A.O.C.

117.67 - 121.62

BRECCIA

117.67 - 118.10 very fine carbonate veining and minor pyrite forming a recemented breccia.

118.10 - 121.62 quartzite is the rock type with moderate to abundant pyrite on joint surfaces. Core is badly broken and RQD = 14%. Core recovery = 94%.

121.62 - 124.82

QUARTZITE

Pale grey massive barren quartzite. RQD = 43%.

124.82

E.O.H.

GEOPEKO LIMITED - KING ISLANDLOG OF D.D.H. NO: D 160/6PLANNING

Proposer: M. Danielson Depth: 90m
 Location: 220 160 E B lens drill cuddy

Purpose of hole: Locate No. 3 and Wedge Faults

Co-ordinates: 220 160 E 564 110 N

Inclination: Horizontal Target depth:

Bearing: 360 °Grid °Magnetic

Target: E N

Approved by: M. C. Rogers Date: 1.6.74

SURVEY

Survey Co-ords: E N

Survey bearing: °Grid °Magnetic

Surveyed in by: Date:

Actual Co-ords: 220159.59E 564114.10N

R.L. of collar: -76.472 Inclination of hole:

Picked up by: D. Brown Date: 6.6.74

SUMMARY

Logged by: M. J. Danielson

Results: C lens 63 - 118m 55m @ 1.68% WO₃

DRILLING

Driller / Contractor: A.D.D.

Date commenced: 5.6.74

Date terminated: 21.6.74

Casing: Size : BX

Depth: 1.52

Core: Size : BQ

Depth: 132.28

Wedge Runoff: Nil

Wedge placed:

Depth:

Proposed by:

Approved by:

Reason:

Extension: Nil

Final depth: 132.28m

Reason for termination: Hole passed north of Northern Fault

Condition of hole on completion:

Casing : 1.52 BX remains

Cemented: Surveyed to 121.92m.

Bore hole survey:

Water: Yes. Hole made ½gal/min.

Comments on drilling conditions:

GEOPEKO LIMITED - DOLPHIN MINESUMMARY BORE HOLE SURVEY DATAD.D.H. NO. D160/6

Survey method : Multishot Camera

Depth surveyed to : 121.92

Final depth : 132.28m

Date surveyed : 20.6.74

Casing depth : 1.52m

Surveyed by : V. Powell

Checked by : M. Danielson

DEPTH	Bearing		Inclination		True Vertical depth	Co-ordinates	
	Grid	Mag.	Read	Corrected		E-W	N
0	360			0			
15.2	001	352°	88°	-2°	0.53	2.11	15.08
30.48	002	353°	88°	-2°	1.06	4.18	30.16
45.72	000°15'	351°15'	88°	-2°	1.64	6.50	45.19
60.96	000	351°	87°	-3°	2.41	8.88	60.21
76.20	000	351°	87°	-3°	3.24	11.25	75.27
91.44	000	351°	87°	-3°	4.09	13.63	90.32
106.68	000	351°	86°	-4°	5.01	16.01	105.33
121.92	002	353°	86°	-4°	5.99	18.17	120.37

REMARKS

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. NO. D 160/6

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
0 - 2.10	Garnet Pyroxene Skarn	18				80	41	0 - 0.96 rubble
2.10 - 12.88	Marble	4		9.6-12.3 clay		100	91	9.64 - 10.50 clay seam
12.88 - 20.17	Pyroxene biotite hornfels	12		clay		lost core 14.6-15.0 otherwise 100%	55	bad ground 18.3 - 20.2
20.17- 4 ² 4.40	Biotite pyroxene hornfels	13		minor clay. chlorite at 22.8		100	51	bad ground 33.1 - 35.1
42.40-58.30	Quartzite	19			51.21-51.51 51.51-51.97 52.73-54.56 54.56-57.30 57.30-58.30 otherwise 100%	30% 43% 87% 78% 70%	25	
58.30-75.59	Pyroxene garnet hornfels	5		minor carbonate		100	87	
75.59-106.98	Garnet skarn	8				75.59- 78.64 88% otherwise 100%	81	
106.98-107.90	Garnet pyroxene skarn	+20				60	0	
107.90-121.31	Garnet skarn	7		minor pyrite	120.5m 45°	100	78	

FURTHER DATA & REMARKS (Compression Tests)

Core size: 0 - 132.28m E.O.H. BQ (35mms dia.)

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. NO.D 160/6

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
121.31-125.58		11		minor pyrite		100	61	
125.58-129.08		+20				31	0	Poor ground FAULT ZONE
129.08-132.28	Quartzite	11		minor pyrite and carbonate		100	58	Bad ground 131.0-131.4 132.0-132.28

FURTHER DATA & REMARKS (Compression Tests)

GEOPEKO LIMITED - DOLPHIN MINEASSAY DATAD.D.H. NO. D160/6

SAMPLE NO.	DEPTH (METRES)				ELEMENTS					COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo	CARD NO	Check WO ₃	Assay Mo	
C 1653	0	1	1.0	0.57	0.03	0.01				
4	1	2	"	0.92	0.39	0.01	C1914	0.46	0.02	
1655	2	3	"	1.0	0.52	0.02				
1591	58	59	"	"	1.89	0.09				
2	59	60	"	"	0.05	0.01				
3	60	61	"	"	0.13	0.01				
4	61	62	"	"	0.14	0.01				
5	62	63	"	"	0.12	0.01				
6	63	64	"	"	0.26	0.01				
7	64	65	"	"	0.41	0.01				
8	65	66	"	"	0.50	0.01				
9	66	67	"	"	1.38	0.04	C1915	1.49	0.04	
1600	67	68	"	"	1.23	0.02				
1	68	69	"	"	0.03	0.01				
2	69	70	"	"	0.45	0.01				
3	70	71	"	"	0.17	0.01				
4	71	72	"	"	0.30	0.01				
5	72	73	"	"	1.08	0.03				
6	73	74	"	"	0.26	0.01				
7	74	75	"	"	2.25	0.08				
8	75	76	"	"	1.09	0.04				
9	76	77	"	"	1.76	0.06	C1916	1.70	0.06	
10	77	78	"	0.70	1.40	0.05				
1	78	79	"	1.0	1.42	0.05				
2	79	80	"	"	0.76	0.02				
3	80	81	"	"	2.72	0.08				
4	81	82	"	"	2.80	0.09				
5	82	83	"	"	3.00	0.11				
1606	83	84	"	"	2.90	0.13				

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

GEOPEKO LIMITED - DOLPHIN MINEASSAY DATAD.D.H. NO. D160/6

SAMPLE NO.	DEPTH (METRES)				ELEMENTS						COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo	Card No	check WO ₃	Assay Mo		
C 1617	84	85	1.0	1.0	5.00	0.17					
8	85	86	"	"	2.50	0.09					
9	86	87	"	"	3.50	0.14	C1917	3.7	0.08		
20	87	88	"	"	3.30	0.13					
1	88	89	"	"	2.44	0.09					
2	89	90	"	0.52	5.80	0.22					
3	90	91	"	1.0	2.55	0.10					
4	91	92	"	"	1.64	0.05					
5	92	93	"	0.94	3.70	0.14					
6	93	94	"	1.0	0.06	0.20					
7	94	95	"	"	3.30	0.11					
8	95	96	"	0.95	0.98	0.02	C1918	1.63	0.04		C lens 63-118m 55m @ 1.68%WO ₃
9	96	97	"	1.0	1.82	0.06					
30	97	98	"	"	4.90	0.20					
1	98	99	"	"	3.40	0.14					
2	99	100	"	"	2.70	0.10					
3	100	101	"	"	1.58	0.06					
4	101	102	"	"	1.94	0.09					
5	102	103	"	"	2.85	0.15					
6	103	104	"	"	2.41	0.10					
7	104	105	"	"	0.49	0.05					
8	105	106	"	0.90	0.75	0.02	C1919	0.94	0.05		
9	106	107	"	1.0	1.70	0.06					
40	107	108	"	0.55	0.50	0.02					
1	108	109	"	1.0	0.22	0.01					
2	109	110	"	"	0.06	0.01					
3	110	111	"	"	0.25	0.01					
4	111	112	"	"	0.90	0.04					
5	112	113	"	"	0.63	0.03					

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. NO. D 160/4 6

SAMPLE NO.	DEPTH (METRES)				ELEMENTS						COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo		CAD No	check WO ₃	Assay Mo	
C 1646	113	114	1.0	1.0	0.64	0.03					
7	114	115	"	"	0.70	0.02					
8	115	116	"	"	0.58	0.01					
9	116	117	"	"	1.38	0.05					
50	117	118	"	"	0.91	0.04					
1	118	119	"	"	0.20	0.01					
C 1652	119	120	"	"	0.01	0.01					

C19200.68 0.02

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/6

LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1654	0.39	0.01		0.43		C 1914	0.46	0.02		0.44	
1599	1.38	0.04		1.44		1915	1.49	0.04		1.45	
1609	1.76	0.06		1.85		1916	1.70	0.06		1.65	
1619	3.50	0.14		3.50		1917	3.70	0.08		3.60	
1628	0.98	0.02		1.10		1918	1.63	0.04		1.60	
1638	0.75	0.02		0.82		1919	0.94	0.05		0.93	
1648	0.58	0.01		0.63		1920	0.68	0.02		0.66	
C 1654	0.39	0.01	C 1090	0.51	0.04		0.49				
1599	1.38	0.04	1091	1.50	0.04		1.52				
1609	1.76	0.06	1092	1.65	0.06		1.65				
1619	3.50	0.14	1093	2.7	0.14		2.45				
1628	0.98	0.02	1094	1.58	0.05		1.60				
1638	0.75	0.02	1095	0.90	0.04		0.88				
1648	0.58	0.01	1096	0.70	0.03		0.75				

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/6

LAB. K.I.S.			LAB. K.I.S.			LAB.			LAB.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1597	0.41	< 0.01	D 2087	0.41	0.01						
1591	1.89	0.09	2088	0.05	0.17						
1604	0.30	< 0.01	2089	0.29	0.01						
1613	2.72	0.08	2090	3.05	0.08						
1644	0.90	0.04	2091	5.39	0.12						
1633	1.58	0.06	2092	1.76	0.07						
1622	5.80	0.22	2093	6.3	0.31						

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/6

LAB. K.I.S.			LAB. A.C.S.L.			LAB. A.M.D.L.			LAB.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1628	0.98	0.02	C 1055	1.40	0.034	D 0232	1.51	0.055			
C 1648	0.58	0.01	1056	0.72	0.027	0233	0.08	0.04			
C 1633	1.58	0.06	D 0244	1.39	0.035	D 0243	1.77	0.08			

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO.D160/6

0 - 2.10

GARNET PYROXENE SKARN

Considerable rubbly core at commencement of hole and core recovery.

0 - 0.96 = 0.50m.

This unit is a pyroxene rich grossular skarn with moderate disseminated scheelite.

2.10 - 12.88

MARBLE

Typical barren grey massive B lens marble.

12.88 - 13.80

PYROXENE HORNFELS

Mostly a pyroxene hornfels with weak disseminated scheelite.

This unit appears to represent the base of the B lens unit.

13.80 - 18.64

BIOTITE HORNFELS

A barren fine grained purplish brown hornfels.

Between 15 - 16m a lineation in the core - maybe bedding - is running subparallel to core axis.

Between 14.3 and 14.6 core is lost - driller logged it as 0.3m clay (?).

18.64 - 20.17

ACID DYKE

A pale grey massive rock, no mineralisation, with an apparent volcanic texture.

20.17 - 42.40

BIOTITE PYROXENE HORNFELS

A disrupted bedded sequence of bh and ph. Bedding appears parallel to long axis of core.

Quality of core is poor and complete unit shows a weak brecciation.

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO.D160/6

42.40 - 44.60

APLITE

A very fine grained pink quartz rich aplite.

This unit is very similar to that intersected in surface hole 173 and D120/1 on both on section 220 120 E just before entering the quartzites proper North of the No. 3 Fault.

44.60 - 58.30

QUARTZITE

A pale grey massive barren quartzite. Quality of core is very poor.

RQD = 25%.

58.30 - 75.59

PYROXENE GARNET HORNFELS

Generally a typical green pgh unit with carbonate ovoids up to 10cm dia. rimmed by honey coloured grossular garnets. Very patchy low grade scheelite to 65m and then grade improves mainly due to isolated patches of coarse scheelite.

This unit becomes more andradite garnet rich towards the base and scheelite content increases.

75.59 - 106.98

GARNET HORNFELS

High grade purplish brown, medium to coarse grained andradite skarn.

The scheelite is disseminated throughout.

Some grinding of the core in 88 - 91m area but generally core indicates very good ground conditions.

106.98 - 109.70

GARNET PYROXENE SKARN

A dominantly pyroxene rich skarn with weakly disseminated scheelite.

Lost core: 106.98 - 107.90 0.55 recov.

109.70 - 118.63

GARNET HORNFELS

Good high grade disseminated scheelite in a purplish brown medium to coarse grained andradite skarn.

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO D160/6

118.63 - 125.58

BANDED BIOTITE/PYROXENE HORNFELS

Dominantly a bh with occasional bands of ph up to 2cm wide.

Bedding: 120m 40° L.A.O.C.
124m 50° L.A.O.C.

The unit is completely unmineralised.

125.58 - 128.78

FAULT ZONE (NORTHERN FAULT)

Core is only rubble and RQD is zero.

Core recovery 75cms = 23%.

128.78 - 132.28

QUARTZITE

Pale grey brown weakly spotted barren quartzite. Minor pyrite on joint surfaces.

132.28

E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 160/5

PLANNING

Proposer: M.J. Danielson.

Depth:

Location: 220 160E (N14) drilling
cuddy B lens drive, -75m R.L.

Purpose of hole: Test C lens south of Central Fault.

Co-ordinates: 220 160 E 564 096 N

Inclination: -49° Magnetic

Bearing: 180° Grid Target depth:

Target: E N

Approved by: M.C. Rogers. Date: 1/12/74

SURVEY

Survey Co-ords: E N

Survey bearing: Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 160.16 E 564 095.95 N

R.L. of collar: -77.17

Inclination of hole:

Picked up by : J. Cook.

Date: -48° 22' 26"
12/2/75

SUMMARY

Logged by : M.J. Danielson.

Results: No C lens intersection made south of the
Central Fault.

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 11/12/74

Date terminated: 30/1/75

Casing: Size : BX

Depth : 1.37

Core: Size : NQ BQ

Depth : 1.37 178.00

Wedge Runoff:

Wedge placed: NIL

Depth:

Proposed by :

Approved by:

Reason:

Extension: NIL

Reason for termination: Structure unclear

Final depth: 178.00

Condition of hole on completion: machine reached limiting depth.

Casing : 1.37m BX Remains.

Cemented : Yes.

Bore hole survey: Surveyed to 176.78m.

Water: Normal water return throughout.

Comments on drilling conditions:

GEOPEKO LIMITED - DOLPHIN MINESUMMARY BORE HOLE SURVEY DATAD.D.H. NOP 160/5

Survey method : Multishot camera.

Final depth : 178.00

Casing depth : 1.52

Depth surveyed to : 176.78m.

Date surveyed : 30/1/75

Surveyed by : G.L. Buckland.

Checked by : G.L. Buckland.

DEPTH	Bearing		Inclination		True Vertical depth	Co-ordinates	
	Grid	Mag.	Read	Corrected		ES	NE
15.24	176°45'	167°45'	41°	-49°	11.50	9.60	2.76
30.48	179°	170°	40°30'	-49°30'	23.09	19.34	4.48
45.72	180°30'	171°30'	40°	-50°	34.76	28.46	6.13
60.96	180°30'	171°30'	39°30'	-50°30'	46.46	38.11	7.69
76.20	180°30'	171°30'	39°	-51°	58.31	47.57	9.28
91.44	182°	173°	40°	-50°	70.11	57.10	10.62
106.68	184°	175°	40°15'	-49°45'	81.77	66.86	11.68
121.92	185°	176°	40°	-50°	93.42	76.66	12.36
137.16	187°	178°	40°	-50°	105.09	86.45	12.76
152.40	188°30'	179°30'	39°15'	-50°45'	116.84	96.16	12.89
167.64	189°	180°	38°45'	-51°15'	128.70	105.74	12.89
176.78	192°	183°	38°	-52°	135.90	111.36	12.59

REMARKS

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No.D 160/5

Depth Interval (metres)	Rock Type	Fractures/m.	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery.	R.Q.D.	Remarks (weathering)
0 - 31.95	ph/bh	4	minor clay: 0-9.46	2m:35° 6m:35°	97	92	0 - 1.37m rubble - collaring in. 31.40 - 31.65, core is brecciated, dissected by numerous carbonate filled joints and chlorite is present Fault.
31.95 - 49.26	bh	9	chlorite: 33.87 - 34.17, 42.10. 45.11 - 45.67. minor carbonate.		99	67	Bad ground: 33.87 - 34.17 43.42 - 44.24 45.11 - 45.67 48.84 - 49.10 Core is brecciated and carbonate recemented: 36.64 - 36.67. Fault? Fracture surfaces are slickensided.

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designator). = $\frac{\text{length core } \geq 10 \text{ cms}}{\text{Length recovered}} \%$
- Core size. 0 - 1.37 NQ
 1.37 - 178.00 BQ

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No.D 160/5

Depth Interval (metres)	Rock Type	Fractures/m.	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery.	R.Q.D.	Remarks (weathering)
49.26 - 72.54	bh	7	chlorite: 63.40 - 65.84. Pyrite @ 66.15	52m:30°	94	80	bad ground: 57.0 - 58.89 Core brecciated at 64.70. Good Chlorite here. Fault?
72.54 - 90.83	bh	10	clay, minor carbonate and pyrite. No significant chlorite.		101	53	Possible fault: 72.75 - 73.25. Core is badly broken with moderate carbonate veining. bad ground: 81.76 - 82.41 89.0 - 89.75.
90.83 - 121.31	bh	3	clay, minor carbonate.		98	87	bad ground. 113.4 - 114.4, minor chlorite on joint surfaces here.
121.31 - 136.14	bh/bah	+20	some chlorite. 123 - 124m. otherwise clay.	124m:75° 125m:70° 130m:75° 132m:65	96	37	Poor ground - particularly: 123.5 - 132.0m

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designator). = $\frac{\text{length core } \geq 10 \text{ cms}}{\text{Length recovered}} \%$
- Core size.

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 160/5

Depth Interval (metres)	Rock Type	Fractures/m.	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery.	R.Q.D.	Remarks (weathering)
136.14 - 153.62	Banded footwall hornfels (?)	6	Clay	138m:5° 143m:45° 146m:40° 148m:40° 153m:45° 161m:45° 165m:50°	98	80	
153.62 - 162.46	Banded footwall hornfels	11	mostly clay, some chlorite in bad ground zone.	160m:30°	96	50	Bad ground: 154.6 - 155.2 157.7 - 161.
162.46 - 178.00	Banded footwall hornfels	8	mostly clay, minor carbonate.	163m:50° 166m:45°	97	72	

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designator). = $\frac{\text{length core } \geq 10 \text{ cms}}{\text{Length recovered}}$ %
- Core size.

GEOPEKO LIMITED - KING ISLANDCORE RECOVERYD.D.H. No. D 160/5

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 1.37	1.37	0.46	34
4.33	2.96	2.92	99
7.38	3.05	3.04	100
9.46	2.08	2.08	100
12.58	3.12	3.12	100
15.70	3.12	3.12	100
17.72	2.02	2.02	100
20.65	2.93	2.93	100
23.62	2.97	2.97	100
26.75	3.13	3.13	100
29.75	3.00	3.00	100
31.95	2.20	2.09	95
34.17	2.22	1.98	89
37.28	3.11	3.11	100
40.30	3.02	3.02	100
42.06	1.76	1.72	98
45.11	3.05	2.15	103
47.85	2.74	2.74	100
48.46	0.61	0.67	110
51.21	2.75	2.82	103
54.25	3.04	3.01	99
57.71	2.92	2.35	80
57.48	0.31	0.31	100
58.82	1.35	1.02	76
60.35	1.52	1.34	88
63.40	3.05	2.93	96
65.84	2.44	2.50	102
68.18	2.34	2.21	94
69.49	1.31	1.25	95
72.54	3.05	2.92	96
75.23	2.69	2.56	95
77.11	1.88	1.97	105
78.26	1.15	1.28	111
79.48	1.22	1.32	92
81.31	1.83	1.92	100
82.75	1.44	1.66	116
83.84	1.09	1.57	144
85.80	1.96	1.61	82
86.77	0.97	0.95	98
88.70	1.93	1.90	98
89.15	0.45	0.48	107
90.83	1.68	1.43	85
93.88	3.05	2.98	98
96.93	3.05	2.98	98
98.22	1.29	1.25	97

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 160/5

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
99.97	0.82	0.77	93
103.02	3.05	3.06	100
106.07	3.05	2.90	95
109.12	3.05	3.02	99
112.17	3.05	3.12	102
115.21	3.04	3.07	101
118.26	3.05	3.04	100
121.31	3.05	2.97	97
124.36	3.05	3.14	103
126.64	2.28	2.36	106
128.07	1.43	1.46	102
129.29	1.22	0.26	21
129.59	0.30	0.40	133
130.96	1.37	1.33	97
132.33	1.37	1.41	103
133.10	0.77	0.76	100
136.14	3.04	3.15	104
138.07	1.93	1.95	101
141.20	3.13	3.08	90
144.32	3.12	3.10	99
147.45	3.13	3.05	97
150.49	3.04	2.80	92
153.62	3.13	3.10	99
156.67	3.05	3.20	105
158.80	2.13	2.05	96
159.56	0.76	0.67	88
160.32	.76	0.72	95
162.46	2.14	1.84	86
165.51	3.05	2.79	91
167.03	1.52	1.38	91
170.08	3.05	3.08	101
173.13	3.05	3.00	98
176.17	3.04	3.04	100
178.00	1.83	1.80	98
E.O.H.			

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 160/5

SAMPLE No.	DEPTH (METRES)				ELEMENTS				COMMENTS
	From	To	Length	Length Recovered	WO ₃	Mo			
D2952	163	164	1.0	1.0	0.08	0.01			
3	164	165	"	0.90	0.43	0.03			
D2954	165	166	"	0.90	0.20	0.02			
D2955	170	171	"	1.0	0.04	0.01			
6	171	172	"	"	0.03	0.02			
7	172	173	"	"	0.02	0.02			
8	173	174	"	"	0.10	0.02			
D2959	174	175	"	"	0.07	0.01			

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - DOLPHIN MINE

GEOLOGICAL LOG

D.D.H. No. D 160/5

0 - 2.40

PYROXENE HORNFELS

A pale green fine grained hornfels with minor interbeds of grossular garnet - occasional speck of scheelite but does not warrant core splitting.

Bedding: 2m 35° L.A.O.C.

This unit represents the base of the B lens sequence.

2.40 - 135.70

BIOTITE HORNFELS

2.4 - 11.0

Pale grey brown barren.

Bedding 6m 35° L.A.O.C.

11.0 - 16.0

A greenish grey hornfels containing occasional irregular shaped patches of white carbonate (?) up to 3cm diameter in which are clusters of pyrite. No mineralization.

16.0 - 31.4

Pale grey brown barren hornfels. This unit is weakly spotted particularly 20.5 - 26.5m.

31.4 - 31.9 Fault.

Core is very weak structurally with abundant penetrating carbonate veining.

Core loss 29.75 - 31.95 = 5%.

31.9 - 36.2

Spotted grey brown barren hornfels.

Core lost 31.95 - 34.17 = 11%.

36.2 - 42.1

A mottled grey brown barren hornfels.

A 10cm recemented breccia at 36.7m. Could be slickensides on joint surfaces.

42.1 - 46.0

A disturbed dark brown biotite hornfels containing irregular patches of a pale greenish white material, of ten strung out in a wispy appearance.

46.0 - 48.5

Spotted grey hornfels.

GEOPEKO LIMITED - DOLPHIN MINE

GEOLOGICAL LOG

D.D.H. No. D160/5

2.40 - 135.70
cont.

BIOTITE HORNFELS

48.5 - 64.0

A pale grey brown hornfels. Weakly spotted 54 - 57m.
Bedding: 52m 30° L.A.O.C.

Core lost:

54.25 - 57.17 = 20% lost.

57.48 - 58.83 = 25% "

58.83 - 60.35 = 12% "

Core is particularly broken between 56.35 - 58.83
R.Q.D. = 5%.

Throughout this broken section there is no evidence
of chlorite.

64.0 - 68.0

Dark brownish green hornfels. Minor chlorite on
joint surfaces.

68.0 - 72.0

Pale grey hornfels.

72.0 - 90.5

Dark grey barren hornfels. Mostly carbonate and clay
on joint surfaces - minor pyrite. Possible fault
72.75 - 73.25.

Core is badly broken with moderate carbonate veining.
Quality of core throughout this section is only
moderate and R.Q.D. 72.54 - 90.83 = 53%.

No significant chlorite on joint surfaces.

Core is particularly badly broken 81.76 - 82.41 and
89.0 - 89.75

Core lost: 89.15 - 90.83 = 15% lost.

90.5 - 123.50

A pale grey brown barren fine grained hornfels.
Quality of core is good in this interval and R.Q.D.
90.83 - 121.31 = 87%.

This unit is weakly spotted:

98.0 - 99.0

101.0 - 101.5

104.4 - 106.5

112.5 - 113.5

Some chlorite appearing in fracture surfaces below
120.8m and core is more broken although contact of
this unit with underlying unit does not appear to be
a faulted one.

GEOPEKO LIMITED - DOLPHIN MINE

GEOLOGICAL LOG

D.D.H. No. D 160/5

123.50 - 135.70

BANDED BIOTITE/ACTINOLITE HORNFELS

Thinly banded (< 1cm) dark grey fine grained hornfels. No mineralization.

Quality of core in this section is poor.

R.Q.D. 121.31 - 136.14 = 37%

Core is particularly poor between 123.5 - 132.0m.

Aplite: 130.61 - 130.81m.

Minor green pyroxene and brown grossular garnet begin to appear below 133m.

135.7 - 178.0

BANDED FOOTWALL HORNFELS (?)

This is a banded unit of biotite - pyroxene - grossular garnet and minor carbonate. It is mostly thinly bedded (< 1cm) and is generally barren of any mineralization. There are very minor disseminations of scheelite between 163 - 166m and 170 - 175m but is sub oregrade (< 0.5% WO₃ - see assays).

Aplite: 141.1 - 142.2

143.3 - 144.1

156.7 - 157.1

Bad ground: 154.6 - 155.2

157.7 - 161.0

Bedding:	138m	5°	L.A.O.C.
	141m	20°	"
	145m	40°	"
	148m	28°	"
	152m	30°	"
	161m	45°	"
	165m	50°	L.A.O.C.

Core loss: 147.45 - 150.49 = 8% lost.

160.32 - 162.46 = 14% "

162.46 - 165.51 = 8% "

165.51 - 167.03 = 9% lost.

Below 168 metres the regular thinly bedded nature becomes very disturbed and no bedding angle can be discerned with accuracy.

Below 174 metres the unit becomes much more biotite rich.

178 metres E.O.H.

GEOPEKO LIMITED - KING ISLANDLOG OF D.D.H. NO:D 160/4PLANNING

Proposer: M. J. Danielson Depth: 135 m

Location: Dolphin Mine 220 160 E, Cuddy.

Purpose of hole: Oreblocking

Co-ordinates: 220 160 E 564 110 N

Inclination: -60° Target depth: 25 mBearing: 180° Grid $^{\circ}$ Magnetic

Target: E N

Approved by: M. C. Rogers Date: 1-4-74

SURVEY

Survey Co-ords: E N

Survey bearing: $^{\circ}$ Grid $^{\circ}$ Magnetic

Surveyed in by: Date:

Actual Co-ords: 220160.5 E 564097.2 N

R.L. of collar: -77.5 Inclination of hole: $-60^{\circ} 45'$

Picked up by: M. G. Manthant Date: 22 April, 1974.

SUMMARY

Logged by:

Results:

DRILLING

Driller / Contractor: A.D.D.

Date commenced:

Date terminated: 30.4.74

Casing: Size : BX

Depth: 1.5

Core: Size : NQ

BQ

Depth: 1.5

136.55

Wedge Runoff: Nil

Wedge placed:

Depth:

Proposed by:

Approved by:

Reason:

Extension: Nil

Final depth: 136.55

Reason for termination: Hole passed into unmineralized lower volcanics.

Condition of hole on completion:

Casing : BX 1.5 m

Cemented: Yes

Bore hole survey: Surveyed to 134.11 m.

Water: Normal water pressure throughout.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLANDSUMMARY STRUCTURAL DATAD.D.H. NO. D 160/4

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
0 - 27.13	bh	6		clay	0m 50° 15m 55° 21m 50°		85	bad ground 5.9 - 6.5m 25.7 - 26.0m
27.13 - 46.0	pgh	6				41 - 43 20% loss	86	
46.0 - 53.8	gh	2					94	
53.8 - 58.1	gh/ch Fault?	19					22	Fault? very siliceous 56.4 - 59.6m
58.1 - 68.2	pgh	8					83	
68.2 - 70.2	gh	+20					13	core is only rubble
70.2 - 81.0	gh	4					79	bad ground 76.9 - 77.3
81.0 - 85.4	gh	17					30	
85.4 - 102.1	Banded gh	7			86m 52° 91m 40° 94m 35° 98m 30°		74	
102.1 - 110.6	Banded gh/bh/ph	15			105m 20° 110m 35°		33	
110.6 - 112.7	Banded gh	4			111m 27°		75	
112.7 - 116.1	Banded gh	+20			113m 32°		19	

FURTHER DATA & REMARKS (Compression Tests)

Water 21.52m -

GEOPEKO LIMITED - KING ISLANDSUMMARY STRUCTURAL DATAD.D.H. NO. D 160/4

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
116.1 - 136.55 E.O.H.	Banded bh/ph lower volcanics	9			119m 55° 125m 52°		75	

FURTHER DATA & REMARKS (Compression Tests)

GEOPEKO LIMITED - DOLPHIN MINESUMMARY BORE HOLE SURVEY DATAD.D.H. NOD 160/4

Survey method : Multishot Camera

Depth surveyed to : 134.11m

Final depth : 136.55m

Date surveyed : 30.4.74

Casing depth : 1.5m

Surveyed by : (G. Buckland,

(V. Powell.

Checked by : M. J. Danielson.

DEPTH	Bearing		Inclination		True Vertical depth	Co-ordinates	
	Grid	Mag.	Read	Corrected		E	NS
0	180			-60	0	0	0
30.5	188	179		-60°30'	26.53	0.66	14.99
61.0	187	178		-60	52.97	1.18	30.14
91.4	187.5	178° 30'		-60	79.37	1.61	45.37
121.9	187.5	178° 30'		-59	105.85	2.00	61.01
134.11	188	179		-59° 30'	116.35	2.16	67.22

REMARKS

GEOPEKO LIMITED - DOLPHIN MINEASSAY DATAD.D.H. NO.D 160/4

SAMPLE NO.	DEPTH (METRES)				ELEMENTS						COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo					
C 1254	34	35	1.0	1.0	0.11	<0.01					
5	35	36	"	"	0.32	0.02					
6	36	37	"	"	0.09	<0.01					
7	37	38	"	"	0.03	<0.01					
8	38	39	"	"	1.13	0.06					
9	39	40	"	"	0.03	<0.01					
60	40	41	"	"	0.01	<0.01					
1	41	42	"	0.83	0.62	0.02					
C 1262	42	43	"	0.83	0.02	<0.01					
C 1488	43	44	"	1.0	0.03	<0.01					
9	44	45	"	"	0.09	<0.01					
C 1263	45	46	"	"	0.21	<0.01					
4	46	47	"	"	4.5	0.41					
5	47	48	"	"	2.10	0.10					46-57m
6	48	49	"	0.96	1.69	0.06					11m
7	49	50	"	1.0	3.9	0.16					@
8	50	51	"	"	2.58	0.09					1.90m
9	51	52	"	"	2.10	0.07					
70	52	53	"	"	1.34	0.13					
1	53	54	"	"	1.08	0.04					
2	54	55	"	"	0.30	0.01					
3	55	56	"	"	0.94	0.04					
4	56	57	"	"	0.34	0.02					
5	57	58	"	"	0.06	<0.01					
6	58	59	"	"	0.23	<0.01					
7	59	60	"	"	0.56	0.01					
8	60	61	"	"	0.30	0.01					
C 1279	61	62	"	"	1.65	0.07					

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

S.G. :

GEOPEKO LIMITED - DOLPHIN MINEASSAY DATAD.D.H. NO.D 160/4

SAMPLE NO.	DEPTH (METRES)				ELEMENTS					COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo	CARD NO	Check WO ₂	Assay Mo	
C 1490	62	63	1.0	1.0	0.03	<0.01	C1715	0.04	<0.01	
1	63	64	"	"	0.02	<0.01				
2	64	65	"	"	0.09	<0.01				
3	65	66	"	"	0.16	<0.01				
4	66	67	"	"	0.02	<0.01				
5	67	68	"	"	<0.01	<0.01				
C 1496	68	69	"	"	0.02	<0.01				
C 1280	69	70	"	"	0.01	<0.01				
1	70	71	"	0.77	0.74	0.01				70-104m
2	71	72	"	1.0	3.00	0.09	C1716	3.60	0.09	34m @ 1.64% WO ₃
C 1283	72	73	"	"	1.34	0.06				
4	73	74	"	"	1.53	0.07				
5	74	75	"	"	1.99	0.09				
6	75	76	"	"	2.22	0.09				
7	76	77	"	"	2.32	0.08				
8	77	78	"	"	1.08	0.04	C1717	1.04	0.02	
9	78	79	"	"	2.12	0.07				
90	79	80	"	"	4.40	0.13				
1	80	81	"	"	5.80	0.18				
2	81	82	"	"	0.04	<0.01				
3	82	83	"	"	0.56	0.01				
4	83	84	"	"	1.80	0.05				
5	84	85	"	"	0.96	0.02				
6	85	86	"	"	1.14	0.03				
7	86	87	"	"	2.65	0.09				
8	87	88	"	"	0.66	0.02	C1718	0.62	0.01	
9	88	89	"	"	2.46	0.09				
300	89	90	"	"	1.80	0.06				
1	90	91	"	"	2.16	0.07				

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

S.G. :

GEOPEKO LIMITED - DOLPHIN MINEASSAY DATAD.D.H. NO. D 160/4

SAMPLE NO.	DEPTH (METRES)				ELEMENTS						COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo		CARD No.	check WO ₃	Assay MO	
C 1302	91	92	1.0	1.0	0.88	0.02					
3	92	93	"	"	0.93	0.03					
4	93	94	"	"	2.45	0.07					
5	94	95	"	"	1.55	0.04					
6	95	96	"	"	2.40	0.07					
7	96	97	"	"	0.41	0.01					
8	97	98	"	"	0.25	0.01		C1919	0.29	0.01	
9	98	99	"	"	0.75	0.01					
10	99	100	"	"	1.71	0.04					
1	100	101	"	"	0.83	0.01					
2	101	102	"	"	1.01	0.02					
3	102	103	"	"	1.16	0.03					
4	103	104	"	"	0.76	0.02					
C 1147	104	105	"	"	0.01	0.01					
8	105	106	"	"	0.16	0.01		C1921	0.26	0.01	
9	106	107	"	"	0.18	0.01					
C 1150	107	108	"	"	0.07	0.01					
C 1315	108	109	"	"	0.48	0.01					108—
6	109	110	"	"	0.55	0.01					114m
7	110	111	"	"	0.64	0.01					6m @
8	111	112	"	"	0.39	0.01		C1920	0.43	0.01	0.59%
9	112	113	"	"	0.31	0.01					WO ₃
C 1497	113	114	"	"	1.18	0.06					
8	114	115	"	"	0.01	0.01					
9	115	116	"	"	0.01	0.01					
C 1500	116	117	"	"	0.21	0.01					
C 1320	117	118	"	"	0.38	0.01					
1	118	119	"	"	0.43	0.01					3m
2	119	120	"	"	0.39	0.01					

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

S.G. :

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/4

LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1490	0.03	< 0.01	D 2197	0.05	< 0.01	C 1715	0.04	< 0.01	D 2223	0.06	0.01
1282	3.00	0.09	2177	3.20	0.09	1716	3.60	0.09	2206	3.60	0.11
1288	1.08	0.04	2170	1.12	0.02	1717	1.04	0.02	2205	1.16	0.03
1298	0.66	0.02	2163	0.68	0.02	1718	0.62	0.01	2207	0.64	0.02
1308	0.25	< 0.01	2165	0.27	< 0.01	1719	0.29	< 0.01	2227	0.31	0.01
1148	0.16	< 0.01	2171	0.17	< 0.01	1720	0.26	< 0.01	2236	0.38	0.01
1318	0.39	0.01	2181	0.42	0.01	1721	0.43	< 0.01	2224	0.43	0.02
C 1490	0.03	< 0.01	2152	0.04	< 0.01	2424	0.01	< 0.01			

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/4

LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1282	3.0	0.09	D 2153	3.06	0.10	D 2425	3.90	0.12			
1288	1.08	0.04	2154	1.20	0.04	2426	1.14	0.05			
1298	0.66	0.02	2155	0.70	0.03	2427	0.66	0.03			
1308	0.25	<0.01	2156	0.29	0.01	2428	0.28	<0.01			
1148	0.16	<0.01	2157	0.27	0.01	2429	0.26	0.01			
1318	0.39	0.01	2158	0.41	0.01	2430	0.40	0.01			

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/4

LAB. K.I.S.			LAB. A.M.D.L.			LAB. A.C.S.L.			LAB.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1282	3.00	0.09	D 0279	3.28	0.08	D 0280	2.76	0.048			
C 1318	0.39	0.01	D 0277	0.45	0.05	D 0278	0.48	0.012			

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NOD #60/4

Core size: 0 - 1.5m NQ
1.5 - 136.55m BQ

0 - 3.90

B LENS HOST ROCKS

Mostly a poorly banded biotite pyroxene hornfels. 0 - 1.5m there is minor skarn developed but no mineralisation,.

3.90 - 27.13

BIOTITE HORNFELS

A fine grained, barren, grey bh. Good quality core - RQD 85%. 16.2 - 26.3 variable dark grey to black intermittent spotting. Spots up to 5mm dia.

27.13 - 46.0

PYROXENE GARNET HORNFELS

Typical pale green ph and brown grossular garnet with carbonate ovoids mostly less than 2cm dia. Mostly barren but some minor scheelite 33.7 - 42.2.

46.0 - 52.7

GARNET HORNFELS

Typical medium grained andradite skarn with high grade disseminated scheelite. Minor banding at 52.7m.

52.7 - 56.05

BANDED GARNET HORNFELS

Weakly banded (ph) skarn with moderate disseminated scheelite but not as high grade as the unit above.

56.05 - 56.30

MARBLE

Barren grey calcite hornfels.

56.30 - 57.0

PYROXENE HORNFELS

Very siliceous pale green ph. The unit is barren and the core badly broken. This unit is interpreted as the zone of the Central Fault.

57.0 - 69.9

PYROXENE GARNET HORNFELS

Typical pgh as before. Minor mineralisation 57.9 - 61.5
65.1 - 65.2

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO. D 160/4

- 69.9 - 85.69 GARNET HORNFELS
- High grade disseminated scheelite in a medium grained andradite skarn. Ph rich 80.6 - 81.3. Some minor ph banding in the skarn below 82.3m.
- 85.69 - 86.2 MARBLE
- Typical barren grey calcite hornfels.
- 86.2 - 103.63 BANDED GARNET HORNFELS
- Good disseminated scheelite in andradite skarn interbedded with barren ph.
- 103.63 - 107.0 BANDED BH/PH
- Thinly banded barren biotite pyroxene hornfels.
- 107.0 - 121.92 BANDED GARNET HORNFELS
- This appears to be a unit gradational between the lower C lens skarn and replaced footwall beds. Very poor rubbly core 114.8-116.1. There is little mineralisation below 113m except for 117-120m.
- 121.92 - 128.80 BANDED BH/PH
- This is mostly a thinly banded barren bh/ph but there is minor scheelite in ph rich grossular garnet skarns eg. 123.54-123.60.
- 128.80 - 134.80 MARBLE
- The unit is predominantly marble with minor irregular zones of ph. Minor low grade scheelite 130.4-133.9.
- 134.8 - 136.55 LOWER METAVOLCANICS
- Barren purplish grey rock with flecks of mica (biotite(?)) developed. The unit has a distinctive volcanic texture to distinguish it from biotite hornfels.
- 136.55 E.O.H.

GEOPEKO LIMITED - DOLPHIN MINESUMMARY BORE HOLE SURVEY DATAD.D.H. NO. D 160/3

Survey method : Multishot Camera

Depth surveyed to : 73.15 m

Final depth : 75.44 m

Date surveyed : 3.5.74

Casing depth : 1.52 m

Surveyed by : G. Buckland

Checked by : M. J. Danielson

DEPTH	Bearing		Inclination		True Vertical depth	Co-ordinates	
	Grid	Mag.	Read	Corrected		XX W	XX S
0	360		-90	-90	0	0	0
15.24	271	262°	-3	-87	15.23	0.60	0.11
30.48	269	260°	-4	-86	30.43	1.61	0.30
45.72	270.5	261°30'	-4	-86	45.64	2.65	0.46
60.96	272	263°	-4	-86	60.84	3.71	0.61
73.15	268.5	259°30'	-4	-86	73.01	4.57	0.72

REMARKS

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. NO. D 160/3

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
0 - 20.25	bh	7		clay		11.9 - 13.4m 80% recov.	87	bad ground 11.8 - 12.2 19.5 - 20.2
20.25 - 36.0	pgh	4		clay minor sulphide		22.5 - 25.8m 40% recov.	93	
36.0 - 62.2	gh	5		clay	45m 70° 50m 70° 56m 40° 62m 50° 66m 65° 67m 70°		89	
62.2 - 67.65	footwall beds	6		clay	70° 70° 70m 50°		86	
67.65 - 75.44	banded bh/ah	15		clay	75m 50°		24	poor ground
E.O.H.								

FURTHER DATA & REMARKS (Compression Tests)

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. NO. D 160/3

SAMPLE NO.	DEPTH (METRES)				ELEMENTS						COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo	CARD NO.	check WO ₂	Assay Mo		
C 1323	26	27	1.0	1.0	1.18	0.09					
4	27	28	"	"	0.19	0.01					
5	28	29	"	"	0.46	0.01	C19220	48	0.01		
6	29	30	"	"	0.01	0.01					
7	30	31	"	"	0.10	0.01					
8	31	32	"	"	0.02	0.01					
9	32	33	"	"	0.02	0.01					
30	33	34	"	"	0.05	0.01					
1	34	35	"	"	0.11	0.01					
2	35	36	"	"	0.75	0.04					
3	36	37	"	"	1.11	0.04					
4	37	38	"	"	1.25	0.04				C lens 6m at 0.87% WO ₃	
5	38	39	"	"	0.78	0.04					
6	39	40	"	"	0.83	0.07	C19230	90	0.02		
7	40	41	"	"	0.48	0.07					
8	41	42	"	"	0.01	0.01					
9	42	43	"	"	0.02	0.01					
40	43	44	"	"	0.01	0.01					
1	44	45	"	"	0.01	0.01					
2	45	46	"	"	0.26	0.01					
3	46	47	"	"	0.37	0.01					
4	47	48	"	"	0.41	0.01				C lens 3m at 0.35% WO ₃	
5	48	49	"	"	0.07	0.01					
6	49	50	"	"	0.16	0.01					
7	50	51	"	"	1.09	0.04					
8	51	52	"	"	1.41	0.05					
9	52	53	"	"	1.10	0.05				C lens 7m at 1.59% WO ₃	
50	53	54	"	"	1.50	0.05					
1	54	55	"	"	2.82	0.09					

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

S.G. :

GEOPEKO LIMITED - DOLPHIN MINEASSAY DATAD.D.H. NO. D 160/3

SAMPLE NO.	DEPTH (METRES)				ELEMENTS						COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo		CARR NO	Check WO ₃	Assay Mo	
C 1352	55	56	1.0	1.0	0.41	0.01		C172	0.58	0.01	
3	56	57	"	"	2.78	0.10					
4	57	58	"	"	0.01	0.01		D 5146	0.61		
5	58	59	"	"	0.02	0.02		D 5147	0.67		
6	59	60	"	"	<0.01	<0.01		D 5148	0.44		
7	60	61	"	"	0.02	0.02		D 5149	0.41		
8	61	62	"	"	0.04	0.04		D 5150	0.87		
9	62	63	"	"	0.17	<0.01		D 5151	0.14		
60	63	64	"	"	0.02	0.02		D 5152	0.01		
1	64	65	"	"	<0.01	0.01		D 5153	0.01		
2	65	66	"	"	0.33	<0.01		C172	0.42	0.01	
C 1363	66	67	"	"	0.07	<0.01		D 5154	0.04		

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

S.G. :

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/3

LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1325	0.46	◀0.01	D2168	0.47	0.01	C1722	0.48	0.01	D2247	0.52	0.03
1336	0.83	0.07	2180	0.89	0.04	1723	0.70	0.02	2244	0.93	0.04
1352	0.41	0.01	2173	0.41	0.01	1724	0.58	◀0.01	2242	0.62	0.02
1362	0.33	◀0.01	2167	0.35	0.01	1725	0.42	0.01	2226	0.43	0.02
C 1325	0.46	◀0.01	D 2149	0.76	0.02	D 2421	0.74	0.02			
1336	0.83	0.07	2159	0.85	0.04	2431	0.84	0.04			
1352	0.41	0.01	2150	0.53	0.01	2422	0.49	0.02			
1362	0.33	◀0.01	2151	0.39	0.01	2423	0.40	0.02			

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/3

LAB. K.I.S.			LAB. A.M.D.L.			LAB. A.C.S.L.			LAB.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1336	0.83	0.07	D 0275	0.81	0.05	D 0276	0.96	0.028			

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO. D 160/3

Core size: 0 - 0.35m NQ
 0.35 - 75.44m BQ

0 - 0.70

B LENS

Mainly a pyroxene hornfels with minor development of a grossular skarn containing isolated specks of scheelite. Core not split as grade would not warrant it.

0.70 - 20.25

HANGINGWALL BIOTITE HORNFELS

A grey to purplish brown fine grained barren hornfels. No obvious bedding.

Spotted: 9.6 - 9.7m
 12.2 - 13.4m
 16.4 - 19.0m

Spots are dark grey to black in colour, up to 0.5cm dia. often sub elongate in one direction, possibly bedding.

20.25 - 36.0

PYROXENE GARNET HORNFELS

This is a typical pgh. Mainly a green ph rock with angular fragments of white carbonate rimmed by pale brown grossular garnet.

The whole unit below 26m is weakly mineralised.

Lost Core: 23.5 - 25.8 only 40% recovered core.

36.0 - 40.70

GARNET HORNFELS

The upper contact with the pgh is difficult to discern as this unit is also very ph rich. Otherwise, it is a medium grained andradite skarn, massive containing high grade finely disseminated scheelite.

40.70 - 45.67

MARBLE MARKER (?)

This unit is a mixture of:

ph 40.7 - 41.4m
 ch 41.4 - 42.3m
 ph/bh 42.3 - 44.3m
 ch 44.3 - 45.3m
 ph 45.3 - 45.67m

The whole unit is sub ore grade containing only isolated patches of scheelite. The marble sections show very minor grossular garnet.

Bedding: 44.9m 70° L.A.O.C.

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO.D 160/3

45.67 - 62.20

BANDED LOWER C LENS GARNET SKARN

Mostly an andradite skarn with interbedded barren green ph. The unit is highly mineralised and fine to medium grained.

Bedding:	50m	70°
	56m	40°
	62m	50°

62.20 - 67.65

FOOTWALL BEDS

Variably mineralised andradite skarn in a mostly ph/bh rock with moderate grossular garnet. Some unmineralised white carbonate beds up to 7cm wide,

	eg.	67.0 - 67.1m	
Bedding:	66m	65°	L.A.O.C.

67.65 - 75.44

BANDED BH/AH

Thinly banded biotite actinolite hornfels. The unit is barren and rock quality is poor. RQD 24%,

Bedding:	70m	65°
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75.44 E.O.H.

GEOPEKO LIMITED - KING ISLANDLOG OF D.D.H. NO: D 160/2PLANNING

Proposer: M. J. Danielson Depth:

Location: 220 160 E, B lens drill cuddy.

Purpose of hole: Oreblocking

Co-ordinates: 220 160 E 564 100 N

Inclination: -60

Target depth:

Bearing: 360 °Grid

°Magnetic

Target: E

N

Approved by: M. C. Rogers

Date: 1.4.74

SURVEY

Survey Co-ords: E

N

Survey bearing: °Grid

°Magnetic

Surveyed in by:

Date:

Actual Co-ords: 564 100.8^N 220 159.5^E

R.L. of collar: -77.6

Inclination of hole: -59°30'

Picked up by: David Brown

Date: 7.5.74

SUMMARY

Logged by: M. J. Danielson

Results: C lens	29 - 46m	17m	at	1.06% WO ₃
	49 - 57m	8m	at	0.51% WO ₃
	59 - 61m	2m	at	0.39% WO ₃

DRILLING

Driller / Contractor: A.D.D.

Date commenced: 3.5.74

Date terminated: 9.5.74

Casing: Size : BX

Depth: 1.5

Core: Size : NQ

Depth: 1.5

BQ

81.84

Wedge Runoff:

Wedge placed: Nil

Depth:

Proposed by:

Approved by:

Reason:

Extension: Nil

Final depth: 81.84m

Reason for termination: Hole passed into unmineralised footwall beds.

Condition of hole on completion:

Casing : BX 1.5m

Cemented: Yes.

Bore hole survey: Surveyed to 79.23m

Water: Normal water return throughout.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. NO. D 160/2

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
0 - 1.60		+15		clay			32	
1.60 - 19.80		6			13.6m 40°		83	bad ground 19.2 - 19.5m
19.80 - 43.88		5					91	
43.88 - 55.19		6					83	bad ground 43.88 - 44.2m
55.19 - 76.14		7			50m 50° 65m 70° 66m 80° 69m 60°	55.19 - 58.98m 75% recov.	69	bad ground 69.8 - 70.7m
76.14 - 81.84		+20			78m 45°		17	

FURTHER DATA & REMARKS (Compression Tests)

GEOPEKO LIMITED - DOLPHIN MINESUMMARY BORE HOLE SURVEY DATAD.D.H. NO. D 160/2

Survey method : Multishot Camera

Final depth : 81.84

Casing depth : 1.52

Depth surveyed to : 79.23

Date surveyed : 10.5.74

Surveyed by : G. Buckland
V. Powell

Checked by : M. J. Danielson

DEPTH	Bearing		Inclination		True Vertical depth	Co-ordinates	
	Grid	Mag.	Read	Corrected		E W	N
0	360			-60			
15.2	354.5	345°30'		-59°	13.06	1.90	7.61
30.48	352	343°		-59°30'	26.17	4.17	15.04
45.72	352	343°		-59°15'	39.29	6.44	22.45
60.96	355	346°		-59°15'	52.39	8.64	29.93
76.20	352.5	343°30'		-59°30'	65.49	10.85	37.40
79.23	352	343°		-59°30'	68.17	11.31	38.88

REMARKS

GEOPEKO LIMITED - DOLPHIN MINEASSAY DATAD.D.H. NO.D 160/2

SAMPLE NO.	DEPTH (METRES)				ELEMENTS						COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo	CARD NO	Check WO ₃	Assay Mo		
C 1426	29	30	1.0	1.0	0.28	0.01					
7	30	31	"	"	1.14	0.04	C1726	1.32	0.03		
8	31	32	"	"	1.16	0.06					
9	32	33	"	"	0.01	0.01					
30	33	34	"	"	0.61	0.02					
1	34	35	"	"	1.06	0.06					
2	35	36	"	"	2.10	0.12					
3	36	37	"	"	2.37	0.15					
4	37	38	"	"	2.20	0.09					C lens 17m at 1.06% WO ₃
5	38	39	"	"	1.11	0.05					
6	39	40	"	"	2.10	0.09					
7	40	41	"	"	1.06	0.05					
8	41	42	"	"	0.49	0.02	C1727	0.72	0.01		
9	42	43	"	"	1.04	0.04					
40	43	44	"	"	0.69	0.02					
1	44	45	"	"	0.15	0.01					
2	45	46	"	"	0.50	0.50					
3	46	47	"	"	0.03	0.01					
4	47	48	"	"	0.01	0.01					
5	48	49	"	"	0.05	0.01					
6	49	50	"	"	0.94	0.05					
7	50	51	"	"	0.54	0.03					
8	51	52	"	"	0.39	0.01					8m at 0.51% WO ₃
9	52	53	"	"	0.70	0.04	C1728	0.79	0.01		
50	53	54	"	"	0.58	0.02					
1	54	55	"	"	0.45	0.01					
2	55	56	"	0.94	0.17	0.01					
3	56	57	"	0.75	0.35	0.01					
4	57	58	"	0.60	0.01	0.01					
5	58	59	"	1.0	0.21	0.02					

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

S.G. :

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. NO. D 160/2

SAMPLE NO.	DEPTH (METRES)				ELEMENTS					COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo	CARD NO	Check WO ₃	Assays Mo	
C 1456	59	60	1.0	1.0	0.39	0.01				2m at 0.39% WO ₃
7	60	61	"	"	0.39	<0.01	C1729	0.39	0.01	
8	61	62	"	"	0.01	<0.01				
9	62	63	"	"	0.04	<0.01				
C 1460	63	64	"	"	0.07	<0.01				

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

S.G. :

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/2

LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1457	0.39	0.01	D 2172	0.40	0.01	C 1729	0.39	0.01	D2241	0.42	0.01
1427	1.14	0.04	2174	1.15	0.04	1726	1.32	0.03	2246	1.41	0.05
1438	0.49	0.02	2184	0.52	0.01	1727	0.72	0.01	2245	0.75	0.02
1449	0.70	0.04	2175	0.78	0.04	1728	0.79	0.01	2243	0.83	0.03
C 1457	0.39	0.01	D 2145	0.39	0.01	D 2417	0.38	0.02			
1427	1.14	0.04	2146	1.14	0.04	2418	1.14	0.05			
1438	0.49	0.02	2147	0.79	0.02	2419	0.76	0.03			
1449	0.70	0.04	2148	0.80	0.05	2420	0.80	0.05			

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D160/2

LAB. K.I.S.			LAB. A.M.D.L.			LAB. A.C.S.L.			LAB.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1427	1.14	0.04	D 0271	1.16	0.05	D 0272	1.24	0.03			

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO. D 160/2

Core size: 0 - 1.52 NQ
 1.52 - 81.84 BQ

0 - 1.60

B LENS

This is the base of the B lens unit and is mainly a pyroxene biotite hornfels with very minor grossular garnet skarn developed. The skarn contains isolated specks of scheelite but does not warrant assay.

1.60 - 19.80

HANGINGWALL BIOTITE HORNFELS

A barren grey fine grained hornfels. Quality of core is moderate to good. RQD 83%.

Bedding: 13.6m 40° L.A.O.C.

Minor spotting: 12.3 - 12.5m
 15.2 - 15.45m.

19.80 - 30.25

PYROXENE GARNET HORNFELS

Generally a typical green pgh. The rock is basically green with white carbonate pods up to cms dia. rimmed by brown grossular garnet. Minor mineralisation in form of occasional specks of scheelite below 24m. Does not warrant assay above 29m.

The top part of this pgh unit 19.8 - 23.0 is very bh rich but exhibits the carbonate pods and grossular garnet. This part of the unit is completely barren.

30.25 - 46.20

GARNET SKARN

30.25 - 41.0 Highly mineralised andradite skarn. Medium to coarse grained, good quality core.

41.0 - 46.20 Lower grade mineralisation in a skarn that is much more ph rich. This unit is not the typical gh of the 30 - 40m section.

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO. D 160/2

46.20 - 48.30

BIOTITE HORNFELS

This is a variable unit of mostly bh with a little ph and minor grossular garnet. The unit is unmineralised.

48.30 - ^{69.80}~~73.17~~BANDED GARNET SKARN

This is a weakly mineralised lower C lens horizon. The unit is mostly a fine grained andradite skarn with bedded ph. The unit is mineralised to 62m but is very patchy below that.

Bedding:	50m	50°	L.A.O.C.
	65m	70°	L.A.O.C.
	69m	60°	L.A.O.C.

73.17 - 74.70

LOWER METAVOLCANICS

A pale greenish grey rock with flecks of biotite. Barren and no bedding.

74.70 - 81.84

BIOTITE HORNFELS

The top 0.70m of this unit is a mixed bh and ph rock with minor grossular skarn and carbonate but is unmineralised.

There is some ph bedding between 77m and 79m.

Bedding:	78m	45°	L.A.O.C.
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Aplite 80.35 - 80.60m.

81.84 E.O.H.

Fault:

69.8 - 70.7

Coal is only subtle with abundant chlorite on surfaces. Rock type is quartzite?

69.5 - 70.5 only 0.59m recov.

70.7 - 73.17

Weakly mineralised basal hornfels
Mainly ph, grossular garnet,
minor carbonate.

GEOPEKO LIMITED - KING ISLANDLOG OF D.D.H. NO:D 160/1PLANNING

Proposer: M. J. Danielson Depth:

Location: Dolphin Mine, 220 160 E cuddy.

Purpose of hole: Oreblocking

Co-ordinates: 220 160 E 564 100 N

Inclination: -30 Target depth: 65

Bearing: 360 °Grid °Magnetic

Target: E N

Approved by: M. C. Rogers Date: 1.5.74

SURVEY

Survey Co-ords: E N

Survey bearing: °Grid °Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 159.3 E 564 102.1 N

R.L. of collar: -77.9 Inclination of hole:

Picked up by: David Brown Date: 14.5.74

SUMMARY

Logged by: M.J. Danielson

Results: C lens 79 - 89m 10m at 0.40% WO₃DRILLING

Driller / Contractor: A.D.D.

Date commenced: 10.5.74

Date terminated: 16.5.74

Casing: Size : BX

Depth: 1.52

Core: Size : NQ

BQ

Depth: 1.52

105.16

Wedge Runoff:

Wedge placed: Nil

Depth:

Proposed by:

Approved by:

Reason:

Extension: Nil

Final depth: 105.16

Reason for termination: Hole failed to locate No. 3 Fault,
discontinued in unmineralised footwall beds.

Condition of hole on completion:

Casing : 1.5m BX remaining

Cemented: No.

Bore hole survey: Surveyed to 65.53m.

Water: Water at 52.88m.

Comments on drilling conditions: Below 60m depth water pressure was too strong to allow wireline core extraction so conventional methods used.

GEOPEKO LIMITED - DOLPHIN MINESUMMARY BORE HOLE SURVEY DATAD.D.H. NO.D 160/1

Survey method : Multishot Camera

Depth surveyed to : 65.53m

Final depth : 105.16m

Date surveyed : 23.5.74

Casing depth : 1.52m

Surveyed by : V. Powell
G. Buckland

Checked by : M. J. Danielson

DEPTH	Bearing		Inclination		True Vertical depth	Co-ordinates	
	Grid	Mag.	Read	Corrected		E	W
0	359 ↑ INSIDE CASING	350°	60°	-30°			
15.24	354	345°	59°	-31°	7.76	2.96	12.77
30.48	349	340°	60°	-30°	15.38	7.08	25.30
45.72	350	341°	59.5°	-30.5°	22.50	11.06	37.72
60.96	349	340°	59.5°	-30.5°	30.85	15.55	50.06
65.53	350	341°	59°	-31°	33.17	16.82	53.76

REMARKS

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. NO. D 160/1

Depth Interval (metres)	Rock Type	Fractures / Metre	Joint Angle	Joint Filling	Bedding Angle	% Core Recovery	Broken Core % >10cms (R.Q.D.)	Remarks (weathering)
0 - 46.05	bh/pgh	6		mostly clay/ minor carbonate			84	
46.05 - 58.02		25		minor sulphides /abundant chlorite			27	poor ground
52.88								WATER.
52.88 - 56.63	q					84		
58.02 - 67.16	bh/ch	10			64m 55°		69	for major areas of core loss see Geology Log.
67.16 - 78.33	banded footwall beds?	too much core lost too determine accurately				48	20	
78.33 - 92.96	banded skarn	8				92	62	
92.96 - 105.16	bh/ph	+15				58	20	

FURTHER DATA & REMARKS (Compression Tests)

Core size: 0 - 0.53 NQ
0.53 - 105.16 BQ

GEOPEKO LIMITED - DOLPHIN MINEASSAY DATAD.D.H. NO. D 160/1

SAMPLE NO.	DEPTH (METRES)			ELEMENTS						COMMENTS
	From	To	Length	Length recovered	WO ₃	Mo	CAD check NO	WO ₃	Assays Mo	
C 1170	35	36	1.0	1.0	0.28	<0.01				
1	36	37	"	"	1.02	0.03	C1730	0.90	0.02	
2	37	38	"	"	0.09	0.01				
3	38	39	"	"	0.01	<0.01				
C 1174	39	40	"	"	0.02	0.01				
C 1195	40	49	"	"	2.85	0.09				
C 1175	64	65	"	"	0.16	<0.01				
6	65	66	"	"	0.01	<0.01				
7	66	67	"	"	0.01	<0.01				
8	67	68	"	"	0.21	<0.01				
C 1179	68	69	"	"	0.35	0.09				
C 1180	78	79	"	"	0.18	<0.01				
1	79	80	"	"	1.08	0.03				
2	80	81	"	"	0.28	<0.01				
3	81	82	"	"	0.16	0.01				
4	82	83	"	"	0.34	0.01	C1731	0.36	<0.01	Lower C lens 10m @ 0.40% WO ₃
5	83	84	"	"	0.42	0.01				
6	84	85	"	"	0.12	<0.01				
7	85	86	"	0.57	0.42	0.01				
8	86	87	"	1.0	0.12	<0.01				
9	87	88	"	0.84	0.45	0.01				
90	88	89	"	1.0	0.61	0.02				
1	89	90	"	"	0.22	0.01	C1732	0.21	<0.01	
2	90	91	"	0.70	0.01	<0.01				
3	91	92	"	1.0	0.01	<0.01				
C 1194	92	93	"	"	0.01	<0.01				

SPECIFIC GRAVITY

Determined by:

Depth (m) :

Rock Type :

S.G. :

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/1

LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.			LAB. K.I.S.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1171	1.02	0.03	D 2182	1.00	0.03	C 1730	0.90	0.02	D 2240	0.95	0.03
1184	0.34	0.01	2185	0.36	0.01	1731	0.36	<0.01	2239	0.40	0.01
1191	0.22	0.01	2179	0.24	0.01	1732	0.21	<0.01	2225	0.20	0.01
C 1171	1.02	0.03	D 2142	0.86	0.03	D 2414	0.96	0.03			
1184	0.34	0.01	2143	0.38	0.01	2415	0.39	0.01			
1191	0.22	0.01	2144	0.24	0.01	2416	0.24	0.01			

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 160/1

LAB. K.I.S.			LAB. A.M.D.L.			LAB. A.C.S.L.			LAB.		
Original Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.	Check Sample No.	WO ₃	Mo.
C 1184	0.34	0.01	D 0273	0.49	0.045	D 0274	0.53	0.008			

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO. D 160/1

Core size: 0 - 1.52 NQ
 1.52 - 105.16 BQ

0 - 28.65

BIOTITE HORNFELS

A homogeneous grey brown biotite hornfels. Massive and fine grained with no mineralisation.

19.4 - 21.5 Dark brown spots up to 4mm dia. - usually elongate in one direction.

28.65 - 41.47

PYROXENE GARNET HORNFELS

This is not a typical pgh and is very biotite rich to 32m. Below this depth the unit resembles a pyroxene rich grossular skarn with a very mottled appearance, however 'pods' or ovoids of either calcite or garnet persist to 41.47m. The unit is very weakly mineralised and is not ore grade. Core split 35 - 40m which was the best mineralisation.

41.47 - 44.19

BIOTITE HORNFELS

Fine grained grey massive barren biotite hornfels.

44.19 - 48.05

PYROXENE GARNET HORNFELS

This unit is similar to the mottled green pyroxene pink grossular garnet rock described above. Some pods and ovoids, usually less than 2cm of carbonate or grossular garnet. There is the isolated speck of scheelite but no core warrants splitting.

This unit is very badly broken between 46.10 - 48.05 and would have a RQD of zero in this interval.

Does not appear to be any lost core.

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO.D 160/1

48.05 - 49.04

LEACHED GARNET SKARN

This section is very heavily leached but highly mineralised between 48.5 and 49.04.

The core is very carbonate rich and appears extremely brecciated.

49.04 - 52.88

BIOTITE PYROXENE HORNFELS

A barren fine grained hornfels unit. Much chlorite on joint surfaces.

52.88 WATER.

52.88 - 56.63

QUARTZITE (?)

Fine grained grey massive rock. Very siliceous. There is approx. 10cms rubble about 52.88 and at this point water inflow commenced.

Core recovery in this interval was 3.15m = 84%.

56.63 - 58.28

MARBLE

Dirty barren grey carbonate rich rock. Does not appear to be as carbonate rich as a true marble but has sufficient reaction with acid to warrant the name. The unit is barren.

58.28 - 62.83

BIOTITE HORNFELS

A barren dark grey to black rock with some bedding apparent at 60.3m.

Bedding 60.3m 40° L.A.O.C.

The whole unit is heavily fractured, core seems recemented breccia with abundant fine hair-like veinlets of carbonate penetrating the rock.

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO.D 160/1

62.83 - 71.90

MARBLE

This is a typical barren grey marble with minor andradite skarn developed 64.4 - 65.0 with minor scheelite.

Bedding: 64.0m 40° L.A.O.C.

Minor skarn and scheelite between 67.5 and 68.7m.

Quality of core is generally good in this unit. There is approx. 10cms of rubble at 67.36m but no lost core.

<u>LOST CORE:</u>	recovery	% lost
68.58 - 69.80	.88	28
69.80 - 71.63	.60	67
71.63 - 72.24	.72	Nil
72.24 - 72.85	.08	87
72.85 - 74.07	.32	74
74.07 - 77.11	.32	90
77.11 - 78.33	1.16	5
78.33 - 80.47	2.10	Nil

71.90 - 78.33

BANDED FOOTWALL BEDS (?)

The major part of this unit is missing - see lost core. Several pieces of the core recovered indicate bedded ch/ph/gh/bh typical of banded footwall beds.

Note: The bedding is parallel to the long axis of the core.

With the exception of the several typical pieces of banded footwall beds the remainder of the core recovery is pieces of marble, biotite hornfels and minor mineralised skarn, but does not warrant core splitting.

78.33 - 92.96

BANDED ANDRADITE SKARN (LOWER C LENS ??)

This unit is typical of the lower C lens. It is basically a low to moderately mineralised andradite skarn with barren green interbeds of pyroxene hornfels, usually less than 3cm wide.

Bedding: 84m 80° L.A.O.C.
86m 60° L.A.O.C.
88m 68° L.A.O.C.

GEOPEKO LIMITED - DOLPHIN MINEGEOLOGICAL LOGD.D.H. NO.D 160/1

Core recovery in this section is excellent except:

85.34 - 85.95	0.15	recovery
85.95 - 89.08	2.96	"
89.08 - 91.14	1.80	"
91.14 - 91.74	.42	"
91.74 - 92.76	1.04	"

92.96 - 94.60

BIOTITE HORNFELS

This unit is very similar in appearance to lower metavolcanics. It is a predominantly biotite rock with a weakly remnant volcanic texture. No mineralisation.

94.60 - 105.16

BANDED BIOTITE ACTINOLITE HORNFELS

A thinly bedded biotite actinolite hornfels. Dark grey in colour and no mineralisation.

Bedding:	97.5m	25°	L.A.O.C.
	103m	65°	L.A.O.C.
	104m	65°	L.A.O.C.

Between 98.45 and 101.50 there is only 0.20m recovered but core lost in this interval is due to the drillers error and not bad ground.

The final 0.4m of the hole is very ph rich with moderate grossular garnet.

105.16 E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO DOLPHIN 150/4

PLANNING

Proposer: M. J. Danielson Depth: 35m

Location: Junction C22 and C64 stopes , C Central, -150m R.L.

Purpose of hole: Test depth of mineralisation below -150RL at section 220 160E

Co-ordinates: 220 146 E 564057.5 N
Inclination: -46° Magnetic:
Bearing 055° Grid Target Depth:
Target: E N
Approved by: M. C. Rogers Date: 27/9/76

SURVEY

Survey Co-ords: E N
Survey bearing: 55° 40' Grid Magnetic:
Surveyed in by: Date:
Actual Co-ords: 220 145.1 E564 056.4 N
R.L. of Collar: -149.2 Inclination of Hole: -44 00'
Picked up by: R.J.H Date: 1.10.76

SUMMARY

Logged by: G.L. Buckland
Results: Lower C lens 1 - 17m, 16m @ 0.83% WO3
24 - 30m, 6m @ 0.52% WO3

DRILLING

Driller/Contractor: K.I.S

Date commenced: 29/9/76

Date terminated: 7/10/76

Casing:	Size:			
	Depth:			
Core:	Size:	E17		
	Depth:	38.5		

Wedge Runoff:

Wedge placed: Nil Depth:
Proposed by: Approved by:
Reason:

Extension: Nil

Reason for termination: Hole reached footwall of Lower C lens.

Condition of hole on completion: Final depth: 38.5m

Casing: -
Cemented: No

Bore hole survey: Acid tube to 38m
Water: Normal water return throughout

Comments on drilling conditions: -

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H No. DOLPHIN 150/4

Survey method: Acid Tube

Final depth : 38.5m

Casing depth : N/L.

Depth surveyed to: 38m

Date surveyed: 7/10/76

Surveyed by :L. Limbourne

Checked by :G. L.Buckland

Depth (m)	Bearing		Inclination		True vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corrected			
38m			50°	42.5°			

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. DOLPHIN 150/4

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 2.50	2.50	2.12	85
4.80	2.30	2.14	93
6.80	2.00	1.97	99
9.10	2.30	2.25	98
11.80	2.70	2.54	94
13.20	1.40	1.40	100
15.80	2.60	2.56	98
18.00	2.20	2.24	102
21.00	3.00	2.91	97
23.40	2.40	2.31	96
26.40	3.00	3.05	102
30.40	4.00	3.97	99
33.00	2.60	1.92	74
36.00	3.00	2.90	97
38.50	2.50	2.36	94

GEOPEKO LIMITED -

ASSAY DATA

D.D.H. No. Dolphin 150/4

Sample No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	To	Length	Length Recovered	WO ₃	Mo	
D5165	0	1	1.0	1.0	0.11	< 0.01	
6	1	2	"	0.66	2.27	0.08	↓ Lower C lens 1-17m, 16m @ 0.83% NB: D5179 and D5181 have been truncated to 0.5% WO ₃ ; as veins of coarse scheelite are present within these two intervals
7	2	3	"	1.0	2.77	0.10	
8	3	4	"	0.90	0.82	0.01	
9	4	5	"	1.0	0.89	0.02	
70	5	6	"	"	0.63	0.01	
1	6	7	"	"	0.33	< 0.01	
2	7	8	"	"	1.06	0.03	
3	8	9	"	"	0.80	0.02	
4	9	10	"	"	0.39	< 0.01	
5	10	11	"	"	0.40	< 0.01	
6	11	12	"	"	0.62	0.01	
7	12	13	"	"	0.38	< 0.01	
8	13	14	"	"	0.44	0.01	
9	14	15	"	"	3.34	0.13	0.5
80	15	16	"	0.76	0.47	< 0.01	
1	16	17	"	1.0	6.40	0.24	0.5
2	17	18	"	"	0.17	< 0.01	↑ Lower C lens 24 - 30m, 6m @ 0.52% WO ₃
3	18	19	"	"	0.24	< 0.01	
4	19	20	"	"	0.48	0.01	
5	20	21	"	0.92	0.20	< 0.01	
6	21	22	"	1.0	0.31	< 0.01	
7	22	23	"	"	0.01	< 0.01	
8	23	24	"	"	0.21	< 0.01	
9	24	25	"	"	0.31	< 0.01	
90	25	26	"	"	0.35	< 0.01	
1	26	27	"	"	0.23	< 0.01	
2	27	28	"	"	1.04	0.04	
3	28	29	"	"	0.79	0.03	
4	29	30	"	"	0.43	0.01	
5	30	31	"	"	< 0.01	< 0.01	↑ If intersection is taken as 1-30m: 29m @ 0.62% WO ₃
6	31	32	"	"	< 0.01	< 0.01	
7	32	33	"	0.50	< 0.01	< 0.01	
8	33	34	"	1.0	< 0.01	< 0.01	
9	34	35	"	"	0.27	< 0.01	
200	35	36	"	"	< 0.01	< 0.01	
1	36	37	"	"	0.10	< 0.01	
D5202	37	38	"	0.82	0.19	< 0.01	

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. Dolphin 150/4

LAB.		K.I.S.		LAB. K.I.S.			LAB. AMDEL			LAB. ACSL		
Original Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	
D5167	2.77	0.10	D5452	2.66	0.10	D5453	2.50		D5454	3.08		
5170	0.63	0.01	5455	0.63	0.03	5456	0.72		5457	0.86		
5187	0.01	<0.01	5458	0.09	0.01	5459	0.11		5460	0.07		
D5192	1.04	0.04	D5461	0.86	0.05	D5462	1.14		D5463	1.13		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. DH 150/4

Core Size: A17 (32mms. dia.)

0 - 0.62

MARBLE

A grey bedded barren marble.
Bedding 0.4m 40° LAOC

0.62 - 29.35

BANDED GARNET HORNFELS

An interbedded sequence of skarn, pale green Pyroxene hornfels and minor biotite hornfels, containing weakly disseminated scheelite mineralisation throughout. Coarse scheelite is developed in veins at 14.20 - 14.25 and 16.85 - 17.02m

Core quality is fair - most breaks being subparallel to bedding,

Core leached and broken: 26.90 - 27.05
28.50 - 28.55

Bedding:

3.2m	40°	LAOC
6	35°	"
10	40°	"
12.5	15°	"
16	42°	"
20	55°	"
22	45°	"
25	35°	"
28	45°	"

29.35 - 38.50

BANDED FOOTWALL BEDS

A bedded interval of biotite hornfels with subordinate thin (up to 5cm) beds of green pyroxene hornfels and grossular garnet. Minor specks of scheelite are developed at 37.10m.

RUBBLE 31.15 - 31.75

Fault: carbonate recemented breccia - 33.75m

Core is weakly leached and has pyrite cubes on fracture surfaces at 37.97 - 38.05m.

Bedding:

32.5m	-	40	LAOC
36	-	35	"
37	-	30	"
38	-	35	"

38.50m E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO. Dolphin 150/3

PLANNING

Proposer: M. Danielson

Depth: 35m

Location: C 6422 - 150m RL

Purpose of hole: Test position of Central Fault

Co-ordinates: 220 145.5 E 564 055

Inclination: -23

Bearing 134 Grid

Target: E

Approved by: M.C. Rogers

N

Magnetic:

Target Depth:

N

Date: 24/9/76

SURVEY

Survey Co-ords: E

Survey bearing: 134° 30' Grid

Surveyed in by:

Actual Co-ords: 220 145.4 E 564 055.1

R.L. of Collar: -148.7

Picked up by: R.J.H

N

Magnetic:

Date:

N

Inclination of Hole: -23° 30'

Date: 27.9.76

SUMMARY

Logged by: G.I. Buckland

Results: Upper lens C:

11-19m, 8m @ 0.76% WO₃

DRILLING

Driller/Contractor: M5 KIS

Date commenced: 24/9/76

Date terminated: 29/9/76

Casing: Size: Nil

Depth:

Core: Size: E17

Depth: 23.5

Wedge Runoff: NIL

Wedge placed:

Proposed by:

Reason:

Depth:

Approved by:

Extension: NIL

Reason for termination: Hole passed south of Central FAULT

Condition of hole on completion:

Final depth: 23.5m

Casing: Nil

Cemented: No

Bore hole survey: Acid tube to 23.5m

Water: Nil

Comments on drilling conditions: Good ground

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H No. DOLPHIN 150/3

Survey method: Acid tube
Final depth : 23.5m
Casing depth : -

Depth surveyed to: 23.5m
Date surveyed: 29/9/76
Surveyed by : L. Limbourne
Checked by : M. Danielson

Depth (m)	Bearing		Inclination		True vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corrected			
23.5			29.5°	-24°			

REMARKS:

ASSAY DATA

D.D.H. No. D150/3

Sample No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	To	Length	Length Recovered	WO ₃	Mo	
D5155	10	11	1.0	1.0	0.04	<0.01	
6	11	12	"	"	0.78	0.02	↓
7	12	13	"	"	0.67	<0.01	
8	13	14	"	"	0.50	0.01	Upper C lens
9	14	15	"	"	0.81	0.01	
60	15	16	"	"	1.01	0.02	11-19m, 8m @ 0.76% WO ₃
1	16	17	"	"	0.99	0.02	
2	17	18	"	"	0.70	0.01	
3	18	19	"	"	0.58	0.01	↑
D5164	19	20	"	"	0.01	<0.01	

SPECIFIC GRAVITY

Determined by:

Depth (m):

Rock Type:

S.G. :

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. Dolphin 150/3

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 1.40	1.40	1.39	99
- 1.97	0.57	0.58	100
- 2.50	0.53	0.53	100
- 3.25	0.75	0.77	103
- 5.20	1.95	1.92	98
- 6.80	1.60	1.55	97
- 9.85	3.05	3.05	100
-11.80	1.95	1.98	102
-14.80	3.00	3.00	100
-17.80	3.00	3.04	101
-20.80	3.00	3.00	100
-23.50	2.70	2.65	98

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. 150/3

LAB.		K.I.S.		LAB.		K.I.S.			LAB. AMDEL			LAB. ACSL		
Original Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo			
D5160	1.01	0.02	D5449	0.95	0.04	D5450	1.10		D5451	1.16				

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. DOLPHIN 150/3

- 0 - 0.96 BIOTITE HORNFELS
- A grey barren biotite hornfels having fracture surfaces coated with montmorillonite.
- 0.96 - 1.97 MARBLE
- Isolated specks of minor scheelite mineralisation are developed from 0.96-1.40m within this interval of grey spotted ch.
- 1.97 - 3.15 BIOTITE HORNFELS
- A broken interval of grey barren bh.
- 3.15 - 10.18 MARBLE
- Dominantly a spotted barren ch with minor massive bedded ch:
Bedding: 5.8m: 20° LAOC
Core quality is good.
- 10.18 - 12.30 GARNET PYROXENE HORNFELS
- From 10.18 - 11.14 this rock contains grossularite but beyond this point becomes enriched in pyroxene to form a fine grained gph. Weak scheelite mineralisation is developed from 11.14 - 11.55.
- 12.30 - 18.30 GARNET HORNFELS
- A massive andradrite garnet hornfels containing high grade finely disseminated scheelite mineralisation throughout. Typical of Upper C lens gh.
- 18.30 - 19.36 A disturbed zone of green ph, grossular garnet and minor carbonate at 18.46m. Minor sporadic coarse scheelite is developed.
 This interval represents the Central Fault.
- 19.36 - 23.50 BIOTITE HORNFELS
- A massive barren black bh.
Minor carbonate recemented breccia at 19.50m.
Core quality is good.
- 23.50m E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO. D 150/2

PLANNING

Proposer: M.J. Danielson

Depth: 50m

Location: N 15 -136m

Purpose of hole: To test structure south of Central and Wedge Faults.

Co-ordinates: 220 148 E 564 080

N

Inclination: -16°

Magnetic:

Bearing 132° Grid

Target Depth:

Target: E

N

Approved by: M.C. Rogers

Date: 1/4/76

SURVEY

Survey Co-ords: E

N

Survey bearing: $130^{\circ}10'$ Grid

Magnetic:

Surveyed in by:

Date:

Actual Co-ords: 220 149.6 E 564 081.5

N

R.L. of Collar: -136.3

Inclination of Hole: $-17^{\circ}30'$

Picked up by: R.J.H.

Date: 3/5/76

SUMMARY

Logged by: G.L. Buckland.

Results: Lower C lens 5 - 12m, 7m @ 1.23% WO_3
Upper C lens 12 - 51m, 39m @ 1.80% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 30/4/76

Date terminated: 5/5/76

Casing: Size: NIL

Depth:

Core: Size: A 17

Depth: 52.0

Wedge Runoff:

Wedge placed: NIL

Depth:

Proposed by:

Approved by:

Reason:

Extension: Nil

Reason for termination: Hole intersected aquifer

Condition of hole on completion:

Final depth: 52.0m

Casing: Hole plugged and tapped

Cemented: No

Bore hole survey: No - hole plugged and tapped.

Water: Significant water inflow measured at 40 gall/min was intersected.

Comments on drilling conditions: Hole terminated near to the anticipated position of D 199 ~~cut~~ at -150m R.L.

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 150/2

Depth Interval (metres)	Rock Type	Fractures /m.	Joint Angle (wrt LAOC)	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Recovery	R.Q.D.	Remarks (weathering)
0 - 11.70	Banded gh	11		minor carbonate	1m : 15° 6.25m : 30° 8m : 35° 10m : 32° 11m : 28° 11.5m:35°	98	27	Most fractures are subparallel to bedding. broken ground: 0.70 - 1.10 8.70 - 8.85.
11.70 - 33.05	Massive gh	5		montmorillonite @ 28.10		101	82	Good core quality - minor rubble: 20.66 - 20.76; 24.66 - 24.77.
33.05 - 51.35	Massive gh	6		carbonate @ 37.50, montmorillonite @ 46.15. also minor pyrite.		100	78	38.76 - 38.83 core is weakly leached and has pyrite clusters throughout 43.10 - 43.12: core is weakly brecciated with sulphide on a fracture plane (33° to L.A.O.C.) 43.81 - 43.87: Core weakly brecciated with carbonate cement. 49.20 - 49.25: core is weakly leached and brecciated *All these zones are possible minor faults.

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) $\pm = \frac{\text{length core} > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size. A 17 32mms. dia

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 150/2

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 3.20	3.20	2.94	92
6.25	3.05	3.12	102
9.00	2.75	2.68	97
11.70	2.70	2.71	100
14.75	3.06	3.10	102
17.80	3.05	3.11	102
20.85	3.05	3.11	102
23.90	3.05	2.95	97
26.95	3.05	3.07	101
30.00	3.05	3.11	102
33.05	3.05	3.05	100
36.10	3.05	3.10	102
39.15	3.05	3.08	101
42.20	3.05	3.02	99
45.25	3.05	3.05	100
48.30	3.05	3.01	99
51.35	3.05	3.05	100

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 150/2

SAMPLE No.	DEPTH (METRES)			ELEMENTS		COMMENTS	
	From	To	Length	Length Recovered	WO ₃		Mo
D4969	0	1	1.0	0.90	0.01	0.01	
70	1	2	1.0	1.0	0.17	0.01	
1	2	3	1.0	1.0	0.01	0.01	
2	3	4	1.0	1.0	0.01	0.01	
3	4	5	1.0	1.0	0.08	0.01	
4	5	6	1.0	1.0	3.80	0.09	Lower C lens 5 - 12m, 7m @ 1.23% WO ₃
5	6	7	1.0	1.0	1.36	0.02	
6	7	8	1.0	1.0	0.36	0.01	
7	8	9	1.0	1.0	0.44	0.01	
8	9	10	1.0	1.0	0.80	0.01	
9	10	11	1.0	1.0	0.58	0.01	
80	11	12	1.0	1.0	1.30	0.02	
1	12	13	1.0	1.0	2.35	0.07	
2	13	14	1.0	1.0	1.84	0.05	
3	14	15	1.0	1.0	1.51	0.05	
4	15	16	1.0	1.0	1.39	0.02	
5	16	17	1.0	1.0	2.78	0.07	
6	17	18	1.0	1.0	1.09	0.05	
7	18	19	1.0	1.0	1.46	0.06	
8	19	20	1.0	1.0	2.20	0.09	
9	20	21	1.0	1.0	1.16	0.05	
4990	21	22	1.0	1.0	0.66	0.01	
D4491	22	23	1.0	1.0	1.27	0.05	
2	23	24	1.0	1.0	0.86	0.04	
3	24	25	1.0	1.0	1.29	0.06	
4	25	26	1.0	1.0	1.58	0.08	
5	26	27	1.0	1.0	0.78	0.04	
6	27	28	1.0	1.0	1.43	0.07	
7	28	29	1.0	1.0	1.81	0.09	
8	29	30	1.0	1.0	1.86	0.09	
9	30	31	1.0	1.0	1.52	0.08	
D5000	31	32	1.0	1.0	1.04	0.04	
1	32	33	1.0	1.0	1.06	0.05	
2	33	34	1.0	1.0	0.72	0.02	
3	34	35	1.0	1.0	1.40	0.06	
4	35	36	1.0	1.0	1.29	0.05	
5	36	37	1.0	1.0	1.09	0.04	
6	37	38	1.0	1.0	2.20	0.09	
7	38	39	1.0	1.0	1.70	0.07	
8	39	40	1.0	1.0	1.76	0.08	
9	40	41	1.0	1.0	2.53	0.10	
10	41	42	1.0	1.0	1.70	0.07	
11	42	43	1.0	1.0	1.67	0.10	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 150/2

SAMPLE No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	To	Length	Length Recovered	WO ₃	Mo	
12	43	44	1.0	1.0	3.10	0.13	Upper C lens 12m - 25m, 39m @ 1.80% WO ₃
D5013	44	35	1.0	1.0	3.57	0.17	
D5014	45	46	1.0	1.0	1.38	0.06	
5	46	47	1.0	1.0	3.68	0.13	
6	47	48	1.0	1.0	5.23	0.24	
7	48	49	1.0	1.0	1.44	0.04	
8	49	50	1.0	1.0	3.8	0.16	
D5019	50	51	1.0	1.0	1.36	0.04	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 150/2

LAB.		K.I.S.		LAB. K.I.S.			LAB. AMDEL			LAB. ACSL		
Original Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	
D4970	0.17		D5116	0.18		D5117	0.25		D5118	0.24		
4980	1.30		D5119	1.36		D5120	1.44		D5121	1.39		
4990	0.66		5122	0.72		5123	1.04		5124	0.78		
5000	1.04		5125	1.00		5126	1.66		5127	1.07		
D5010	1.70		D5128	1.65		D5129	1.76		D5130	1.79		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 150/2

0 - 12.21

BANDED GARNET HORNFELS

An interbedded sequence of barren marble, pale green pyroxene hornfels and weakly mineralised skarn. Minor intervals of black biotite hornfels are also developed.

The skarn bed from 1.18 - 1.41m contains weak disseminated scheelite mineralisation with good grade mineralisation also between 5 - 12.21m.

This hole was drilled at a shallow angle to bedding and so therefore assays do not reflect true thickness.

Bedding: 1m : 15° L.A.O.C.
2m : 10° L.A.O.C.
6.25m : 30° L.A.O.C.
8m : 35° L.A.O.C.
11.5 m : 35° L.A.O.C.

The Central Fault is not obvious in the core. At 12.21m a change to massive higher grade gh occurs with no apparent bedding being evident beyond this point. However, no discontinuity is present at 12.21m.

At 12.21m the boundary between banded gh and massive gh occurs at a break in the core where some grinding is evident.

Although the core interval appropriate to this point indicates no core loss it is possible that a couple of centimetres of core could have been ground away. 12.21m is interpreted as the Central Fault.

12.21 - 51.35

MASSIVE GARNET HORNFELS

A massive andradite garnet hornfels containing high grade finely disseminated scheelite mineralisation throughout. Typical Upper C lens. Coarse scheelite is present at 47.5m.

The core is of good quality throughout with no obvious faults being identified. Major structural features observed are:

1. Rubble: 20.66 - 20.76, 24.66 - 24.77
2. Weak leaching: 38.76 - 38.83, 49.20 - 49.25
3. Weak brecciation: 43.10 - 43.12, 43.81 - 43.87, 49.20 - 49.25.

The interval 43.81 - 43.87 seems the most likely position for a fault.

Note: Drillers report drilling to a depth of 52.0m, however the last 0.65m of core was not recovered after the water inflow was intersected.

52.0m E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO. D 150/1

PLANNING

Proposer: M. Danielson

Depth: 60

Location: N15 -136m

Purpose of hole: To test structure south of Wedge and Central Faults.

Co-ordinates: 220 148 E 564 080

Inclination: -13

Bearing 185 Grid

Target: E

Approved by: M.C. Rogers

N

Magnetic:

Target Depth:

N

Date: 1/4/76

SURVEY

Survey Co-ords: E

Survey bearing: 188°50' Grid

Surveyed in by:

Actual Co-ords: 220 147.9 E 564 081.0

R.L. of Collar: -136.0

Picked up by: R.J.H.

N

Magnetic:

Date:

N

Inclination of Hole: -13°30'

Date: 23/4/76

SUMMARY

Logged by: G.L. Buckland

Results: C Central Lower C lens 0 - 8m, 8m @ 0.78% WO₃

C Central South Upper C lens 8 - 37m, 29m @ 1.16% WO₃

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 21/4/76

Date terminated: 30/4/76

Casing: Size: NIL

Depth:

Core: Size: A 17

Depth: 59.0

Wedge Runoff:

Wedge placed: Nil

Proposed by:

Reason:

Depth:

Approved by:

Extension: Nil

Reason for termination: Hole passed into pgh to the south of the 'Q' Fault.

Condition of hole on completion:

Final depth: 59.0m

Casing: No

Cemented: No

Bore hole survey: Surveyed to 58.0m

Water: Normal water return throughout

Comments on drilling conditions: E 500 machine

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 150/1

Survey method : Multishot camera
Final depth : 59.0m
Casing depth : -

Depth surveyed to : 58.0m
Date surveyed : 10/5/76
Surveyed by : G.L.B.
Checked by : G.L.B.

Depth (m)	Bearing		Inclination		True vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corrected		S	-
22	189° 30'	180°	76°	-14°	5.10	21.39	
43	189° 30'	180°	76°	-14°	10.18	41.76	
58	189° 30'	180°	76°	-14°	13.81	56.31	

REMARKS:

Hole has a constant MAGNETIC bearing of 180°; plotted on a bearing of 189° 30' I.S.G.

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SUMMARY STRUCTURAL DATA

D.D.H. No. D 150/1

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 - 9.65	banded gh	17		carbonate minor sulphide	5m : 30° 7m : 60°	93	18	breaks in core are principally along bedding. Fault?: 2.40 - 2.45 - carbonate recemented breccia. very broken core: 7.35 - 7.70
9.65 - 36.70	gh	12		minor carbonate	35m : 30°	94	47/	broken core: 12.70 - 12.75 13.16 - 13.61 21.0 - 21.25 25.5 - 25.70 Fault: carbonate recemented breccia- 36.34 - 36.37 30.85 - 36.70: core quality improves.
36.70 - 59.0	gh/ bh/ pgh	6		minor carbonate		99	76	Broken core: 37.07 - 37.40; 53.26 - 53.65; 55.34 - 56.05. Core riddled with carbonate veinlets: 53.05 - 53.15; also

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) \pm $\frac{\text{length core} > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size. A 17 (32mms dia)

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 150/1

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)
								@ 53.30. Core brecciated 56.40 - 56.43 Fault.

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) $\pm \frac{\text{length core } > 10 \text{ cms}}{\text{length drilled}} \%$
3. Core size.

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No.D 150/1

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 3.10	3.10	3.10	100
3.60	0.50	0.58	96
6.10	2.50	2.47	99
9.65	3.55	2.88	81
12.70	3.05	3.05	100
15.60	2.90	2.68	92
18.50	2.90	2.70	93
21.60	3.10	2.82	91
24.50	2.90	2.77	96
27.55	3.05	2.86	94
30.60	3.05	2.84	93
33.65	3.05	2.70	89
36.70	3.05	2.88	94
39.75	3.05	3.05	100
42.80	3.05	3.02	99
45.85	3.05	3.05	100
48.90	3.05	3.05	100
52.00	3.10	2.98	96
55.00	3.00	2.90	97
59.00	4.00	4.05	101

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 150/1

SAMPLE		DEPTH (METRES)			ELEMENTS		COMMENTS
No.	From	To	Length	Length Recovered	WO ₃	Mo	
D4930	0	1	1.0	1.0	0.86	0.02	
1	1	2	1.0	1.0	0.30	<0.01	
2	2	3	1.0	1.0	0.56	0.01	C Central Lower C lens 0 - 8m, 8m @ 0.78% WO ₃
3	3	4	1.0	0.92	0.17	<0.01	
4	4	5	1.0	1.0	0.93	0.03	
5	5	6	1.0	1.0	0.22	<0.01	
6	6	7	1.0	1.0	1.69	0.05	
7	7	8	1.0	0.80	1.49	0.17	
8	8	9	1.0	1.0	1.89	0.06	
9	9	10	1.0	1.0	1.58	0.03	
40	10	11	1.0	1.0	1.82	0.04	
1	11	12	1.0	1.0	1.08	0.01	
2	12	13	1.0	1.0	1.08	0.02	
3	13	14	1.0	1.0	0.07	<0.01	
4	14	15	1.0	0.81	0.89	0.02	
5	15	16	1.0	1.0	1.24	0.03	
6	16	17	1.0	1.0	1.50	0.05	
7	17	18	1.0	0.80	1.16	0.03	
8	18	19	1.0	1.0	1.50	0.02	
9	19	20	1.0	1.0	1.14	0.01	
50	20	21	1.0	0.90	0.76	0.01	
1	21	22	1.0	1.0	0.55	<0.01	C Central South Upper C lens 8 - 37m, 29m @ 1.16% WO ₃
2	22	23	1.0	1.0	1.13	0.03	
3	23	24	1.0	0.90	0.54	<0.01	
4	24	25	1.0	1.0	1.54	0.04	
5	25	26	1.0	1.0	1.98	0.05	
6	26	27	1.0	0.82	1.64	0.03	
7	27	28	1.0	1.0	1.89	0.05	
8	28	29	1.0	1.0	1.06	0.02	
9	29	30	1.0	0.84	0.83	0.01	
60	30	31	1.0	1.0	0.92	0.01	
1	31	32	1.0	1.0	1.08	0.02	
2	32	33	1.0	1.0	0.72	<0.01	
3	33	34	1.0	1.0	0.73	0.02	
4	34	35	1.0	1.0	1.24	0.04	
5	35	36	1.0	1.0	1.21	0.03	
6	36	37	1.0	0.82	0.75	0.01	
7	37	38	1.0	1.0	<0.01	<0.01	
D4968	38	39	1.0	1.0	<0.01	<0.01	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 150/1

LAB. K.I.S.			LAB. K.I.S.			LAB. AMDEL			LAB. ACSL			
Original Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	Check Sample No.	WO ₃	Mo	
D4930	0.86		D5104	0.90		D5105	1.02		D5106	0.97		
4940	1.82		5107	1.60		5108	1.82		5109	1.90		
4950	0.76		5110	0.79		5111	0.84		5112	0.93		
4960	0.92		5113	0.98		5114	1.10		5115	1.15		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 150/1

0 - 7.87

BANDED GARNET HORNFELS

An interbedded sequence of pale green ph, minor black bh and skarn beds up to 10cm in width containing finely disseminated scheelite mineralisation.

Minor coarse scheelite occurs along at joint at 2.10m.

From 2.40 - 2.45 the core is a carbonate recemented breccia; while at 7.30 a prominent fracture contains molybdenite, chalcopyrite and carbonate as infilling.

The poor core quality in this region results mainly from breaks along bedding.

Bedding 5m : 30° L.A.O.C.

7m : 60° L.A.O.C.

The Central Fault is not obvious in the core but is placed at 7.87m owing to:

- 1) disturbed bedding from 7.66 to 7.87m
- 2) a change to high grade finely disseminated scheelite beyond this point (Typical of Upper C lens massive gh). and
- 3) occasional clusters of free MoS_2 on a fracture.

7.87 - 37.04

MASSIVE GARNET HORNFELS

A massive andradite garnet skarn containing high grade finely disseminated scheelite mineralisation ~~on~~ throughout.

From 30.88 - 37.04 the skarn has a finer grained texture and appears enriched in pyroxene but still remains highly mineralised.

Fault: 36.34 - 36.37 - carbonate recemented breccia.

37.04 - 56.50

BIOTITE HORNFELS

A massive homogenous grey/black barren bh. The core is riddled with carbonate veinlets:

53.05 - 53.15 and also at 53.30.

Core brecciated - Fault: 56.40 - 56.43.

56.50 - 59.0

PYROXENE GARNET HORNFELS

Carbonate ovoids (up to 4cm) commonly rimmed with grossularite are set in a fine grained pale green pyroxene rich groundmass containing occasional specks of coarse scheelite e.g. at 57.34m.

59.0 E.O.H.