GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No.290/1 Dolphin

PLANNING

PROPOSER: C. Kendall DEPTH: 80 m

LOCATION: W40 Mid Wedge

PURPOSE OF HOLE: Test position of Grassy River Fault

PROPOSED CO-ORDS: 220 294 E 564 153 N

INCLINATION: 0°

BEARING: 075° °Grid °Mag

TARGET: E N

DEPTH: 70 m (Target)

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 76°34' °Grid °Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 295.3 E 564 159.7 N

R.L. OF COLLAR: 185.6

INCLINATION OF HOLE: 0

PICKED UP BY: BL DATE: 04.07.82

SUMMARY

LOGGED BY: C.J. Kendall

RESULTS: Quartzites throughout hole. Finished at 33.0 m due to ground conditions and water.

DRILLING

DATE COMMENCED: 05.07.82 DATE TERMINATED: 19.07.82

DRILLER/CONTRACTOR: K.I.S.

CASING: SIZE:
DEPTH:

CORE: SIZE: 46 TT
DEPTH: 33.0

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 33.0 m

REASON FOR TERMINATION: Bad ground

CONDITION OF HOLE ON COMPLETION:

CASING: Nil

CEMENTED: No

BORE HOLE SURVEY: No

WATER: Major inflows at end.

COMMENTS ON DRILLING CONDITIONS: Ok.

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. 290/1

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
3.30	3.30	3.3	100
5.70	2.40	2.4	100
8.30	2.60	2.8	107
10.5	2.20	2.6	118
13.5	3.0	4.0	133
15.4	1.9	1.8	95
17.9	2.5	2.6	104
20.7	2.8	3.3	118
22.0	1.3	1.2	92
22.5	0.5	0.5	100
25.2	2.7	2.8	104
27.2	2.0	2.4	120
30.5	3.3	4.4	133
33.0	2.5	2.3	92

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA & BORE HOLE SURVEY DATA

D.D.H. No. 290/1

ASSAY DATA: Not split

BORE HOLE SURVEY DATA: Not surveyed

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. 290/1 Dolphin

0.0 - 29.2 m — Quartzite

A partially banded, highly siliceous sequence of metamorphosed sediments.
The core is very broken and heavily jointed; the longest stick of core measures 20 cm.
The two prominent joint directions are:-

(i) 5°LCA
(ii) 45°LCA

Joints are chlorite filled and show some sulphide mineralisation - mainly pyrite.
Core is particularly badly broken below 8.30 m with core size averaging 2 cm aggregate. Core is water and iron stained at 13.5 m.

29.2 - 30.2 m — Fault Breccia

A chlorite, actinolite rich zone showing angular quartzite fragments in a green-brown matrix.
There are numerous calcite veins at 40° - 60° LCA. throughout this zone. Contacts are sharp at both ends.

Top 20°LCA
Bottom 20°LCA

30.2 - 33.0 m — Quartzite

Finely broken quartzite 2 cm aggregate - no structure visible.
At 30.5 m sample taken for this section analysis. Material had mottled appearance, possibly a spotted hornfels.

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 280/16

PLANNING

PROPOSER: R.H. Davies. DEPTH: 85 m

LOCATION: R14 W76 - 150 m level

PURPOSE OF HOLE: Test B Lens adjacent to Northern Boundary Fault.

PROPOSED CO-ORDS: 220287 E 564112 N

INCLINATION: 0°

BEARING: 102° $^{\circ}$GRID $^{\circ}$MAG

TARGET: E N

DEPTH:

CHECKED BY: R.E.Sandell-Davies DATE: 10.7.80

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: $103^{\circ}24'$ $^{\circ}$GRID $^{\circ}$MAG

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220286.9 E 564112.0 N

R.L. OF COLLAR: -146.63

INCLINATION OF HOLE: $+00^{\circ}$ 13"

PICKED UP BY: R. Howman DATE: 23.7.80

SUMMARY

LOGGED BY: R.H. Davies

RESULTS: 18-25 m, 7 m @ 0.63% WO_3
32-34 m, 2 m @ 2.32% WO_3
38-45 m, 7 m @ 0.43% WO_3
} B Lens Decline.

DRILLING

DATE COMMENCED: 12.6.80 DATE TERMINATED: 16.7.80

DRILLER/CONTRACTOR: A.D.D.

CASING: SIZE:
DEPTH:

CORE: SIZE: NQ BQ
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 66.0 m

REASON FOR TERMINATION: Passed through B lens.

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: Yes, single shot.

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/16

Surveyed method: Single Shot
Final depth: 66.0 m.
Casing depth:

Depth surveyed to: 45 m
Date surveyed: 17.7.80
Surveyed by: B. Schneiders
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
20 m	104°30'	S85°30'E	90°	90°			
45 m	105°30'	S84°30'E	90°	90°			
66 m	105°	S85°	90°	90°	assumed		

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 280/16

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.00 - 6.00	6.00	6.00	93
6.00 - 9.00	3.00	1.80	60
9.00 - 12.00	3.00	2.90	97
12.00 - 15.00	3.00	3.00	100
15.00 - 18.00	3.00	2.80	93
18.00 - 22.50	4.50	4.50	100
22.50 - 25.50	3.00	3.00	100
25.50 - 27.50	2.00	2.00	100
27.50 - 30.00	2.50	2.50	96
30.00 - 33.00	3.00	3.05	101
33,00 - 37.50	4.50	4.43	98
37.50 - 40.00	2.50	2.50	100
40.00 - 45.00	5.00	5.00	100
45.00 - 47.00	2.00	1.80	90
47.00 - 48.00	1.00	1.00	100
48.00 - 50.00	2.00	1.34	77
50.00 - 55.50	5.50	2.49	45
55.50 - 59.00	3.50	2.12	61
59.00 - 62.00	3.00	1.20	40
62.00 - 63.00	1.00	0.85	85
63.00 - 65.00	2.00	1.90	85
65.00 - 66.00	1.00	0.73	73
EOH 66.00 m			

GEOLOGY - KING ISLAND SCHEELITE

LENGTH OF CORE GREATER THAN 10 CM PER METRE

D.D.H. No. D 280/16

INTERVAL (m)	LENGTH (cm)	INTERVAL (m)	LENGTH (cm)
0.00 - 1.0	57.0	53.0 - 54.0	00.0
1.0 - 2.0	74.0	54.0 - 55.0	00.0
2.0 - 3.0	87.0	55.0 - 56.0	10.0
3.0 - 4.0	82.0	56.0 - 57.0	00.0
4.0 - 5.0	56.0	57.0 - 58.0	00.0
5.0 - 6.0	43.0	58.0 - 59.0	00.0
6.0 - 7.0	00.0	59.0 - 60.0	00.0
7.0 - 8.0	34.0	60.0 - 61.0	00.0
8,0 - 9.0	00.0	61.0 - 62.0	10.0
9.0 - 10.0	00.0	62.0 - 63.0	10.0
10.0 - 11.0	12.0	63.0 - 64.0	00.0
11.0 - 12.0	00.0	64.0 - 65.0	20.0
12.0 - 13.0	38.0	65.0 - 66.0	00.0
13.0 - 14.0	64.0		
14.0 - 15.0	38.0		
15.0 - 16.0	16.0		
16.0 - 17.0	24.0		
17.0 - 18.0	66.0		
18.0 - 19.0	74.0		
19.0 - 20.0	57.0		
20.0 - 21.0	60.0		
21.0 - 22.0	90.0		
22.0 - 23.0	100.0		
23.0 - 24.0	90.0		
24.0 - 25.0	90.0		
25.0 - 26.0	54.0		
26,0 - 27.0	68.0		
27.0 - 28.0	50.0		
28.0 - 29.0	53.0		
29.0 - 30.0	74.0		
30.0 - 31.0	80.0		
31.0 - 32.0	70.0		
32.0 - 33.0	35.0		
33.0 - 34.0	17.0		
34.0 - 35.0	41.0		
35.0 - 36.0	47.0		
36.0 - 37.0	22.0		
37.0 - 38.0	50.0		
38.0 - 39.0	57.0		
39.0 - 40.0	31.0		
40.0 - 41.0	71.0		
41.0 - 42.0	88.0		
42.0 - 43.0	89.0		
43.0 - 44.0	27.0		
44.0 - 45.0	29.0		
45.0 - 46.0	00.0		
46.0 - 47.0	00.0		
47.0 - 48.0	11.0		
48.0 - 49.0	00.0		
49.0 - 50.0	00.0		
50.0 - 51.0	00.0		
51.0 - 52.0	00.0		
52.0 - 53.0	00.0		

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/16

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)
0.00 - 9.00	bh	8		pyrite/clay	35%	93%	82.0%	
9.00 - 9.50	DFZ			clay		60%		Decline Fault Zone.
9.50 - 17.60	bh(podded)	6					42.0%	Breccia in clay matrix
17.60 - 20.30	5ph			quartz/clay		100%	96.0%	
20.30 - 20.90	ch	4		chl.	30%		100.0%	
20.90 - 26.90	gph			cal.			96.0%	
26.90 - 37.85	ch/ph			cal.	45%	100%	87.0%	ch/ph is weathered
37.85 - 40.30	gph	13		clay			77.0%	in part contains swelling clays.
40.30 - 41.70	ph	4					85.0%	
41.70 - 44.20	gph	3			45%	80%	93.0%	
44.20 - 62.00	ph	20		chl.		85%	5.0%	fractured ph.
62.00 - 66.00	bph						8.0%	bph

FURTHER DATA & REMARKS

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

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 280/16

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 12551	17	18	1.0	1.0	0.09	0.01		
52	18	19	"	"	0.59	0.01		
53	19	20	"	"	0.55	0.01		
54	20	21	"	"	0.29	0.01		
55	21	22	"	"	0.64	0.01		
56	22	23	"	"	0.79	0.01		
57	23	24	"	"	0.82	0.01		
58	24	25	"	"	0.73	0.01		
59	25	26	"	"	0.21	0.01		
60	26	27	"	"	0.16	0.01		
61	27	28	"	"	0.06	0.01		
62	28	29	"	"	0.04	0.01		
63	32	33	"	"	4.18	0.01		
64	33	34	"	"	0.63	0.01		
65	36	37	"	"	0.09	0.01		
66	37	38	"	"	0.07	0.01		
67	38	39	"	"	0.54	0.01		
68	39	40	"	"	0.34	0.02		
69	40	41	"	"	0.27	0.01		
70	41	42	"	"	0.34	0.01		
71	42	43	"	"	0.82	0.01		
72	43	44	"	"	0.24	0.01		
73	44	45	"	"	0.47	0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 280/16

0.0 - 9.0 m BIOTITE HORNFELS

This unit consists of a fine grained competent dark coloured bedded biotite hornfels.

The biotite hornfels contains minor interbeds of pyroxene hornfels. Pyrite is not common on joint planes, but does occur in some of the pyroxene rich interbeds. In these areas the disseminated pyrite appears to be comformable to bedding.

Broken core at 6.3 m may be indicative of some faulting.

Bedding	3.5 m	55°
	5.0 m	50°

9.0 - 9.5 DECLINE FAULT ZONE

The core in this zone is badly crushed and consists mostly of small (1.0 cm) biotite hornfels fragments set in a clay matrix. Core on either side of this fault zone is fractured for about 1 m.

This suggests that the fault zone has a width of brecciation of 2.5 m with a central broken core of 0.5 m.

9.5 - 17.6 BIOTITE HORNFELS (PODDED)

This unit consists essentially of a dark biotite hornfels which contains pods and inclusions.

The pods are usually small (2 cm) and sometimes appear to be aligned Typically they contain calcitic cores which are surrounded by grossular garnet and pyroxene reaction rims. A fabric, possibly bedding is observable at 12.0 m.

A pyroxene hornfels bed also occurs within the unit between 12.0 - 14.0 m. The pyroxene hornfels band is medium grained and consists of actinolite set in a matrix of feldspar. Fine pyrite appears to be disseminated through the unit. From 15.0 - 17.6 m the biotite hornfels becomes finer grained and contains less pyroxene.

Possible faults	17.0 m	
	15.5 m	
Bedding	11.5 m	35°

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 280/16

17.6 - 44.8 B LENS

17.6 - 26.9 m Garnet Pyroxene Hornfels

This unit contains a pale olive green mineralised garnet pyroxene hornfels. A fresh grey unmineralised marble unit occurs within the garnet pyroxene hornfels. The contact with garnet pyroxene hornfels appears to be gradational and possibly the garnet pyroxene hornfels is a replaced marble.

The contact with biotite hornfels (podded) had the appearance of a recemented breccia with biotite hornfels fragments set in a chloritic matrix.

The grainsize of the garnet pyroxene hornfels increases with depth and is quite coarse at 23.5 m. The grainsize again decreases as the next marble unit is approached.

Broken core at 20.0 m.

Bedding 30^{o}

26.9 - 37.85 Marble/Pyroxene Hornfels

This unit consists of fresh and weathered marbles interbedded with pyroxene hornfels.

From 26.9 - 31.0 m the marble has a spotted texture. The spots are caused by knots of dark coloured biotite hornfels or (amphibole?).

Minor mineralisation occurs within the unit as veins at 32.6, 33.6 and 36.1 m. The veins have associated alteration zones and appear to cross cut bedding. Some replacement of the marble appears to have occured at 37.0 m, where minor mineralisation is associated with pyroxene and andradite garnet.

A possible fault occurs at 38.0 m where the marble is quite disturbed.

At 34.0 m a 15 cm pug zone is associated with a 1 m wide zone of fractured core.

Bedding 27.5 m 45^{o}
35.2 m 45^{o}
36.5 m 30^{o}

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 280/16

37.85 - 44.8 Garnet Pyroxene Hornfels

This unit consists of an olive green mineralised garnet pyroxene hornfels which is cut by a barren dark olive green pyroxene hornfels unit.

The unit appears reasonably competant although some swelling (of clays) due to adsorbtion of water has occurred at 38.4 m.

A small pug zone is also present at 40.0 m.

At 42.0 m banding in the garnet pyroxene hornfels is quite prominent.

Faults 40.0 m

Bedding @ 42.0 m is 45° to LCA

44.8 - 62.0 PYROXENE HORNFELS

This unit consists of a badly broken pale green pyroxene hornfels.

The pyroxene hornfels contains a network of chlorite veins.

62.0 - 66.0 BIOTITE PYROXENE HORNFELS

In this unit the rock becomes more biotite rich and becomes darker in colour.

Like the previous unit, the core is severely fractured (2.0 cm) and contains a high percentage of chlorite veins and fillings.

EOH 66.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 280/15

PLANNING

PROPOSER: S. G. Brown DEPTH: 60 m

LOCATION: S13 -150 m Level

PURPOSE OF HOLE: Test B Lens Decline Fault Northern Boundary Fault

PROPOSED CO-ORDS: 220 287 E 514 113 N

INCLINATION: 0

BEARING: 080° °GRID °MAG

TARGET: E N

DEPTH: 60 m

CHECKED BY: S. G. Brown DATE: 11/4/80

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 78° 24' °GRID °MAG

SURVEYED IN BY: J. Cook DATE:

ACTUAL CO-ORDS: 220 287.18 E 564 113.51N

R.L. OF COLLAR: -146.6

INCLINATION OF HOLE: -0° 12'

PICKED UP BY: J. Cook DATE: 24/4/80

SUMMARY

LOGGED BY: R. E. Sandell Davies

RESULTS: 21.0 - 26.0 m, 5 m @ 0.63% WO_3

DRILLING

DATE COMMENCED: 21/4/80 DATE TERMINATED: 28/4/80

DRILLER/CONTRACTOR: S. Batchelor/A.D.D.

CASING: SIZE:
DEPTH:

CORE: SIZE: NQ 10 m
DEPTH: BQ 49 m

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 49 m

REASON FOR TERMINATION: In Quartzites

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: Not Surveyed

WATER: Driller reported inflow of salty water at 32 m.

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D280/15

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.5 m	3.5	3.5	100
3.5 - 5.0	1.5	1.4	93
5.0 - 6.5	1.0	0.9	90
6.5 - 8.0	1.5	1.5	100
8.0 - 9.6	1.6	1.2	75
9.6 - 10.0	0.4	0.1	25
10.0 - 10.8	0.8	0.1	13
10.8 - 12.5	1.7	0.9	53
12.5 - 14.0	1.5	1.0	67
14.0 - 15.5	1.5	1.5	100
15.5 - 16.8	1.3	1.3	100
16.8 - 17.6	0.8	0.8	100
17.6 - 19.3	1.7	1.4	82
19.3 - 20.5	0.8	0.7	88
20.5 - 21.2	0.7	0.5	71
21.2 - 23.6	2.4	2.4	100
23.6 - 26.6	3.0	3.0	100
26.6 - 28.5	1.9	1.5	79
28.5 - 28.8	0.3	0.2	67
28.8 - 29.0	0.2	0.2	100
29.0 - 29.3	0.3	0.3	100
29.3 - 30.1	0.8	0.3	38
30.1 - 31.0	0.9	0.1	11
31.0 - 31.6	0.6	0.1	17
31.6 - 32.0	0.4	0.1	25
32.0 - 32.6	0.6	0.2	33
32.6 - 33.3	0.7	0.2	29
33.3 - 33.6	0.3	0.3	100
33.6 - 34.2	0.6	0.5	83
34.2 - 34.3	0.1	0.2	200
34.3 - 34.9	0.6	0.4	67
34.9 - 35.4	0.5	0.1	20
35.4 - 36.2	0.8	0.2	25
36.2 - 36.6	0.4	0.1	25
36.6 - 37.6	1.0	0.9	90
37.6 - 38.2	0.6	0.1	17
38.2 - 38.7	0.5	0.1	20
38.7 - 39.1	0.4	0.2	50
39.1 - 39.3	0.2	0.2	100
39.3 - 39.7	0.4	0.1	25
39.7 - 40.1	0.4	0.2	50
40.1 - 40.3	0.2	0.1	50
40.3 - 41.2	0.9	0.4	44
41.2 - 41.5	0.3	0.2	67
41.5 - 41.9	0.4	0.2	50
41.9 - 42.3	0.4	0.3	75
42.3 - 42.5	0.2	0.2	100
42.5 - 43.0	0.5	0.3	60
43.0 - 43.4	0.4	0.4	100
43.0 - 43.9	0.5	0.3	60
43.9 - 45.0	1.1	1.1	100
45.0 - 45.4	0.4	0.2	50

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 280/15

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
45.4 - 45.7	0.3	0.2	67
45.7 - 46.1	0.4	0.2	50
46.1 - 46.2	0.1	0.1	100
46.2 - 46.6	0.4	0.3	75
46.6 - 47.0	0.4	0.2	50
47.0 - 47.1	0.1	0.1	100
47.1 - 47.6	0.5	0.2	40
47.6 - 48.0	0.4	0.1	25
48.0 - 48.4	0.4	0.1	25
48.4 - 49.0	0.6	0.1	17
EOH 49.0 m			

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/15

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 - 8,0	bph	8		Chlor/cc			68	
8.0 - 11.5	FZ	>20		Rock Floor			0	
11.5 - 21.2	bph	10		Chlor/cc/sulph			58	
21.2 - 27.8	gh	3		cc/chlor			95	
27.8 - 49.0	FZ	>20		Chlor/cc/sulph			16	

FURTHER DATA & REMARKS

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

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 280/15

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 12101	16	17	1.0	1.0	<0.01	0.01		
02	21	22	"	"	0.59	0.01		
03	22	23	"	"	0.72	0.01		
04	23	24	"	"	0.78	0.01		
05	24	25	"	"	0.74	0.02		
06	25	26	"	"	0.30	0.01		
07	26	27	"	"	0.25	0.34		
08	27	28	"	"	<0.01	0.20		
09	36	37	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 280/15

0.0 - 8.0 m BIOTITE PYROXENE HORNFELS

Well interbedded formation of biotite and pyroxene hornfels, dark brown and khaki green respectively. Both are fine grained.

Bedding is thin, 1 cm or less, and is rarely disturbed.

Bedding is @ 50° to LCA @ 3.5 m
" 50 " 7.5 m

8.0 - 11.8 FAULT ZONE (DECLINE)

This fault zone initially (1 m) consists of broken biotite pyroxene hornfels generally 0.5 cm diameter occasionally up to 3 cm. A centre section of approximately 70 cm is poorly recemented gravel sized (0.5 - 5 mm, mostly 1 mm) fragments in a clayey matrix.

The remaining 1.1 m consists of loose fragments of disturbed biotite pyroxene hornfels from the other side of the fault.

11.8 - 21.2 BIOTITE PYROXENE HORNFELS

The first section of this unit from 11.8 - 13.8 m consists of biotite hornfels with thin (5 mm) discontinuous, contorted "Strings" of pyroxene hornfels.

Some brecciation has occured, but is now rehealed with calcite filled fractures.

A small crystal of scheelite occurs @ 11.9 m in a strip of pyroxene hornfels.

From 13.8 - 17.0 m the unit is mostly a green slightly coarse grained pyroxene hornfels which appears to have suffered some brittle deformation.

The remainder of the unit is black fine grained biotite hornfels. Bedding is present.

Bedding is @ 45° to LCA @ 17.4 m
36° 20.0 m

21.2 - 27.6 GARNET SKARN

Well mineralised, massive garnet skarn, generally structureless apart from a dominance of calcite veins at either ends.

Considerable molybdenite can be seen between 26.6 and 27 m.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 280/15

27.6 - 46.1 FRACTURED BIOTITE PYROXENE HORNFELS

This section of core is either broken and loose, or shows extensive brecciation with subsequent rehealing.

27.6 - 36.6 Mostly loose and broken biotite hornfels, occasional pieces of core 15 cm, most fragments about 1 cm
36.6 - 37.6 Brecciated and rehealed core with calcite veining. Rock type is garnet pyroxene hornfels poorly mineralised
37.6 - 43.0 Loose, broken core, biotite hornfels mostly 1 cm size.
43.0 - 45.0 Brecciated and rehealed core, rock type is garnet pyroxene hornfels some grossular.
45.0 - 46.1 Loose and broken biotite pyroxene hornfels, 1 cm size.

46.1 - 49.0 QUARTZITES

Pale grey, loose, broken quartzites, sulphides on joint surface.

EOH 49.0 m

NB Driller reported inflow of salty water @ 32 m.

File

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 280/14A

PLANNING

Proposer: G. J. Bujtor **Depth:** 80 m

Location: -150 m R.L. Drill Drive

Purpose of hole: Cover hole for extensions to -150 m R.L. Drill Drive.

Co-ordinates: 220280 **E** 563951 **N**

Inclination: Horizontal **Magnetic:**

Bearing: 90° **Grid** **Target depth:** 80.0 m

Target: **E** **N**

Approved by: **Date:**

SURVEY

Survey Co-ords: **E** **N**

Survey bearing 91°40' **Grid** **Magnetic:**

Surveyed in by: **Date:**

Actual Co-ords: 220284.98 **E** 563950.37 **N**

R.L. of collar: W-144.54 **Inclination of hole:** -1°00'

Picked up by: R.H. **Date:** 1-5-78

SUMMARY

Logged by: A. Younger

Results: No Assays. Water flow 1.47 l/s at 37.5 m.

DRILLING

Driller/Contractor: A.D.D.

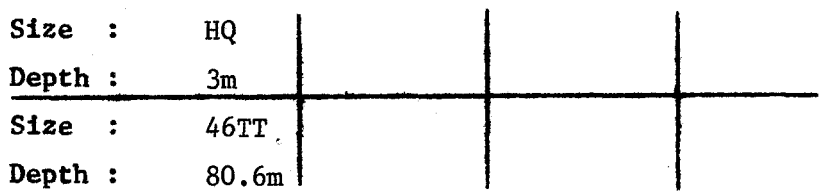
Date Commenced: 14-4-78 **Date Terminated:** 24-4-78

Casing: **Size :** HQ

Depth : 3m

Core: **Size :** 46TT

Depth : 80.6m



Wedge Runoff:

Wedge Placed: Nil **Depth:**

Proposed by: **Approved by:**

Reason:

Extension:

Final depth: 80.6 m

Reason for termination: 5 m past the end of proposed drive extension.

Condition of hole on completion:

Casing: 3 m

Cemented:

Bore hole survey: At 41.0 m, 80.6 m by L. Denby

Water: 1.47 litres / sec at 37.5 m. approx 40% sea water.

Comments on drilling conditions: Bad ground 20-25 and 70-78 m.

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/14A

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.2	2.2	2.1	95
2.2 - 3.2	1.0	0.7	70
3.2 - 4.4	1.2	1.3	108
4.4 - 4.9	0.5	0.3	60
4.9 - 5.9	1.0	1.0	100
5.9 - 6.9	1.0	1.1	110
6.9 - 7.5	0.6	0.55	91
7.5 - 8.4	0.9	1.0	90
8.4 - 9.2	0.8	0.75	93
9.2 - 9.8	0.6	0.7	116
9.8 - 10.2	0.4	0.25	62
10.2 - 10.5	0.3	0.5	166
10.5 - 10.6	0.1	0.05	50
10.6 - 11.0	0.4	0.4	100
11.0 - 11.4	0.4	0.5	125
11.4 - 12.1	0.7	0.75	107
12.1 - 13.2	1.1	1.0	90
13.2 - 14.3	1.1	1.1	100
14.3 - 16.4	2.1	2.2	104
16.4 - 18.0	1.6	1.9	118
18.0 - 20.6	2.5	2.5	96
20.6 - 20.7	0.1	0.05	50
20.7 - 20.9	0.2	0.2	100
20.9 - 21.0	0.1	0.1	100
21.0 - 21.5	0.5	0.5	100
21.5 - 23.0	1.5	1.7	113
23,0 - 25.0	2.0	1.9	95
25.0 - 27.9	2.9	2.9	100
27.9 - 29.5	1.6	1.8	112
29.5 - 31.7	2.2	2.4	109
31.7 - 33.0	1.3	1.2	92
33.0 - 35.4	2.4	2.3	95
35.4 - 37.5	2.1	2.55	121
37.5 - 40.1	2.6	2.45	94
40.1 - 42.6	2.5	2.15	86
42.6 - 44.5	1.9	1.95	102
44.5 - 45.4	0.9	0.9	100
45.4 - 46.5	1.1	1.25	113
46.5 - 49.0	2.5	2.3	92
49.0 - 51.0	2.0	1.95	97
51.0 - 53.0	2.0	2.0	100
53.0 - 53.6	0.6	0.6	100
53.6 - 55.2	1.6	1.7	106
55.2 - 56.0	0.8	0.8	100
56.0 - 57.9	1.9	2.0	105
57.9 - 58.6	0.7	0.8	114
58.6 - 59.3	0.7	0.7	100
59.3 - 60.0	0.7	0.8	114

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/14A

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
60.0 - 60.5	0.5	0.45	90
60.5 - 61.0	0.5	0.5	100
61.0 - 62.3	1.3	1.25	96
62.3 - 63.5	1.2	1.4	116
63.5 - 64.3	0.8	0.9	112
64.3 - 65.3	1.0	0.9	90
65.3 - 65.4	0.1	0.2	200
65.4 - 66.0	0.6	0.55	91
66.0 - 66.3	0.3	0.45	150
66.3 - 67.1	0.8	0.75	93
67.1 - 67.4	0.3	0.25	83
67.4 - 68.3	0.9	0.8	88
68.3 - 69.0	0.7	0.5	71
69.0 - 69.9	0.9	1.0	111
69.9 - 71.1	1.2	1.5	125
71.1 - 72.0	0.9	0.65	72
72.0 - 72.3	0.3	0.3	100
72.3 - 72.7	0.4	0.4	100
72.7 - 73.0	0.3	0.35	116
73.0 - 73.5	0.5	0.4	80
73.5 - 74.0	0.5	0.4	80
74.0 - 75.5	1.5	1.5	100
75.5 - 76.2	0.6	0.65	108
76.2 - 76.9	0.7	0.45	64
76.9 - 77.5	0.6	0.6	100
77.5 - 78.1	0.6	0.55	91
78.1 - 79.0	0.9	1.0	111
79.0 - 80.6	1.6	1.5	93
			99.89
		Average Recovery =	99%

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 280/14A

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 - 20.2	Bh	14	45 -65	Clay,Chl,Minor Sulph.	30°	100	41.9	
20.2 - 24.95	DECLINE FAULT ZONE							
	Bh	50+	0-90	Clay,Chl		93	16.8	Reconsolidated Breccia 0.45m ∴ RQD = 7.4
24.95 - 58.6	Upper Volcan. Major Water Flow of 1.47 litres / sec at 37.5 m	10	45°-80°	Carb,clay,Chl		100	52.7	Reconsolidated Breccia 3.3m ∴ RQD = 42.9
58.6 - 80.6	Upper Volcan.	20	50°-60°	Clay,Chl.		100	19.77	Reconsolidated Breccia 0.75 m ∴ RQD = 16.4

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) += $\frac{\text{Length Core 10 cm}}{\text{Length Drilled}}$ %
3. Core size. 46TT

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/14A

0.0 - 20.2 Biotite Hornfels

Grey - brown fine grained biotite hornfels, The unit shows traces of relic bedding at 7.2 m which has an angle of 30° to the LCA.

The core is highly jointed with a f/m of about 14 between angles of 45°-65° to the LCA. Badly fractured zones occur:-

1. 4 - 1.5 m
5. 8 - 5.9 m
6. 7 7.0 m
9. 1 - 9.3 m
10.45 - 10.65m
11.1 - 11.4 m
12.0 - 12.2 m
13.2 - 13.5 m
15.45 - 15.95m
16.2 - 16.5 m

Fracture fill is mainly clay and chlorite with minor sulphides.

The fracture zones are probably subsidary faults related to the Decline Fault.

20.2 - 24.95 Decline Fault Zone - Biotite Hornfels

A major fault zone within the Biotite hornfels, which have been highly fragmented and sheared; the resultant f/m rate is in excess of 50, at all angles to the LCA.

The fracture fills are mainly clay or chlorite; which have in places acted as a matrix to reconsolidate the fractured material to form breccias.

24.95 - 58.6 Upper Volcanics 1

Dark grey green unit with much distinctive spotting seems to be of two types; a primary spotting due to ?hornblende or possibly ?olivine phenocrysts and a secondary or metamorphic spotting probably due to cordierite or actinolite growths.

The start of the unit is highly brecciated and consolidated by a clay - chlorite matrix. After the first metre calcite becomes the dominant breccia matrix and fracture fill.

The breccia are quite common and the carbonate has many voids eg; 26.43-26.48 m, 40.66 - 41.0 m,

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/14A

Fractures / metre are about 10 generally at 45° - 80° to the LCA.

Major fracture zones occur;

29.2 - 29.5 m,
31.5 - 31.7 m,
42.5 - 42.6 m,
44.2 - 44.4 m,
52.3 - 53.4 m,
54.9 - 55.0 m,

Fracture fill is mainly carbonate with clay and chlorite becoming dominant by 58.6 m.

A major water inflow of 1.47 litres / sec occurs at 37.5 m.

58.6 - 80.6 Upper Volcanics 11

This is the same petrographic unit as before but has been separated because of its more highly fractured nature and the almost complete lack of carbonate infill compared to the previous unit. F/m are about 20, at about 50°-60° to the LCA. Clay and chlorite are the main fracture fills.

Major fractures and / or possible faults occur:-

58.7 - 58.9 m,
59.1 - 59.7 m,
60.1 - 60.5 m,
60.7 - 61.2 m,
61.7 - 62.3 m,
63.0 - 63.2 m,
66.2 - 67.7 m,
68.8 - 69.05m,
69.95- 74.1 m,
75.5 - 76.9 m,
77.4 - 77.7 m,

There is much clay and chlorite pug with weathering of minerals within the volcanics eg; 78.25 m.

EOH

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 280/14

PLANNING

Proposer: G. J. Bujtor — Depth: 10/4/78

Location: -150 m. R.L. Drill Drive

Purpose of hole: Cover hole for extensions to -150 m. R.L. Drill Drive

Co-ordinates: 220280E E 563950 N

Inclination: Horizontal — Magnetic:

Bearing: 90° Grid — ~~Target~~ depth: 85.0 m

Target: E N

Approved by: Date:

SURVEY

Survey Co-ords: E N

Survey bearing Grid — Magnetic:

Surveyed in by: Date:

Actual Co-ords: 220285.12 E 563949.88 N

R.L. of collar: W-144.48 — Inclination of hole:

Picked up by: R.J.H. — Date: 10-5-78

SUMMARY

Logged by: A. Younger

Results: Abandoned due to excessive water flow refer to DDH D 280/14a

DRILLING

Driller/Contractor: A.D.D.

Date Commenced: 11-4-78 — Date Terminated: 13-4-78

Casing:	Size :	HQ
	Depth :	3m
Core:	Size :	46TT
	Depth :	38.1m

Wedge Runoff:

Wedge Placed: Nil — Depth:

Proposed by: — Approved by:

Reason:

Extension:

Final depth: 38.1 m

Reason for termination: Abandoned, water flow too strong.

Condition of hole on completion:

Casing: Collar pipe, tap.

Cemented:

Bore hole survey: Not surveyed

Water: At 30.1 m and 36.0 m, total flow 1.61 litres/sec.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/14

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.5	2.5	2.3	92
2.5 - 3.5	1.0	0.9	90
3.5 - 4.4	0.9	1.0	111
4.4 - 6.1	1.7	1.65	97
6.1 - 8.2	2.1	2.1	100
8.2 - 9.4	1.2	1.2	100
9.4 - 10.1	0.7	0.7	100
10.1 - 10.6	0.5	0.5	100
10.6 - 10.8	0.2	0.2	100
10.8 - 11.0	0.2	0.2	100
11.0 - 11.1	0.1	0.1	100
11.1 - 11.5	0.4	0.4	100
11.5 - 12.5	1.0	1.0	100
12.5 - 13.4	0.9	0.9	100
13.4 - 14.6	1.2	1.3	108
14.6 - 17.6	3.0	3.0	100
17.6 - 19.1	1.5	1.5	100
19.1 - 20.0	0.9	1.0	111
20.0 - 20.5	0.5	0.5	100
20.5 - 20.8	0.3	0.3	100
20.8 - 21.5	0.7	0.7	100
21.5 - 21.7	0.2	0.2	100
21.7 - 22.4	0.7	0.6	85
22.4 - 24.1	1.7	1.7	100
24.1 - 25.7	1.6	1.5	93
25.7 - 27.5	1.8	1.75	97
27.5 - 30.1	2.6	2.6	100
30.1 - 33.1	3.0	2.9	96
33.1 - 36.0	2.9	2.90	100
36.0 - 37.3	1.3	1.5	115
37.3 - 38.1	0.8	0.8	100
			———
			99.83%
		Recovery	=100%

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 280/14

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 - 23.4	Bh	20	40-60	clay, chl	45°	100	50	
20.5 - 23.4	DECLINE FAULT ZONE							
23.4 - 38.1	Upper Volcanics	10	40-50	carb, clay	-	100	57	

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) += $\frac{\text{Length Core 10 cm}}{\text{Length Drilled}}$ %
3. Core size.

46TT

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/14

0.0 - 23.4 **BIOTITE HORNFELS**

Biotite hornfels with very minor pyroxene zones and heavily fractured throughout.

Bedding not well developed generally, at 14.6 m is at 45° to the LCA.

F/M generally about 20 at 40°-60° to LCA.

Two major fault zones occur:

10.1 - 11.5 m, and
20.5 - 23.4 m.

The later is the Decline Fault zone and 10.1 - 11.5 m is probably a fault associated with it.

23.4 - 38.1 m **UPPER VOLCANICS**

Dark grey green porphyritic volcanics with much carbonate infill of breccias and fractures.

Phenocrysts probably hornblende or olivine.

F/M are about 10 at 40°-50° to the LCA.

Two water inflows occurred; at 30.1 m and 36.0 m giving a total flow of 1.61 litres/sec.

E.O.H.

GEOPEKO DIVISION - King Island

LOG OF D.D.H. No. D 280/13

PLANNING

Proposer: G. J. Bujtor Depth: .....

Location: -150 m. R.L. Drill Drive

.....

Purpose of Hole: To define C lens south of the Swan Fault.

Co-ords: 220280 E 563950 N

Inclination: -54°

Bearing: 180° °Grid °Mag

Target: ..... E ..... N

Depth: .....

Approved by: ..... Date: .....

SURVEY

Survey Co-ords: ..... E ..... N

Surveyed Bearing: 179°.30' °Grid °Mag

Surveyed in by: ..... Date .....

Actual Co-ords: 220281.42 E 563948.61 N

R.L. of Collar: R-146.2

Inclination of Hole: -53° 40'

Picked up By: R.J.H. Date 1-3-78

SUMMARY

Logged By: G.J. Bujtor Date .....

Results: 179 - 183 m, 4 m @ 1.14% WO_3

.....

.....

.....

DRILLING

Date Commenced: 21-3-78 Date Terminated 3-4-78

Driller/Contractor A.D.D.

Casing:	Size :	BQ			
	Depth :	1m			
Core:	Size :	46TT			
	Depth :	200 m			

Wedge Runoff:

Wedge placed: Depth

Proposed by: Approved by

Reason

Extension: Nil

Final Depth: 200.0

Reason for Termination: Successfully intersected Southern Orebody & Granit-

Condition of hole on completion:

Casing;

Cemented:

Bore hole survey: Surveyed to 132.0 m Extrapolated to 200 m.

Water: Normal

Comments on Drilling Conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/13

Survey method: Singleshot Camera
Final depth: 200 m
Casing depth: 1m

Depth surveyed to: 132.0
Date surveyed 4-4-78
Surveyed by: L. 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	36°	-54	2.43	1.73	0.31
27	179	169	35.5	-54.5	21.97	15.41	2.97
48	179	169	35.25	-54.75	39.12	27.31	5.28
69	179	169	34.25	-55.75	56.48	38.91	7.54
90	179	169	34.25	-55.75	73.84	50.51	9.80
111	180	170	34.0	-56.0	91.25	62.07	11.84
132	178	168	33.75	-56.25	108.71	73.48	14.27
152	178	168	33.75	-56.25	125.34	84.35	16.58
172	178	168	33.75	-56.25	141.92	95.22	18.89
192	178	168	33.75	-56.25	158.60	106.09	21.20
200	178	168	33.75	-56.25	165.25	110.43	22.12

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/13

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.2	3.2	3.2	100
3.2 - 6.2	3.0	3.0	100
6.2 - 9.2	3.0	3.0	100
9.2 - 12.2	3.0	3.0	100
12.5 - 15.2	3.0	3.0	100
15.2 - 18.2	3.0	3.0	100
18.2 - 21.2	3.0	3.0	100
21.2 - 24.2	3.0	3.0	100
24.2 - 27.2	3.0	3.0	100
27.2 - 27.6	0.4	0.55	138
27.6 - 28.6	1.0	?1.0	100
28.6 - 30.4	1.8	?1.8	100
30.4 - 20.9	0.5	0.5	100
30.9 - 31.9	1.0	0.85	85
31.9 - 32.5	0.6	0.8	133
32.5 - 34.2	1.7	1.5	88
34.2 - 36.3	2.1	2.2	105
36.3 - 37.4	1.1	1.1	100
37.4 - 38.9	1.5	1.2	80
38.9 - 42.5	3.6	3.6	100
42.5 - 45.5	3.0	3.0	100
45.5 - 46.5	0.7	0.95	136
46.5 - 47.5	1.3	1.3	100
47.5 - 48.0	0.5	0.5	100
48.0 - 49.5	1.5	1.5	100
49.5 - 51.2	1.7	1.5	88
51.2 - 51.9	0.7	0.7	100
51.9 - 52.6	0.7	0.8	114
52.6 - 56.3	3.7	3.7	100
56.3 - 59.3	3.0	3.0	100
59.3 - 60.5	1.2	1.2	100
60.5 - 63.3	2.8	2.8	100
63.3 - 66.4	3.1	3.1	100
66.4 - 67.5	1.1	?1.1	100
67.5 - 69.1	1.6	?1.6	100
69.1 - 71.7	2.6	?2.6	100
71.7 - 74.7	3.0	3.0	100
74.7 - 77.0	2.3	2.4	104
77.0 - 78.5	1.5	1.7	113
78.5 - 79.4	0.9	0.9	100
79.4 - 81.0	1.6	1.9	119
81.0 - 83.0	2.0	2.0	100
83.0 - 84.5	1.5	1.5	100
84.5 - 86.5	2.0	2.0	100
86.5 - 88.1	1.6	1.9	119
88.1 - 89.5	1.6	1.3	81
89.5 - 91.3	1.8	1.8	100

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/13

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
91.3 - 93.7	2.4	2.6	108
93.7 - 95.5	1.8	1.8	100
95.5 - 98.5	3.0	3.0	100
98.5 - 101.5	3.0	3.0	100
101.5 - 104.5	3.0	3.0	100
104.5 - 107.5	3.0	3.0	100
107.5 - 110.5	3.0	3.0	100
110.5 - 112.5	2.0	2.2	110
112.5 - 115.5	3.0	3.0	100
115.5 - 118.5	3.0	3.0	100
118.5 - 121.5	3.0	3.0	100
121.5 - 123.7	2.2	2.2.	100
123.7 - 126.7	3.0	3.0	100
126.7 - 129.7	3.0	3.0	100
129.7 - 132.7	3.0	3.0	100
132.7 - 135.7	3.0	3.0	100
135.7 - 138.7	3.0	3.0	100
138.7 - 141.7	3.0	3.0	100
141.7 - 144.7	3.0	3.0	100
144.7 - 147.7	3.0	3.0	100
144.7 - 150.7	3.0	3.0	100
150.7 - 152.2	1.5	1.5	100
152.2 - 153.5	1.3	1.3	100
153.5 - 154.0	0.5	0.7	140
154.0 - 156.7	2.7	2.6	96
156.7 - 160.0	3.3	?3.3	100 (broken)
160.0 - 161.2	1.2	?1.2	100 (broken)
161.2 - 164.0	2.8	2.6	93
164.0 - 165.7	1.7	1.7	100
165.7 - 168.7	3.0	3.0	100
168.7 - 169.4	0.7	0.8	114
169.4 - 173.4	3.0	3.0	100
173.4 - 176.4	3.0	3.0	100
176.4 - 178.4	2.0	3.0	100
178.4 - 180.0	1.6	2.35	147
180.0 - 183.7	3.7	2.65	72°
183.7 - 185.7	2.0	2.0	100
185.7 - 188.7	3.0	3.0	100
188.7 - 191.2	2.5	2.2	88
191.2 - 194.2	3.0	3.0	100
194.2 - 197.0	2.8	2.8	100
197.0 - 200	3.0	3.0	100
EOH 200m			

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/13

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 7264	99	100	1.0	1.0	<0.01	<0.01		
65	100	101	"	"	0.20	<0.01		
66	101	102	"	"	0.11	<0.01		
67	102	103	"	"	0.29	<0.01		
68	103	104	"	"	<0.01	<0.01		
69	104	105	"	"	0.25	0.01		
70	105	106	"	"	0.24	0.04		
71	106	107	"	"	0.29	0.01		
72	107	108	"	"	<0.01	<0.01		
73	108	109	"	"	<0.01	<0.01		
74	109	110	"	"	0.07	<0.01		
75	110	111	"	"	<0.01	<0.01		
			"	"				
76	118	119	"	"	0.06	0.03		
77	119	120	"	"	0.31	0.01		
78	120	121	"	"	0.10	<0.01		
79	121	122	"	"	0.25	0.01		
80	122	123	"	"	0.04	<0.01		
81	123	124	"	"	<0.01	<0.01		
D 7301	162	163	"	"	0.01	<0.01		
22	163	164	"	"	0.01	0.07		
23	164	165	"	"	<0.01	<0.01		
24	165	166	"	"	<0.01	<0.01		
25	166	167	"	"	0.02	<0.01		
26	167	168	"	"	0.07	<0.01		
27	168	169	"	"	0.01	<0.01		
28	169	170	"	"	<0.01	0.01		
29	170	171	"	"	0.03	0.01		
30	171	172	"	"	0.07	<0.01		
31	172	173	"	"	0.06	0.01		
32	173	174	"	"	0.02	<0.01		
33	174	175	"	"	0.15	0.07		
34	175	176	"	"	0.25	0.03		
35	176	177	"	"	0.22	0.03		
36	177	178	"	"	0.28	0.02		
37	178	179	"	"	0.02	0.01		
38	179	180	"	"	0.35	0.05		↑
39	180	181	"	"	0.98	0.06	4m @ 1.14 % WO_3	
40	181	182	"	"	1.72	0.08		
41	182	183	"	"	1.52	0.05		↓

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/13

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 7342	183	184	"	"	0.13	0.01		
43	184	185	"	"	<0.01	<0.01		
44	185	186	"	"	<0.01	<0.01		
45	186	187	"	"	<0.01	<0.01		
46	187	188	"	"	0.03	<0.01		
47	188	189	"	"	<0.01	<0.01		
48	189	190	"	"	0.1	<0.01		
49	190	191	"	"	<0.01	<0.01		
50	191	192	"	"	<0.01	<0.01		
51	192	193	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 280/13

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 - 27.45	Bh	6		Clay,chl,cal,sulp		100	82	S_1 35 - 42° to LCA
27.45 - 27.60	MAJOR FAULT - SWAN - BRECCIATED Chloritic, clayey, pug.						Ø	
27.60 - 46.5	Bh	9		Clay,chl,sulp,carb		99	46	
46.5 - 66.2	Bh	12		clay,chl,carb,sulp		100	45	
66.2 - 70.4	MAJOR FAULT						Ø	
70.4 - 83.0	Bh	10		Clay,chl,carb,sulp		100	44	
83.0 - 93.7	Bh	8 - 10		Chl,carb,clay,sulp		100	55	
93.7 - 102.5	Ph/GPH	6 - 8		Clay,carb,chl		100	76	
102.5 - 127.1	Ch	7 - 8		Clay,carb,chl	So : 40°	100	67	
127.1 - 151.85	Bh	5 - 6		Clay, chl,carb	Smb : 25-28°	100	80	
151.85- 161.5	Bh	8		Clay,carb,chl		98	35	Broken
161.5 - 174.3	PGH	8		Chl,clay,carb		98	79	
174.3 - 183.3	GH	5		Clay,chl		96	74	
183.3 - 192.0	hybrid	7		Chl,clay	So: 51°	95	75	
192.0 - 200	Granite	6 - 8		Clay?		100	64	

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) += $\frac{\text{Length Core 10 cm}}{\text{Length Drilled}}$ %
3. Core size. 46TT

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/13

0.00 - 27.45 **BIOTITE HORNFELS - DISTURBED**

Distinctive unit of sheared and disturbed biotite hornfels with abundant carbonate veins and stringers.

S_1 3.5^o to LCA at 13.65 m
S_1 4.2^o to LCA at 26.7 m

Probable fault at base of unit from 26.95 - 27.05 m

27.45 - ?27.60 **MAJOR FAULT - SWAN**

Badly broken, brecciated pug core. Broken core extends away from the fault, within the interval 26.85 -+ 30.4 m.

?27.60 - ?93.70 m **BIOTITE HORNFELS**

Fine grained grey to brown coloured biotite hornfels (+? actinolite hornfels) with abundant badly broken and fractured zones (faults). Carbonate veining is very common throughout particularly from 45 - 83 m.

Broken core associated with the above major fault extends from 27.60 - 30.4 m (and possibly further to 32.5 m. Badly broken core occurs from 37.3 - 38.9 m (fractured); 46.6 - 61.0 m (fracturing, breccia, carbonate veining - all badly broken with numerous faults); 66 - 72 m (fault pug, breccia, rubble, carbonate veining); 74.7 - 76.0 78.5 - 79.4 (fractured); 80 - 88.1 m (fractured, shearing, fault, carbonate veins); around 91.3 m (broken core).

Spotting occurs from 31 - 45 m, 61 - 63 m.

Major fault occurs within the interval 66.2 - 70.4 m where chlorite pug, breccia, and carbonate veining is dominant.

Towards the base of the unit, some pyroxene hornfels is present.

?93.70 - ?100.0 **PYROXENE HORNFELS**

Green pyroxene hornfels with minor brown biotite hornfels. Very minor patchy garnet (andradite) is also present. Rare scheelite present.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/13

100.0 - 127.10 m B LENS

Typical B lens consisting of the following subdivisions -

?100.0 - 102.50 m Garnet Pyroxene Hornfels
Green pyroxene hornfels with abundant andradite and grossular garnet. Some scheelite mineralization is present.

102.50 - 126.45 m Marble - Grey coloured well bedded marbles with some zones of patchy skarn and associated scheelite mineralization. The majority of the marble is barren.

Fracturing of the marbles is common and clay filled joints (with ? chlorite) are also present.

So 40° to LCA 105.85 m

126.45 - 127.10 m Pyroxene Hornfels
Green pyroxene hornfels with rare grossular garnet and scheelite mineralization.

127.10 - 161.50 m BIOTITE HORNFELS

Fine grained medium grained, brown coloured biotite hornfels with numerous sheared broken core zones represented by probable faults i.e. around 135.7 m (shearing and carbonate veining), around 137.7 m (shearing and chloritic pug), around 141.7 (broken and rubbly), around 148.25 m (broken and fractured) 141.05 (minor shear), 151.85 - 152.5 (shearing and calcite veins), around 153.5 m, around 156.7 (rubble), and 158.0 - 161.5 m (badly broken, rubbly clayey in part).

Minor metamorphic spotting occurs from 139 - 141 m, 14.9 - 151.85 m.

Minor pyroxene hornfels with associated grossular garnet veins occurs within the interval 134.9 - 136.35 m. Some andradite also appears to be present. Mineralization has most probably come up the two faults nearby / adjacent. Banding is approximately 25 - 28° to LCA.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/13

161.5 - 174.30 m — PYROXENE GARNET HORNFELS

Typical pyroxene garnet hornfels with calcite fragments up to 10 cm in size and invariably rimmed by grossular garnet. The pyroxene garnet hornfels becomes increasingly skarnetised and the contact with Upper C lens is very diffuse. Very minor scheelite mineralization is present.

Probable faulting occurs around 164.0 m (broken, clayey and calcite veined), around 165.7 m (sheared and rubbly), 168.3 - 168.6 m (rubbly, clayed and calcite veined)

174.30 - ?183.30 m — C LENS - GARNET SKARN

Coarse grained andradite garnet skarn with minor scheelite mineralization. The unit is non banded and probably Upper C lens.

A major fault or shear occurs from 178.20 - 178.8 with the core badly broken and almost pure clay (mylonitic garnet hornfels?).

A possible minor fault occurs around 183.2 m.

?183.30 - 192.0 m — HYBRID ROCK - SKARN / GRANITE / BANDED FOOTWALL BEDS

Intermixed hybrid rock type consisting of skarn, granite and minor pyroxene hornfels and banded footwall beds.

Probable banded footwall beds with bedded marble, pyroxene and grossular - andradite garnet occurs from 189.65 - ?191.0m. Bedding is approximately 51° to LCA.

Faulting appears to be present around 184.0 - 184.2 m (broken and rubbly), around 189 m and 191.0 - 191.1 m (fractured, clayey ?, rubbly).

Minor scheelite mineralization is present.

192.0 - 200.0 m — GRASSY GRANITE - ADAMELLITE

Coarse grained pinkish coloured adamellite with no visible scheelite mineralization present.

EOH 200.0 m

GEOLOGY - KING ISLAND SCHEELITE

CHECK ASSAY DATA

D.D.H. No. D 280 113

LAB.	K.I.S.		LAB.	K.I.S. CHECK		LAB.	AMDEL		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	
7265	0·2	<0·01	11691	0·27	<0·01	11692	0·37		11693	0·26		
7277	0·31	0·01	11694	0·40	<0·01	11695	0·44		11696	0·44		
7334	0·25	0·03	11697	0·27	0·12	11698	0·32		11699	0·32		

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 280/12

PLANNING

Proposer: G. J. Bujtor **Depth:** 190.0 m

Location: -150 m R.L. Drill Drive

Purpose of hole: To define B & C lens

Co-ordinates: 220280 **E** 563950 **N**

Inclination: -64.5° **Magnetic:**

Bearing: 180° **Grid** **Target depth:**

Target: **E** **N**

Approved by: **Date:**

SURVEY

Survey Co-ords: **E** **N**

Survey bearing 178°00 **Grid** **Magnetic:**

Surveyed in by: **Date:**

Actual Co-ords: 220281.42 **E** 563948.89 **N**

R.L. of collar: F-146.1 **Inclination of hole:** -63°20'

Picked up by: R.J.H. **Date:** 08.02.78

SUMMARY

Logged by: G. J. Bujtor

Results: B lens 76 - 78 m, 2 m @ 1.10% WO_3
C lens 160 - 170 m, 10 m @ 0.89% WO_3
(Southern Orebody)

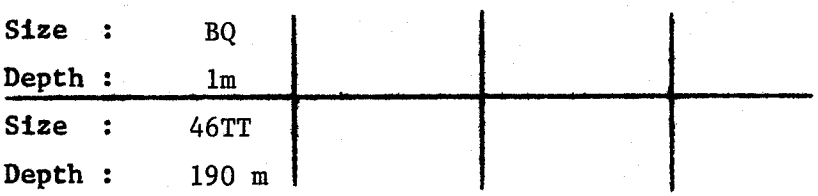
DRILLING

Driller/Contractor: A.D.D.

Date Commenced: 3-2-78 **Date Terminated:** 24-2-78

Casing: **Size :** BQ
Depth : 1m

Core: **Size :** 46TT
Depth : 190 m



Wedge Runoff:

Wedge Placed: **Depth:**

Proposed by: **Approved by:**

Reason:

Extension:

Final depth: 190.0 m

Reason for termination: Successfully tested C lens Southern Orebody

Condition of hole on completion:

Casing:

Cemented:

Bore hole survey: Surveyed to 132.0 m extrapolated to 190.0 m.

Water:

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/12

Survey method: Multishot
Final depth: 190.0 m
Casing depth: 1 m

Depth surveyed to: 132.0 m
Date surveyed to: 23-2-78
Surveyed by: L. Denby
Checked by: G. J. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		S	E
12	179	169	27.3	-62.7	10.67	5.39	1.05
24	179	169	27.3	-62.7	21.34	10.78	2.10
48	180	170	27.0	-63.0	42.72	21.52	4.00
66	181	171	27.0	-63.0	58.75	29.62	5.29
84	181	171	27.3	-62.7	74.76	37.75	6.53
99	182	172	27.0	-63.0	88.13	44.49	7.43
114	182	172	27.0	-63.0	101.50	51.24	8.31
126	182	172	27.0	-63.0	112.19	56.63	9.07
132	183	173	27.0	-63.0	117.53	59.33	9.41
152	183	173	27.0	-63.0	135.35	68.35	10.51
172	183	173	27.0	-63.0	153,17	77.37	11.61
190	183	173	27.0	-63.0	169.21	85.48	12.60

REMARKS: Hole projected 132 metres to 190 metres

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/12

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.3	3.3	3.3	100
3.3 - 5.0	1.7	1.7	100
5.0 - 6.5	1.5	1.5	100
6.5 - 9.5	3.0	3.0	100
9.5 - 12.5	3.0	3.0	100
12.5 - 15.5	3.0	3.0	100
15.5 - 18.0	2.5	?2.75	110
18.0 - 19.0	1.0	?1.0	100
19.0 - 20.0	1.0	?1.0	100
20.0 - 22.3	2.3	?2.3	100
22.3 - 25.5	2.2	?2.2	100
25.5 - 26.6	1.1	1.1	100
26.6 - 29.5	2.9	2.9	100
29.5 - 32.5	3.0	3.0	100
32.5 - 33.5	1.0	?1.0	100
33.5 - 34.5	0.7	?0.7	100
34.5 - 36.3	2.1	?2.3	110
36.3 - 39.5	3.2	?3.2	100
39.5 - 41.9	2.4	2.4	100
41.9 - 44.5	2.6	2.6	100
44.5 - 47.5	3.0	3.0	100
47.5 - 50.0	2.5	2.6	104
50.0 - 53.0	3.0	3.0	100
53.0 - 55.5	2.5	2.5	100
55.5 - 58.3	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 - 69.2	1.7	1.7	100
69.2 - 71.7	2.5	2.5	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 - 82.3	1.6	1.6	100
82.3 - 84.7	2.4	2.4	100
84.7 - 87.7	3.0	3.0	100
87.7 - 90.7	3.0	3.0	100
90.7 - 93.7	3.0	3.0	100
93.7 - 96.7	3.0	3.0	100
96.7 - 99.7	3.0	3.0	100
99.7 - 102.7	3.0	3.0	100
102.7 - 105.2	2.5	2.5	100
105.2 - 108.2	3.0	3.0	100
108.2 - 111.2	3.0	3.0	100
111.2 - 114.2	3.0	3.0	100
114.2 - 117.2	3.0	3.0	100
117.2 - 120.2	3.0	3.0	100
120.2 - 123.2	3.0	3.0	100

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/12

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
123.2 - 125.4	2.2	2.2	100
125.4 - 126.2	1.2	1.2	100
126.2 - 129.2	3.0	3.0	100
129.2 - 130.0	0.8	0.9	113
130.0 - 130.2	0.2	0.2	100
130.2 - 132.0	1.8	1.6	89
132.0 - 133.6	1.6	1.6	100
133.6 - 136.6	3.0	3.0	100
136.6 - 139.6	3.0	3.0	100
139.6 - 142.6	3.0	3.0	100
142.6 - 145.6	3.0	3.0	100
145.6 - 148.6	3.0	3.0	100
148.6 - 151.6	3.0	3.0	100
151.6 - 154.6	3.0	3.0	100
154.6 - 157.6	3.0	3.0	100
157.6 - 160.3	2.7	2.7	100
160.3 - 162.8	2.5	2.5	100
162.8 - 165.8	3.0	3.0	100
165.8 - 168.8	3.0	3.0	100
168.8 - 171.8	3.0	3.0	100
171.8 - 174.8	3.0	3.0	100
174.8 - 177.8	3.0	3.0	100
177.8 - 179.3	1.5	1.5	100
179.3 - 181.0	1.7	1.7	100
181.0 - 184.0	3.0	3.0	100
184.0 - 187.0	3.0	3.0	100
187.0 - 190.0	3.0	3.0	100

EOH 190.0 metres.

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/12

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 7163	71	72	1.0	1.0	<0.01	<0.01		
64	72	73	"	"	<0.01	<0.01		
65	73	74	"	"	0.42	0.01		
66	74	75	"	"	<0.01	<0.01		
67	75	76	"	"	<0.01	<0.01		
68	76	77	"	"	0.93	0.05	2m @	1.10% WO_3
69	77	78	"	"	1.27	0.13		
70	78	79	"	"	0.01	<0.01		
71	79	80	"	"	<0.01	<0.01		
72	80	81	"	"	<0.01	<0.01		
73	81	82	"	"	0.02	<0.01		
74	82	83	"	"	0.06	0.01		
D 7196	145	146	"	"	<0.01	<0.01		
97	146	147	"	"	<0.01	<0.01		
98	147	148	"	"	<0.01	<0.01		
99	148	149	"	"	0.01	<0.01		
200	149	150	"	"	0.07	<0.01		
201	150	151	"	"	0.06	<0.01		
2	151	152	"	"	<0.01	<0.01		
3	152	153	"	"	0.02	<0.01		
4	153	154	"	"	0.05	<0.01		
5	154	155	"	"	0.01	<0.01		
6	155	156	:	"	<0.01	<0.01		
7	156	157	"	"	0.23	0.01		
8	157	158	"	"	0.07	<0.01		
9	158	159	"	"	0.07	<0.01		
10	159	160	"	"	0.10	<0.01		
11	160	161	"	"	1.25	0.04		
12	161	162	"	"	1.75	0.05		
13	162	163	"	"	0.33	0.02		
14	163	164	"	"	0.47	0.03		
15	164	165	"	"	0.52	0.04	10m @	0.89% WO_3
16	165	166	"	"	0.68	0.03		
17	166	167	"	"	1.08	0.05		
18	167	168	"	"	0.50	0.03		
19	168	169	"	"	1.51	0.07		
20	169	170	"	"	0.85	0.03		
21	170	171	"	"	<0.01	<0.01		
22	171	172	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 280/12

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 - 17.6	Bh	6		Chl, clay		100	80	
17.6 - 26.6	Bh	Ø		Clay, chl, cal		100	Ø	Fault
26.6 - 32.5	Bh	5		Clay, chl, cal		100	68	
32.5 - 37.0	Bh	Ø		Clay, chl, cal		100	Ø	Fault
37.0 - 76.4	Bh	5 - 7		Clay, chl, cal		100	72	
76,4 - 102.35	Bilens	8 - 9		Clay, cal		100	64	
102.35 - 126.2	Bh	5		Clay, chl, cal		100	77	
126.2 - 137.5	Bh			Clay, carb, chl		100	56	
137.5 - 162.55	PGH	8		Clay, chl, carb		100	68	
162.55 - 164.7	Gh	5 - 6		Chl		100	81	
169.7 - 176.58	M/M	7 - 8		Chl, clay, carb.		100	80	
176.55 - 190.0	Granite	6 - 7		Clay?		100	80	

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) $= \frac{\text{Length Core 10 cm}}{\text{Length Drilled}}$ %
3. Core size.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/12

0.0 - 17.60 m — Biotite Hornfels/? Upper Volcanics

Fine grained, slightly disturbed biotite hornfels with possibly some minor greenish? Upper Volcanics. The sediments are well cleaved and more micaceaus than normal. The following cleavage (S_1) angles were noted.

S_1 30° to LCA at 3.5 metres
S_1 35° to LCA at 16.6 metres

17.60 - 26.60 m — Major Fault Zone - Biotite Hornfels

Badly broken, fractured, fragmental, brecciated fault zone with numerous white carbonate Veins. Chloritic clay pug is common. Recemented breccia is well developed from 18.0 - 20.0 m. Minor epidote with some grossular garnet occurs around 19.8 metres.

26.60 - 32.50 m — Biotite Hornfels

Fine grained coloured biotite hornfels/? actinolite hornfels with rare patches of green pyroxene hornfels/ grossular garnet (ie around 30 m). The core is relatively unbroken and fractured.

32.50 - 37.00 m — Fault Zone - Biotite Hornfels

Badly broken, fractured, brecciated and heavily calcite veined fault zone.

37.00 - 74.70 m — Biotite Hornfels

Fine grained light grey to dark brown coloured biotite hornfels with numerous pyroxene - actinolite alteration zones and patches.

The core from 37.0 - 43.0 m is somewhat broken adjacent to the fault zone above.

A possible fault or shear zone is present around 58.5m.

From 72.0 - 74.7 m, recrystallised biotite hornfels.is intermixed with some pyroxene hornfels and minor grossular garnet. It may form part of B lens but biotite hornfels is dominant

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/12

74.7 - 102.35 m — B lens

74.7 - 77.55 m — Garnet Skarn - Pyroxene Hornfels

Intermixed unit of pyroxene hornfels (dominantly 74.7 - 76.4 m) and garnet skarn (76.4 - 77.55 m). The skarn consists of both andradite and grossular garnet.

77.55 - 101.2 m — Marble

Barren, disturbed and well bedded grey to white coloured marble. Numerous soft, cream to reddish ironstained coloured clayey zone (?faults /? shears ?weathered zones) occur from 87.45 - 87.9 m, around 93.7 m, and around 96.7 m.

The following bedding angles were noted -

So 30^{o} to LCA at 80.8 m
So 46^{o} to LCA at 88.7 m
So 38^{o} to LCA at 97.15 m

Interbeds of dark? silty / ? carbonaceous material is common. The core is in general more broken than normal for B lens.

101.2 - 102.35 m — Pyroxene Hornfels

Greenish to light grey coloured, fine grained pyroxene hornfels some with minor grossular garnet and small patches of 'unreacted' biotite hornfels.

102.35 - 137.50 m — Biotite Hornfels

Fine grained dark brown coloured biotite hornfels with numerous pyroxene hornfels / grossular garnet alteration veins and patches (?solution channelways).

Badly broken white clayey material (?probable fault occurs from 108.3 - 108.5 m, 111.2 - 111.4 m, 114.2, around 117.2 m (pyroxene, ?grossularite, ?quartz), around 120.2 (pyroxene and ?quartz), 123.2 m (pyroxene and ? quartz) and 125.4 / 126.2 m (?quartz, ?aplite).

Rubbly, broken and fractured core occurs from 128.6 - 129.55 m, 129.9 - 130.5 m, around 132m, around 133.6 m, 134.6 - 136.7.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/12

All the core from 128.5 - 137.5 m is bad ground with numerous possible faults. Carbonate and quartz veining is common.

Granite (adamelite) / aplite dykes occur from 128.9 - 129.2 m, around 130 m, 133.85 - 134.6 , 135.2 - 135.4 m.

Contact with pgh below is sheared and broken.

137.5 - 162.55 m Pyroxene Garnet Hornfels

Greenish to light brown coloured pyroxene - garnet hornfels with many irregularly shaped marble fragments and numerous chlorite - quartz masses (or ? fragments).

The top of the unit from 137.5 - 140.0 m is broken and fractured.

Part of the pgh has been mineralized especially the base of the unit from 156.6 - 162.55 m. Here the unit appears rather chloritic rich, and contains abundant andradite garnet with some chlorite - quartz masses (?fragments). This could possibly from part of Upper C lens but appears to containtoo much chlorite.

Broken core occurs from around 145.6 m, around 148.6 m (?sandy aplite vein), around 151.6 m (aplite) and around 154.6 m (sandy aplite).

Numerous small aplite veins and dykes are present.

162.55 - 169.70 m Upper C lens - Garnet Skarn

Coarse grained Upper C lens garnet skarn (andradite) with some quartz veins and masses. Good fine disseminated scheelite occurs throughout.

169.70 - ?176.55 m Marble

Intermixed unit of dominantly marble and pyroxene hornfel and grossualr garnet. No visible scheelite mineralization is present. The base of the unit grades into assimilated granite / adamellite.

176.55 - 190.00 m Granite / adamellite

Massive coarse and fine grained, pink Grassy Granite / adamellite. Minor pyroxene hornfels - biotite hornfels occurs from 185.8 - 187.75 m. (probable chilled fine grained aplite margins). The granite is broken and fractured at the top of the unit from 176.55 - 181.50 m.

No visible scheelite present.

EOH 190.00 metres.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 280/11

PLANNING

Proposer: G.J. Bujtor **Depth:** 13.1.78

Location: -150 m R.L.

Purpose of hole: To define C lens south of Swan Fault.

Co-ordinates: 220280 **E** 563950 **N**

Inclination: -76° **Magnetic:**

Bearing: **Grid** **Target depth:** 144.50 m

Target: **E** **N**

Approved by: **Date:**

SURVEY

Survey Co-ords: **E** **N**

Survey bearing 177°10' **Grid** **Magnetic:**

Surveyed in by: **Date:**

Actual Co-ords: 220281.42E 563949.19 **N**

R.L. of collar: F-146.2 **Inclination of hole:** -76°30'

Picked up by: R.J.H. **Date:** 190178

SUMMARY

Logged by: G. J. Bujtor

Results: Mineralized PGH
135 - 136 m 1m @ 0.47% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date Commenced: 13-1-78 **Date Terminated:** 2-2-78

Casing: **Size :** B
Depth : 1.0m

Core: **Size :** 46TT
Depth : 144.5

Wedge Runoff: Nil

Wedge Placed: **Depth:**

Proposed by: **Approved by:**

Reason:

Extension: Nil
Final depth: 144.50 m
Reason for termination: Successfully tested C lens and finished in adamellite / granite.
Condition of hole on completion:
Casing:
Cemented:
Bore hole survey: Surveyed to 124.0 metres.
Water: Normal
Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/11

Survey method: Eastman Singleshot
Final depth: 144.5m
Casing depth: 1.0m

Depth surveyed to: 124.0m
Date surveyed to: 3-2-78
Surveyed by: L. Denby
Checked by: G. J. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		S	E
19	178	168	14	-75	18.44	4.50	0.96
40	179	169	14	-76	38.82	9.49	1.93
61	184	174	14.5	-75.5	59.17	14.63	2.47
82	185	175	14.5	-75.5	79.50	19.87	2.93
103	186	176	14.75	-75.25	99.81	25.21	3.30
124	189	179	14.75	-75.25	120.12	30.56	3.39
144.5	189	179	14.75	-75.25	139.94	35.78	3.48

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/11

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.8	3.8	3.8	100
3.8 - 5.7	1.9	1.9	100
5.7 - 8.5	2.8	2.8	100
8.5 - 10.5	2.0	1.9	95
10.5 - 13.5	3.0	3.0	100
13.5 - 15.7	2.2	2.2	100
15.7 - 18.7	3.0	3.0	100
18.7 - 24.5	5.8	6.5	112
24.5 - 31.5	7.0	7.0	100
31.5 - 34.5	3.0	3.0	100
34.5 - 36.0	1.5	1.5	100
36.0 - 37.5	1.5	1.55	103
37.5 - 40.5	3.0	3.0	100
40.5 - 43.5	3.0	3.0	100
43.5 - 45.0	1.5	1.75	117
45.0 - 46.5	1.5	1.6	107
46.5 - 48.5	2.0	2.0	100
48.5 - 51.5	3.0	3.0	100
51.5 - 54.5	3.0	3.0	100
54.5 - 57.5	3.0	3.0	100
57.5 - 60.5	3.0	3.0	100
60.5 - 63.5	3.0	3.0	100
119.6 - 121.1	1.5	1.5	100
121.1 - 124.0	2.9	2.9	100
124.0 - 127.0	3.0	3.0	100
127.0 - 130.5	3.5	4.0	114
130.5 - 131.6	1.1	1.1	100
131.6 - 133.0	1.4	1.4	100
133.0 - 136.0	3.0	3.0	100
136.0 - 139.1	3.1	3.1	100
139.1 - 142.1	3.0	3.0	100
142.1 - 144.5	2.4	2.4	100
EOH 144.5			

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/11

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 7034	57	58	1.0	1.0	<0.01	<0.01		
35	58	59	"	"	0.11	<0.01		
36	59	60	"	"	0.01	<0.01		
D 7037	70	71	"	"	<0.01	0.01		
38	71	72	"	"	10.1	0.47		
39	72	73	"	"	0.05	<0.01		
40	73	74	"	"	0.02	<0.01		
41	74	75	"	"	0.08	<0.01		
42	75	76	"	"	0.26	0.01		
43	76	77	"	"	0.03	0.03		
44	77	78	"	"	0.05	<0.01		
D 7045	131	132	"	"	<0.01	<0.01		
46	132	133	"	"	<0.01	<0.01		
47	133	134	"	"	0.16	0.01		
48	134	135	"	"	0.29	0.01		
49	135	136	"	"	0.47	0.01		
50	136	137	"	"	0.20	0.01		
51	137	138	"	"	<0.01	<0.01		
52	138	139	"	"	<0.01	<0.01		
53	139	140	"	"	0.16	0.02		
54	140	141	"	"	0.02	<0.01		
55	141	142	"	"	<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. D 280/11

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 - 21.6	Bh/?Vol	8		clay/chl		99	63	faulting & shears common
21.6 - 60.5	Bh	6-7		clay/carb/ chl		100	66	
60.5 - 70.85	Bh	6-7		clay/carb/ chl		100	77	
70.85 - 91.85	Ch/Ph	6-7		clay/chl/ carb		100	70	
91.85 -133.0	Bh	8-9		clay/chl/ carb		100	66	
133.0 - 141.35	Pgh/Ph	6		clay/chl/ carb		100	76	
141.35 - 144.5	Gr/Ad	7				100	43	
EOH 144.5	m							

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/11

0.0 - ?21.60 ?UPPER VOLCANICS / BIOTITE HORNFELS

Intermixed and highly disturbed, fractured sequence of ?Upper volcanics and biotite (+actinolite) hornfels. Faulting is very common with many breccia and / or chlorite-clay pug zones.

Greenish ?chlorite units which are interpreted as being Upper Volcanics occur from 3.7 - 5.25m, 10.3 - 13.15m, ?21.0 - ?21.60 m. Sheared contacts with hornfels is the norm, (?faults).

The dominant breccia / chlorite pug zone occur from 13.4 - 13.5m, around 15.7m, around 18.7m and ?21.0 - 21.60m. Some of these zones may well be fault zones.

?So (or S1) 52° to LCA at 1.0m.

21.6 - 70.85m BIOTITE HORNFELS

Fine grained grey to dark brown coloured biotite hornfels with minor zones of green pyroxene hornfels and rare grossular garnet. ie 33.35 - 34.35 (marble, pyroxene hornfels, grossular garnet minor scheelite (blue).); 57.4 - 61.2 m (greenish pyroxene hornfels);

Minor "bleached"? biotite hornfels occurs from 48.5 - 52.35 m.

Badly broken and fractured core with and without chlorite pug and breccia occurs form 22.6 - 22.95 m, 24.45 - 24.6 m, around 28.5 m, around 30.8 m, 44.9 m - 45,5 m, around 52.65 m, around 54.5 m, 57.1 - 57.5 m, and 67.2 m. These could probably represent fault zones.

Well developed spotting occurs in the biotite hornfels (very similar to that occurring in the Upper Volcanics?) from 46.3 - 48.5 m, 53.5 - 57.1 m.

Very minor blue fluorescing scheelite occurs from 57.5 - 59.7 m.

So 44° to LCA at 69.4 m.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/11

70.85 - 91.85m — B LENS

Typical B lens with the following subdivisions-

70.85 - 74.5 m — Pyroxene hornfels

With minor grossular garnet, and coarse scheelite crystals from 71.6 - 71.7 m. Very minor disseminated scheelite is present.

74.5 - 89.35 m — Marble

Massive, well bedded grey marble which is virtually unmineralized. From 74.5 - 78.5 m, the unit is rathered bleached and yellowish - green in colour. Chlorite / montmorillorite appear to occur along joint/fracture surfaces. A possible fault with fractured and broken core occurs around 75.25 m.

So 53^{o} to LCA at 79.35 m
So 35^{o} to LCA at 87.05 m

89.35 - ?91.85 m — Pyroxene Hornfels

Greenish coloured pyroxene hornfels with no visible bedding.

91.85 - 133.0 m — BIOTITE HORNFELS

Light brown to grey to dark brown, fine grained biotite hornfels with numerous ?actinolite / pyroxene hornfels alteration zones and patches.

From 91.85 - 105.50 m, pyroxene / ? actinolite alteration zones are most common.

Thin aplite dykes and veins occur from 109.65 - 109.50 m, 109.95 - 110.15 m, 111.45 - 112.2 m, 119.0 - 119.3 m, 120.7 - 120.85 m.

Badly broken core occurs from 92.2 - 93.65 m, 93.2 - 93.5 m, 102.0 - 102.6 m (veined, fractured and broken - possible fault), around 110.5 (possible broken duce to intrusion of aplite dykes). 115.15 - 115.60 m (fault with chlorite pug, clay and breccia), 117.65 - 118.15 m (fault with breccia and chlorite pug), around 131.6 m (v. minor calcite veining).

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. B 280/11

133.0 - 136.80 m PYROXENE GARNET HORNFELS - MINERALIZED

Mineralized pyroxene garnet hornfels with numerous typical calcite / marble fragments up to 7 cm across. Minor massive adradite skarn occurs from 135.25 - 135.70 m.

136.80 - 141.35 m BIOTITE HORNFELS / PYROXENE HORNFELS

Grey to light brown coloured biotite hornfels with pyroxene hornfels (+grossular + andradite + quartz + marble + minor scheelite) from 139.35 - 141.35 m Minor sulphide mineralization is also present.

141.35 - 144.50 m ADAMELLITE

Coarse crystalline, siliceous, pinkish coloured adamellite / granite. No visible scheelite .

EOH 144.50 m.

File.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 280/10

PLANNING

Proposer: G.J.Bujtor **Depth:** 90-95 m

Location: -150 m R.L.

Purpose of hole: C lens oreblocking

Co-ordinates: 220280 **E** 563950 **N**

Inclination: -26° **Magnetic:**

Bearing: 360 **Grid** **Target depth:** 90.0 m

Target: **E** **N**

Approved by: **Date:**

SURVEY

Survey Co-ords: **E** **N**

Survey bearing 1°00' **Grid** **Magnetic:**

Surveyed in by: **Date:**

Actual Co-ords: 220280.77E 563951.30 **N**

R.L. of collar: R-146.0 **Inclination of hole:** -26°40°

Picked up by: R.J.H. **Date:** 11-1-78

SUMMARY

Logged by: G.J.Bujtor

Results: Upper C lens 55.71m, 16m @ 1.67% WO_3
71-77m, 6m @ 0.51% WO_3

?Lower C lens 79-81m, 2m @ 0.90% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date Commenced: 9-1-78 **Date Terminated:** 13-1-78

Casing: **Size :** B
Depth : 1.0

Core: **Size :** 46TT
Depth : 90 m

Wedge Runoff: Nil

Wedge Placed: **Depth:**

Proposed by: **Approved by:**

Reason:

Extension: Nil
Final depth: 90.0 m
Reason for termination: Successfully intersected C lens / Wedge Fault

Condition of hole on completion:
Casing:
Cemented: No
Bore hole survey: Surveyed to 90 m.
Water: Normal H_2O return
Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/10

Survey method: Eastman Singleshot
Final depth: 90.0 m
Casing depth: Nil

Depth surveyed to: 90 m
Date surveyed to: 13-1-78
Surveyed by: L. Denby
Checked by: G. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		N	W
6	0	350	63.5	-26.5	2.68	5.29	0.93
27	0	350	63.5	-26.5	12.05	23.79	4.19
48	0	350	63.0	-27.0	21.58	42.22	7.44
69	0	350	63.0	-27.0	31.11	60.65	10.69
90	2	352	62.15	-27.75	40.89	79.06	13.28

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/10

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.6	3.6	4.0	111
3.6 - 6.5	2.9	2.8	97
6.5 - 8.0	1.5	1.7	113
8.0 - 9.5	1.5	1.5	100
9.5 - 12.5	3.0	3.0	100
12.5 - 15.5	3.0	3.0	100
15.5 - 18.1	2.6	2.7	104
18.1 - 21.1	3.0	3.0	100
21.1 - 23.5	2.4	2.3	96
23.5 - 24.0	0.5	?0.8	160
24.0 - 24.5	0.5	?0.6	120
24.5 - 28.0	4.5	4.5	100
28.0 - 29.5	1.5	1.5	100
29.5 - 33.2	3.7	3.7	100
33.2 - 35.0	1.8	1.75	97
35.0 - 37.5	2.5	2.4	96
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
82.5 - 85.5	3.0	3.0	100
85.5 - 88.4	2.9	2.9	100
88.4 - 90.0	1.6	1.6	100

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/10

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 6968	25	26	1.0	1.0	<0.01	<0.01		
69	26	27	"	"	<0.01	<0.01		
70	27	28	"	"	0.05	<0.01		
71	28	29	"	"	0.10	<0.01		
72	29	30	"	"	0.06	<0.01		
D 6973	43	44	"	"	<0.01	<0.01		
74	44	45	"	"	<0.01	<0.01		
75	45	46	"	"	<0.01	<0.01		
76	46	47	"	"	<0.01	<0.01		
77	47	48	"	"	<0.01	<0.01		
78	48	49	"	"	<0.01	<0.01		
79	49	50	"	"	<0.01	<0.01		
80	50	51	"	"	0.01	<0.01		
81	51	52	"	"	0.02	<0.01		
82	52	53	"	"	<0.01	<0.01		
83	53	54	"	"	3.0	0.08		
84	54	55	"	"	0.24	0.02		
85	55	56	"	"	1.90	0.06		
86	56	57	"	"	0.27	<0.01		
87	57	58	"	"	1.46	0.04		
88	58	59	"	"	1.62	0.04		
89	59	60	"	"	0.93	0.03		
90	60	61	"	"	2.0	0.08		
91	61	62	"	"	2.1	0.08		
92	62	63	"	"	1.76	0.07		16 m @ 1.67% WO_3
93	63	64	"	"	3.6	0.16		
94	64	65	"	"	2.4	0.11		
95	65	66	"	"	1.8	0.07		
96	66	67	"	"	1.14	0.04		
97	67	68	"	"	1.92	0.05		
98	68	69	"	"	1.55	0.05		
99	69	70	"	"	1.08	0.03		
D 7000	70	71	"	"	1.26	0.03		
1	71	72	"	"	0.64	0.02		
2	72	73	"	"	0.17	0.01		
3	73	74	"	"	0.80	0.03		6 m @ 0.51% WO_3
4	74	75	"	"	0.40	0.01		
5	75	76	"	"	0.64	0.02		
6	76	77	"	"	0.41	0.01		
7	77	78	"	"	0.21	0.01		
8	78	79	"	"	0.06	<0.01		
9	79	80	"	"	1.34	0.05		

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/10

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 7010	80	81	1.0	1.0	0.46	0.02		2m @ 0.90 % WO_3
11	81	82	"	"	0.06	<0.01		
12	82	83	"	"	0.03	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/10

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)
0.0-23.2	Bh	6-7		clay,chl, sulp,carb.		103	85	excludes fault zones
Major Fault 2.9 - 4.4m Minor Faults 7.8 - 8.0 m, 12.15, & 18.1 m - badly broken.				Fragmental breccia, chloritic pug.				
23.2-?25.0m	Fault	badly broken & fractured.			95% of core < 5cm in length.			
25.0-29.4 m	?B lens	6-7		Clay, Chl.		65		
29.4-29.55m	Fault	- fractured, broken and clayey.						
29.55-43.65	Bh	8		Clay,Chl.		82		
43.65-55.0	B lens	3-5		Clay,chl, carb.	55:44.9 m 40:47.85m	86		
55.0-55.25	Wedge Fault	- brecciated, fractured, clayey pug zone.						
55.25-70.10	Gh Upper C-lens	6		Garnet,clay chlorite		76		
77.10-90.0	Bh/Ph/Ch	5-6		clay,chl.	20:84 m 35:89.5 m	78		

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) $= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/10

0.0 - 2.90 m — Biotite Hornfels

Disturbed and sheared light grey to brown coloured biotite hornfels. The sheared and disturbance is caused by the fault below.

S_1 21° to LCA at 2.0 metres.

2.90 - 4.40 m — Fault

Major fault zone with fragmental recemented breccia, chlorite and pug. Shearing and disturbance of the sediments occurs on both sides of the fault.

4.40 - ?23.2 m — Biotite Hornfels

Fine grained sheared, and disturbed biotite hornfels with numerous calcite / carbonate veins and stringers. Possible carbonate blebs (up to 4-5 cms) are present around 9.5 - 12.5 m.

Possible minor faults occur around 7.5 - 8.0 m, 12.15 m, 18.1 m.

?23.2 - ?25.0 — ?Fault

Badly broken and fractured biotite hornfels with 95% of core less than 5 cm in length. Exact position of fault is impossible to determine.

?25.0 - 29.40 m — ?B-lens (or 'A-lens'?).

Peculiar but distinctive rock unit consisting of light orange - brown coloured grossular garnet and minor pyroxene hornfels. Minor disseminated scheelite is present but most probably sub-oregrade.

29.40 - 29.55 m — Fault

Broken, fractured and clayey fault zone.

29.55 - ?43.65 — Biotite Hornfels

Fine grained dark grey to brown biotite hornfels. The grey coloured hornfels with associated spotting up to 5 mm in size occurs at the top of the unit from 29.55 - 34.30 m. Clay is common on some joint / fracture surfaces (montmorillonite)?

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/10

Dark brown biotite hornfels with minor green pyroxene hornfels alteration zones / patches occurs from 34.4 - 43.65 m. The intensity of alteration increases on approaching B lens below.

?43.65 - ?51.5 — B lens - Grossular Garnet / Pyroxene Hornfels

Interbedded and intermixed unit of grossular garnet and pyroxene hornfels. Very minor disseminated scheelite (sub-ore) is present. Bedding is well defined

The base of the unit is arbitrary and is taken at the last noted presence of grossular garnet. The base of B lens may in fact extend down to the Wedge Fault at 55 m. Within this zone, pyroxene hornfels, andradite garnet and biotite hornfels is common.

So 55^{o} to LCA at 44.9 m
So 40^{o} to LCA at 47.85m

?51.5 - 55.0 m — Pyroxene Hornfels / Biotite Hornfels / Andradite Garnet / Marble

Completely intermixed zone of pyroxene hornfels / biotite hornfels / andradite garnet and minor marble, which may be the lower part of B lens. As the Wedge Fault below is approached, the unit becomes more disturbed with evidence of numerous associated fractures and faults.

So 19^{o} to LCA at 51.6 m

Minor scheelite mineralization present throughout.

55.0 - 55.25 m — Wedge Fault

Brecciated, fractured, clay pug zone with shearing and disturbance of adjacent units.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/10

55.25 - 77.10 m — Garnet Hornfels - Upper C lens

Massive Upper C lens garnet skarn consisting of dominantly andradite garnet, with minor quartz, calcite pyroxene, chlorite and ? epidote. Good disseminated scheelite mineralization occurs throughout.

Numerous small broken zones are present and may well be large fractures or minor fault / shear zones - 57.9 m, around 58.25 m, around 58.75 m, 61.25 m-61.40 m, 64.2 - 64.5 m, and around 67.0 metres.

Adjacent to the wedge fault, biotite hornfels and pyroxene hornfels is present from 55.25 - 56.15 m. Most probably dragged along fault.

77.10 - 84.0 m — Pyroxene Hornfels / marble / skarn

Intermixed and interbedded unit of pyroxene hornfels, marble and andradite garnet skarn (patchy).

Minor scheelite mineralization is present.

Badly broken core from 82.0 - 82.5 m (possible Fault)?

84.0 - 87.1 m — Biotite Hornfels

Dark fine grained biotite hornfels with numerous alteration zones and patches of pyroxene hornfels.

? So 20^{o} to LCA at 84.0 m

87.1 - 90.0 m — Marble

Barren white to grey coloured marble.

So 35^{o} to LCA at 89.5 m

EOH 90.00 metres

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO.D 280/9

PLANNING

Proposer: M. Danielson — **Depth:** 100 metres

Location: -150 metres R.L.

Purpose of hole: C lens oreblocking

Co-ordinates: 220 280 E 563 950 — N
Inclination: -50° — **Magnetic:**
Bearing 360° **Grid** — **Target Depth:**
Target: E — N
Approved by: M. C. R. — **Date:** 1-7-1977

SURVEY

Survey Co-ords: E — N
Survey bearing: 358'50' **Grid** — **Magnetic:**
Surveyed in by: — **Date:**
Actual Co-ords: 220 280.73 E 563 950.94 — N
R.L. of Collar: R-146.0 — **Inclination of Hole:** -49°50'
Picked up by: R.J.H. — **Date:** 16-12-1977

SUMMARY

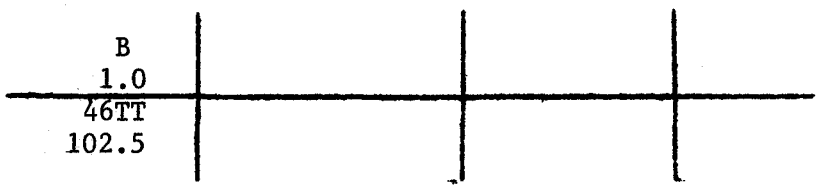
Logged by: G. J. Bujtor
Results: Lower C lens
60 - 62 m, 2 m @ 2.17% WO_3: 64 - 91 m, 27 m @ 0.77% WO_3
B lens 52 - 54 m, 2 m @ 1.83% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 14-12-1977 — **Date terminated:** 22-12-1977

Casing: **Size:** B
Depth: 1.0
Core: **Size:** 46TT
Depth: 102.5



Wedge Runoff: Nil
Wedge placed: — **Depth:**
Proposed by: — **Approved by:**
Reason:

Extension: Nil
Reason for termination: Successfully test C lens / Wedge Fault

Condition of hole on completion: — **Final depth:** 102.5 metres
Casing:
Cemented:
Bore hole survey: Surveyed to 102.5
Water: Normal water return

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/9

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.7	3.7	3.7	100
3.7 - 5.0	1.3	1.2	92
5.0 - 7.0	2.0	2.0	100
7.0 - 9.6	2.6	2.75	106
9.6 - 11.2	1.6	1.70	106
11.2 - 14.2	3.0	3.65	122
14.2 - 16.2	2.0	2.0	100
16.2 - 18.4	2.2	1.85	84
18.4 - 20.8	2.4	2.55	106
20.8 - 22.6	1.8	1.8	100
22.6 - 24.8	2.2	2.2	100
24.8 - 26.6	1.8	1.85	103
26.6 - 28.9	2.3	2.25	98
28.9 - 29.8	0.9	0.9 Broken	100
29.8 - 30.0	0.2	0.3 Broken	150
30.0 - 30.1	0.1	0.2 Broken	200
30.1 - 30.3	0.2	0.2 Broken	100
30.3 - 30.5	0.2	0.2 Broken	100
30.5 - 30.7	0.2	0.2 Broken	100
30.7 - 31.5	0.8	0.9 Broken	113
31.5 - 33.0	1.5	1.5 Broken	100
33.0 - 33.7	0.7	0.8	114
33.7 - 36.4	2.7	2.7	100
36.4 - 39.4	3.0	3.0	100
39.4 - 42.2	2.8	2.7	96
42.2 - 45.2	3.0	3.0	100
45.2 - 48.2	3.0	3.0	100
48.2 - 51.2	3.0	3.0	100
51.2 - 51.25	0.05	0.05	100
51.25 - 53.80	2.55	2.55	100
53.80 - 56.80	3.0	3.0	100
56.80 - 59.60	2.8	2.8	100
59.6 - 62.50	2.9	2.9	100
62.5 - 65.50	3.0	3.0	100
65.5 - 68.50	3.0	3.0	100
68.5 - 71.50	3.0	3.0	100
71.5 - 73.10	1.6	1.7	106
73.1 - 76.1	3.0	3.0	100
76.1 - 77.6	1.5	1.45	97
77.6 - 79.5	1.9	1.8	95
79.5 - 81.2	1.7	1.7	100
81.2 - 83.2	2.0	2.0	100
83.2 - 84.6	1.4	1.35	96
84.6 - 87.5	2.9	2.9	100
87.5 - 90.5	3.0	3.0	100
90.5 - 93.5	3.0	3.0	100
93.5 - 96.5	3.0	3.0	100
96.5 - 99.5	3.0	3.0	100
99.5 - 102.5	3.0	3.0	100

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/9

Survey method: Eastman Singleshot
Final depth: 102.5 metres
Casing depth: 1.00 metres

Depth surveyed to: 102.5 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
18.5	000.25	350.25	39.75°	-50.25°	14.22	11.66	2.00
39.5	357.50	347.50	39.25°	-50.75°	30.48	24.64	4.88
54.5	359.0	349.0	39.25°	-50.75°	42.10	33.96	6.69
81.5	356.0	346.0	39.0	-51.0	63.08	50.45	10.80
102.5	356.25	346.25°	39.0	-51.0	79.40	63.29	13.94

REMARKS:

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/9

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 6918	45	46	1.0	1.0	<0.01	<0.01		
19	46	47	"	"	<0.01	<0.01		
20	47	48	"	"	<0.01	<0.01		
21	48	49	"	"	<0.01	<0.01		
22	49	50	"	"	0.20	<0.01		
23	50	51	"	"	0.15	<0.01		
24	51	52	"	"	0.03	<0.01		
25	52	53	"	"	3.35	0.12	2 metres @ 1.83% WO_3	
26	53	54	"	"	0.31	0.01		
D 6927	58	59	"	"	<0.01	<0.01		
28	59	60	"	"	<0.01	<0.01		
29	60	61	"	"	3.93	0.16		
30	61	62	"	"	0.41	0.01	2m @ 2.17% WO_3	
31	62	63	"	"	<0.01	<0.01		
32	63	64	"	"	0.03	<0.01		
33	64	65	"	"	0.61	0.03		
34	65	66	"	"	1.02	0.04		
35	66	67	"	"	1.42	0.07		
36	67	68	"	"	1.0	0.05		
37	68	69	"	"	0.61	0.03		
38	69	70	"	"	0.36	0.02		
39	70	71	"	"	0.84	0.04		
40	71	72	"	"	0.47	0.02		
41	72	73	"	"	0.38	0.01		
42	73	74	"	"	0.92	0.04		
43	74	75	"	"	2.98	0.14		
44	75	76	"	"	1.67	0.07		
45	76	77	"	"	0.56	0.03	27m @ 0.77% WO3	
46	77	78	"	"	0.75	0.04		
47	78	79	"	"	0.50	0.02		
48	79	80	"	"	0.89	0.05		
49	80	81	"	"	0.62	0.03		
50	81	82	"	"	0.15	<0.01		
51	82	83	"	"	0.58	0.02		
52	83	84	"	"	0.30	0.01		
53	84	85	"	"	0.28	0.01		
54	85	86	"	"	0.31	0.02		
55	86	87	"	"	0.54	0.03		
56	87	88	"	"	0.19	0.01		
57	88	89	"	"	0.61	0.03		
58	89	90	"	"	0.86	0.04		
59	90	91	"	"	1.24	0.05		

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/9

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 6960	91	92	1.0	1.0	0.03	<0.01		
61	92	93	"	"	<0.01	<0.01		
62	93	94	"	"	0.65	0.03		
63	94	95	"	"	0.03	<0.01		
64	95	96	"	"	<0.01	<0.01		
65	96	97	"	"	<0.01	<0.01		
66	97	98	"	"	<0.01	<0.01		
67	98	99	"	"	<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.D 280/9

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 - 18.5	Bh	10-12		Clay, Sulph Chl.	:	102	55	
	MAJOR FAULT from 2.90-4.50 m : brecciated, fractured, chlorite pug. 18.20-18.50 m: badly broken							
18.5-27.5	Bh	6		Clay, Chl, Carb		102	64	
27.5 - 33.7	Bh	>20		Clay, Chl,		105	13	Badly broken and fractured
33.7 - 45.2	Bh	8 - 10		Clay, Chl, Carb		99	50	
45.2 - 59.6	B-lens gh/ph/bh	5 - 6		Clay, Chl, Carb		100	84	Possible faults 50.9-51.5 metres around 57.8 metres
59.6 - 91.10	Banded Skarn	8		Clay, Chl, Carb	62.4:45° 69.05:47° 77.10:40° 85.05:43° 92.80:58° 98.25:54°	100	72	Possible fault 59.6-59.7 metres Broken zones within 77.0 - 91.0m 91.0 metres
91.10 - 91.50	FAULT	brecciated, fractured and disturbed chloritic pug.						
91.50 - 102.5	Banded Footwall beds/ bh&l.v.	4-10		Clay, chl		100	74	

EOH 102.5 metres.

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/9

0.0 - 2.90 — Biotite Hornfels

Highly disturbed biotite - pyroxene? - actinolite? hornfels. Mottled zones of one within the other is common. Disturbance and fracturing is the result of the large fault below.

?2.90 - ?4.50 — Fault

Highly fractured, broken, brecciated pug zone. No scheelite mineralization is present. Chlorite and clay / mylanite is common.

?4.50 - 18.20 — Biotite Hornfels

Fine grained brown and grey coloured hornfels. From 4.50 - 8.0 metres, pyroxene hornfels with some associated grossular garnet is common. Here the unit is disturbed due to the above fault.

Dark brown biotite hornfels with abundant calcite filled hairline fractures occurs from 8.0 - 13.2 metres The core is considerably broken and fractured.

Grey coloured hornfels (?actinolite) is common from 13.2 - 18.2, and well developed spotting within the hornfels occurs from 13.2 - 16.5 metres. The dark spots average 6 mm in size and may possibly be a metamorphic feature.

18.20 - 18.50 — ?Fault

Possible fault with badly broken core and minor chlorite pug.

18.5 - 44.90 — Biotite Hornfels

Fine grained biotite hornfels with well developed spotting in patches. Minor actinolite and pyroxene reaction zones are present.

The core is broken and fractured from 27.5 - 33.5 metres, around 36.4 metres, 39.2 - 43.0 metres. Some of the exceptionally broken areas may in fact be faults i.e. 27.5 - 33.5 m, and 42.0 - 42.3 metres.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/9

44.90 - 53.35 **?B lens:Garnet Hornfels / Pyroxene Hornfels / Marble**

Probable B lens consisting of a crudly banded sequence of pyroxene hornfels / andradite garnet / grossular garnet / marble and minor ?biotite hornfels. The unit was originally a 'dirty' marble.

Numerous ?small probable faults exist within the interval 50.9 - 51.5 metres. The core within the and on adjacent sides of this interval is sheared disturbed and broken. Some slickenside are present in the fault interval.

53.35 - 59.60 **Biotite Hornfels**

Fine grained dark brown to grey coloured biotite hornfels with numerous calcite filled veins.

A possible minor fault (recemented) occurs around 57.80 metres.

59.6 - 59.7 **Fault - Wedge**

Badly broken, fractured and rubbly core. No fault pug - probably washed away during drilling.

59.70 - 91.10 **Banded Skarn - Lower C lens**

Well banded and bedded lower C lens skarn consisting of interbeds of biotite hornfels, marble, pyroxene hornfels and andradite garnet with minor grossular garnet.

Disseminated scheelite mineralization occurs throughout the andradite beds and unit as a whole A large scheelite vein occurs from 60.0 - 60.5 metres and averages 1 - 2 cm in width. Some massive recrystalized, unreplaced marbles are present. (63.0 - 64.65 m).

The following bedding angles were noted:

So	45°	to	LCA	at 62.4 metres
So	52°	to	LCA	at 64,1 metres
So	46°	to	LCA	at 66.15 metres
So	47°	to	LCA	at 69.05 metres
So	46	to	LCA	at 71.30 metres
So	48	to	LCA	at 74.25 metres
So	40	to	LCA	at 77.10 metres
So	35°	to	LCA	at 81.45 metres
So	43°	to	LCA	at 87.05 metres
So	52	to	LCA	at 89.15 metres
So	58	to	LCA	at 92.80 metres

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/9

So 51 to LCA at 95.85 metres
So 54 to LCA at 98.25 metres

Zones of broken core which may represent possible faults occur at the following intervals - around 63.85 metres, 77.25 - 77.80 metres, around 81.2 metres 83.0 - 83.2 metres, 84.4 - 84.6 metres, around 87.5 metres and 90.25 - 90.50 metres.

91.10 - 91.50 — Fault

Fractured, disturbed, brecciated chlorite pug zone.

91.50 - 98.80 — Banded Footwall Beds

Well bedded and banded sequence of marbles, biotite hornfels, pyroxene hornfels andradite garnet and minor grossular garnet. The unit is basically unmineralized apart from the massive andradite skarn from 93.15 - 94.0 metres.

The zones of grossular garnet are very weathered and altered and unstable. A possible fault may occur from 97.15 - 97.30 metres.

98.80 - 99.50 — Biotite Hornfels

A small unit of fine grained biotite hornfels which may well be part of the banded footwall beds above.

99.50 - 102.50 — Lower Volcanics

Medium grained dark volcanics speckled with numerous? biotite flakes.

EOH 102.50 metres.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO.D 280/8

PLANNING

Proposer: M. Danielson **Depth:** 100 metres

Location: -150 metres R.L.

Purpose of hole: C lens oreblocking

Co-ordinates: 220 160 **E** 563 950 **N**
Inclination: -70° **Magnetic:**
Bearing **Grid** **Target Depth:**
Target: **E** **N**
Approved by: M.C.R. **Date:** 1-12-1977

SURVEY

Survey Co-ords: **E** **N**
Survey bearing: 357° 20' **Grid** **Magnetic:**
Surveyed in by: **Date:**
Actual Co-ords: 220 280.73 **E** 563 950.97 **N**
R.L. of Collar: R-146.1 **Inclination of Hole:** -69°20'
Picked up by: R.J.H. **Date:** 13-12-1977

SUMMARY

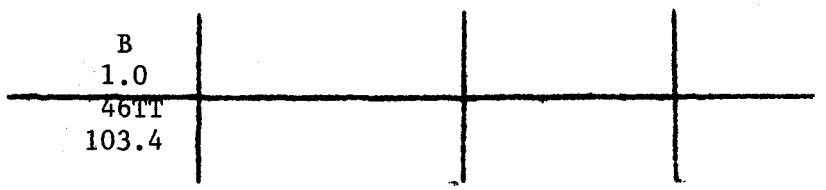
Logged by: G. J. Bujtor
Results: Lower C lens 74 - 85 m, 11 m @ 0.87% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 9-12-1977 **Date terminated:** 13-12-1977

Casing: **Size:** B
Depth: 1.0
Core: **Size:** 46TT
Depth: 103.4



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

Extension:

Reason for termination: Successfully intersected Wedge Fault and Lower C lens.

Condition of hole on completion: **Final depth:** 103.4
Casing: No
Cemented: No
Bore hole survey: Surveyed to 103.4
Water: Normal

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/8

Survey method: Eastman Singleshot
Final depth: 103.4 metres
Casing depth: 1.0 metres

Depth surveyed to: 103.4 metres
Date surveyed to: 14-12-77
Surveyed by: J. Wijniewski
Checked by: G. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		N	W
19	356.5	346.5	20.5°	-69.5°	17.8	6.47	1.55
40	351.0	341.0	20.0°	-70.0°	37.53	13.26	3.89
61	352.0	342.0	19.25	-70.75°	57.36	19.84	6.03
82	350.25	340.25	19.25	-70.75	77.19	26.35	8.37
103	349.0	339.0	19.25	-70.75	97.02	32.81	10.85

REMARKS:

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/8

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 6829	53	54	1.0	1.0	0.50	0.01		
30	54	55	"	"	0.02	<0.01		
31	55	56	"	"	<0.01	<0.01		
D 6832	72	73	"	"	<0.01	<0.01		
3	73	74	"	"	0.12	<0.01		
4	74	75	"	"	1.75	0.06		
5	75	76	"	"	0.47	0.01		
6	76	77	"	"	0.36	<0.01		
7	77	78	"	"	0.64	0.02		
8	78	79	"	"	0.93	0.02	11m @	0.87%WO_3
9	79	80	"	"	0.86	0.02		
D 6840	80	81	"	"	0.64	0.01		
1	81	82	"	"	0.48	0.01		
2	82	83	"	"	0.65	0.01		
3	83	84	"	"	1.74	0.07		
4	84	85	"	"	1.02	0.04		
5	85	86	"	"	0.21	<0.01		
6	86	87	"	"	0.13	<0.01		
7	87	88	"	"	0.01	<0.01		
D 6848	88	89	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/18

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.4	3.4	3.2	94
3.4 - 5.2	1.8	(2.0?)	Fault zone
5.2 - 6.4	1.2	1.05	88
6.4 - 7.5	1.1	1.30	118
7.5 - 9.5	2.0	1.70	85
9.5 - 12.5	3.0	3.0	100
12.5 - 15.5	3.0	3.05	102
15.5 - 18.0	2.5	(2.0?)	Fault zone
18.0 - 21.0	3.0	3.0	100
21.0 - 22.1	1.1	1.15	105
22.1 - 24.5	2.4	2.50	104
24.5 - 27.5	3.0	3.0	100
27.5 - 19.0	1.5	1.4	93
29.0 - 30.0	1.0	1.0	100
30.0 - 31.5	1.5	1.55	103
31.5 - 32.6	1.1	1.10	100
32.6 - 33.5	0.9	1.10	122
33.5 - 34.7	1.2	1.15	96
34.7 - 35.7	1.0	1.05	105
35.7 - 37.8	2.1	2.20	105
37.8 - 38.8	1.0	1.0	100
38.8 - 39.4	0.6	0.75	125
39.4 - 40.5	1.1	1.25	114
40.5 - 42.3	1.8	1.70	94
42.3 - 43.8	1.5	1.40	93
43.8 - 45.0	1.2	1.40	117
45.0 - 48.0	3.0	3.0	100
48.0 - 49.2	1.2	1.2	100
49.2 - 51.8	2.6	2.6	100
51.8 - 54.8	3.0	3.0	100
54.8 - 57.8	3.0	3.0	100
57.8 - 60.8	3.0	3.0	100
60.8 - 63.8	3.0	3.0	100
63.8 - 66.8	3.0	3.0	100
66.8 - 69.8	3.0	3.0	100
69.8 - 72.8	3.0	3.0	100
72.8 - 75.8	3.0	3.0	100
75.8 - 78.8	3.0	3.0	100
78.8 - 81.1	2.3	2.75	120
81.1 - 83.5	2.4	2.4	100
83.5 - 86.5	3.0	3.0	100
86.5 - 88.6	2.1	2.1	100
88.6 - 91.5	2.9	2.9	100
91.5 - 94.5	3.0	3.0	100
94.5 - 97.5	3.0	3.0	100
97.5 - 100.5	3.0	3.0	100
100.5 - 103.4	2.9	2.9	100

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/8

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 - 29.0	Bh Major faults:	5		clay,chl,carb 3.20 metres - 5.30	2 m : 60° metres & 15.95 -	95	80 17.85 metres	
29.0 - 45.75	Bh	12		clay, chl, carb, sulph.		104	31	Badly broken core. 30.9 - 40.7 metres
45.75 - 46.40	Possible Fault;			Broken & brecciated pug.				
46.40 - 73.10	Bh / Ch	6-7		clay,chl,carb sulph.		100	78	
73.10 - 73.20	Fault - brecciated, fractured, chlorite - rich pug.							
73.20 - 91.5	Band skarn footwall beds	5-10		clay,carb,chl sulph.	75.5m: 74° 81.0m: 77° 84.15m:70° 87.6m: 78°	100	59	Broken & fractured from 78.0 - 85.1 m
91.5 - 103.4	L.V.A. bh / ah	5		clay,chl,carb	98.0m:80° 103.0m:70°	100	75	
EOH 103.40m								

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/8

0.0 - 3.20 **Biotite Hornfels**

Fine grained and somewhat disturbed biotite hornfels with a distinctive striped appearance. The unit consists of a crudly alternating biotite hornfels with greenish pyroxene hornfels

from 2.95 - 3.20 metres, coarse grossular garnet is developed adjacent to a large fault breccia zone.

Smb or So 60^{o} to LCA at 2 metres.

?3.20 - ?5.30 **Fault**

Major fault zone consisting of badly broken and brecciated hornfels which in places appears to be recemented. Sulphides, clay and chlorite in fillings are common.

Fracturing of the sediments on both sides of the fault is common.

?5.30 - 15.95 **Biotite Hornfels**

Fine grained light brown to grey green coloured biotite hornfels with evidence of disturbance. The unit has both a striped and a spotted appearance. The spots consist of roundish whitish reaction zones surrounding small pyrite and ? pyrrhotite sulphide aggregates and masses. The spots range from 1 mm to 7 mm in size.

A possible minor hair line fault occurs around 7.5 metres.

15.95 - 17.85 **Fault**

Sheared, disturbed, brecciated and broken zone of probable biotite hornfels. Most of the breccia and pug zone occurs from approximately 17.0 - 17.6 metres.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/8

17.85 - 45.75 **Biotite Hornfels**

Fine grained brown to grey & greenish coloured biotite hornfels with numerous? Pyroxene alteration zones along fractures / fluid channelways.

Minor sulphides and spotting occurs around 22.0 metres (sulphides) and 31.5 metres (spots).

The core appears quite competent from 17.85 - 30.0 metres but from 30.0 - 45.75 metres is rather broken and fractured with the possibility of some minor faults. Badly broken core occurs from 30.9 - 31.1 metres, 32.4 - 32.7 metres and 35.0 - 40.7 metres.

45.75 - 46.4 metres **Possible Fault**

Zone of badly broken and brecciated core with abundant soft pug, clay and chlorite. Breccia fragments are visible. This zone may in fact be the unstable hangingwall of the massive more competent marbles below.

46.40 - 54.50 **Marble**

Massive, recrystallized and unmineralized grey marble with numerous soft clay filled joints and fractures.

The base of the unit from 53.3 - 54.50 is a greenish coloured garnet (grossular) pyroxene hornfels carrying minor disseminated scheelite.

54.50 - 73.10 **Biotite Hornfels**

Brown to greenish grey coloured biotite hornfels. The greenish grey zones are pyroxene (actinolite) alteration patches. Minor grossular garnet (andradite) is developed as isolated crystal aggregates and also, more commonly in veins up to 1 centimetre in width.

Small patches of broken core occur from 65.2 - 65.6, 66.65 - 66.80 metres, and 69.2 - 69.4 metres.

The unit contains very minor disseminated scheelite (subore grade) throughout, and appears to be invariably associated with the intrusive quartz veins and associated grossular garnet.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No.D 280/8

?73.10 - ?73.20 — Fault - Wedge

Brecciated, fractured chlorite rich pug zone with sharp hangingwall and footwall contacts.

73.20 - 85.10 — Banded Skarn - Mineralized

Mineralized banded skarn sequence consisting of interbedded andradite garnet (originally marbles), marble, pyroxene hornfels and biotite hornfels. Individual marble beds are up to 6 centimetres in width. The top half of the sequence has been almost completely skarntised. The following bedding angles were noted:-

So 74^{o} to LCA At 75.5 metres
So 83^{o} to LCA At 77.35 metres
So 77^{o} to LCA At 81.0 metres
So 70^{o} to LCA At 84.15 metres

Disseminated scheelite occurs throughout the sequence associated with andradite garnet. The bottom half of the sequence from 78.0 - 85.10 metres is quite broken and somewhat fractured.

85.10 - 90.85 — Banded Footwall Beds - Unmineralized

Extremely well bedded sequence consisting of unreplaced marble and biotite hornfels with associated reaction rims of andradite - grossular garent and pyroxene hornfels.

Rare andradite garnet beds up to 8 centimetres in width carry minor scheelite. The remainder of the unit is barren. Unreplaced marble beds range from 1 centimetre up to 30 centimetres in width.

So 63^{o} to LCA At 86.4 metres
So 78^{o} to LCA At 87.6 metres

90.85 - 96.25 — Lower Volcanics

Distinctive volcanic sequence consisting of numerous rock types - a dark somewhat coarse grained ?biotite rich (?spotted) unit at the top; and a greyish felty -'spotted' unit in the lower half.

A sharp volcanic / biotite hornfels contact occurs around 92 metres.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No.D 280/18

96.25 - 103.4 Biotite Hornfels - Banded / Bedded

Fine grained dark brown to grey coloured biotite hornfels / ?actinolite hornfels. The unit is very finely banded and / or bedded with individual bands down to 1 mm in width. Sone pyroxene alteration zones are present.

A whitish monzonite dyke occurs from 101.85 - 102.48 m
The following banding - bedding angles were noted.

So 80° to LCA at 98.0 metres
So 71° to LCA at 99.05 metres
So 70° to LCA at 103.0 metres

E.O.H. 103.4

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO. D 280/7

PLANNING

Proposer: M. J. DANIELSON — **Depth:** 140 metres

Location: Q.8, 150 metres L.

Purpose of hole: C lens oreblocking

Co-ordinates: 220 280 E 563 950 N
Inclination: -90° **Magnetic:**
Bearing 360° Grid **Target Depth:**
Target: E N
Approved by: M.C.R. **Date:** 1-7-77

SURVEY

Survey Co-ords: E N
Survey bearing: 144'30' Grid **Magnetic:**
Surveyed in by: **Date:**
Actual Co-ords: 220 280.70 E 563 950.30 N
R.L. of Collar: F- 146.2 **Inclination of Hole:** -87°50'
Picked up by: R.J.H. **Date:** 25-11-77

SUMMARY

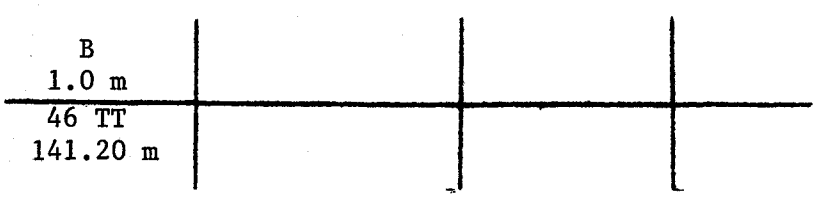
Logged by: D.Cowan
Results: Mineralized PGH 66-75 metres 9 metres @ 1.38% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 18-11-77 **Date terminated:**

Casing: **Size:** B
Depth: 1.0 m
Core: **Size:** 46 TT
Depth: 141.20 m



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

Extension: Nil
Reason for termination: Intersected mineralized pgh & approx 12 m granite/adamallite
Condition of hole on completion: **Final depth:** 141.20
Casing:
Cemented: No
Bore hole survey: Surveyed to 130 m
Water: Normal water return.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/7

Survey method: Eastman Singleshot
Final depth: 141.20 m
Casing depth: 1.00 m

Depth surveyed to: 130.0 m
Date surveyed to: 7 - 12-77
Surveyed by: L. Denby
Checked by: G.J. Bujtor

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		S	E & W
0 m	154.5°	144.5°	1.10°	-87.9°	0.0	0.0	0.0
25 m	158o	148°	1.50°	-88.5°	24.99 m	0.56	0.35 (E)
130 m	236°	226°	3.50°	-86.5°	129.79 m	5.01	4.26 (W)

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/7

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.00 - 3.3	3.3	3.15	95
3.3 - 6.5	3.2	3.18	99
6.6 - 9.5	3.0	3.02	101
9.5 - 13.7	4.2	3.84	91
13.7 - 16.2	2.5	2.36	94
16.2 - 17.7	1.5	1.62	108
17.7 - 18.5	0.8	0.86	108
18.5 - 19.6	1.1	1.24	113
19.6 - 21.7	2.1	2.03	97
21.7 - 24.6	2.9	2.87	99
24.6 - 26.5	1.9	1.90	100
26.5 - 28.5	2.0	1.95	98
28.5 - 29.9	1.4	1.80	129
29.9 - 32.8	2.9	2.68	92
32.8 - 35.5	3.0	2.91	97
35.5 - 36.1	0.6	0.41	68
36.1 - 38.0	1.9	1.92	101
38.0 - 39.8	1.8	1.77	98
39.8 - 42.0	2.2	2.47	112
42.0 - 43.0	1.0	0.98	98
43.0 - 44.6	1.6	1.71	107
44.6 - 46.3	1.7	1.82	107
46.3 - 47.00	0.7	0.77	110
47.0 - 48.3	1.3	1.38	106
48.3 - 50.1	1.8	1.89	105
50.1 - 52.0	1.9	1.78	94
52.0 - 54.1	2.1	2.06	98
54.1 - 56.2	2.1	2.21	105
56.2 - 57.0	0.8	0.84	95
57.0 - 58.0	1.0	0.98	98
58.0 - 59.1	1.1	1.17	106
59.1 - 63.0	3.9	3.64	93
63.0 - 63.9	0.9	0.88	98
63.9 - 67.0	3.1	3.37	109
67.0 - 70.1	3.1	3.10	100
70.1 - 73.1	3.0	3.02	101
73.1 - 76.1	3.0	2.97	99
76.1 - 79.5	3.4	3.51	103
79.5 - 82.5	3.0	2.91	97
82.5 - 83.5	1.0	1.00	100
83.5 - 85.6	2.1	2.14	102
85.6 - 87.0	1.4	1.49	106
87.0 - 88.6	1.6	1.37	86
88.6 - 91.0	2.4	2.49	104
91.0 - 92.3	1.3	1.17	90
92.3 - 95.3	3.0	3.00	100
95.3 - 98.3	3.0	3.03	101
98.3 -101.3	3.0	3.06	102

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 280/7

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
101.3 - 104.3	3.0	3.02	101
104.3 - 107.3	3.0	3.03	101
107.3 - 110.3	3.0	2.87	96
110.3 - 110.8	0.5	0.45	90
110.8 - 113.8	3.0	3.02	101
113.8 - 116.8	3.0	3.04	101
116.8 - 117.8	1.0	0.98	98
117.8 - 120.6	2.8	2.87	103
120.6 - 123.6	3.0	3.02	101
123.6 - 127.0	3.4	3.33	98
127.0 - 130.0	3.0	3.10	103
130.0 - 133.0	3.0	3.05	102
133.0 - 135.2	2.2	2.20	100
135.2 - 138.2	3.0	3.00	100
138.2 - 141.2	3.0	2.88	96
EOH			

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/7

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)
0-32.80	Upper Volcanics	99		Generally absent		99	59	
32.8 - 63.9	Biotite pyroxene hornfels	11		Generally absent; minor calcite	43°:38.71 40°:39.62 25°:59.42 28°:59.82 45°:62.95	102	48	
63.9-76.1	Pyroxene garnet hornfels	6		Absent		102	88	
76.1-98.3	Biotite Pyroxene Hornfels	10		Fe - sulphides		100	55	
98.3-130.0	ph, bh and ch	8		Absent	50°:107.12 41°:107.97 30°:109.26 50°:114.36 58°:118.76 60°:121.50	100	58	Partings are along bedding planes
130.0 - 141.20 EOH.	Granite	7		Absent		99	70	

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) += $\frac{\text{length core >10 cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 280/7

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 6744	65	66	1.0	1.0	0.05	0.01		
5	66	67	"	"	4.45	0.15		
6	67	68	"	"	0.63	0.02		
7	68	69	"	"	0.35	0.02		
8	69	70	"	"	1.73	0.08	9 metres	
9	70	71	"	"	0.85	0.04	@ 1.38%	WO_3
D 6750	71	72	"	"	1.24	0.05		
D 6786	72	73	"	"	1.54	0.07		
7	73	74	"	"	1.74	0.08		
D 6788	74	75	"	"	0.35	0.02		

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/7

0 - 32.80 Upper Volcanics

A fairly uniform sequence of metavolcanics including a few intervals (~10%) of biotite hornfels.

32.8 - 64.89 Biotite pyroxene hornfels

A poor to weakly bedded unit of bph. Intervals showing clear biotite spotting occur between

42.85 - 44.60 metres
48.08 - 52.25 metres

64.89 - 74.33 Pyroxene garnet hornfels

A unit of pgh containing scheelite over its whole length. Probable ore - grade scheelite occurs between

67.49 - 67.89
69.26 - 73.74

Large scheelite crystals occur between 66.00 - 66.11.

74.33 - 97.62 Biotite pyroxene hornfels

Much of the core is shattered, especially between 82.5 - 88.6 metres.

Biotite spotting occurs between

91.46 - 95.35

97.62 - 101.57 Podded pyroxene hornfels

This unit consists of coarse calcite pods (up to 3 centimetres diametre) set in a matrix of fine greenish pyroxene.

101.57 - 121.82 Alternating biotite hornfels/pyroxene hornfels

A very well banded unit consisting of finely interbedded bh and ph.

121.82 - 128.91 Banded footwall beds

Alternating bh, ph and marble. A few of the marble bands have been replaced by andradite skarn and these also contain scheelite.

128.91 - 141.20 E.O.H. Granite

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 280/6

PLANNING

Proposer: M.J. Danielson — Depth: 130m

Location: Q15 cuddy, -98m R.L.

Purpose of hole: C Lens oreblocking

Co-ordinates: 220 275 E 564 118 N

Inclination: -45° Magnetic

Bearing: 176 Grid Target depth:

Target: E N

Approved by: M.B. Rogers Date: 1/9/75

SURVEY

Survey Co-ords: E N

Survey bearing: 172° 30' Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 275.9 E 564 118.0 N

R.L. of collar: -97.5 Inclination of hole: -44°00'

Picked up by : R.J.H. Date: 25/9/75

SUMMARY

Logged by : G.L. Buckland

Results: Upper C lens : 81 - 123m, 42m @ 1.64% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 23/9/75 Date terminated: 1/10/75

Casing:	Size :	BX			
	Depth :	1.52			
Core:	Size :	NQ	BQ		
	Depth :	0.5	133.8		

Wedge Runoff:

Wedge placed: Nil Depth:

Proposed by : Approved by:

Reason:

Extension: Nil.

Reason for termination Hole reached planned depth. Final depth: 133.8m

Condition of hole on completion:

Casing : 1.52m BX remains

Cemented : Yes

Bore hole survey: Surveyed to 132m

Water: Normal water return throughout.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/6

Survey method : Multishot camera
Final depth : 133.8m
Casing depth : 1.52m

Depth surveyed to : 132m
Date surveyed : 1/10/75
Surveyed by : GLB
Checked by : MJD

DEPTH (m)	Bearing		Inclination		True Vertical Depth (m)	Co-oridinates	
	Grid	Mag.	Read	Corrected		S	E
15	174° 30'	164° 30'	45°	-45°	10.62	10.22	2.71
30	172°	162°	44° 15'	-45°45'	21.32	20.27	5.79
45	171°	161°	44°	-46°	32.12	30.21	8.94
60	174°	164°	43°	-47°	43.00	40.10	11.92
75	174°	164°	43°	-47°	53.97	49.93	14.74
90	174°	164 °	42°	-48°	65.06	59.62	17.52
105	174°	164°	42°	-48°	76.21	69.25	20.29
120	174° 30'	164° 30'	42°	-48°	87.36	78.89	23.05
132	175°	165°	41°	-49°	96.38	86.54	25.12

REMARKS:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/6

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 - 6.77	Breccia	+15		minor clay, carbonate and chlorite		69	11	0 - 6.77: core is brecciated. Generally-broken ground.
6.77 - 25.8	Breccia/ ch/tuffite	5		Abundant chlorite: 20.83 - 24.15, otherwise, minor clay, carbonate	20.7m:35°	100	78	Core brecciated 7.6 - 7.86, 11.5 - 12.1, 12.35 - 12.9, 15.4 - 15.9. (Also riddled with carbonate veinlets). 16.2 - 16.55, 18.77 - 18.84, 22.2 - 22.32, 25.05 - 25.20 (chlorite filled). Core leached and brecciated: 9 - 11.1, 13.72 - 14.25, 17.2 - 17.53, (has little

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) $= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size. 0 — .50 NQ
   0.50 - 133.8 BQ

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No.

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)
								structural strength). Fault? 17.53 - 18.1, 18.3 - 18.84
25.8 - 46.8	ch/gph/ breccia	4		carbonate @ 27.75, 30.2 chlorite : 42.38 - 44.13		93	89	26.84 - 27.15: core is brecciated, riddled with carbonate veinlets. 31.54 - 31.61: calcite in filling a joint: also at 31.78-31.82. 42.38 - 44.16: core is brecciated. Broken ground : 42.80 - 43.0 43.8 - 46.8: 46% core loss Fault?
46.8 - 61.8	bh	9		chlorite: 56.6 - 58.9. minor clay,				

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/6

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)
				carbonate		99	55	broken ground: 48.25 - 48.75, 56.6 - 58.9. 58.5 - 58.65: core is strongly sheared - has no structural strength. Fault? 59.9: minor brecciation 61.65 - 61.72: carbonate recemented breccia.
61.8 - 79.8	pgh/gh	3		carbonate @ 66.90, minor chlorite @ 65.0,67.8, 68.0,78.2		100	91	Minor broken ground. 70.0 - 70.06, 72.9 - 72.94, 78.18 - 78.30
79.8 - 103.8	gh	2		minor clay, carbonate		100	96	core weakly leached: 101.1 - 101.4.
103.8 - 121.8	gh	6		carbonate @ 115.87		100	69	broken ground 108.18 - 108.28 111.3 - 112.0 galena slickensided on a plane

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) $= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/6

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)
								at 114.6. Core weakly leached: 115.70 - 115.90 105 - 108.5, 111 - 112.8
121.8 - 133.8	Marker Horizon	9		chlorite: 125.53 - 125.55, 133.72. clay, carbonate.	131m :25° 133.6m:22°	99	60	broken ground rubble - 127.2 - 129.5, 131.38 - 131.9. Breccia zone: 125.53 - 125.55 minor fault? Brecciated core (?): 122.83 - 123.00. Core is riddled with carbonate veinlets: 127.05 - 127.25. Core weakly leached: 132.14 - 132.30

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) += $\frac{\text{length core >10 cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 280/6

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 4.8	4.8	2.86	60
7.8	3.0	2.91	97
10.8	3.0	2.94	98
13.8	3.0	3.05	102
16.8	3.0	3.00	100
19.8	3.0	3.00	100
22.8	3.0	3.12	104
25.8	3.0	3.02	101
28.8	3.0	2.92	97
31.8	3.0	3.10	103
34.8	3.0	2.76	92
37.8	3.0	3.02	101
40.8	3.0	3.04	101
43.8	3.0	3.07	102
46.8	3.0	1.61	54
49.8	3.0	2.96	99
52.8	3.0	2.90	97
55.8	3.0	3.02	101
58.8	3.0	2.91	97
61.8	3.0	3.05	102
64.8	3.0	3.00	100
67.8	3.0	2.98	99
70.8	3.0	2.94	98
73.8	3.0	3.08	103
76.8	3.0	2.96	99
79.8	3.0	3.03	101
82.8	3.0	2.98	99
85.8	3.0	3.04	101
88.8	3.0	3.01	100
91.8	3.0	3.00	100
94.8	3.0	3.01	100
97.8	3.0	3.00	100
100.8	3.0	3.03	101
103.8	3.0	3.00	100
106.8	3.0	2.90	97
109.8	3.0	3.05	102
112.8	3.0	2.90	97
115.8	3.0	3.04	101
118.8	3.0	3.00	100
121.8	3.0	3.02	101
124.8	3.0	3.06	102
127.8	3.0	2.90	97
130.8	3.0	2.86	95
133.8	3.0	3.03	101

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 280/6

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo		COMMENTS
D4339	65	66	1.0	1.0	<0.01	<0.01		
40	66	67	1.0	1.0	0.40	<0.01		
1	67	68	1.0	1.0	0.09	<0.01		
2	68	69	1.0	1.0	<0.01	<0.01		
3	69	70	1.0	1.0	<0.01	<0.01		
4	70	71	1.0	1.0	0.52	<0.01		
5	71	72	1.0	1.0	<0.01	<0.01		
6	72	73	1.0	1.0	0.08	<0.01		
7	73	74	1.0	1.0	2.00	0.07		
8	74	75	1.0	1.0	0.92	0.02		
9	75	76	1.0	1.0	0.16	<0.01		
50	76	77	1.0	1.0	2.52	0.06		
1	77	78	1.0	1.0	0.01	<0.01		
2	78	79	1.0	1.0	0.24	<0.01		
3	79	80	1.0	1.0	0.06	<0.01		
4	80	81	1.0	1.0	0.15	<0.01		
5	81	82	1.0	1.0	0.50	<0.01		
6	82	83	1.0	1.0	0.66	0.01		
7	83	84	1.0	1.0	3.62	0.14		
8	84	85	1.0	1.0	2.20	0.09		
9	85	86	1.0	1.0	2.52	0.10		
60	86	87	1.0	1.0	5.60	0.23		
1	87	88	1.0	1.0	2.30	0.08		
2	88	89	1.0	1.0	1.44	0.06		
3	89	90	1.0	1.0	2.02	0.09		
4	90	91	1.0	1.0	1.80	0.08		
5	91	92	1.0	1.0	1.55	0.08		
6	92	93	1.0	1.0	1.30	0.06		
7	93	94	1.0	1.0	1.53	0.07		
8	94	95	1.0	1.0	0.96	0.04		
9	95	96	1.0	1.0	1.00	0.04		
70	96	97	1.0	1.0	1.22	0.04		
1	97	98	1.0	1.0	1.07	0.04		
2	98	99	1.0	1.0	0.94	0.03		
3	99	100	1.0	1.0	1.46	0.08		
4	100	101	1.0	1.0	1.28	0.07		
5	101	102	1.0	1.0	0.91	0.03		
6	102	103	1.0	1.0	0.68	0.02		
7	103	104	1.0	1.0	0.52	<0.01		
8	104	105	1.0	1.0	0.67	0.01		
9	105	106	1.0	0.90	1.26	0.04		

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No.

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo	COMMENTS
80	106	107	1.0	1.0	1.36	0.04	
1	107	108	1.0	1.0	2.12	0.07	Upper C lens:
2	108	109	1.0	1.0	2.32	0.07	81 - 123m 42m @
3	109	110	1.0	1.0	2.02	0.07	1.64% WO_3 0.06%MO
4	110	111	1.0	1.0	1.88	0.06	(NOTE: Samples
5	111	112	1.0	0.90	1.32	0.03	D4360, 4386, 4388
6	112	113	1.0	1.0	5.77	0.20	have been truncated
7	113	114	1.0	1.0	1.42	0.03	to 4.00% for the
8	114	115	1.0	1.0	7.02	0.05	calculation.)
9	115	116	1.0	1.0	1.96	0.05	
90	116	117	1.0	1.0	3.50	0.10	
1	117	118	1.0	1.0	1.39	0.05	
2	118	119	1.0	1.0	1.32	0.04	
3	119	120	1.0	1.0	0.26	<0.01	
4	120	121	1.0	1.0	0.13	<0.01	
5	121	122	1.0	1.0	1.22	0.02	
6	1226	123	1.0	1.0	1.23	0.03	
7	123	124	1.0	1.0	0.05	<0.01	
D4398	124	125	1.0	1.0	0.02	<0.01	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 280/6

LAB. K.I.S.			LAB. K.I.S.			LAB. AMDEL,			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.	
D4340	0.40	0.01	D4610	0.37		D4611	0.48		D4612	0.42		
50	2.52	0.06	13	2.43		14	2.40		15	1.77		
60	5.60	0.23	16	3.70		17	5.17		18	4.31		
70	1.22	0.04	19	1.22		20	1.32		21	1.29		
80	1.36	0.04	22	1.35		23	1.45		24	2.06		
90	3.50	0.10	25	3.32		26	3.40		27	2.57		
D4396	1.23	0.03	D4628	1.04		D4629	1.32		D4630	1.41		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/6

0 - 42.38 B LENS

B lens is characterised by a variety of rock types -.

0 - 10.94 BRECCIA

Angular rock chips (maximum length 4cm) are surrounded by a fine grained groundmass of subangular rock chips (up t 1cm in length) and rock flour. Purplish bh and grey gph appear to be the dominant rock chip compositions.

The intervals 6.77 - 7.6 and 7.86 - 9.1 are not brecciated but represented by disturbed gph containing some sporadic grains of scheelite 8.3 - 8.47.

Carbonate filled fractures are located at 7.75 and 10.94m while chlorite is the dominant joint coating elsewhere.

The interval is strongly brecciated (RQD 11, J/M +15) to 6.77 but becomes better quality core to 10.94.

10.94 - 20.75 MARBLE

A disturbed grey ch containing a few specks of scheelite 17.67 - 17.9.

Vague bedding is developed from 20.55m e.g. 20.7m : 35° L.A.O.C.

Details of significant brecciation, leaching and possible faulting are given on the structural page.

20.75 - 24.03 TUFFITE

Minute flecks of highly lustrous white mica (muscovite?) are set in a pale green and white flecked groundmass which displays a vague tuffaceous texture.

Chlorite is abundant on joint surfaces.

24.03 - 41.68 MARBLE

A grey ch containing minute crystals of biotite(?) throughout. The interval 26.25 - 26.55 contains a few crystals of scheelite where the core is enriched in pyroxene and grossular garnet.

Carbonate filled fractures occur at:

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/6

27.70
30.20
31.6
34.88
35.44

Breccia : 25.05 - 25.20
26.84 - 27.15

41.68 - 42.38 GARNET PYROXENE HORNFELS

A disturbed gph.

42.38 - 44.16 BRECCIA

A strongly brecciated interval which contains rock fragments of purple bh and a white coloured rock (e.g. at 43.31 and 43.17, not carbonate rich) set in rock flour groundmass.

Chlorite coats joints.46% core loss is recorded in the interval 43.8 - 46.8.

This brecciated interval separates B lens and the underlying C lens hangingwall bh.

44.16 - 62.30 BIOTITE HORNFELS

Dominantly a purple-grey barren fine grained biotite hornfels with the uppermost 2.3m having the occasional thin interbeds of fine grained pale green ph. (e.g. 46.93 - 47.08) and small crystals of grey actinolite (?) hornfels.

Broken ground: 48.25 - 48.75
56.6 - 58.9
Fault: 58.5 - 58.65

- core is strongly sheared and has no structural strength.

Carbonate recemented breccia : 61.65 - 61.72.

62.30 - 82.46 PYROXENE GARNET HORNFELS

A rock consisting of ovate carbonate pods, up to 8cm in length, rimmed by pale pink grossular garnets set in a dominantly pyroxene rich groundmass. The pods are best developed where the groundmass is biotite rich. e.g. 80.0 - 80.5m.

This unit is weakly mineralised from 66.5m, containing sporadic grains of scheelite while coarse scheelite occurs in the following intervals.

73.86 - 73.92
73.97 - 74.02
76.81 - 76.87
81.07 - 81.13

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/6

From approximately 80m the incidence of carbonate pods decreases and the pgh developes a more uniform fine grained texture.

The lower pgh contact is gradational but is located where uniform fine grained disseminated scheelite first appears.

Minor sections of broken ground occur:
70.0 - 70.06
72.9 - 72.94
78.18 - 78.30,
having chlorite on the fracture faces.

Core quality is excellent. (RQD = 91%, 61.8 - 79.8m; J/M =3.)

82.46 - 122.82 GARNET HORNFELS

A fine grained andradite garnet skarn containing high grade finely disseminated scheelite mineralisation. Coarse scheelite occurs in the following zones.
83.28 - 83.42
86.12 - 86.15
112.39 - 112.46
114.30 - 114.43
116.52 - 116.58

Galena is present on a slickensided plane at 114.6m.

Core quality is excellent to 103.8m (RQD =96%, 79.8 - 103.8m; J/M =2), while from 103.8m to 121.8m the core becomes more broken (RQD 69; J/M 6).

The core is weakly leached from approximately 105 - 108.5m and 111 to 112.8m

This weak leaching, together with a finer grain size for the andradite garnet crystals in the latter gh zone could perhaps explain the differing rock quality parameters (RQD's, J/M's) between these zones.

This unit is representative of upper C lens.

122.82 - 133.8 MARKER HORIZON

The following rock types are indicative of this marker horizon:

122.82 - 123.10 BIOTITE HORNFELS

A barren black bh.

The upper contact appears brecciated(?) from 122.82 - 123.00

123.10 - 123.73 GARNET PYROXENE HORNFELS

A barren rock consisting of pink grossular garnet and pale green ph.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/6

123.73 - 125.12	MARBLE A barren white disturbed ch.
125.12 - 127.50	GARNET PYROXENE BIOTITE HORNFELS Dominantly a rock containing pink gh and green ph with an occasional interbed of block bh. Breccia : 125.53 - 125.55. Broken ground : 127.2 - 127.5
127.50 - 131.80	BIOTITE HORNFELS A black barren bedded bh. Bedding 131m : 23° LAOC. Broken ground: 127.5 - 129.5 131.38 - 131.8
131.80 - 132.44	GARNET PYROXENE HORNFELS A gh/ph with very weak scheelite mineralisation developed in the gh zones.
132.44 - 133.8	MARBLE A barren white, vaguely bedded ch with development of thin (<2cm) beds of ph and bh from 133.50m. Bedding : 133.6m - 22° LAOC. This hole was terminated within the marker horizon.
133.8m	E.O.H.

DIAMOND DRILL HOLE BOREHOLE SURVEY

Alaska 5/3/82

EASTMAN — KODAK MULTISHOT CAMERA

D.D.H. No. D 300/6 Date Surveyed: 10.12.81

Total Depth: 97 M Depth Surveyed To: 94 M

Casing Depth: 1M Surveyed By:

Shot No.	Time	Depth	Defl.	Direct	Shot No.	Time	Depth	Defl	Direct	
1	0	BLANK.			20	38	M			
2	2	MISS	-		21	40	40	19	S16E	
3	4	M	-		22	42	M			
4	6	10M	20	S15E	23	44	25	19	S16E	
5	8	25M	20	S15E	24	46	M			
6	10	40	20	S15E	25	48	10M	20	S15E	
7	12	55	19	S15E	26	50	M			
8	14	M	-	"	27	52	M			
9	16	70M	19	S16E	28	54	•			
10	18	85	19	S15E	29	56				
11	20	94	14	S15E	30	58				
12	22	94			31	60				
13	24	M			32	62				
14	26	M		?	33	64				
15	28	85	19	S15E	34	66				
16	30	M			36	68				
17	32	70	19	S15E	37	70				
18	34	M			38	72				
19	36	55	19	S15E	39	74				

REMARKS: —

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 280/5

PLANNING

Proposer: M.J. Danielson. Depth: 145m.

Location: Q.15 cuddy, -98m R.L.

Purpose of hole: C lens oreblocking.

Co-ordinates: 220 275 E 564 118 N

Inclination: -55° Magnetic

Bearing: 170 Grid Target depth:

Target: E N

Approved by: M.C. Rogers. Date: 1/9/75

SURVEY

Survey Co-ords: E N

Survey bearing: 176°40' Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 275.8 E 564 118.3 N

R.L. of collar: -97.6m Inclination of hole: -54°50'

Picked up by : R.J.H. Date: 15.9.75

SUMMARY

Logged by : M.J. Danielson.

Results: Upper C lens: 61 - 91m, 30m @ 1.51% WO_3
Lower C lens: 109 - 125m, 16m @ 0.32% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 10/9/75 Date terminated: 22/9/75

Casing: Size : BX
Depth : 1.5

Core: Size : BQ
Depth : 160.5

Wedge Runoff:

Wedge placed: Nil. Depth:

Proposed by : Approved by:

Reason:

Extension: Nil.

Reason for termination: Hole passed below Lower volcanics. Final depth: 160.5m

Condition of hole on completion:

Casing : 1.5m BX remains.

Cemented : Yes.

Bore hole survey: Surveyed to 159.0m.

Water: No.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/5

Survey method : Multishot camera.
Final depth : 160.5m
Casing depth : 1.52m.

Depth surveyed to : 159m.
Date surveyed : 22/9/75
Surveyed by : G.L. Buckland.
Checked by : M.J. Danielson.

DEPTH (m)	Bearing		Inclination		True Vertical Depth (m)	Co-oridinates	
	Grid	Mag.	Read	Corrected		S	E
15	177°	167°	36°	-54°	12.13	8.61	1.8
30	176°	166°	36°	-54°	24.27	17.15	3.85
45	177°	167°	35°	-55°	36.52	25.56	5.92
60	179°	169°	35°	-55°	48.82	33.99	7.63
75	180°	170°	34°30'	-55°30'	61.14	42.39	9.24
90	180°	170°	34°15'	-55°45'	73.51	50.72	10.83
105	180°30'	170°30'	34°	-56°	85.94	58.99	12.27
120	181°30'	171°30'	34°	-56°	98.37	67.27	13.63
135	181°	171°	33°30'	-56°30'	110.83	75.52	14.94
150	184°	174°	33°	-57°	123.34	83.69	15.91
159	185°	175°	33°	-57°	130.89	88.57	16.31

REMARKS:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/5

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)
00 - 11.0m	B lens breccia.	0 - 6m = +20 6 - 8 = 10 8 - 11 = 5	) clay))			85	36	2.5 - 9.8m clay recemented breccia. 9.8 - 10.1m leached ch.
11.0 - 32.0	ch	4		carbonate	15m:50° 22m:40°	100	80	Minor leaching & carbonate recemented breccia between 15.6 - 15.9m 16.9 - 18.1m
32.0 - 46.2m	bh	7		clay		98	62	Broken ground: 35.5 - 37.0 43.5 - 44.5 clay recemented breccia. 33.1 - 33.3
46.2 - 56.0m	bh	4		clay		97	70	
56.0 - 89.0	pgh gh	4		clay		100	92	
89.0 - 110.0	bh, ph. ch.	6		carbonate	93m:35° 99m:30°	99	78	Broken ground: 107 - 109m. leaching in ch. 100 - 104 105.8 - 106.2
110.0 - 125.0	banded gh	5		clay	112m:35° 114m:40° 115m:40° 123m:30°	100	75	
125.0 - 155.0	bfb	4		clay	129m:35°	99	83	

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}} \%$
3. Core size. BQ = 36.5mm dia.

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/5

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)
125.0 - 155.0 cont.					135m:40° 142m:30° 146m:30°			
155.0 - 160.5	bh/ah	10		clay	160m:30°	100	50	

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 280/5

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 5.0	5.0	3.50	70
8.0	3.0	2.90	97
11.0	3.0	3.0	100
14.0	3.0	3.0	100
17.0	3.0	3.0	100
20.0	3.0	3.0	100
23.0	3.0	3.0	100
26.0	3.0	3.0	100
29.0	3.0	3.0	100
32.0	3.0	3.0	100
34.4	2.4	2.4	100
38.0	3.6	3.6	100
41.0	3.0	2.9	97
44.0	3.0	2.95	98
47.0	3.0	2.85	95
50.0	3.0	3.0	100
53.0	3.0	2.80	93
56.0	3.0	2.95	98
59.0	3.0	3.0	100
62.0	3.0	3.0	100
65.0	3.0	3.0	100
68.0	3.0	3.0	100
71.0	3.0	3.0	100
74.0	3.0	3.0	100
77.0	3.0	3.0	100
80.0	3.0	2.95	98
83.0	3.0	3.0	100
86.0	3.0	3.0	100
89.0	3.0	3.0	100
92.0	3.0	2.95	98
95.0	3.0	3.00	100
98.0	3.0	3.0	100
101.0	3.0	2.9	97
104.0	3.0	3.0	100
107.0	3.0	3.0	100
110.0	3.0	3.0	100
113.0	3.0	2.95	98
116.0	3.0	3.0	100
119.0	3.0	3.0	100
122.0	3.0	3.0	100
125.0	3.0	3.0	100
128.0	3.0	3.0	100
131.0	3.0	3.15	105
134.0	3.0	3.0	100
137.0	3.0	3.0	100
140.0	3.0	2.70	90
143.0	3.0	2.95	98

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D280/5

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
- 146.0	3.0	3.0	100
149.0	3.0	2.95	98
152.0	3.0	3.0	100
155.0	3.0	3.0	100
158.0	3.0	3.0	100
160.5	2.5	2.5	100
E.O.H.			

GEOPEKO LIMITED - Dolphin Mine

ASSAY DATA

D.D.H. No. D 280/5

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo		COMMENTS
D 4280	56	57	1.0	1.0	0.07	<0.01		
1	57	58	"	"	0.76	0.01		
2	58	59	"	"	0.09	<0.01		
3	59	60	"	"	<0.01	<0.01		
4	60	61	"	"	0.18	<0.01		
5	61	62	"	"	2.35	0.06		
6	62	63	"	"	3.95	0.14		
7	63	64	"	"	2.37	0.06		Upper C lens:
8	64	65	"	"	1.50	0.05		
9	65	66	"	"	3.20	0.10		61 - 91m,
90	66	67	"	"	1.92	0.08		
1	67	68	"	"	2.25	0.08		30m @
2	68	69	"	"	2.47	0.10		1.51% WO_3
3	69	70	"	"	1.80	0.09		
4	70	71	"	"	2.72	0.11		0.04% Mo
5	71	72	"	"	1.26	0.05		
6	72	73	"	"	0.84	0.04		
7	73	74	"	"	1.06	0.04		
8.	74	75	"	"	0.56	0.01		
9	75	76	"	"	0.88	0.04		
4300	76	77	"	"	1.24	0.04		
1	77	78	"	"	1.64	<0.01		
2	78	79	"	"	1.82	<0.01		
3	79	80	"	"	2.20	0.01		
4	80	81	"	"	2.07	<0.01		
5	81	82	"	"	1.17	0.01		
6	82	83	"	"	1.10	<0.01		
7	83	84	"	"	0.43	<0.01		
8	84	85	"	"	0.74	<0.01		
9	85	86	"	"	0.56	<0.01		
10	86	87	"	"	0.43	<0.01		
1	87	88	"	"	1.38	<0.01		
2	88	89	"	"	0.70	<0.01		
3	89	90	"	"	0.20	<0.01		
4	90	91	"	"	0.38	<0.01		
D 4315	91	92	"	"	0.02	<0.01		
D 4316	107	108	1.0	1.0	<0.01	<0.01		
7	108	109	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - Dolphin

ASSAY DATA

D.D.H. No. D 280/5

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo		COMMENTS
D 4318	109	110	1.0	1.0	0.65	<0.01		
9	110	110	"	"	0.28	<0.01		
20	111	112	"	"	0.19	<0.01		Lower C lens:
1	112	113	"	"	0.68	<0.01		
2	113	114	"	"	0.13	<0.01		109 - 125m
3	114	115	"	"	0.19	<0.01		
4	115	116	"	"	0.56	0.02		16m @
5	116	117	"	"	0.27	<0.01		0.32% WO_3
6	117	118	"	"	0.16	<0.01		0.01% Mo
7	118	119	"	"	0.25	<0.01		
8	119	120	"	"	0.44	0.01		
9	120	121	"	"	0.10	<0.01		
30	121	122	"	"	0.14	<0.01		
1	122	123	"	"	0.41	0.03		
2	123	124	"	"	0.29	0.02		
3	124	125	"	"	0.30	0.01		
4	125	126	"	"	0.20	<0.01		
5	126	127	"	"	<0.01	<0.01		
D 4336	127	128	"	"	<0.01	<0.01		
D 4337	146	147	1.0	1.0	0.25	<0.01		
8	147	148	"	"	0.80	0.03		

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 280/5

LAB. K.I.S.			LAB. K.I.S.			LAB. AMDEL			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.	
D4281	0.76	0.01	D4589	0.81		D4590	1.08		D4591	0.75		
91	2.25	0.08	92	2.46		93	2.40		94	2.39		
301	1.64	<0.01	95	1.83		96	1.89		97	1.63		
11	1.38	<0.01	98	1.31		99	1.64		4600	1.54		
18	0.65	<0.01	4601	0.65		4602	0.78		03	0.86		
4326	0.16	<0.01	04	0.17		05	0.25		06	0.32		
D4333	0.30	0.01	D4607	0.35		D4608	0.45		D4609	0.42		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/5

00 - 33.0m — B LENS

00 - 9.8m Breccia

Bassic rock type is probably a fine grained pyroxene grossular garnet skarn containing no mineralisation. The unit has been severely brecciated and is now represented as fragments of bh (?) up to 3cm dia. set in a clay matrix. There is moderate fine carbonate veining throughout. Core loss in 0 - 5m run is most likely due to collaring of the hole.

Core quality in this section is R.Q.D. = 36% but rock would have little structural strength.

9.8 - 18.8m Marble

Barren grey marble. Some leaching and carbonate recemented breccia between 9.8 - 10.1m.

18.8 - 20.8m Tuffite

Barren flecked grey abundant pyroxenisation.

20.8 - 33.0m Marble

Barren grey marble.

33.0 - 55.3m — HANGINGWALL BIOTITE HORNFELS

A barren grey brown hornfels.

Quality of core is moderate.

32.0 - 46.2m R.Q.D. = 62% but improves significantly
46.2 - 56.0m R.Q.D. = 70%.

The unit shows a weakly fragmental texture to 38m with white fragment of actinolite hornfels (?) up to 3cm dia. set in the purplish brown biotite hornfels groundmass. Clay recemented breccia 33.1 - 33.3m.

Some areas of broken ground at 35.5 - 37.0 and 43.5 - 44.5m.

55.3 - 62.0m — PYROXENE GARNET HORNFELS

A weakly mineralized pyroxene and carbonate rich rock. The carbonate pods are not as well defined as usual and the unit appears to grade into the underlying garnet hornfels.

62.0 - 90.0m — GARNET HORNFELS

Medium grained andradite garnet skarn containing abundant finely disseminated scheelite.

Becomes increasingly pyroxene rich and lower grade mineralization below 88m.

Quality of core is good. R.Q.D. (56 - 89m) = 92%.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. NO. 280/5

90.9 - 109.0m — MARKER HORIZON (?)

A barren section of rock types as follows:-

90.9 - 96.0m Biotite pyroxene hornfels
Barren green and grey hornfels.

96.0 - 109.0m
Between 96 - 99m barren grey ch. Below 99m the marble is more white and bedding is clearly defined by thin (< 1cm) grossular garnet bed. There is some leaching in this section between 100 - 104m.
Biotite hornfels interbeds 107.35 - 108.0m.

109.0 - 126.0m — BANDED GARNET HORNFELS

Interbedded barren green ph and medium to fine grained andradite garnet skarn, containing finely disseminated scheelite.

126.0 - 147.8m — BANDED FOOTWALL BEDS

Dominantly a barren white grey marble containing thin (usually < 1cm) interbeds of barren grey bh, green ph and brown grossular garnet.
Fine desseminated scheelite 146.0 - 147.8m.
Broken ground with minor leaching and brecciation between 137 and 137.3m. Note 10% core loss between 137 - 140m.

147.8 - 155.4m — LOWER METAVOLCANICS

Pale grey green barren unit flecked with brown biotite grains. Quality of core is very good.

155.4 - 160.5m — BANDED BIOTITE ACTINOLITE HORNFELS

Barren fine grained thinly bedded grey ah and brown bh.

E.O.H. 160.5m

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D280/4

PLANNING

Proposer: M.J. Danielson, Depth: 110m

Location: Q.15 -98m R.L.

Purpose of hole: C lens oreblocking.

Co-ordinates: 220 275 E 564 120 N

Inclination: -68 Magnetic

Bearing: 180° Grid Target depth:

Target: E N

Approved by: M.C. Rogers. Date: 1/8/75

SURVEY

Survey Co-ords: E N

Survey bearing: 157°20' Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 276.0 E 564 118.7 N

R.L. of collar: -97.6 Inclination of hole: -67°20'

Picked up by : R.J.H. Date: 4/9/75

SUMMARY

Logged by : G.L. Buckland.

Results: B lens: 26 - 33m, 7m @ 1.11% WO_3
Upper C lens: 65 - 84m, 19m @ 1.97% WO_3
Lower C lens: 88 - 110m, 22m @ 1.55% WO_3

DRILLING

Driller/Contractor: A.D.D.

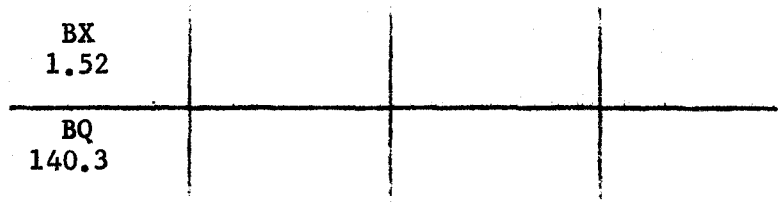
Date commenced: 27/8/75 Date terminated: 9/10/75

Casing: Size : BX

Depth : 1.52

Core: Size : BQ

Depth : 140.3



Wedge Runoff:

Wedge placed: Nil Depth:

Proposed by : Approved by:

Reason:

Extension: Nil.

Reason for termination: Hole passed through Lower metavolcanics. Final depth 140.3m

Condition of hole on completion:

Casing : 1.52m BX remains

Cemented : Yes.

Bore hole survey: Surveyed to 138m.

Water: Normal water return throughout.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/4

Survey method : Multishot camera.
Final depth : 140.3m
Casing depth : 1.52m.

Depth surveyed to : 138m.
Date surveyed : 10/9/75
Surveyed by : G.L. Buckland.
Checked by : M.J. Danielson.

DEPTH (m)	Bearing		Inclination		True Vertical Depth (m)	Co-oridinates	
	Grid	Mag.	Read	Corrected		S	E
15	158°	148°	22°30'	-67°30'	13.84	4.91	3.07
30	158°	148°	22°	-68°	27.72	9.69	6.1
45	159°	149°	21°	-69°	41.67	14.41	8.93
60	161°15'	151°15'	20°30'	-69°30'	55.68	19.08	11.55
75	161°	151°	20°	-70°	69.76	23.61	14.06
90	161°30'	151°30'	19°15'	-70°45'	83.89	28.02	16.49
105	162°	152°	19°	-71°	98.07	32.34	18.84
120	165°	155°	18°	-72°	112.3	36.61	20.88
138	166°	156°	18°	-72°	129.42	41.68	23.15

REMARKS:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/4

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 - 7.14	B lens (gph)	+15		carbonate, clay		100	23	0 - 7m: core weakly brecciated & leached. 3.5 - 7.14: core is riddled with calcite veinlets. Fault: breccia - 6.18 - 6.28 bad ground: 0 - 0.4, 0.8 - 2.0m. Calcite filled vughs occur @ 4.16, 5.83, 6.90.
7.14 - 14.3	B lens (ch)	7		carbonate, clay, chlorite @ 8.70		99	75	Core leached & brecciated: 8.52 - 8.83, 12.1 - 12.32 Core has little structural strength: 12.62 - 12.88 (leached & brecciated).
14.3 - 17.6	B lens (tuffite)	14.3 - 15.74: +20 15.74 - 17.6: 17		16.2 - 17.2: clay, carbonate, chlorite.	17.2:50°	100	26	14.3 - 15.74: core is entirely rubble. 16.45 - 17.2: core is leached & brecciated.

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size. 0 - 140.3 BQ (36.5mm dia.)

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D280/4

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)
14.3 - 17.6 cont.								(has little structural strength).
17.6 - 35.3	B lens (ch/gph)	4		clay:21.55, 27.45, Minor carbonate & chlorite	23:32°	100	91	29.51 - 29.65. core is brecciated. 34.26-34.56 & carbonate recemented. Fault?
35.3 - 50.18	Bh	7		minor clay & chlorite.		98	65	bad ground: 38.3 - 38.65 40.3 - 48.0 Core is brecciated & has little structual strength (can be broken by hand): 36.44 - 36.66 Fault?
50.18 - 83.3	pgh/gh	2		minor carbonate & chlorite.		100	95	57.51 - 57.65: pgh is 'crushed' otherwise excellent core quality.
83.3 - 103.0	marker/ banded gh	7		minor carbonate.	87:45° 96:40°	98	61	broken ground: 88.05 - 88.20 100.0 - 100.50 minor brecciation (?) @ 87.9

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

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/4

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)
103.0 - 110.3	banded gh	14		minor chlorite	104:42° 110:30°	96	18	Generally broken core: core broken parallel to bedding.
110.3 - 125.3	Banded footwall beds.	8		minor chlorite, pyrite @ 123.20	112:30° 117:40° 119:40° 120:40° 122:45° 121:45° 123:30°	92	57	core is broken parallel to bedding.
125.3 -134.3	lv	2		chlorite. e.g. @ 133.75 - 134.3		99	92	Possible Fault(?) @ 133.77 weak brecciation.
134.3 - 140.3	bah	+20			138:40°	100	15	Generally broken ground Breaks parallel to 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) += $\frac{\text{length core >10 cms}}{\text{length drilled}}$ %
3. Core size.

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 280/4

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 2.3	2.3	2.00	87
5.3	3.0	3.20	106
8.3	3.0	3.00	100
11.3	3.0	2.97	93
14.3	3.0	3.05	102
17.3	3.0	3.05	102
20.3	3.0	3.00	100
23.3	3.0	3.00	100
26.3	3.0	3.04	101
29.3	3.0	3.00	100
32.3	3.0	3.04	101
35.3	3.0	2.95	98
38.3	3.0	3.00	100
41.3	3.0	2.88	96
44.3	3.0	2.95	98
47.3	3.0	3.00	100
50.3	3.0	2.88	96
53.3	3.0	3.08	103
56.3	3.0	3.00	100
59.3	3.0	3.00	100
62.3	3.0	2.94	98
65.3	3.0	3.12	104
68.3	3.0	3.02	101
71.3	3.0	2.98	99
74.3	3.0	3.05	102
77.3	3.0	3.00	100
80.3	3.0	3.00	100
83.3	3.0	2.95	99
86.3	3.0	2.86	95
89.3	3.0	3.32	111
92.3	3.0	2.96	99
95.3	3.0	2.78	93
98.3	3.0	3.01	100
100.7	2.4	2.23	93
103	2.3	2.23	97
105.2	2.2	2.16	98
107.5	2.3	1.95	85
110.3	3.0	2.90	97
113.3	3.0	2.84	95
116.3	3.0	2.95	98
119.3	3.0	2.96	99
122.3	3.0	2.10	70
125.3	3.0	2.90	97
128.3	3.0	3.00	100
131.3	3.0	2.94	98
134.3	3.0	3.01	100
137.3	3.0	3.02	101
140.3	3.0	3.00	100

GEOPEKO LIMITED - Dolphin Mine (K.I.)

ASSAY DATA

D.D.H. No. D280/4

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo		COMMENTS
D 4201	18	19	1.0	1.0	0.07	< 0.01		
2	19	20	"	"	0.04	< 0.01		
3	20	21	"	"	0.27	0.01		
4	21	22	"	"	0.45	0.01		
5	22	23	"	"	0.06	< 0.01		
6	23	24	"	"	< 0.01	< 0.01		
7	24	25	"	"	< 0.01	< 0.01		
8	25	26	"	"	0.15	< 0.01		
9	26	27	"	"	0.46	0.02		
10	27	28	"	"	1.06	0.04		
1	28	29	"	"	0.71	0.02		B lens:
2	29	30	"	"	1.24	0.05		26 - 33m
3	30	31	"	"	2.55	0.12		7m @
4	31	32	"	"	1.32	0.06		0.05% MO
5	32	33	"	"	0.46	< 0.01		1.11% WO_3
D 4216	33	34	"	"	< 0.01	< 0.01		
D 4217	56	57	"	"	0.17	< 0.01		
8	57	58	"	"	0.02	< 0.01		
9	58	59	"	"	0.06	< 0.01		
20	59	60	"	"	0.03	< 0.01		
1	60	61	"	"	0.01	< 0.01		
2	61	62	"	"	0.01	< 0.01		
3	62	63	"	"	0.02	< 0.01		
4	63	64	"	"	0.01	< 0.01		
5	64	65	"	"	0.18	< 0.01		
6	65	66	"	"	0.35	< 0.01		
7	66	67	"	"	3.75	0.14		
8	67	68	"	"	3.71	0.11		
9	68	69	"	"	2.93	0.08		
30	69	70	"	"	2.33	0.07		
1	70	71	"	"	0.96	0.04		Upper C lens:
2	71	72	"	"	1.98	0.07		65 - 84m,
3	72	73	"	"	2.45	0.09		19m @
4	73	74	"	"	2.55	0.09		1.97% WO_3
5	74	75	"	"	3.64	0.17		0.07% Mo

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - Dolphin Mine (K.I.)

ASSAY DATA

D.D.H. No. D 280/4

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo		COMMENTS
D 4236	75	76	"	"	3.63	0.14		
7	76	77	"	"	3.0	0.12		
8	77	78	"	"	1.74	0.07		
9	78	79	"	"	0.95	0.02		
40	79	80	"	"	0.46	0.01		
1	80	81	"	"	0.78	0.01		
2	81	82	"	"	0.19	<0.01		
3	82	83	"	"	0.98	0.03		
4	83	84	"	"	1.01	0.01		
5	84	85	"	"	0.16	<0.01		
6	85	86	"	0.8	0.06	<0.01		
7	86	87	"	1.0	0.17	<0.01		
8	87	88	"	"	0.06	<0.01		
9	88	89	"	"	0.44	0.01		
50	89	90	"	"	1.26	0.04		
1	90	91	"	"	1.56	0.07		
2	91	92	"	"	1.12	0.04		
3	92	93	"	"	2.27	0.10		
4	93	94	"	"	1.34	0.05		
5	94	95	"	0.8	1.38	0.06		Lower C lens:
6	95	96	"	1.0	1.24	0.05		88 - 110m,
7	96	97	"	"	2.70	0.10		22m @
8	97	98	"	"	3.08	0.12		1.55% WO_3
9	98	99	"	"	1.35	0.05		0.06% Mo
60	99	100	"	"	0.88	0.04		
1	100	101	"	0.9	1.94	0.08		
2	101	102	"	1.0	2.90	0.12		
3	102	103	"	"	3.52	0.12		
4	103	104	"	"	0.35	<0.01		
5	104	105	"	"	0.15	<0.01		
6	105	106	"	"	3.02	0.11		
7	106	107	"	0.62	1.66	0.06		
8	107	108	"	1.0	0.47	0.01		
9	108	109	"	"	1.01	0.04		
70	109	110	"	"	0.41	0.01		
1	110	111	"	"	0.05	<0.01		
2	111	112	"	"	0.01	<0.01		
3	112	113	"	0.85	0.27	<0.01		
4	113	114	"	1.0	0.07	<0.01		
5	114	115	"	"	0.48	0.01		

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - Dolphin Mine (K.I.)

ASSAY DATA

D.D.H. No. D280/4

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo		COMMENTS
D 4276	115	116	1.0	1.0	0.54	0.01		
7	116	117	"	"	0.14	< 0.01		
8	117	118	"	"	0.17	< 0.01		
D 4279	118	119	"	"	0.08	< 0.01		

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. P 280/4

LAB.	K.I.S.		LAB.	K.I.S.		LAB. AMDEL			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.	
D4204	0.45	0.01	D4562	0.45		D4563	0.55		D4564	0.57		
14	1.32	0.06	65	1.24		66	1.39		67	1.39		
26	0.35	<0.01	68	0.43		69	0.45		70	0.32		
36	3.63	0.14	71	3.45		72	3.53		73	3.28		
44	1.01	0.01	74	0.94		75	1.02		76	0.94		
49	0.44	0.01	77	0.68		78	0.78		79	1.01		
59	1.35	0.05	80	1.24		81	1.39		82	0.22		
69	1.01	0.04	83	0.94		84	1.03		85	0.99		
D4279	0.08	<0.01	D4586	0.03		D4587	0.09		D4588	0.079		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/4

0 - 36.8m B LENS

A variety of rock types as follows:

0 - 8.86m Garnet pyroxene hornfels

A strongly brecciated and leached fine grained andradite garnet skarn containing weak disseminated scheelite mineralization 5.15 - 5.42m.

Numerous calcite filled fractures and vughs occur throughout, being particularly prevalent in the interval 3.5 - 7.14m.

Fault: 6.18 - 6.28; a brecciated zone of angular rock chips (up to 3cm in length) set in a rock flour / carbonate matrix.

Chlorite coats fractures at 8.8m where the core is strongly leached.

An R.Q.D. of 23% (0 - 7.14m) indicates an overall poor core quality.

8.86 - 13.82m Marble

A barren, dirty grey disturbed marble.
Breccia: 9.75 - 11.60m.
Leached and brecciated ch: 12.56 - 12.82m.

13.82 - 16.76m Tuffite (?)

A rock containing dark green clusters of mica (?) surrounded by a paler green pyroxene groundmass, displaying a tuffaceous (?) texture.

Free MoS_2 is present at 15.70m.

The interval 14.3 - 17.6m is extremely badly broken (R.Q.D. = 26%) and contains abundant chlorite.

From 16.50 - 16.76m, the core is weathered with rock fragments set in a puggy carbonate matrix.

16.76 - 17.5m Marble

A very weakly mineralised grey marble.
Breccia: 16.96 - 17.20m, having clay and carbonate as cement.

17.5 - 22.25m Garnet pyroxene hornfels

A weakly mineralized andradite garnet skarn.
Moderate carbonate content 17.57 - 19.6m.

22.25 - 25.46m Marble

A bedded barren grey ch.
Bedding: 23.5m 25° L.A.O.C.
25m 28° "

25.46 - 32.75m Garnet pyroxene hornfels

A gph containing good fine grained disseminated scheelite throughout.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/4

25.46 - 32.75m cont.

Coarse scheelite occurs at 28.78m. Occasional carbonate 'pods' have included needle-like clusters of green actinolite. e.g. at 27.74, 29.07.
Brecciated ground: 29.51 - 29.65m.

32.75 - 34.50m Marble

A disturbed grey barren ch.
Breccia: 34.26 - 34.56, being composed of angular rock chips set in a clay and carbonate matrix. Minor sulphides (pyrrhotite) occur within fractures in this zone.

34.5 - 36.8m Garnet pyroxene hornfels

A disturbed gph with some minor scheelite in the grossular garnet rich zones. e.g. at 36.5m.

Fault (?) 36.44 and 36.66m the core is brecciated, weathered and chlorite filled. Angular rock fragments set in a clay matrix.

36.8 - 50.18m BIOTITE HORNFELS

Dominantly a weakly bedded purplish barren bh with interbeds (≤ 2cm) of pale green ph and pale pink grossular garnet in the intervals:
39.10 - 41.3m and 42.65 - 43.0m.
At 39.93 a ph/ grossular garnet interbed contains minor chalcopyrite. A calcite filled vugh is present at 46.4m.

Core is of good quality to 45.57m but then becomes badly broken to 47.95m.

Bedding: 43m 50° L.A.O.C.
45m 52° "

50.18 - 66.89m PYROXENE GARNET HORNFELS

Typical Dolphin Wedge Area pgh - having subrounded white carbonate pods (up to 5cm in length) surrounded by a honey coloured rim of grossular garnet, and a fine grained pyroxene rich groundmass.

The unit is weakly mineralised throughout with an occasional grain of scheelite but coarse scheelite occurs at 56.78, 64.75 and 65.56m.
From 62.9m the pgh has fewer carbonate pods and is enriched in light green pyroxene. The lower pgh contact is indistict - but is located where uniform high grade scheelite first appears.

66.89 - 84.68m GARNET HORNFELS

A medium grained andradite garnet skarn containing very high grade finely disseminated scheelite to 78.8m.

Below this point the skarn is enriched in pyroxene and the mineralization grade diminishes.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/4

66.89 - 84.68m — From 79.24 - 79.4m The skarn displays vague banding at 50° L.A.O.C.

84.68 - 86.5m — PYROXENE HORNFELS

A very weakly mineralized light green ph.

86.5 - 87.84m — BIOTITE PYROXENE HORNFELS

A barren bedded grey (bh) and pale green (ph) rock.
Bedding: 86m: 50° L.A.O.C.
87m: 40° "

87.84 - 88.20m — BIOTITE HORNFELS

A barren grey/black bh.

88.20 - 88.56m — MARBLE

Massive white barren ch.

88.56 - 110.05m — BANDED GARNET HORNFELS

Essentially an andradite garnet skarn with occasional bands of barren green ph (up to 10cm in length).

Scheelite mineralization is of a medium grade within the gh bands to approximately 103.1m, from where the barren ph and bh interbed increase in occurence and grade becomes lower. Coarse scheelite; 97.74m 97.95m, 99.0m, 101.45m and 102.55m.

The core is of good quality to 103m but becomes badly broken - dominantly along bedding planes, from this point to 110.05m (R.Q.D. = 18%).
Bedding: 104m: 42° L.A.O.C.
110m: 30° "

110.05 - 124.86m — BANDED FOOTWALL BEDS

Principally a bedded sequence of barren white ch (up to 0.5m wide) with thin (≤ 8cm) bh and ph interbeds.

A bed of gh with low grade scheelite mineralization occurs from 112.60 to 113.03m and also 114.36 - 115.40m.

No mineralization below 123.35m.
Aplite: 123.34 - 123.42m
Bedding: 112m 30° L.A.O.C.
117m 40° "
119m 40° "
120m 40° "
123m 30° "

124.86 - 135.7m — LOWER METAVOLCANICS

A rock flecked with grey biotite (?) cyrstals surrounded by a fine grained grey groundmass. From 125.0 - 125.60m the rock contains white ovate phenocrysts of feldspar (?) while at 133.80 the core appears sheared and the chlorite on the fracture plane is slickensided.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/4

124.86 - 135.7m cont. Quality of core is excellent (R.Q.D. = 92%) and chlorite is an abundant joint coating.

135.70 - 140.3m **BANDED BIOTITE ACTINOLITE HORNFELS**

A well bedded unit of black (bh) and grey (ah) hornfels. Individual beds are usually less than 1cm thick.

Core quality is poor. (R.Q.D. = 15%)

Bedding: 138m, 40° L.A.O.C.

E.O.H. 140/30m

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 280/3

PLANNING

Proposer: M.J. Danielson. Depth: 120.0m

Location: Q.15 drive, -98m level.

Purpose of hole: Oreblocking of B and C lens.

Co-ordinates: 220 275 E 564 120 N

Inclination: -84° Magnetic

Bearing: 180° Grid Target depth:

Target: E N

Approved by: M.C. Rogers. Date: 1/8/75

SURVEY

Survey Co-ords: E N

Survey bearing: 168°20' Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 275.8 E 564 119.1 N

R.L. of collar: -97.6 Inclination of hole: -83°40'

Picked up by : R.J.H. Date: 11/8/75

SUMMARY

Logged by : M.J. Danielson

Results: B lens: 3 - 5m, 2m @ 0.47% WO_3
18 - 21m, 3m @ 0.51% WO_3
Upper C lens: 50 - 66m, 16m @ 2.15% WO_3
~~68 - 91m, 23m @ 0.76% WO_3~~
Lower C lens: 68 - 91m, 23m @ 0.76% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 8/8/75 Date terminated: 18.8.75

Casing:	Size :	BX			
	Depth :	1.5			
Core:	Size :	NQ	BQ		
	Depth :	1.5	112.0		

Wedge Runoff:

Wedge placed: Nil. Depth:

Proposed by : Approved by:

Reason:

Extension: Nil

Reason for termination: Hole passed below Lower metavolcanics. Final depth: 112.0m

Condition of hole on completion:

Casing : 1.5m BX remains

Cemented : Yes.

Bore hole survey: Surveyed to 111.0

Water: No

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/3

Survey method : Multishot camera.
Final depth : 112.0m
Casing depth : 1.52m

Depth surveyed to : 111.0m
Date surveyed : 18.8.75
Surveyed by : G.L. Buckland.
Checked by : M.J. Danielson.

DEPTH (m)	Bearing		Inclination		True Vertical Depth (m)	Co-oridinates	
	Grid	Mag.	Read	Corrected		E	S
15	165°	156°	6°	-84°	14.90	0.60	1.47
30	168°	159°	6°	-84°	29.81	1.18	2.92
45	180°	171°	6°30'	-83°30'	44.72	1.52	4.50
60	179°	170°	6°45'	-83°15'	59.61	1.80	6.24
75	186°	177°	6°45'	-83°15'	74.50	2.0	8.05
90	190°	181°	6°15'	-83°45'	89.40	1.89	9.74
105	198°	189°	6°30'	-83°30'	104.31	1.71	11.32
111	213°	204*°	6°30'	-83°30'	110.27	1.43	11.94

REMARKS:

* Must be doubtful reading.

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/3

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 - 14.4	B lens (gph, ch)	8		Carbonate		89	42	0 - 1.4 rubble core is leached & brecciated throughout. Has little structural strength. 0 - 3.6: 61% core recovery.
14.4 - 32.4	B lens (ch, gph, bh, ph)/ bh	14.4 - 22m 4 22 - 32m: 8		carbonate, clay, minor pyrite in bh zone. chlorite @ 28m.		96	72	bh below 20m is broken.
32.4 - 47.4	bh	8		clay, minor carbonate.		100	63	
47.4 - 65.4	pgh/gh	4		clay	63.3m:50° L.A.O.C.	99	86	
65.4 - 101.4	marker/ banded gh/ Banded footwall beds.	7		clay	71m:60° 76m:55° 81m:50° 89m:55° 93m:60° 96m:45°	100	56	At 85.7m, slickensides at 45° to L.A.O.C. Most fractures are parallel to bedding.
101.4 - 107.4	lv.	3		clay, minor carbonate		100	90	
107.4 - 112.0	banded bah.	+15		clay, minor chlorite	110m:60°	100	22	

107.5 - 109.5m.

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size. 0 - 1.4 NQ (47.6mms dia.)
   1.4 - 112.0 BQ (36.5mms dia.)

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 280/3

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 1.4	1.4	1.0	71
3.6	2.2	1.2	55
5.4	1.8	1.75	97
8.2	2.8	2.7	96
11.3	3.1	3.1	100
14.4	3.1	3.1	100
17.4	3.0	3.0	100
20.4	3.0	3.0	100
23.4	3.0	3.1	103
26.4	3.0	2.0	67
29.4	3.0	3.1	103
32.4	3.0	3.0	100
35.4	3.0	3.0	100
38.2	2.8	2.8	100
41.4	3.2	3.2	100
44.4	3.0	3.0	100
47.4	3.0	3.0	100
50.4	3.0	3.0	100
53.4	3.0	2.85	95
56.4	3.0	3.0	100
59.2	2.8	2.8	100
62.3	3.1	3.1	100
65.4	3.1	3.05	98
68.4	3.0	2.85	95
71.4	3.0	3.0	100
74.4	3.0	3.0	100
77.4	3.0	3.0	100
80.4	3.0	3.1	103
83.4	3.0	3.0	100
86.2	2.8	2.8	100
89.2	3.0	2.9	97

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 280/3

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
- 91.8	2.6	2.8	108
94.3	2.5	2.5	100
95.4	1.1	1.1	100
98.4	3.0	3.0	100
101.4	3.0	2.9	97
104.4	3.0	3.0	100
107.4	3.0	3.0	100
110.4	3.0	3.0	100
112.0	1.6	1.6	100
E.O.H.			

GEOPEKO LIMITED - Dolphin Mine (K.I.)

ASSAY DATA

D.D.H. No. D 280/3

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo	COMMENTS
D 4151	3	4	1.0	1.0	0.58	0.01	B lens:
2	4	5	"	"	0.36	<0.01	3 - 5m, 2m @ 0.47% WO_3 0.01% Mo
D 4153	17	18	1.0	1.0	<0.01	<0.01	
4	18	19	"	"	0.60	0.02	B lens:18 - 21m,
5	19	20	"	"	0.62	0.02	3m @
6	20	21	"	"	0.32	<0.01	0.51% WO_3 0.02% Mo
7	21	22	"	"	0.10	<0.01	
D 4158	22	23	"	"	0.47	0.02	
D 4101	46	47	1.0	1.0	0.02	<0.01	
2	47	48	"	"	0.65	0.01	
3	48	49	"	"	0.10	<0.01	
4	49	50	"	"	0.04	<0.01	
5	50	51	"	"	0.28	<0.01	
6	51	52	"	"	4.70	0.16	
7	52	53	"	0.9	3.05	0.10	
8	53	54	"	1.0	2.62	0.07	
9	54	55	"	"	2.60	0.10	
10	55	56	"	"	2.55	0.11	
1	56	57	"	"	2.45	0.14	
2	57	58	"	"	2.22	0.09	Upper C lens :
3	58	59	"	"	2.58	0.10	50 - 66m,
4	59	60	"	"	3.16	0.15	16m @
5	60	61	"	"	2.27	0.18	2.15% WO_3
6	61	62	"	"	2.48	0.47	0.12% Mo
7	62	63	"	"	1.51	0.05	
8	63	64	"	"	0.34	0.01	
9	64	65	"	"	1.67	0.07	
20	65	66	"	"	0.68	0.03	
1	66	67	"	"	0.08	<0.01	
2	67	68	"	0.8	0.08	<0.01	

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - Dolphin Mine (K.I.)

ASSAY DATA

D.D.H. No. D 280/3

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo		COMMENTS
D4123	68	69	1.0	1.0	0.65	0.02		Lower C lens
4	69	70	"	"	1.62	0.08		68 - 91m,
5	70	71	"	"	0.74	0.04		23m @
6	71	72	"	"	1.01	0.04		0.76% WO_3
7	72	73	"	"	1.13	0.05		0.03% Mo
8	73	74	"	"	1.24	0.05		
9	74	75	"	"	0.71	0.04		
30	75	76	"	"	1.78	0.10		
1	76	77	"	"	0.42	0.01		
2	77	78	"	"	0.32	< 0.01		
3	78	79	"	"	0.62	0.03		
4	79	80	"	"	0.70	0.04		
5	80	81	"	"	0.44	0.02		
6	81	82	"	"	0.45	0.02		
7	82	83	"	"	0.43	0.02		
8	83	84	"	"	0.24	< 0.01		
9	84	85	"	"	0.44	0.01		
40	85	86	"	"	0.21	< 0.01		
1	86	87	"	"	0.27	0.01		
2	87	88	"	"	0.96	0.04		
3	88	89	"	"	0.43	0.01		
4	89	90	"	"	2.25	0.09		
5	90	91	"	"	0.38	0.03		
6	91	92	"	"	0.09	< 0.01		
7	92	93	"	"	0.05	< 0.01		
8	93	94	"	"	0.03	< 0.01		
9	94	95	"	"	0.39	0.01		
D 4150	95	96	"	"	0.15	< 0.01		

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 280/3

LAB.	K.I.S.		LAB.	K.I.S.		LAB.	AMDEL		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.	
D4151	0.58	0.01	D4538	0.54		D4539	0.66		D4540	0.55		
56	0.32	<0.01	41	0.33		42	0.44		43	0.44		
02	0.65	0.01	44	0.57		45	0.76		46	0.60		
12	2.22	0.09	47	2.40		48	2.27		49	2.17		
22	0.08	<0.01	50	0.06		51	0.14		52	0.13		
32	0.32	<0.01	53	0.37		54	0.43		55	0.42		
42	0.96	0.04	56	0.94		57	0.97		58	0.94		
D4149	0.39	0.01	D4559	0.41		D4560	0.47		D4561	0.42		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/3

0 - 30.8m — B LENS

0 - 5.0m Garnet pyroxene hornfels
0 - 1.4m is rubble and there is significant core loss to 3.6m. 0 - 3.6m = 39% lost. Minor disseminated scheelite 3.6 - 4.6m.

5.0 - 18.2m Marble
Barren grey ch. Core is extensively leached and brecciated due to Decline Fault to approx. 14.4m and becomes fresh below this depth.

18.2 - 22.8m Garnet pyroxene hornfels
Disseminated scheelite in a fine to medium grained andradite skarn.

22.8 - 29.9m Biotite hornfels
Brown barren bh containing white fragments of actinolite (?) hornfels.

29.9 - 30.8m Pyroxene hornfels
Barren pale green ph. Minor grossular garnet developed.

30.8 - 47.2m — BIOTITE HORNFELS

Barren brown hangingwall biotite hornfels. There is minor carbonate veining 38 - 44m but nothing that looks like a fault.

47.2 - 51.0m — PYROXENE GARNET HORNFELS

Typical pgh of the Dolpin Wedge Area. Mostly a pale green ph groundmass (some occasional bh rich patches) containing white carbonate pods often rimmed by a brown grossular garnet.
The unit contains variable mineralization throughout usually in form of coarse scheelite blebs up to 5mm dia.

51.0 - 65.4m — GARNET HORNFELS

Medium grained andradite garnet skarn containing high grade finely disseminated scheelite. The unit is massive to 63.3 where some minor banding begins to appear with some barren silicate hornfels. Grade of mineralization decreases below 63m.

65.4 - 68.4m — MARKER HORIZON

A weakly mineralized mixture of green ph, brown bh, grey ch with very minor skarn developed.

68.4 - 90.4m — BANDED GARNET HORNFELS

Fine to medium grained andradite garnet skarn containing moderate disseminated scheelite interbedded

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/3

68.4 - 90.4m cont.

with barren green ph and minor black bh. Bedding is well defined and recorded on the structural page.

No significant mineralization below 90.4m.

90.4 - 100.8m BANDED FOOTWALL BEDS

An interbedded mixture of green ph, black bh, brown grossular garnet and white carbonate. Individual beds are generally less than 1cm. thick but some carbonate units are up to 0.5m. Minor skarn and weak disseminated scheelite at 94.5 - 95.2
100.1 - 100.4m

100.8 - 109.0m LOWER METAVOLCANICS

Typical Dolphin lower metavolcanics. Pale green grey in colour with flecks of biotite throughout. No mineralization and no bedding. The unit appears to contain white feldspar porphyroblasts in the uppermost 0.5m.

109.0 - 112.0m BANDED BIOTITE ACTINOLITE HORNFELS

Thinly bedded grey black, barren biotite actinolite hornfels. Quality of core is poor with most breaks occurring along the bedding.

112.0m E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. 280/2

PLANNING

Proposer: M.J. Danielson. Depth: 100m

Location: Q. 15 -98m R.L.

Purpose of hole: C lens oreblocking and locate Northern Fault.

Co-ordinates: 220 275 E 564 118 N

Inclination: -65° Magnetic

Bearing: 360° Grid Target depth:

Target: E N

Approved by: M.C. Rogers. Date: 1/7/75

SURVEY

Survey Co-ords: E N

Survey bearing: Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 274.8 E 564 120.5 N

R.L. of collar: -97.6 Inclination of hole:

Picked up by : R.J.H. Date: 11/8/75

SUMMARY

Logged by : M.J. Danielson.

Results: B. Lens: 3 - 5m, 2m @ 0.63% WO_3

Upper C lens: 71 - 85m, 14m @ 1.25% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 30/7/75 Date terminated: 6/8/75

Casing:	Size :	BX			
	Depth :	1.2m			
Core:	Size :	BQ	NQ		
	Depth :	96.6	1.2		

Wedge Runoff:

Wedge placed Nil Depth:

Proposed by : Approved by:

Reason:

Extension: Nil.

Reason for termination: Hole passed through Northern Boundary Fault. Final depth: 96.6m

Condition of hole on completion:

Casing : 1.2m BX remains.

Cemented : Yes.

Bore hole survey: Surveyed to 94.49m.

Water: Nil.

Comments on drilling conditions:

GEOPEKO LIMITED - Dolphin

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/2

Survey method : Multishot camera
Final depth : 96.6m.
Casing depth : 1.52m.

Depth surveyed to : 94.49m
Date surveyed : 6/8/75
Surveyed by : G.L. Buckland.
Checked by : M.J. Danielson.

DEPTH	Bearing		Inclination		True Vertical Depth	Co-oridinates	
	Grid	Mag.	Read	Corrected		E	N
15.24	0.11°	002°	26°	-64°	13.70	0.47	6.66
30.48	009°	360°	25°	-65°	27.51	0.42	13.16
45.72	007°	358°	25°	-65°	41.32	0.38	19.60
60.96	005°	356°	24°30'	-65°30'	55.17	W 0.03	25.96
76.20	004°	355°	24°	-66°	69.07	0.53	32.18
91.44	004°	355°	24°	-66°	83.0	1.03	38.37
94.49	004°	355°	24°30'	-65°30'	85.78	1.14	37.61

REMARKS

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/2

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 - 15.3	B lens (ch)	0 - 8 +20 8-15.36		carbonate	10m:40°	94	46	0 - 3.5m rubble leached: 0 - 7m 11 - 13m 14.3 - 14.5m
15.3 - 23.3	B lens (ch)	5		carbonate		100	75	clay cemented breccia 23.0 - 23.1
23.3 - 44.3		9		clay minor pyrite	24m:50°	98	68	bad ground 35.8 - 36.0m
44.3 - 59.3	bh, ph	3		clay	45m:40°	99	91	
59.3 - 92.3	bh pgh gh	4		clay		99	82	Fault? 78.4 - 79 minor leaching.
92.3 - 96.6	Fault zone, q	+15		clay		100	42	Fault zone 92.5 - 95.1

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size. 0 - 1.2m NQ (47.6mms dia.)
   1.2 - 96.6m BQ (36.5mms dia.)

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 280/2

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 1.2	1.2	.8	67
3.5	2.3	2.0	87
5.3	1.8	1.9	105
8.3	3.0	3.85	95
11.3	3.0	2.88	96
14.3	3.0	3.0	100
17.3	3.0	3.0	100
20.3	3.0	3.0	100
23.3	3.0	3.0	100
26.3	3.0	3.0	100
29.3	3.0	3.0	100
32.3	3.0	3.0	100
34.3	2.0	2.0	100
37.2	2.9	2.9	100
40.1	2.9	2.65	91
41.2	0.9	1.0	111
44.3	3.1	3.1	100
47.3	3.0	2.93	98
50.3	3.0	2.97	99
53.3	3.0	3.0	100
55.7	2.4	2.4	100
58.4	2.7	2.7	100
59.3	0.9	.85	94
62.3	3.0	3.0	100
65.3	3.0	2.95	98
68.3	3.0	3.0	100
71.3	3.0	3.0	100
74.3	3.0	3.0	100
80.3	3.0	3.0	100
83.3	3.0	3.0	100
86.3	3.0	3.0	100
89.3	3.0	2.95	98
92.3	3.0	2.9	97
95.1	2.8	2.8	100
96.6	1.5	1.5	100
E.O.H.			

GEOPEKO LIMITED - Dolphin

ASSAY DATA

D.D.H. No. D 280/2

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo		COMMENTS
D 4075	3	4	1.0	1.0	0.72	<0.01		B lens:
6	4	5	"	"	0.54	<0.01		3 - 5m, 2m @ 0.63% WO_3 <0.01% Mo
D 4077	64	65	1.0	1.0	0.12	<0.01		
8	65	66	"	"	0.11	<0.01		
9	66	67	"	"	0.04	<0.01		
80	67	68	"	"	0.02	<0.01		
1	68	69	"	"	0.01	<0.01		
2	69	70	"	"	0.02	<0.01		
3	70	71	"	"	0.15	<0.01		
4	71	72	"	"	0.35	<0.01		Upper C lens:
5	72	73	"	"	5.9	0.19		71 - 85m,
6	73	74	"	"	1.25	0.01		14m @ 1.25% WO_3
7	74	75	"	"	1.78	0.03		0.03% Mo
8	75	76	"	"	1.58	0.01		(Note: sample
9	76	77	"	"	1.56	0.03		D 4085 was
90	77	78	"	"	1.16	0.01		written down
1	78	79	"	"	0.34	<0.01		from 5.9 to
2	79	80	"	"	0.86	0.01		4.0% WO_3)
3	80	81	"	"	0.43	<0.01		
4	81	82	"	"	0.39	<0.01		
5	82	83	"	"	1.20	0.01		
6	83	84	"	"	0.42	<0.01		
7	84	85	"	"	2.18	0.06		
8	85	86	"	"	0.12	<0.01		
9	86	87	"	"	0.24	<0.01		
D 4100	87	88	1.0	1.0	0.04	<0.01		

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 280/2

LAB.	K.I.S.		LAB.	K.I.S.		LAB. AMDEL			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.	
D4075	0.72	<0.01	D4526	0.61		D4527	0.73		D4528	0.67		
83	0.15	<0.01	29	0.17		30	0.23		31	0.20		
88	1.58	0.01	32	1.44		33	1.39		34	1.39		
D4097	2.18	0.06	D4535	3.32		D4536	2.40		D4537	2.14		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 280/2

0 - 31.2m B LENS

0 - 6.5 Garnet pyroxene hornfels

Fine grained pyroxene rich andradite garnet skarn. Moderate disseminated scheelite 3.4 - 4.3m. Core is mostly rubble to 3.5m and is extensively leached and brecciated thereafter - influence of Decline Fault.

6.5 - 23.0 Marble

Barren grey ch. Core continues weakly leached to 14.5m with particularly bad zones.
11 - 13m & 14.2 - 14.5m.
No leaching below 14.5m.

23.0 - 27.1m Biotite pyroxene hornfels

Barren, mostly brown biotite hornfels with some green ph interbeds. Breccia clay recemented between 23.0 - 23.1. Core is weakly fragmental with pale white grey fragments of actinolite? hornfels (up to 1cm. dia.) often elongate in direction of bedding, set in the brown bh groundmass.

27.1 - 31.2m Pyroxene hornfels

Dominantly a barren green ph with minor developments of a gph skarn e.g. 27.7 - 28.0m

32.1 - 60.7m BIOTITE HORNFELS

Barren grey brown bh with some alteration to ph to 44m. Below 44m there is no pyroxenization. Quality of core improves significantly below 44m.

60.7 - 72.5m PYROXENE GARNET HORNFELS

Weakly mineralized typical pgh. Pale green groundmass with white carbonate pods up to 4cm dia. rimmed by brown grossular garnet.

72.5 - 87.7m GARNET HORNFELS

Massive andradite garnet hornfels with high grade finely disseminated scheelite to approx. 81m.
Possible fault 78.4 - 79.0 where skarn is severely leached. Below 81m skarn is fine grained, more pyroxene rich and contains less scheelite. Vague banding appears below 85m.
All this unit appears to be Upper C lens.

87.7 - 92.5m BIOTITE PYROXENE HORNFELS

Barren, dominantly brown bh and minor pale green ph.

92.5 - 95.1m FAULT ZONE

Northern Boundary Fault breccia zone.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. 280/2

95.1 - 96.6m QUARTZITE

Barren pale grey quartzite.

96.6m E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 280/1

PLANNING

Proposer: M.J. Danielson. Depth: 110m.

Location: Q.15 -98m R.L.

Purpose of hole: C lens oreblocking.

Co-ordinates: 220 275 E 564 170 N

Inclination: -80° Magnetic

Bearing: 015° Grid Target depth:

Target: E N

Approved by: M.C. Rogers. Date: 14/7/75

SURVEY

Survey Co-ords: E N

Survey bearing: Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 274.8 E 564 120.5 N

R.L. of collar: -97.6 Inclination of hole: -80

Picked up by : R.J.H. Date: 11/8/75

SUMMARY

Logged by : M.J. Danielson.

Results: Upper C lens: 62 - 68m, 6m @ 2.14% WO_3

Lower C lens: 73 - 87m, 14m @ 0.53% WO_3

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 18/7/75 Date terminated: 29/7/75

Casing:	Size :	BX			
	Depth :	1.52			
Core:	Size :	NQ	BQ		
	Depth :	1.37	97.23		

Wedge Runoff:

Wedge placed: Nil. Depth:

Proposed by : Approved by:

Reason:

Extension: Nil.

Reason for termination: Hole passed through Lower Metavolcanics. Final depth: 97.23m.

Condition of hole on completion:

Casing : 1.5m BX remains.

Cemented : Yes/

Bore hole survey: Surveyed to 97.23m.

Water: Nil.

Comments on drilling conditions:

GEOPEKO LIMITED - DOLPHIN MINE (K.I.)

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 280/1

Survey method : Multishot camera.
Final depth : 97.23m.
Casing depth : 1.52m.

Depth surveyed to : 97.23m.
Date surveyed : 29/7/75
Surveyed by : R. Bogaart.
Checked by : G.L. Buckland.

DEPTH (m)	Bearing		Inclination		True Vertical Depth	Co-oridinates	
	Grid	Mag.	Read	Corrected		E	N
15.24	020°	011°	11°	-79°	14.96	0.62	2.85
30.48	015°	006°	10°30'	-79°30'	29.93	1.00	5.68
45.72	009°	000°	10°	-80°	44.94	1.14	8.37
60.96	006°	357°	9°30'	-80°30'	59.96	1.09	10.88
76.20	004°	355°	9°15'	-80°45'	75.00	0.91	13.36
91.44	001°	352°	10°	-80°	90.01	0.58	15.96
97.23	359°	350°	10°	-80°	95.71	0.42	16.96

REMARKS Bearing was deliberately aimed east of I.S.G. North to compensate for collar co-ordinate of 220275 E.

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 280/1

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 - 11.40	B lens	9		carbonate	9.5m:30°	83	36	Big core loss 0 - 3.50m. Mod. leaching & brecciation.
11.40 - 32.74	B lens	4		carbonate clay		97	75	20.5 - 22.6 min. leaching.
32.74 - 56.23	bh	7		clay	43m:70° 45m:60°	99	64	Broken ground 39 - 40.
56.23 - 69.29	pgh/gh	3		clay		97	80	
69.29 - 89.92	marker, banded gh	5		clay		99	72	Joints // bedding.
89.92 - 97.33	bfb, lv.	5		clay		99	71	

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) $+= \frac{\text{length core } >10 \text{ cms}}{\text{length drilled}}$ %
3. Core size. 0 - 1.37 NQ (47.6mms. dia.)
   1.37 - EOH. BQ (36.5mms. dia.)

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. 280/1

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 1.37	1.37	.64	47
3.50	2.13	1.05	49
4.98	1.48	1.48	100
8.36	3.38	3.32	98
11.40	3.04	2.98	98
14.45	3.05	3.05	100
17.50	3.05	3.00	98
20.55	3.05	2.90	95
22.45	1.90	1.55	82
23.60	1.15	1.15	100
26.64	3.04	3.04	100
29.69	3.05	2.95	97
32.74	3.05	3.05	100
35.36	2.62	2.60	99
36.12	0.76	0.76	100
38.84	2.72	2.60	96
41.88	3.04	3.04	100
44.93	3.05	3.00	98
47.39	2.46	2.46	100
49.68	2.29	2.29	100
51.00	1.32	1.24	94
54.05	3.05	3.05	100
56.23	2.18	2.18	100
58.82	2.59	2.59	100
60.15	1.33	1.05	79
63.19	3.04	2.96	97
66.24	3.05	3.05	100
69.29	3.05	3.02	99
72.34	3.05	3.05	100
75.39	3.05	3.05	100
77.72	2.33	2.25	97
79.70	1.98	1.98	100
81.48	1.78	1.78	100
84.53	3.05	3.05	100
87.58	3.05	3.00	98
89.92	2.34	2.34	100
91.13	1.21	1.21	100
93.67	2.54	2.50	98
96.72	3.05	3.05	100
97.33	.61	.61	100
E.O.H.			

GEOPEKO LIMITED - Dolphin mine

ASSAY DATA

D.D.H. No. D 280/1

SAMPLE No.	DEPTH (METRES) From	To	Length	Length Recovered	ELEMENTS WO_3	Mo		COMMENTS
D 4043	15	16	1.0	1.0	0.23	<0.01		
4	16	17	"	"	0.02	<0.01		
4045	60	61	1.0	1.0	<0.01	<0.01		
6	61	62	"	"	<0.01	<0.01		
7	62	63	"	"	1.72	0.02		Upper C lens:
8	63	64	"	"	6.10	0.22		62 - 68m,
9	64	65	"	"	1.18	0.02		6m @
50	65	66	"	"	1.87	0.08		2.14% WO_3
1	66	67	"	"	1.54	0.07		0.07% Mo
2	67	68	"	"	0.41	0.02		
3	68	69	"	"	0.08	<0.01		
4	69	70	"	"	<0.01	<0.01		
5	70	71	"	"	<0.01	<0.01		
6	71	72	"	"	<0.01	<0.01		
7	72	73	"	"	0.11	<0.01		
8	73	74	"	"	0.25	<0.01		
9	74	75	"	"	0.41	<0.01		
60	75	76	"	"	0.44	0.02		
1	76	77	"	"	0.66	<0.01		
2	77	78	"	"	0.14	<0.01		
3	78	79	"	"	0.43	<0.01		Lower C lens:
4	79	80	"	"	0.17	<0.01		
5	80	81	"	"	0.30	<0.01		73 - 87m,
6	81	82	"	"	0.49	0.03		14m @
7	82	83	"	"	0.92	0.04		0.53% WO_3
8	83	84	"	"	0.72	0.01		
9	84	85	"	"	0.64	0.01		0.02% Mo
70	85	86	"	"	1.18	0.04		
1	86	87	"	"	0.68	0.02		
2	87	88	"	"	0.22	<0.01		
3	88	89	"	"	<0.01	<0.01		
D 4074	89	90	1.0	1.0	0.08	<0.01		

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 280/1

LAB. K.I.S.			LAB. K.I.S.			LAB. Amdel			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.	
D4047	1.72	0.02	D4511	1.96		D4512	2.02		D4513	2.21		
52	0.41	0.02	14	0.38		15	0.47		16	0.44		
57	0.11	<0.01	17	0.09		18	0.21		19	0.18		
62	0.14	<0.01	20	0.11		21	0.19		22	0.16		
D4071	0.68	0.02	D4523	0.70		D4524	0.77		D4525	0.74		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. 280/1

0 - 32.20m. B LENS

Garnet pyroxene hornfels. 0 - 8.0m

Fine grained very carbonate rich grossular garnet and pyroxene skarn. Very minor specks of scheelite but no assays taken. Most of the core in this interval is weakly leached probably due to the fault exposed near the drill site in Q.15.

Marble. 8.0 - 10.60m

Barren grey ch. Some leaching and brecciation.

Tuffite (?). 10.60 - 13.05m

Mottled green grey mica and pyroxene rich rock with weakly fragmental texture.

Marble. 13.05 - 22.10m

Mostly barren grey ch. with minor disseminated scheelite between 15 - 17m.

Biotite hornfels. 22.10 - 27.74m

Barren purplish brown bh which contains fragments (up to 7cm. dia.) of a pale grey siliceous hornfels.

Pyroxene hornfels. 27.74 - 32.20m

Mostly a pale green ph with minor interbeds of a fine grained brown grossular garnet. No mineralization.

32.2
30.0 - 56.0m BIOTITE HORNFELS

A barren weakly bedded brown biotite hornfels.

56.0 - 62.25m PYROXENE GARNET HORNFELS

Typical pgh. Pale green ph ground mass with carbonate fragments up to 13cm. dia. often rimmed by pale brown grossular garnet. The contact of the pgh and overlying bh is a 25cm. breccia zone - fault (?).

No mineralization in the pgh.

62.25 - 67.45m GARNET HORNFELS

Medium to coarse grained massive andradite garnet skarn. High grade mineralization.

Typical upper C lens.

67.45 - 73.05m MARKER HORIZON

A variety of barren or weakly mineralized rock types as follows:-

67.45 - 68.54 garnet pyroxene hornfels.
68.54 - 70.0 biotite pyroxene hornfels.
70.0 - 73.05 marble.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. 280/1

73.05 - 88.20m BANDED GARNET HORNFELS

Interbedded mineralized andradite skarn and barren green pyroxene hornfels.

88.20 - 92.60m BANDED FOOTWALL BEDS

A mostly barren mixture of grey marble and interbedded grey and green bh and ph. Minor grossular garnet skarn. No mineralization below 92.35m.

92.60 - 96.92m LOWER METAVOLCANICS

Barren grey brown in colour, mottled weakly fragmental texture.

96.92 - 97.33m BIOTITE PYROXENE HORNFELS

Barren grey green bh/ph.

97.33m E.O.H.

O.h. & copy.

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 260/8

PLANNING

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

LOCATION: P10 Lower Central Diamond Drill Drive

PURPOSE OF HOLE: Test Lower Central Orebody

PROPOSED CO-ORDS: 220 260 E 563 955 N

INCLINATION: -58°

BEARING: 360° °Grid °Mag

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 0° 40' °Grid °Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 259.8 E 563 957.8 N

R.L. OF COLLAR: -233.3

INCLINATION OF HOLE: -55° 40'

PICKED UP BY: R. Howman DATE: 25.3.82

SUMMARY

LOGGED BY: H. Gamlieli

RESULTS: 13 - 16 m, 3 m @ 0.70% WO_3 pgh Lower Central

DRILLING

DATE COMMENCED: 12.2.82 DATE TERMINATED: 22.2.82

DRILLER/CONTRACTOR: L. Limbourne/K.I.S.

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 42 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 260/8

Surveyed method: MS
Final depth: 42 m
Casing depth: 1 m

Depth surveyed to: 40 m
Date surveyed: 24.2.82
Surveyed by: R. Drake
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
10	1.00	N 9 W	34° 00	146	-241.6	963.4	259.9
19	1.00	N 9 W	34° 00	146	-249.0	968.5	260.0
28	1.00	N 9 W	34° 00	146	-236.5	973.5	260.0
40	1.00	N 9 W	33° 30	146'30°	-266.4	980.2	260.2

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 260/8

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.7	2.7	2.7	93
2.7 - 4.5	1.8	1.8	100
4.5 - 7.2	2.7	2.7	100
7.2 - 10.5	3.3	2.75	83
10.5 - 13.0	2.5	2.7	108
13.0 - 15.2	2.2	2.1	95
15.2 - 17.7	2.5	2.5	100
17.7 - 19.9	2.2	2.3	105
19.9 - 22.3	2.4	2.3	96
22.3 - 25.2	2.9	2.9	100
25.2 - 27.4	2.2	2.2	100
27.4 - 32.0	4.6	4.6	100
32.0 - 35.4	3.4	3.4	100
35.4 - 38.8	2.4	2.4	100
38.8 - 40.5	1.7	1.7	100
40.5 - 42.0	1.3	1.5	115

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 260/8

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13742	0	1	1.0	1.0	0.20			
43	1	2	"	"	0.11			
44	2	3	"	"	0.20			
45	3	4	"	"	0.09			
46	4	5	"	"	0.08			
47	5	6	"	"	0.08			
48	6	7	"	"	0.09			
49	7	8	"	"	0.11			
50	8	9	"	"	0.20			
51	9	10	"	"	0.37			
52	10	11	"	"	0.10			
53	11	12	"	"	0.10			
54	12	13	"	"	0.18			
55	13	14	"	"	0.77			
56	14	15	"	"	1.10			
57	15	16	"	"	0.24			
58	16	17	"	"	0.13			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/8

0.0 - 16.7 m PYROXENE GARNET HORNFELS

A massive unit with rich calcium pods. Where pyroxene is present the colour in pale green, elsewhere it is black to grey where biotite is present.

Overall the rock is richer in biotite than normal pyroxene garnet hornfels.

Faults with associated breccia are located at 6 m, 7.2 m, and 8.5 m.

Mineralisation is $< 0.3\%$ WO_3 and occurs mainly as isolated crystals (0.2 mm) within the rock mass, and rarely as intensive mineralisation or narrow belts (0.5 cm wide). Grossular and andradite are present.

16.7 - 18.5 APLITE

A medium grained aplite dyke. It is suggested that this dyke intrudes the fault that divides the pyroxene garnet hornfels above this unit from the banded footwall beds below.

No breccia or clay zone, indicative of faulting can be seen.

18.5 - 35.5 BANDED FOOTWALL BEDS

A well banded unit consisting of interbedded marbles, pyroxene biotite hornfels, and are barren. It is a competant unit with sticks up to 60 cm but the average is 8 cm. Three dykes intrude this unit.

Aplite from 19.5 - 19.7 m
Volcanic dyke from 31.0 - 32.0 m
Volcanic dyke from 34.4 - 35.4 m

A few calcite veins cross parallel to bedding.

35.5 - 42.0 GRANITE

A massive unit rich in quartz, biotite, muscovite and feldspar. The unit is medium grained, pale pink, and sugary. Ground is good with core sticks up to 50 cm.

EOH 42.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 260/7

PLANNING

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

LOCATION: P10 L. Central Drill Drive

PURPOSE OF HOLE: Test L. Central Orebody

PROPOSED CO-ORDS: 220 260 E 563 955 N

INCLINATION: -63°

BEARING: 180° °Grid °Mag

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 180° 18' °Grid °Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 260.1 E 563 956.7 N

R.L. OF COLLAR: 233.2

INCLINATION OF HOLE: -63° 05'

PICKED UP BY: R. Howman DATE: 5.2.82

SUMMARY

LOGGED BY: H. Gamleili

RESULTS: 7-29m, 22m @ 1.15% WO_3 gh L. Central
36-41m, 5m @ 0.72% WO_3 gh (b) L. Central

DRILLING

DATE COMMENCED: 2.2.82 DATE TERMINATED: 13.2.82

DRILLER/CONTRACTOR: L. Limbourne / K.I.S.

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 59m

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 260/7

Surveyed method: MS
Final depth:
Casing depth: 0.75

Depth surveyed to: 58 M
Date surveyed: 24.3.82
Surveyed by: R. Drake
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
10	181.00	S 9 E	26.50	153.10			
19	181.30	S 8.30E	27.00	153.00			
28	181.00	S 9 E	27.00	153.00			
37	181.00	S 9 E	27.00	153.00			
46	183.00	S 7 E	27.00	153.00			
58	182.00	S 8 E	27.00	153.00			

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 260/7

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 4.8	4.8	4.10	85
4.8 - 7.5	2.7	2. 9	107
7.5 - 8.6	1.1	1. 0	91
8.6 - 10.4	2.0	2.0	100
10.6 - 12.1	1.5	1.5	100
12.1 - 18.2	6.1	6.9	113
18.2 - 20.9	2.7	2.9	107
20.9 - 22.4	1.5	1.6	107
22.4 -24.6	2.2	2.2	100
24.6 - 27.5	2.90	3.0	103
27.5 - 30.8	3.30	3.6	109
30.8 - 35.3	4.5	4.8	107
35.3 - 38.3	3.0	3.0	100
38.3 - 41.1	2.8	2.9	104
41.1 - 4.41	3.0	3.0	100
44.1 - 47.7	3.60	4.0	111
47.7 - 49.40	1.7	1.9	112
49.4 - 51.6	2.2	2.1	96
51.6 - 54.6	3.0	3.0	100
54.6 - 57.6	3.0	3.0	100
57.6 - 59.0	1.40	1.20	86
E O H 59 m			

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 260/7

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13706	7	8	1.0	1.0	0.89			
7	8	9	"	"	1.20			
8	9	10	"	"	1.18			
9	10	11	"	"	1.50			
10	11	12	"	"	1.30			
11	12	13	"	"	0.90			
12	13	14	"	"	0.80			
13	14	15	"	"	0.90			
14	15	16	"	"	1.10			
15	16	17	"	"	2.10			
16	17	18	"	"	1.40			
17	18	19	"	"	2.05			
18	19	20	"	"	0.95			
19	20	21	"	"	0.80			
20	21	22	"	"	1.00			
21	22	23	"	"	1.40			
22	23	24	"	"	1.05			
23	24	25	"	"	0.79			
24	25	26	"	"	1.20			
25	26	27	"	"	1.40			
26	27	28	"	"	0.65			
27	28	29	"	"	0.87			
28	29	30	"	"	0.06			
29	30	31	"	"	0.26			
30	31	32	"	"	0.10			
31	32	33	"	"	0.14			
32	33	34	"	"	0.21			
33	34	35	"	"	0.05			
34	35	36	"	"	0.09			
35	36	37	"	"	0.49			
36	37	38	"	"	0.30			
37	38	39	"	"	0.42			
38	39	40	"	"	1.08			
39	40	41	"	"	1.30			
40	41	42	"	"	0.08			
41	42	43	"	"	0.11			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/7

Summary

0.0 - 7.7 m	Pyroxene Garnet Hornfels		
7.7 - 28.0 m	Garnet Hornfels		
28.0 - 35.3 m	Marble Marker		
35.3 - 40.6 m	Garnet Hornfels (banded)		
40.6 - 53.6 m	Banded Footwall Beds	42.8 - 44.25 m	Dyke
53.6 - 59.0 m	Granite		

0.0 - 7.7 m PYROXENE GARNET HORNFELS

A well fractured rock unit with joints and faults running at all angles. There are major faults at 2 metres 2,7 metres and 7.5 m containing mud & breccia. Overall the unit is rich in calcium as crystals and veins.

The rock is pale green where rich in pyroxene and brown where rich/calcum pods. Poorly mineralised unit certainly subgrade few big scheelite crystals occur throughout the rock unit (0.1 - 0.3 mm). Most fragments are 5 - 10 cm long. Overall rich unit in pyroxene, biotite and calcum.

7.7 - 28.0 m GARNET HORNFELS

A typical, garnet hornfels unit. Massive and large grained Essentially green - brown garnet hornfels.
Consisting of black andradite garnet and the calcite and quartz occur as white freckles. High scheelite mineralisation $>$ 0.9% WO_3.
The core is competant with sticks up to 70 cm.

The mineralisation contact with the marble marker unit is sharp

28.0 - 35.30 m MARBLE MARKER

A well banded unit consisting of interbedded (50 cm) biotite hornfels and biotite pyroxene hornfels overall rich calcium unit occur as a big calcite minerals in a matrix of calcium marble.

The contact with garnet hornfels (banded) unit is very sharp both rock type and scheelite mineralisation.

Between 28 - 29 m the rock is well contaminated and rich pyroxene and biotite and also very low scheelite mineralisation $<$ 0.1% WO_3. Overall the rock is a black, grey white colour but in some pyroxene rich areas the rock is pale green. This unit is quite hard with cores up to 40 cm long.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/7

35.30 - 40.60 m GARNET HORNFELS (BANDED)

A banded unit, consisting of andradite skarn and biotite pyroxene hornfels. Generally the rock is green - brown. The biotite pyroxene hornfels layers are generally barren and the grade overall is ~ 0.7% WO_3

Ground is good (up to 50 cm core sticks). The contact with banded footwall beds is not clear and has been fixed by ultraviolet lamp within the banded footwall bed unit the same layers of pyroxene biotite hornfels continuing.

40.6 - 53.6 BANDED FOOTWALL BEDS

A well bedded rock unit with interchanging rock types of pyroxene biotite hornfels, marble, biotite hornfels and pyroxene hornfels. Large faults at 47.7 associated with much breccia and mud.

Aplite dyke occur between 42.8 - 44.28 m associated with baked edges. This dyke is 1.45 m long pink and medium grained rich in feldspar (orthoclase, plagioclose). This unit is generally weak but some sticks are up to 30 cm long.

53.6 - 59.0 m GRANITE

A medium grained granite unit rich muscovite (5.0 - 10.0%), biotite, quartz orthoclase and plagioclase minerals.

Overall it is a massive unit with sticks up to 70 cm. Colour pale pink grey and sugared appearance.

EOH 59.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 260/6

PLANNING

PROPOSER: R. E. S. Davies DEPTH: 30 m

LOCATION: P10 -230 m level Lower Central Drill Drive

PURPOSE OF HOLE: Test Lower Central Orebody

PROPOSED CO-ORDS: 220 260 E 563 955 N

INCLINATION: 0^{o}

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

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 180^{o} 42' ^{o}Grid ^{o}Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 260.8 E 563 954,0 N

R.L. OF COLLAR: -232,1

INCLINATION OF HOLE: (89^{o} 53')

PICKED UP BY: R. Howman DATE: 6.11.81

SUMMARY

LOGGED BY: R. E. S. Davies

RESULTS: 0 - 6 m, 6 m @ 0.52% WO_3
9 - 16 m, 7 m @ 0.53% WO_3 Pgh Lower Central

DRILLING

DATE COMMENCED: 13.10.81 DATE TERMINATED: 15.10.81

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

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 30 m

REASON FOR TERMINATION: In biotite hornfels

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: S/S

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 260/6

Surveyed method: M/S
Final depth: 30 m
Casing depth:

Depth surveyed to: 30 m
Date surveyed: 12.10.81
Surveyed by: R. Drake
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
15	179.00	169.00	-89.00	91.00			
30	179.00	169.00	-89.00	91.00			

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 260/6

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.4 m	3.4	3.4	100
3.4 - 6.0	2.6	2.6	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
EOH 30.0 m			

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 260/6

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13601	0	1	1.0	1.0	0.16			
02	1	2	"	"	2.12			
03	2	3	"	"	0.27			
04	3	4	"	"	0.30			
05	4	5	"	"	0.11			
06	5	6	"	"	0.24			
07	9	10	"	"	0.16			
08	10	11	"	"	3.10			
09	11	12	"	"	0.11			
10	12	13	"	"	0.07			
11	13	14	"	"	0.08			
12	14	15	"	"	0.08			
93	15	16	"	"	0.09			

SPECIFIC GRAVITY

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

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/6

Summary

0.00 -	6.1 m	Pyroxene Garnet Hornfels (mineralised)
6.1 -	10.4 m	Pyroxene Garnet Hornfels
10.4 -	15.9 m	Pyroxene Garnet Hornfels (mineralised)
15.9 -	30.0 m	Biotite Hornfels

0.0 - 6.1 m PYROXENE GARNET HORNFELS (MINERALISED)

Pale pink - green unit containing small (5 cm) pods of calcite. It is erratically mineralised.

The core is good (40 cm sticks) from 3 m on. From 0.3 m it is present as 5 - 10 cm fragments.

6.1 - 10.4 m PYROXENE GARNET HORNFELS

A small section of broken core seperates this unit from the previous one and probably represents a fault.

This unit has a fine grained block biotite hornfels matrix and contains large (5 - 10 cm) calcite clasts. It is unmineralised.

Most of the core is fairly broken, 5 cm sticks.

10.4 - 15.9 m PYROXENE GARNET HORNFELS (MINERALISED)

This unit is seperated from the last by a small amount of broken core 15 cm and a short, weathered interval 5 cm lined with a fine pale yellow mineral.

This unit is erratically mineralised and has a green and pink colour and small (5 cm) calcite clasts. Core is mostly good with 30 cm sticks.

Its top contact is conformable.

15.9 - 30.0 BIOTITE HORNFELS

Mostly a fine grained brown massive biotite hornfels.

Some intervals of slightly coarse material occur at 16 - 18 m and 20 - 21 m.

Ground is only moderately good overall, generally 20 cm sticks. A zone of broken core carrying slickenslides from 23.8 - 24.4 probably indicates a fault.

Bedding	is	@	40^{o}	to	LCA	@ 16 m
"			20^{o}		"	26 m

The last metre of core is cut by many hairline cracks and is quite pyroxene rich.

Considerable amount of felspar are present as filling in the interval from 21 - 25 m.

EOH 30 m

O.C. & Copy.

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 260/5

PLANNING

PROPOSER: S.G. Brown DEPTH: 100m

LOCATION: P10 L. Central Drill Drive

PURPOSE OF HOLE: Test Central & Southern Orebodies

PROPOSED CO-ORDS: 220 260 E 563 955 N

INCLINATION: -40^{o}

BEARING: 180^{0} ^{o}Grid ^{o}Mag

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 178^{o} 27' ^{o}Grid ^{o}Mag

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 260.84 E 563 954.31 N

R.L. OF COLLAR: -233.48

INCLINATION OF HOLE: 129^{o} 33' (-39^{o} 33')

PICKED UP BY: J. Cook DATE: 7.10.81

SUMMARY

LOGGED BY: R.E.S. Davies

RESULTS: 0-12m, 12m @ 0.42% WO_3 pgh(m) L. Central
17-40m, 23m @ o.85% WO_3 gh L. Central
46-53m, 7m @ 0.68% WO_3 gh L. Central
58-77m, 19m @ 0.87%
gh Swan Oreblock

DRILLING

DATE COMMENCED: 30.9.81 DATE TERMINATED: 13.10.81

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

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 90m

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 260/5

Surveyed method: Multishot
Final depth: 90.0 m
Casing depth: 1.0 m

Depth surveyed to: 90.0 m
Date surveyed: 8.10.81
Surveyed by: C. O'Brien
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.			
0.0	178.45			39.55	0.00		
10.0	179.00	169°	49°45'	40.25	6.37		
19.0	179.00	169°	49°30'	40.50	12.18		
28.0	178.00	168°	49°30'	40.50	18.03		
37.0	178.00	168°30	49°15'	40.75	23.87		
46.0	179.00	169°	49°08	40.87	29.75		
55.0	179.25	169°15	49°	41.00	35.64		
64.0	179.00	169°	49°	41.00	41.54		
73.0	180.25	170°15	49°	41.00	47.45		
82.0	175.50	165.30	48°30	41.50	53.35		
90.0	179.00	169°	48°45	41.25	58.65		
E.O.H.							

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 260/5

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13511	0	1	1.0	1.0	0.60			
12	1	2	"	"	0.50			
13	2	3	"	"	0.93			
14	3	4	"	"	0.26			
15	4	5	"	"	0.75			
16	5	6	"	"	0.30			
17	6	7	"	"	0.27			
18	7	8	"	"	0.35			
19	8	9	"	"	0.32			
20	9	10	"	"	0.17			
21	10	11	"	"	0.27			
22	11	12	"	"	0.33			
23	12	13	"	"	0.10			
24	13	14	"	"	0.16			
25	14	15	"	"	0.10			
26	15	16	"	"	0.07			
27	16	17	"	"	0.13			
28	17	18	"	"	1.44			
29	18	19	"	"	0.44			
30	19	20	"	"	1.18			
31	20	21	"	"	1.40			
32	21	22	"	"	2.32			
33	22	23	"	"	1.00			
34	23	24	"	"	0.70			
35	24	25	"	"	1.66			
36	25	26	"	"	0.96			
37	26	27	"	"	1.20			
38	27	28	"	"	0.76			
39	28	29	"	"	0.37			
41	29	30	"	"	0.44			
42	30	31	"	"	0.33			
42	31	32	"	"	0.48			
43	32	33	"	"	0.55			
44	33	34	"	"	0.64			
45	34	35	"	"	0.27			
46	35	36	"	"	0.90			
47	36	37	"	"	1.20			
48	37	38	"	"	0.75			
49	38	39	"	"	0.19			
50	39	40	"	"	0.32			
51	40	41	"	"	0.10			
52	41	42	"	"	0.21			
53	42	43	"	"	0.16			
54	43	44	"	"	0.39			
55	44	45	"	"	0.08			
56	45	46	"	"	0.05			
57	46	47	"	"	0.76			
58	47	48	"	"	1.16			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 260/5

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 13559	48	49	1.0	1.0	1.20			
60	49	50	"	"	0.44			
61	50	51	"	"	0.58			
62	51	52	"	"	0.30			
63	52	53	"	"	0.32			
64	53	54	"	"	0.26			
65	54	55	"	"	0.23			
66	55	56	"	"	0.17			
67	56	57	"	"	0.23			
68	57	58	"	"	0.20			
69	58	59	"	"	0.30			
70	59	60	"	"	1.20			
71	60	61	"	"	0.27			
72	61	62	"	"	0.39			
73	62	63	"	"	1.76			
74	63	64	"	"	2.72			
75	64	65	"	"	0.90			
76	65	66	"	"	0.84			
77	66	67	"	"	0.82			
78	67	68	"	"	0.75			
79	68	69	"	"	0.80			
80	69	70	"	"	0.86			
81	70	71	"	"	0.76			
82	71	72	"	"	0.65			
83	72	73	"	"	0.56			
84	73	74	"	"	0.68			
85	74	75	"	"	0.90			
86	75	76	"	"	0.62			
87	76	77	"	"	0.84			
88	77	78	"	"	0.12			
89	78	79	"	"	0.09			
90	79	80	"	"	0.12			
91	80	81	"	"	0.10			
92	81	82	"	"	0.11			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 260/5 5

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 5.3	5.3	4.3	100
5.3 - 6.0	0.7	0.7	100
6.0 - 8.5	2.5	2.4	96
8.5 - 11.5	3.0	3.0	100
11.5 - 14.5	3.0	3.0	100
14.5 - 17.4	2.9	2.9	100
17.4 - 18.3	0.9	0.9	100
18.3 - 21.0	2.7	2.7	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 - 35.7	2.7	2.7	100
35.7 - 38.7	3.0	3.0	100
38.7 - 41.7	3.0	3.0	100
41.7 - 43.4	1.7	1.3	76
43.4 - 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 - 55.2	3.2	3.2	100
55.2 - 58.2	3.0	3.0	100
58.2 - 61.2	3.0	2.9	97
61.2 - 64.2	3.0	3.0	100
64.2 - 67.2	3.0	3.0	100
67.2 - 70.2	3.0	3.0	100
70.2 - 73.2	3.0	3.0	100
73.2 - 76.2	3.0	3.0	100
76.2 - 79.2	3.0	3.0	100
79.2 - 82.2	3.0	3.0	100
82.2 - 85.2	3.0	2.9	97
85.2 - 88.2	3.0	3.0	100
88.2 - 90.0	1.8	1.8	100
EOH 90.0 m			

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/5

Summary

0.00 - 16.95 m	Pyroxene Garnet Hornfels	(mineralised)
16.95 - 38.70 m	Garnet Hornfels	
38.70 - 42.80 m	Marble Marker	
42.80 - 43.40 m	Faulted	
43.40 - 46.40 m	Garnet Pyroxene Hornfels	
46.40 - 77.80 m	Garnet Hornfels	
77.80 - 81.10 m	Banded Footwall Beds	
31.10 - 86.30 m	Garnet Pyroxene Hornfels	
86.30 - 90.00 m	Granite	

0.00 - 16.95 m PYROXENE GARNET HORNFELS (MINERALISED)

A fractured unit, most core is recovered in pieces 10 - 20 cm long with smaller fragments (2 cm) also occurring.

The unit has a primary breccia texture in some places eg 4 - 6m. Calcite pods 5 - 10 cm long are present. Dominant lithology is pyroxene hornfels and biotite hornfels.

Scattered mineralisation is present throughout, probably about 0.15% WO_3. No quartz and scheelite veins are visible.

The basal contact with the underlying garnet hornfels is hard to define and is taken as the start of ore grade mineralisation.

16.95 - 38.70 GARNET HORNFELS

Fine medium grained, khaki brown andradite garnet skarn that is uniformly well mineralised throughout, probably greater than 0.8% WO_3.

Several areas of broken core occur

24.3 - 24.4 m	2 - 5 cm	fragments
26.0 - 28.2 m	1 - 10cm	"
32.0 - 35.8 m	2 - 10cm	"

The remainder of the core was recovered as sticks 20 - 30 cm long.

38.7 - 42.8 m MARBLE MARKER

Mostly a fine grained pyroxene rich rock recovered in lengths from 5 - 15 cm,

Traces of scheelite are present. Marble layers also occur.

Bedding is @ 40° to LCA @ 40 m

42.8 - 43.4 FAULT

A short zone of fragmented core with poor recovery. Fragments are from 2 mm - 3 cm and consist mostly of carbonate and grossular garnet.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/5

43.4 - 46.4 m GARNET PYROXENE HORNFELS

A fine grained khaki brown to green unit consisting dominantly of andradite garnet with minor pyroxene. Only traces of scheelite occur. Apart from a fault at 45 m core sticks are 10 - 15 cm long.

46.4 - 76.8 GARNET HORNFELS

Massive medium grained khaki brown andradite garnet skarn. The unit is well mineralised, probably 0.9% WO_3.

The contact with the overlying garnet pyroxene hornfels is defined by scheelite mineralisation.

Core sticks average 30 - 40 cm.

A zone of broken core 3 - 10 cm pieces occur from 59.5 - 62.2 m. This section of core is dominantly pyroxene hornfels, with minor garnet hornfels. Traces of scheelite occur.

A 10 cm quartzite veins occurs at the start of the section.

76.8 - 81.1 BANDED FOOTWALL BEDS

This unit merges easily into the overlying garnet hornfels. The change being signified by the development of bedding.

Core competance is about the same as for the garnet hornfels, i.e. 40 cm sticks.

Scheelite is present but the unit is probably sub grade.

Bedding	is	@	45°	to	LCA	@ 78.0 m
"			40°		"	78.5 m
"			45°		"	80.0 m

81.1 - 86.3 GARNET PYROXENE HORNFELS

A fairly heavy unit that only carries rare small scheelite crystals.

The unit is mostly dark green, appearing to consist mostly of a background of fine grained andradite garnet and pyroxene with secondary feldspar 2 mm diameter superimposed.

Bedding	is	@	10°	to	LCA	@ 83.0 m
"			45°		"	82.0 m

Minor sulphides occur just above the granite contact.

Core sticks average 30 cm with some smaller fragments.
Well developed andradite garnets are present immediately adjacent to the granite but no scheelite occurs.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/5

86.3 - 90.0 m **GRANITE**

Fine grained, pale pink granite, cut by a number of joints. Core sticks are about 15 - 25 m.

EOH 90.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 260/4

PLANNING

PROPOSER: S. G. Brown DEPTH: 15 m

LOCATION: S40 Room Lower Pit Stope

PURPOSE OF HOLE: To locate fault

PROPOSED CO-ORDS: 220 253 E 563 984 N

INCLINATION: 0°

BEARING: 040° °GRID °MAG

TARGET: E N

DEPTH:

CHECKED BY: DATE: 14/11/79

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 43° 19' °GRID °MAG

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220 253.06 E 563 983.13 N

R.L. OF COLLAR: -224.1 m

INCLINATION OF HOLE: -0° 39'

PICKED UP BY: R. Howman DATE: 27/11/79

SUMMARY

LOGGED BY: R. H. Davies

RESULTS: No Economic Mineralisation

DRILLING

DATE COMMENCED: 15/11/79 DATE TERMINATED:

DRILLER/CONTRACTOR: Joe Penna/K.I.S.

CASING: SIZE:
DEPTH:

CORE: SIZE: BQ
DEPTH:

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 15.0 m

REASON FOR TERMINATION: Intersected Lower Volcanics

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: No

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 260/4

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.00 - 1.80 m	1.80	1,37	76
1.80 - 4.10	2.30	2.30	100
4.10 - 7.10	3.00	3.00	100
7.10 - 10.10	3.00	3.00	100
10.10 - 13.00	2.90	3.00	103
13.00 - 15.00	2.00	2.10	105

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. D 260/4

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 - 3.50 m	pgh	11.1		calcite		76	22	
3.50 - 5.10	pgh						81	
5.10 - 6.44	gh (b)	8.96			85		63	
6.44 - 9.70	lv	8.63		chlorite	54	100	71	
9.70 - 10.83	Ap	16				100	58	
10.83 - 15.00	lv	6	60	qtz/pyrite		100	94	

FURTHER DATA & REMARKS

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

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 260/4

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 12457	3.0	4.0	1.0	1.0	0.07			
58	4.0	5.0	"	"	0.06			
59	5.0	6.0	"	"	0.90			

SPECIFIC GRAVITY

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

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/4

0.0 - 5.10 m PYROXENE GARNET HORNFELS

This unit consists of a predominantly green rock which contains large calcite ovoids. The rock is composed of large calcite ovoids rimmed by grossular garnet which is in a relatively fine grained pyroxene rich matrix. Occasional patches of scheelite occurs near the start of the hole and are associated with andradite garnet. The pyroxene garnet hornfels is almost completely barren from 3.10 - 5.10 and in this region is pale gray/green due to greater abundance of pyroxene of pyroxene over andradite/garnet. The core in the pyroxene garnet hornfels is broken and may reflect some faulting. Broken zones occur at 2.20 m and 2.40 m.

5.10 - 6.44 GARNET HORNFELS (BANDED)

This unit contains a relatively coarse grained garnet skarn which appears to increase in pyroxene and decrease in garnet with depth. The unit grades into a pyroxene hornfels. Scheelite mineralisation occurs within the more garnet rich areas and is absent in the pyroxene hornfels and the base.

Bedding @ 5.5 m is 85^{o}

6.44 - 15.00 LOWER VOLCANICS

This barren dark grey/black unit appears to grade into the pyroxene hornfels of the previous with and no distinct contact can be seen. The unit has the characteristic mottling of lower volcanics. Which is produced by knobs of biotite set in a finer matrix of pyroxene.
The contact with pyroxene hornfels and lower volcanics may be marked by bands of regular shaped light coloured ovoids. These may be bedded 54^{o} LCA.
No obvious fault seen in the unit which generally seems very competant.

A light coloured aplite dyke occurs 9.7 - 10.83 m.

Near the bottom of the hole the volcanics becomes lighter coloured and pyrite becomes prominant on joint plans.

EOH 15.00 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 260/3

PLANNING

PROPOSER: G. J. Bujtor DEPTH:

LOCATION: -150m RL Hangingwall Drill Drive

PURPOSE OF HOLE: To Define B-lens and Locate Wedge Fault

PROPOSED CO-ORDS: 220260 E 563950 N

INCLINATION: -47°

BEARING: 0° $^{\circ}$GRID $^{\circ}$MAG

TARGET: E N

DEPTH:

CHECKED BY: DATE:

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 359° 30' $^{\circ}$GRID $^{\circ}$MAG

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS: 220260.77 E 563952.38 N

R.L. OF COLLAR: R-146.7

INCLINATION OF HOLE: -48° 20'

PICKED UP BY: R. Howman DATE: 11.5.79

SUMMARY

LOGGED BY: G. J. Bujtor

RESULTS: 34-35m 1m @ 2.03% WO_3
76-77.5m 1.5m@ 0.91% WO_3

DRILLING

DATE COMMENCED: 9/5/79 DATE TERMINATED: 21/5/79

DRILLER/CONTRACTOR: ADD

CASING: SIZE:
DEPTH:

CORE: SIZE: 46TT
DEPTH: 77.5

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 77.5m

REASON FOR TERMINATION: Intersected & Passed Through the Wedge Fault as Planned

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: Surveyed at 22.0 and 33.0m

WATER:

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 260/3

Surveyed method: Single shot
Final depth: 77.50m
Casing depth: 1.00m

Depth surveyed to: 33.00m
Date surveyed: 21/5/79
Surveyed by: L. Denby
Checked by:

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.		N	W
22	1°	351°	51° 15'	-48° 45'	13.77	16.95	2.68
33	0°	350°	51° 15'	-48° 45'	20.65	25.40	4.17

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 260/3

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.0	3.0	2.3	77
3.0 - 6.0	3.0	3.0	100
6.0 - 8.5	2.5	2.5	100
8.5 - 9.3	0.8	0.8	100 broken
9.3 - 9.5	2.0	2.0	100 "
9.5 - 10.3	0.8	0.8	100 "
10.3 - 12.0	1.7	1.7	100
12.0 - 14.6	2.6	2.6	100
14.6 - 16.5	1.9	1.9	100
16.5 - 16.9	0.4	0.4	100
16.9 - 18.1	1.2	1.6	133
18.1 - 19.1	1.0	0.9	90
19.1 - 20.2	1.1	1.1	100
20.2 - 21.2	1.0	1.0	100
21.2 - 22.3	1.1	1.1	100
22.3 - 23.3	1.0	1.0	100
23.3 - 24.1	0.8	0.8	100
24.1 - 24.7	0.6	0.6	100
24.7 - 25.5	0.8	0.8	100
25.5 - 29.4	3.9	3.9	100
29.4 - 31.5	2.1	2.1	100
31.5 - 34.5	3.0	3.0	100
34.5 - 36.1	1.6	1.6	100
36.1 - 38.8	2.7	2.0	74
38.8 - 41.8	3.0	3.0	100
41.8 - 44.8	3.0	3.0	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 - 54.9	1.1	1.1	100 broken
54.9 - 55.1	0.2	0.2	100 "
55.1 - 57.8	2.7	2.7	100
57.8 - 59.0	1.2	1.3	108
59.0 - 62.5	3.5	3.5	100
62.5 - 65.5	3.0	3.0	100
65.5 - 68.0	3.0	3.0	100
68.0 - 69.0	1.6	1.6	100
69.6 - 71.5	1.9	1.9	100
71.5 - 74.5	3.0	3.0	100
74.5 - 77.5	3.0	3.0	100
EOH 77.5m			

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. 260/3

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 - 5.65m	Bh	5-6		Chl/clay/carb/sulph		88	65	
5.65 - 30.7	Bh	5-15		Chl/clay/sulph/carb		101	38	
30.7 - 41.3	Ch	7-10		Chl/carb/clay/		93	55	
41.8 - 52.35	Ch	7-12		Carb/clay/chl		100	62	
52.35 - 73.50	Bh	3- 20		Chl/carb/sulph/clay		100	70	
73.50 - 73.55	W E D G E F A U L T							
73.55 - 77.50	Gh	4-8		Chl/carb/sulph		100	72	
EOH 77.50m								

FURTHER DATA & REMARKS

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

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 260/3

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO_3	Mo		
D 10540	32	33	1.0	1.0	0.01	0.01		
41	33	34	"	"	0.15	0.01		
42	34	35	"	"	2.03	0.03		
43	35	36	"	"	0.01	0.01		
44	36	37	"	"	0.01	0.01		
45	37	38	"	"	0.02	0.01		.6m Recovered
46	72	73	"	"	0.01	0.01		
47	73	74	"	"	0.06	0.01		
48	74	75	"	"	0.15	<0.01		
49	75	76	"	"	0.23	0.01		
50	76	77	"	"	0.86	0.01		
51	77.0	77.5	"	"	1.02	0.02		

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/3

0.0 - 5.65(?)m SHEARED BIOTITE HORNFELS

Highly sheared and disturbed biotite hornfels with numerous zones and patches of pyroxene hornfels alteration. The unit appears somewhat schistose and suggests proximity of a major fault. No scheelite is present.

The top 1m of the unit is fractured and broken.

S_1 33° to LCA at 4m

?5.65 - 30.70 BIOTITE HORNFELS

Fine grained dark brown coloured biotite hornfels. From 9.8 - 13.2m, the unit is very pyroxene rich and greenish in colour with no visible scheelite.

The core is fractured and broken throughout with numerous rubble zones. A probable fault occurs around 29.4m where sand, clay, carbonate and rubble is present.

No scheelite mineralisation is present.

Bedding	37°	to LCA at	20.4m
Bedding	43°		22.5m

30.70 - 30.75(?) FAULT

A major clay pug fault zone.

30.75(?) - 52.35 B-LENS

Grey coloured B-lens marble with abundant white clayey alteration zones and patches. Some minor disseminated scheelite is present. A coarse scheelite vein occurs from 33.9 - 34.3m.

Possible tuffite(?) occurs from 36.9 - 39.85m where the core appears to have a volcanic-like texture.

From 39.85 - 45.15m the marble is dominantly whitish in colour and highly altered to clays.

White secondary carbonate veining is common as are numerous fractured and microfaults.

Pyroxene hornfels with minor grossular garnet occurs at the base of the unit from 50.65 - 52.35m. Traces of scheelite is present.

Bedding appears to be developed throughout the sequence -

Bedding	60-68°	to LCA at	32.6m
Bedding	63°		41m
Bedding	54°		47.9m
Bedding	60°		49.3m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 260/3

52.35 - 73.50 BIOTITE HORNFELS

Fine grained dark brown coloured biotite honrfels with a distinct sediment breccia underlying B-lens marble.

The core is broken and fractured from 53.7 55.2m (numerous rubble zones but no obvious faults or breccia zones); 59 - 61m (some rubble and hole collapse from B-lens above); 62.5 - 62.8m (probable fault zone with rubble and slickensides); 65.5m (hole collapse material from B lens).

From 52.35 - 61.0m numerous pyroxene-actinolite alteration zones and patches are common together with rare garnet interbeds (ie 59 - 60m).

Bedding	60°	to	LCA	at 59.5m
Bedding	58°			68.85m

Noticeable slickensides occur at the base of B-lens (ie 52.4m, probable minor fault around 52.8m where minor open vughs and carbonate is present).

73.50 - 73.55 WEDGE FAULT

Small, thin, tight fault zone with noticeable slickensides. A pyroxene-grossular alteration zone occurs adjacent to the fault from 73.55 - 74.10m.

73.55 - 77.50 BANDED SKARN - LOWER C-LENS

Well bedding and mineralised lower C-lens andradite skarn with numerous interbeds of biotite hornfels, pyroxene hornfels and grossular.

Bedding	55°	to	CLA	at 74.55m
Bedding	75°			75.45m
Bedding	65°			75.85m
Bedding	75°			76.85m

The hole was terminated in Lower C lens, as the Wedge Fault had already been intersected.

EOH 77.5m

GEOLOGY - KING ISLAND SCHEELITE

CHECK ASSAY DATA

D.D.H. No. D 260/3

LAB. K.I.S.			LAB. K.I.S. CHECK			LAB. AMDEL			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	
10548	0.15	<0.01	11952	0.15		11953	0.19		11954	0.17		

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 260/2

PLANNING

Proposer: G. J. Bujtor **Depth:**

Location: -150 m R.L. Drill Drive

Purpose of hole: To define C lens and Central / Wedge Faults.

Co-ordinates: 220260 **E** 563950 **N**

Inclination: -70° **Magnetic:**

Bearing: 0° **Grid** **Target depth:**

Target: **E** **N**

Approved by: **Date:**

SURVEY

Survey Co-ords: **E** **N**

Survey bearing 6'30' **Grid** **Magnetic:**

Surveyed in by: **Date:**

Actual Co-ords: 220261.04 **E** 563951.65 **N**

R.L. of collar: F-146.95 **Inclination of hole:** -71°20'

Picked up by: R.J.H. **Date:** 1-5-78

SUMMARY

Logged by: G. J. Bujtor

Results: Negative.

DRILLING

Driller/Contractor: A.D.D.

Date Commenced: 20-4-78 **Date Terminated:** 1-5-78

Casing: **Size :** BQ

Depth : 1m

Core: **Size :** 46TT

Depth : 98.0m

Wedge Runoff:

Wedge Placed: **Depth:**

Proposed by: **Approved by:**

Reason:

Extension:

Final depth: 98.00 m.

Reason for termination: Successfully tested faults.

Condition of hole on completion:

Casing:

Cemented:

Bore hole survey: Surveyed to 98.0 m

Water: Normal

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 260/2

Survey method: Singleshot Camera
Final depth: 98 m
Casing depth: 1 m

Depth surveyed to: 98 m
Date surveyed to: 1-5-78
Surveyed by: L. Denby
Checked by: A. Younger

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		N	W
8	009	359	19	-71	7.56	2.60	0.05
38	006	356	19	-71	35.93	12.35	0.73
68	003	353	18	-72	64.46	21.55	1.86
98	001	351	18	-72	92.99	30.71	3.31

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 260/2

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY	
0.0 - 3.2	3.2	3.2	100	
3.2 - 6.5	3.2	3.0	94	
6.5 - 8.5	2.0	2.0	100	
8.5 - 10.2	1.7	1.8	106	
10.2 - 13.2	3.0	3.0	100	
13.2 - 16.2	3.0	3.0	100	
16.2 - 18.5	2.3	2.3	100	
18.5 - 21.5	3.0	3.0	100	
21.5 - 23.5	2.0	2.0	100	
23.5 - 26.5	3.0	3.0	100	
26.5 - 29.5	3.0	3.0	100	
29.5 - 32.5	3.0	3.0	100	
32.5 - 35.5	3.0	3.0	100	
35.5 - 38.5	3.0	3.0	100	
38.5 - 41.5	3.0	3.0	100	
41.5 - 44.5	3.0	3.0	100	
44.5 - 47.5	3.0	3.0	100	
47.5 - 50.5	3.0	3.0	100	
50.5 - 53.5	3.0	3.0	100	
55.0 - 57.2	2.2	3.0	91	
57.2 - 57.5	0.3	0.6	200	
57.5 - 59.8	2.3	2.0	87	
59.8 - 62.5	2.7	2.7	100	
62.5 - 65.5	3.0	3.0	100	
65.5 - 68.5	3.0	3.0	100	
68.5 - 70.0	1.5	1.6	107	
70.0 - 72.5	2.5	2.6	113	
72.5 - 73.7	1.2	1.2	100	
73.7 - 74.5	0.8	0.8	100	
74.5 - 75.5	1.0	1.0	100	
75.5 - 76.3	0.8	0.9	113	broken
76.3 - 77.2	0.9	0.9	100	
77.2 - 78.5	1.3	1.4	108	
78.5 - 79.3	0.8	0.8	100	broken
79.3 - 82.3	3.0	3.2	107	
82.3 - 85.3	3.0	3.0	100	
85.3 - 88.3	3.0	3.0	100	
91.3 - 93.8	2.5	2.7	108	
93.6 - 98.0	2.8	2.8	100	
96.6 - 98.0	1.4	1.4	100	
EOH 98.0 m				

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 260/2

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 7669	13	14	1.0	1.0	0.02	<0.01		
70	14	15	"	"	0.02	0.01		
71	15	16	"	"	0.55	0.04		
D 7672	34	35	"	"	<0.01	<0.01		
73	35	36	"	"	0.34	0.02		
74	36	37	"	"	0.01	<0.01		
75	37	38	"	"	<0.01	<0.01		
76	38	39	"	"	0.03	<0.01		
D 7677	49	50	"	"	0.10	<0.01		
78	50	51	"	"	<0.01	<0.01		
D 7679	82	83	"	"	0.07	0.01		
80	83	84	"	"	<0.01	<0.01		
81	84	85	"	"	<0.01	<0.01		
82	85	86	"	"	0.19	0.01		
83	86	87	"	"	0.57	0.04		
84	87	88	"	"	<0.01	<0.01		
85	88	89	"	"	0.64	0.02		
86	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 260/2

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC-TURES /m	JOINT ANGLE (WRT LAOC)	JOINT FILLING	BEDDING ANGLE (W.R.T. L.A.O.C.)	% CORE RECO-VERY	R.Q.D.	REMARKS (WEATHERING)
0.0 - 11.0	Bh	6 - 7		Clay,chl,sulph		100	57	
11.0 - 16.8	B-lens	4 - 5		Chl		100	90	
16.8 - 33.5	Bh	5		Chl,sulp,clay		100	71	
33.5 - 35.85	PGH	13		Clay,chl,sulph		100	67	
34.85 - 35.0	FAULT - CHLORITIC PUG, CLAY						Ø	
35.0 - 50.0	B-lens	3 - 4		Clay,carb,cal		100	73	
50.0 - 72.5	Bh	6		Chl, clay		100	75	
72.5 - 79.3	Bh	8 - Ø		Clay,chl,sulph		100	39	
79.3 - 81.8	Bh	5		Chl		100	76	
81.8 - 85.6	PGH	6 - 7		Clay,chl, carb		100	70	
85.6 - 88.5	Skarn?	12		Clay,chl,		100	60	
88.5 - 98.0	Vol,Bh/Ph	8 - 10		Chl,clay		100	65	

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) += $\frac{\text{Length Core 10 cm}}{\text{Length Drilled}}$ %
3. Core size. 46TT

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 260/2

0.0 - 11.00 m — **BIOTITE HORNFELS**

Dark grey to brown coloured biotite hornfels with noticeable shearing and disturbance at the top of the unit from 0.0 - 4.6 m. Shearing at 1.4 m is approx. 50° to LCA.

Broken core occurs from 0.0 - 0.5 m, 6.0 - 7.0 m 7.6 - 8.5 m.

11.00 - 16.80 m — **B LENS - PYROXENE HORNFELS, ?SILICIFIED MARBLE, MINOR SKARN**

Intermixed unit consisting of pyroxene hornfels, ?silicified marble (11.0 - 11.75 m) and minor andradite / ? grossular garnet skarn.

Some veins of scheelite mineralization occur around 13.7 m, and 15.5 - 16.5 m. No disseminated scheelite is present.

16.80 - 33.50 m — **BIOTITE HORNFELS**

Light grey to greenish coloured biotite hornfels with numerous zones and patches of metamorphic spotting. 25.0 - 27.0 m, 29.4 - 31.0 m. The spots are dark in colour and up to 4 mm in size (average).

Minor broken core occurs around 23.5 m.

33.50 - 34.85 m — **PYROXENE GARNET HORNFELS**

Greenish coloured pyroxene garnet hornfels with numerous remnant marble fragments completely replaced by grossular garnet. At the top of the unit, some siliceous - sulphide rich fragments are present.

Rare scheelite specks are present.

34.85 - 35.0 — **FAULT**

Major fault zone with chlorite pug, breccia and clay.

35.00 - 50.00 m — **B LENS MARBLE**

Massive grey coloured B lens marble with green pyroxene hornfels (1 minor grossular) at the top and bottom contcuts ie 35.0 - 38.75 m (possibly some ? tuffite) and 49.4 - 50.0 m rare scheelite mineralization is present.

Bedding is not well developed So 65° to LCA 46.15 m

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No.D 260/2

50.00 - 81.80 m BIOTITE HORNFELS

Dark brown to grey coloured biotite hornfels which are spotted in part.

Minor angular sediment fragments occur at the top of the unit from 50.0 - 54.0 m.

Pyroxene hornfels / grossular garnet bands are common from 53.5 - 57.5 m. Banding at 55.45 m is 58° to LCA.

Metamorphic spotting is common from 66 - 68 m, 70 - 80 m. Spots are dark black in colour and average 4-5 mm in size.

Broken core zone occur from 55.0 - 58 m (rubble at 57.2 m), 68.5 - 69.0 m, 72.5 - 77.2 (fault), 78.5 - 79.5 m.

MAJOR FAULT with brecciation, shearing and fracturing occurs from 75.6 - 75.9 m (pug - breccia zone).

Core adjacent on either side is badly fractured with possibly some minor faults. Shearing is from 17-25° to LCA. Chlorite coating of joints and fractures is common. Fracturing is common along the long axis of core.

81.80 - 85.60 m PYROXENE GARNET HORNFELS

Typical pyroxene garnet hornfels with angular marble fragments up to 6cm across. Upper contact with biotite hornfels appears to be quite regular. Lower contact is somewhat disturbed and possibly faulted.

Rare scheelite mineralization is present.

85.60 - 88.5 m INTERMIXED SKARN, SEDIMENT, PYROXENE HORNFELS

Intermixed and disturbed unit of andradite skarn, pyroxene hornfels, biotite hornfels (sediment) with minor grossular garnet.

The unit is neither like Upper C lens or Lower C lens.

Disseminated scheelite mineralization is present.

A recemented breccia (fault zone) occurs aroun 86.9 m.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 260/2

88.5 - 88.6 FAULT

Probable fault with very sheared and chloritic zone.

88.6 - 91.3 m LOWER VOLCANICS

Dark, coarse crystalline spotted volcanic unit with abundant ?biotite flecks and masses. (the core in places resembles sheared biotite hornfels).

Broken, fractured and clayey core occurs around 89.6 m and 90.5 m (Fault zones?).

91.3 - 98.0 m BIOTITE HORNFELS / PYROXENE HORNFELS

Typical, and well bedded biotite hornfels / pyroxene hornfels with variable bedding angles. Numerous aplite veins are present 95.95 - 96.10 m, 96.3 - 96.35 m, 96.6 - 96.95 m.

So 53^{o} to LCA at 94.7 m
So 76^{o} to LCA at 97.25m

Possible fault occurs around 91.3 (breccia and calcite veining) and around 93.8 (rubble, clay).

EOH 98.00 m

File

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 260/1

PLANNING

Proposer: G. J. Bujtor **Depth:** 10-4-78

Location: -150 m R.L. Drill Drive

Purpose of hole: To define C lens

Co-ordinates: 220260 **E** 563950 **N**

Inclination: Vential (-90°) **Magnetic:**

Bearing: - **Grid** **depth:** 139.5 m

Target: **E** **N**

Approved by: **Date:**

SURVEY

Survey Co-ords: 269'20' E **N**

Survey bearing **Grid** **Magnetic:**

Surveyed in by: **Date:**

Actual Co-ords: 220260.87E 563950.29 **N**

R.L. of collar: F-146.85 B(143.0) **Inclination of hole:** -88°20'

Picked up by: R.J.H. **Date:** 17-4-78

SUMMARY

Logged by: G. J. Bujtor

Results: 92 - 107 m, 15 m @ 0.94% WO_3 (Upper C lens)
111 - 114 m, 3 m @ 0.35% WO_3 (Lower C lens)

DRILLING

Driller/Contractor: A.D.D.

Date Commenced: 3-4-1978 **Date Terminated:** 19-4-78

Casing: **Size :** BQ
Depth : 1m

Core: **Size :** 139.5
Depth : 46TT

Wedge Runoff:

Wedge Placed: **Depth:**

Proposed by: **Approved by:**

Reason:

Extension: Nil
Final depth: 139.5
Reason for termination: Successfully intersected fault & C lens.

Condition of hole on completion:
Casing:
Cemented:
Bore hole survey: 139.5 m
Water: Nil

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 260/1

Survey method: Singleshot
Final depth: 139.5 m
Casing depth: 1.0 m

Depth surveyed to: 139.5 m
Date surveyed: 19.4.78
Surveyed by: L. Denby
Checked by: A. Younger

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		S	W
19.50	282	272	2.75	-87.25	19.48	-0.03	0.94
49.50	263	253	3.25	-86.75	49.43	+0.47	2.57
79.5	265	255	3.0	-87.0	79.39	+0.88	4.16
109.5	260	250	3.25	-86.75	109.24	+1.46	5.76
139.5	256	246	3.5	-86.5	139.18	+2.20	7.43

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 260/1

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY	
0.0 - 3.7	3.7	3.7	100	
3.7 - 6.5	2.8	2.8	100	
6.5 - 9,5	3.0	3.0	100	
9.5 - 12.5	3.0	3.0	100	
12.5 - 15.5	3.0	3.0	100	
15.5 - 18.3	2.8	2.8	100	
18.3 - 20.5	2.2	2.3	105	
20.5 - 23.5	3.0	3.0	100	
23.5 - 26.5	3.0	3.0	100	
26.5 - 29.5	3.0	3.0	100	
29.5 - 32.5	3.0	3.0	100	
32.5 - 35.5	3.0	3.0	100	
35.5 - 38.5	3.0	3.0	100	
38.5 - 41.5	3.0	3.0	100	
41.5 - 44.5	3.0	3.0	100	
44.5 - 47.5	3.0	3.0	100	
47.5 - 50.5	3.0	3.0	100	
50.5 - 53.5	3.0	3.0	100	
53.5 - 56.5	3.0	3.0	100	
56.5 - 59.0	2.5	2.5	100	
59.0 - 60.4	2.4	1.5	63	Broken
60.4 - 61.6	1.2	1.2	100	"
61.6 - 62.8	1.2	1.2	100	"
62.8 - 63.4	0.6	0.6	100	"
63.4 - 64.4	1.0	1.0	100	"
64.4 - 66.4	2.0	2.0	100	"
66.4 - 69.5	3.1	3.1	100	
69.5 - 72.2	2.7	2.7	100	Broken
72.2 - 72.8	0.6	0.6	100	
72.8 - 75.5	2.7	2.7	100	
75,5 - 76.5	1.0	1.0	100	
76.5 - 79.5	3.0	3.0	100	
79.5 - 82.5	3.0	3.0	100	
82.5 - 85.5	3.0	3.0	100	Broken
85.5 - 87.2	1.7	1.7	100	"
87.2 - 88.2	1.0	1.0	100	"
88.2 - 89.7	1.5	1.5	100	"
89.7 - 91.5	1.8	1.8	100	"
91.5 - 92.0	0.5	0.5	100	"
92.0 - 93.0	1.0	1.4	140	"
93.0 - 94.7	1.7	2.0	118	
94.7 - 97.5	2.8	2.8	100	
97.5 - 100.5	3.0	3.0	100	
100.5 - 103.5	3.0	3.0	100	
103.5 - 106.5	3.0	3.0	100	
106.5 - 109.5	3.0	3.0	100	
109.5 - 112.5	3.0	3.0	100	

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 260/1

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO_3	Mo		
D 7352	47	48	1.0	1.0	0.09	<0.01		
53	48	49	"	"	0.35	0.01		
54	49	50	"	"	0.21	0.01		
55	50	51	"	"	0.24	0.01		
56	51	52	"	"	0.01	<0.01		
57	52	53	"	"	0.08	<0.01		
58	53	54	"	"	0.06	<0.01		
D 7367	83	84	"	"	<0.01	<0.01		
68	84	85	"	"	0.11	<0.01		
69	85	86	"	"	0.22	0.01		
70	86	87	"	"	0.12	<0.01		
71	87	88	"	"	<0.01	<0.01		
72	88	89	"	"	<0.01	<0.01		
73	89	90	"	"	0.05	<0.01		
74	90	91	"	"	<0.01	<0.01		
75	91	92	"	"	0.04	0.01		
76	92	93	"	"	0.39	0.02		↑
77	93	94	"	"	1.63	0.03		
78	94	95	"	"	1.34	0.04		
79	95	96	"	"	0.65	0.05		
80	96	97	"	"	0.19	0.01		
81	97	98	"	"	1.81	0.06		
82	98	99	"	"	1.51	0.02		15m @
83	99	100	"	"	2.0	0.08		
84	100	101	"	"	1.22	0.06		0·94% WO_3
85	101	102	"	"	0.74	0.04		
86	102	103	"	"	0.83	0.05		
87	103	104	"	"	0.64	0.04		
88	104	015	"	"	0.56	0.03		
89	105	106	"	"	0.31	0.02		
90	106	107	"	"	0.29	0.03		↓
91	107	108	"	"	<0.01	<0.01		
92	108	109	"	"	<0.01	<0.01		
93	109	110	"	"	<0.01	<0.01		
94	110	111	"	"	0.03	0.01		
95	111	112	"	"	0.42	0.01		3m @
96	112	113	"	"	0.25	0.01		
97	113	114	"	"	0.39	0.02		0·35% WO_3
98	114	115	"	"	0.14	0.01		
99	115	116	"	"	0.05	0.01		
400	116	117	"	"	<0.01	<0.01		
601	117	118	"	"	<0.01	<0.01		
602	118	119	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 260/1

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
112.5 - 115.5	3.0	3.0	100
115.5 - 118.5	3.0	3.0	100
118.5 - 121.5	3.0	3.0	100
121.5 - 124.5	3.0	3.0	100
124.5 - 127.5	3.0	3.0	100
127.5 - 130.5	3.0	3.0	100
130.5 - 133.5	3.0	3.0	100
133.5 - 136.5	3.0	3.0	100
136.5 - 139.5	3.0	3.0	100
EOH 139.5			

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 260/1

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC-TURES /m	JOINT ANGLE (WRT LAOC)	JOINT FILLING	BEDDING ANGLE (W.R.T. L.A.O.C.)	% CORE RECO-VERY	R.Q.D.	REMARKS (WEATHERING)
0.0 - 13.1	Bh / B lens	8		Clay,chl,sulph.	34°	100%	71	Possible faults 4-65m & 8.3 - 8.35 m.
13.1 - 40.1	Bh	6		Chl,sulph.	?55°	100%	84	
40.1 - 54.3	Pgh	5		Chl,Carb.		100%	85	
54.3 - 72.2	Bh	broken		Chl,clay,carb.		95%	29	Badly broken
MAJOR FAULT 54.4 m - mylonitic pug zone with carbonate								
72.2 - 78.2	Bh	7-8		Chl,Clay,Carb.		99%	50	
78.2 - 84.0	Pgh	6		Chl,Carb.		100%	78	
84.0 - 92.8	Pgh	broken		Chl,Chl,Carb.		95%	13	Badly broken
92.8 - 107.0	Gh	6-7		Clay,chl,garnet.	40°	100%	69	
107.0 - 118.5	?Gh	6		Chl,Clay,Carb.		100%	84	
118.5 - 121.5	Aplite	16		Carb,Clay.		100%	20	
121.5 - 135.0	Bh/Ph	6		Chl,clay,carb.	65°,56°	100%	75	
135.0 - 139.5	Granite	5				100%	83	

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) += $\frac{\text{Length Core 10 cm}}{\text{Length Drilled}}$ %
3. Core size. 46TT

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 260/1

0.0 - ?6.25 m — Biotite Hornfels (-Pyroxene Hornfels)

Disturbed and intermixed unit of biotite hornfels with abundant pyroxene hornfels alteration zones + patches. Possible fault occurs at 4.65 m.

?6.25 - ?13.10 m — ?B Lens

Intermixed unit consisting of pyroxene hornfels (dominant) biotite hornfels and minor marble with grossular garnet (6.25 - 6.90 m).

Bedding in the marble is approx 34° to LCA.

No scheelite mineralization is present. Fault with brecciation and shearing occurs from 8.30 - 8.35 m.

?13.10 - 40.00 m — Biotite Hornfels

Dark grey to brown coloured biotite hornfels with rare pyroxene hornfels alteration zones and patches.

Metamorphic spotting with spots up to 1 cm in size are common and occur from 27.7 - 28.2 m and 32.75 - 37.0 m. The spots are both brownish and dark greyish - black in colour. ?So 55° to LCA at 26.7 m. Minor aplite veins are present.

40.0 - 40.1 — ?Fault

Possible fault with shearing and brecciation and minor sulphides and carbonate. This may infact be the brecciated contact of biotite hornfels above and pyroxene garnet hornfels below.

40.10 - 53.90 m — Pyroxene Garnet Hornfels

Typical pyroxene garnet hornfels with marble fragments up to 7 cm in size, rimmed by grossular garnet. From 40.10 - 47.0 m, the pyroxene garnet hornfels is 'fresh' looking and unskarnetised. From 47.0 - 53.90, appears to become increasingly skarnetised on approaching the major fault, Below. Rare scheelite mineralization is present.

53.90 - 54.30 m — Biotite Hornfels

Dark brown disturbed biotite hornfels associated with the major fault adjacent.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 260/1

54.30 - 54.40 Major Fault

Sheared chloritic, mylonite pug zone with carbonate veining.

54.40 - 78.20 m Biotite Hornfels

Dark brown to grey coloured, highly fractured and disturbed biotite hornfels. Numerous faults appear to be present throughout as evidenced by the amount of broken core and calcite veining. Contact with pyroxene garnet hornfels below is gradational. No visible scheelite mineralization is present.

78.20 - 92.80 m Pyroxene Garnet Hornfels

Typical pyroxene garnet with angular marble fragments up to 17 cm across. The core is quite competent from 78.20 - 84.0 m, but from 84.0 - 92.8, the core is badly broken and fractured with a few rubble zones and patches. (possible numerous faults!).

Very minor scheelite mineralization is present.

92.80 - 107.0 m Upper C lens Garnet Skarn

Massive and coarse grained andradite garnet skarn with good disseminated scheelite mineralization present. From 95.5 - 98.0 m, the skarn is very siliceous and contains up to 40-50% quartz with only fair scheelite present.

The base of the unit from 105.5 - 107.0 m is somewhat banded with banding (bedding) at 40° to LCA.

The top of the unit from 92.80 - 95.0 is slightly broken and fractured. Other broken areas with possible faults occur around 100.5 m and 101.55 m.

107.0 - 110.75 C lens Marble Marker

Marble marker horizon consisting dominantly of marble with minor biotite hornfels and pyroxene hornfels with grossular garnet. Broken, chloritic and fractured core occurs around 108.25 m. White clayey alteration along fractures in the marble are common.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 260/1

110.75 - 118.55 m — ? Banded Footwall Beds?

Possible banded footwall beds which look very atypical. Marble and grossular interbeds are rare. Pyroxene hornfels with minor biotite is present. From 117-118.5 m, possible admixtures of lower volcanics are present.

Minor scheelite mineralization is present.

118.55 - 121.15 m — Aplite Dyke

Fine grained aplite dyke with no visible scheelite present.

121.15 - 135.00 m — ?Biotite Hornfels / Pyroxene Hornfels

Interbedded biotite hornfels / pyroxene hornfels with minor grossular garnet and rare ?andradite garnet beds. The unit is atypical and scheelite mineralization is rare. Broken core occurs around 124.5 m, 130.7 m and 133.45 m. Possible fault around 121.95 m (abundant calcite veining)

So 65^{o} to LCA at 123.5 m
So 56^{o} to LCA at 130.3 m

135.0 - 139.5 m — Adamellite

Coarse grained Grassy Adamellite with no visible scheelite present.

EOH 139.5 m.