

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. NO. D 190/1

PLANNING

Proposer: M. Danielson

Depth: 30m.

Location: W 28 south, -130m R.L.

Purpose of hole: Define area south of Wedge and Central Faults.

Co-ordinates: 220 190 E 564 095

Inclination: 0

Bearing 192 Grid

Target: E

Approved by: M.J. Danielson

N

Magnetic:

Target Depth:

N

Date: 16/2/76

SURVEY

Survey Co-ords: E

Survey bearing: 183°10' Grid

Surveyed in by:

Actual Co-ords: 220 194.9 E 564 095.3

R.L. of Collar: -127.8

Picked up by: R.J.H.

N

Magnetic:

Date:

N

Inclination of Hole: +000°50'

Date: 19/2/76

SUMMARY

Logged by: M. Danielson

Results: 10 - 14m, 4m @ 0.80% WO<sub>3</sub>  
coarse scheelite 26 - 28m.

DRILLING

Driller/Contractor: K.I.S.

Date commenced: 14/2/76

Date terminated: 23/2/76

Casing: Size: N12

Depth:

Core: Size: E17

Depth: 37.13

Wedge Runoff:

Wedge placed: Nil

Proposed by:

Reason:

Depth:

Approved by:

Extension: Nil

Reason for termination: Hole passed south of pgh contact.

Condition of hole on completion:

Final depth: 37.13m.

Casing: Nil

Cemented: No

Bore hole survey: Acid tube to 30m.

Water: No.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 190/1

Survey method : Acid tube  
Final depth : 37.13  
Casing depth : Nil

Depth surveyed to : 30m  
Date surveyed : 26.2.76  
Surveyed by : G. Scott Smith  
Checked by : M. Danielson

Depth (m)	Bearing		Inclination		True vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corrected			
30	—	—	Acid etch	'appeared' horizontal.			

REMARKS:

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 190/1

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 1.36	1.36	1.20	88
2.44	1.08	.61	56
3.76	1.32	.50	38
4.43	.67	.40	60
5.20	.77	.65	84
5.83	.63	.63	100
6.05	.22	.22	100
6.42	.37	.30	82
6.68	.26	.22	85
6.91	.23	.20	87
7.28	.37	.37	100
8.30	1.02	1.02	100
8.52	.22	.22	100
9.93	1.41	.70	50
10.32	.39	.30	77
11.82	1.50	1.50	100
14.70	2.88	2.88	100
15.08	.38	.30	79
15.71	.63	.50	79
16.10	.39	.30	77
16.82	0.72	.60	83
17.63	.81	.81	100
18.61	.98	.90	92
19.24	.63	.63	100
20.55	1.31	1.25	95
20.97	.42	.42	100
21.98	1.01	1.01	100
22.57	.59	.59	100
23.78	1.21	1.21	100
24.11	.33	.20	61
25.60	1.49	1.49	100
26.40	.80	.80	100
27.41	1.01	1.01	100
28.10	.69	.50	72
29.36	1.26	1.26	100
30.86	1.50	1.50	100
32.21	1.35	1.35	100
33.69	1.48	1.48	100
35.22	1.53	1.53	100
35.57	.35	.30	86
37.13	1.56	1.56	100

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 190/1

SAMPLE No.	DEPTH (METRES)			ELEMENTS		COMMENTS	
	From	To	Length	Length Recovered	WO <sub>3</sub>		Mo
D4717	10	11	1.0	0.95	0.61	<0.01	4m @ 0.80% WO <sub>3</sub>
8	11	12	1.0	1.0	0.89	0.01	
9	12	13	1.0	1.0	0.42	<0.01	
20	13	14	1.0	1.0	1.29	0.02	
1	14	15	1.0	0.90	0.01	<0.01	
2	15	16	1.0	0.83	0.19	<0.01	
3	16	17	1.0	0.80	0.02	<0.01	
4	17	18	1.0	1.0	0.01	<0.01	
5	18	19	1.0	0.90	0.08	<0.01	
6	19	20	1.0	1.0	0.18	<0.01	
7	20	21	1.0	1.0	0.04	<0.01	
8	21	22	1.0	0.95	0.02	<0.01	
9	22	23	1.0	1.0	0.15	<0.01	
30	23	24	1.0	0.90	0.06	<0.01	
1	24	25	1.0	1.0	0.37	<0.01	
2	25	26	1.0	1.0	0.11	<0.01	
3	26	27	1.0	0.90	7.7	0.18	
D4734	27	28	1.0	1.0	1.04	0.01	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 190/1

LAB.		K. I. S.		LAB.		K. I. S.		LAB. AMDEL			LAB. ACSL		
Original Sample No.	WO <sub>3</sub>	Mo	Check Sample No.	WO <sub>3</sub>	Mo	Check Sample No.	WO <sub>3</sub>	Mo	Check Sample No.	WO <sub>3</sub>	Mo		
D4720	1.29		D5089	1.20		D5090	1.30		D5091	1.33			
D4731	0.37		D5092	0.36		D5093	0.45		D5094	0.42			

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 190/1

0 - 0.60

CALCITE HORNFELS

Barren grey ch.

0.6 - 2.44

LEACHED GARNET HORNFELS

Fine to medium grained andradite garnet skarn. Moderate disseminated scheelite. Leached. Lost core: 1.36 - 2.44 = 44%.

2.44 - 4.43

BRECCIA

Carbonate and hornfels fragments recemented in a clay matrix.

4.43 - 9.93

BIOTITE HORNFELS

Barren grey bh. Minor thin carbonate veining throughout. Significant core loss and core is virtually rubble between 8.0 - 9.93.

9.93 - 34.8

PYROXENE GARNET HORNFELS

Typical pgh. Pale green pyroxene ground-mass containing white carbonate fragments rimmed with brown grossular garnet.

Sporadic sub ore grade mineralisation throughout. Significant coarse scheelite at 26.6m.

Quartz vein 11.60 - 11.75.

Quality of core throughout this unit is good for M5 drilling.

Lower contact of pgh appears stratigraphic.

34.8 - 37.13

BIOTITE HORNFELS

Barren grey bh.

37.13 E.O.H.

a.t. 6 Copy

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 180/13

PLANNING PROPOSER: S.G. Brown DEPTH: 80m  
 LOCATION: N13 Access  
 PURPOSE OF HOLE: Test ground in route of proposed Decline Bypass  
 PROPOSED CO-ORDS: 220 180 E 563 992 N  
 INCLINATION: -52°  
 BEARING: 360° °Grid °Mag  
 TARGET: E N  
 DEPTH:  
 CHECKED BY: DATE:

SURVEY SURVEY CO-ORDS: E N  
 SURVEYED BEARING: 1°52' °Grid °Mag  
 SURVEYED IN BY: DATE:  
 ACTUAL CO-ORDS: 220 180.76 E 563 994.93 N  
 R.L. OF COLLAR: 190.6  
 INCLINATION OF HOLE: -51°29'  
 PICKED UP BY: R. Howman DATE: 15.12.81

SUMMARY LOGGED BY: H. Gamlieli  
 RESULTS: No Economic Mineralisation Lower Pit

DRILLING DATE COMMENCED: 28.11.81 DATE TERMINATED: 28.1.82  
 DRILLER/CONTRACTOR: B. Gills / K.I.S.  
 CASING: SIZE:  
 DEPTH:  
 CORE: SIZE: 46TT  
 DEPTH:  
 WEDGE PLACED: DEPTH: PROPOSER:  
 EXTENSION:  
 FINAL DEPTH: 56m  
 REASON FOR TERMINATION: Bogged in volcanics  
 CONDITION OF HOLE ON COMPLETION:  
 CASING:  
 CEMENTED:  
 BORE HOLE SURVEY: NO  
 WATER:  
 COMMENTS ON DRILLING CONDITIONS: Terrible

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 180/13

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 3.0	3.0	1.6	53
3.0 - 6.0	3.0	3.3	110
6.0 - 10.0	4.0	4.2	105
10.0 - 10.5	0.5	1.0	200
10.5 - 11.5	1.0	1.3	130
11.5 - 13.5	2.0	2.2	110
13.5 - 15.5	2.0	2.2	110
15.5 - 18.5	3.0	3.1	103
18.5 - 20.7	2.2	2.5	114
20.7 - 22.7	2.0	2.5	125
22.7 - 24.5	1.8	1.9	106
24.5 - 26.6	2.1	2.3	110
26.6 - 29.6	3.0	3.1	103
29.6 - 32.6	3.0	3.1	103
32.6 - 35.0	2.4	2.5	104
35.0 - 38.0	3.0	3.1	103
38.0 - 42.1	4.1	4.9	120
42.1 - 42.5	0.4	0.4	100
42.5 - 45.9	3.4	3.4	112
45.0 - 47.8	1.9	1.9	100
47.8 - 51.8	4.0	4.2	105
51.8 - 56.0	4.2	4.8	114

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 180/13

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO <sub>3</sub>	Mo		
D 13700	0	1	1.0	1.0	0.33			
1	1	2	"	"	0.78			
2	2	3	"	"	0.23			
3	3	4	"	"	0.10			
4	4	5	"	"	0.09			
5	5	6	"	"	0.09			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 180/13

Summary

0.00 - 5.00 m	gh (b)
4.50 - 16.4 m	bh/ph (bfb)
16.4 - 27.6 m	bfb
27.6 - 30.6 m	cc
30.6 - 40.5 m	lv
40.5 - 56.0 m	Basalt

0.00 - 5.00 m GARNET HORNFELS (BANDED)

A dark rock unit comprised of garnet hornfels bands mainly inter-bedding with pyroxene hornfels. In the garnet hornfels bands large garnet crystals can be seen. The garnet hornfels is coarser grained than the pyroxene hornfels. The pyroxene hornfels is a definite green from the actinolite and pyroxene.

There is a fault system through this unit from 3.5 m to 4.5 m resulting in the unit being well fractured: There are few obvious joints though. Overall this is a weak rock unit with the largest cores being only 15 - 20 cm long.

Bedding to LCA is  $80^{\circ}$  at 3.2 m and  $70^{\circ}$  at 3.4 m

4.50 - 16.4 m BIOTITE HORNFELS/PYROXENE HORNFELS (BANDED FOOTWALL BEDS)

An extremely well bedded unit which is striking to the eye. The rock is well fractured with many fractures parallel to the bedding. Some areas show twisted banding from tectonic and sedimentary processes. In some areas actinolite needles can be seen, e.g. at 4.8 m, but this is mainly restricted to the earlier section of the rock unit. In the first metre or so bedding isn't so obvious and there are some pods of calcite and garnet hornfels.

The beds of biotite hornfels and pyroxene hornfels give a striking colour banding. There are faults and a few joints, the main faults are at 5.2 m, 6.6 to 7.1 m, 10.5 m, and from 11.5 to 12.5 m.

Bedding to LCA is  $68^{\circ}$  and  $72^{\circ}$  at 11.5 and 11.8 m respectively.

16.4 - 27.6 m BANDED FOOTWALL BEDS

A dark rock unit rich in pyroxene and biotite. The rock is well fractured especially between 21.70 m - 24.5 m. The unit is rich in marble pods between 23.7 - 24.5 m.

Aplit dyke occurs from 16.5 - 18.6 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 180/13

27.6 - 30.6 m MARBLE

Most of the rock unit is calcium, overall the rock is a black, grey white colour, but between 29.6 - 30.6 m the rock is rich pyroxene and the colour is pale green.

The last meter is well contaminated and enriched in pyroxene probably due to volcanics contact.

The ground is competent with 30.4 cm sticks.

30.6 - 40.5 LOWER VOLCANICS

A fine grained unit the rock is black, ground is competent with 5.30 cm sticks. A rich sulphide unit.

There is a large fault between 38-40.5 m with much breccia and mud associated with it and quartz vein occurs within the fault zone.

40.5 - 56.0 m BASALT

A fine grained unit heavily altered to serpentine.

Very disturbed ground by few joints and small faults breccia and mud associated with it.

EOH 56m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 180/12

PLANNING PROPOSER: R. E. Sandell Davies DEPTH: 40 m  
LOCATION: -75 m Level 018  
PURPOSE OF HOLE: Test B Lens  
PROPOSED CO-ORDS: 220 180 E 564 190 N  
INCLINATION: +50°  
BEARING: 180° °GRID °MAG  
TARGET: E N  
DEPTH: 38.7  
CHECKED BY: DATE:

SURVEY SURVEY CO-ORDS: E N  
SURVEYED BEARING: °GRID °MAG  
SURVEYED IN BY: DATE:  
ACTUAL CO-ORDS: 220 180.3 E 564 179.9 N  
R.L. OF COLLAR: -70.06  
INCLINATION OF HOLE: Not practicle to measure  
PICKED UP BY: R. Howman DATE: 16/12/80

SUMMARY LOGGED BY: R. H. Davies  
RESULTS: 21 - 28 m, 7 m @ 0.53% WO<sub>3</sub> B Lens

DRILLING DATE COMMENCED: 26/11/80 DATE TERMINATED: 8/12/80  
DRILLER/CONTRACTOR: KIS/D. Rutherford  
CASING: SIZE:  
DEPTH:  
CORE: SIZE: BQ  
DEPTH: 38.7  
WEDGE PLACED: DEPTH: PROPOSER:  
EXTENSION:  
FINAL DEPTH: 38.7 m  
REASON FOR TERMINATION: Passed through B Lens and Wedge Fault  
CONDITION OF HOLE ON COMPLETION: into bph  
CASING:  
CEMENTED:  
BORE HOLE SURVEY: Multi shot  
WATER:  
COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No.     D 180/12    

Surveyed method: Multishot  
 Final depth: 39.70 m  
 Casing depth: Nil

Depth surveyed to: 39.70 m  
 Date surveyed: 8/12/80  
 Surveyed by: R. Drake  
 Checked by:

Direction of hole: up

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.		N	W
10	<del>171</del> 351°	<del>S 19° E</del> N 1° W	41°	49°	7.547	6.560	0.115
20	<del>171</del> 351°	<del>S 19° E</del> N 1° W	41° 15'	48° 45'	15.037	6.625	0.116
30	<del>171</del> 351°	<del>S 19° E</del> N 1° W	41° 45'	48° 15'	22.498	6.658	0.117
39.7	<del>171</del> 351°	<del>S 19° E</del> N 1° W	41° 45'	48° 15'	29.735	6.458	0.113

REMARKS:

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 180/12

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.00 - 2.40	2.40	2.40	100
2.40 - 4.40	2.00	2.20	110
4.40 - 5.20	0.80	0.93	116
5.20 - 6.30	1.10	1.00	91
6.30 - 9.20	2.90	2.80	97
9.20 - 12.40	3.20	3.10	97
12.40 - 15.40	3.00	2.80	93
15.40 - 18.40	3.00	2.90	97
18.40 - 24.00	5.60	5.60	100
24.00 - 26.50	2.50	2.80	112
26.50 - 29.50	3.00	2.70	90
29.50 - 32.50	3.00	2.90	97
32.50 - 35.70	3.20	2.70	84
35.70 - 38.70	3.00	2.80	93
EOH 38.7 m			

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. D 180/12

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TURES /m	JOINT ANGLE (WRT/ LAOC)	JOINT FILLING	BEDDING ANGLE (W R T/ L A Q C)	% CORE RECO- VERY	R Q D	REMARKS (WEATHERING)
0.00 - 3.80	ph	7	30° 80°			105	68	
3.80 - 6.70	bh (Δ)	20	-	chlorite		104	0	
6.70 - 26.50	B Lens	13	58° 58° 45° 45° sub//	Calcite	55° 45°	99	66	Fault at 22.70 m contains fault pug
26.50 - 28.50	FZ	6				90	100	Breccia zone probably will disintegrate as water is absorbed.
28.50 - 38.70	bph	5	80° 15° sub//		80° 70° 55°			
EOH 38.70 m								

FURTHER DATA & REMARKS

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

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No. D 180/12

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO <sub>3</sub>	Mo		
D 12962	11	12	1.0	1.0	0.01			
50	12	13	"	"	0.58			
51	13	14	"	"	0.62			
52	14	15	"	"	0.58			
53	19	20	"	"	0.10			
54	20	21	"	"	0.21			
55	21	22	"	"	0.58			
56	22	23	"	"	0.50			
57	23	24	"	"	0.70			
58	24	25	"	"	0.82			
59	25	26	"	"	0.58			
60	26	27	"	"	1.13			
61	27	28	"	"	0.39			
62	28	29	"	"	0.04			

SPECIFIC GRAVITY

Depth (metres):

Rock Type:

S.G.:

Determined by:

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 180/12

0.0 - 3.80 m PYROXENE HORNFELS

A pale grey/green pyroxene hornfels with minor grossular garnet and amphibole.

3.80 - 6.70 BIOTITE HORNFELS (Breccia)

This unit consists of a dark coloured biotite hornfels which shows some lineation of quartz rich stringers perhaps reflecting bedding. Bedding  $40^{\circ}$ .  
The unit is badly broken.

6.70 - 26.5 B LENS

This unit consists of banded barren grey marbles with some mineralised garnet pyroxene hornfels bands.

Tuffite occurs on two distinct horizons.

Bedding  $55^{\circ}$  at 6.8 m

6.70 - 12.40 Marble

A barren grey marble unit with minor pale green pyroxene veinlets. The base of the marble is bedded with minor pale green pyroxene rich bands.

12.40 - 13.40 Garnet Pyroxene Hornfels

This unit consists of a mineralised dark olive green garnet pyroxene hornfels.

13.40 - 16.30 Tuffite

The unit consists of a dark grey rock with a minor pale green mineral (possibly pyroxene). The rock is composed essentially of clusters of muscovite and a dark mineral (magnetite) and amphibole.  
Many of the joint planes show evidence of movement (slickensides) and are coated with a mineral with a soapy feel.

16.30 - 18.40 Marble

A barren grey marble.  
Bedding  $45^{\circ}$  and 18.0 m

18.40 - 20.70 Garnet Pyroxene Hornfels

This unit is a fine grained olive green rock composed of pyroxene andradite garnet and calcite.

20.70 - 21.10 Tuffite

As above.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 180/12

21.10 - 26.50 Garent Pyroxene Hornfels  
Unit similar to garnet pyroxene hornfels  
between 18.40 - 20.70 m, free molybdenum is  
present at 26.40 m.  
A fault zone occurs at 22.50 - 22.80 m.  
This zone contains a fault pug of  
slickensided chlorite.

26.50 - 28.50 FAULT ZONE

Breccia zone consisting of angular fragments of marble  
in a groundmass of pyroxene/calcite/amphibole

28.50 - 28.70 BIOTITE PYROXENE HORNFELS

This unit consists of a light grey biotite hornfels with  
minor irregular blebs and bands of pyroxene. Minor  
grossular garnet is also associated with the pyroxene beds.

Bedding	80°	@	28.60 m
"	70°		
"	55°		
Joints	80°		
"	15°		
"	subparallel		

EOH 38.70 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 180/11

PLANNING PROPOSER: R. E. Sandell Davies DEPTH: 70 m  
LOCATION: N13  
PURPOSE OF HOLE: Test Southern Orebody/Auk Fault  
PROPOSED CO-ORDS: 220 180 E 563 900 N  
INCLINATION: -58°  
BEARING: 0° ° GRID ° MAG  
TARGET: E N  
DEPTH:  
CHECKED BY: W. Black DATE:

SURVEY SURVEY CO-ORDS: E N  
SURVEYED BEARING: 04° 50' ° GRID ° MAG  
SURVEYED IN BY: DATE:  
ACTUAL CO-ORDS: 220 179.8 E 563.901.7 N  
R.L. OF COLLAR: -209.8  
INCLINATION OF HOLE: -58° 10'  
PICKED UP BY: M. Marchant DATE: 24/5/80

SUMMARY LOGGED BY: R. E. Sandell Davies  
RESULTS: 29.0 - 41.0 m, 12 m @ 0.94% WO<sub>3</sub>

DRILLING DATE COMMENCED: 16/5/80 DATE TERMINATED: 6/6/80  
DRILLER/CONTRACTOR: Joe/Penna/K.I.S.  
CASING: SIZE:  
DEPTH:  
CORE: SIZE: BQ  
DEPTH: 89  
WEDGE PLACED: DEPTH: PROPOSER:  
EXTENSION:  
FINAL DEPTH: 89.0 m  
REASON FOR TERMINATION: In ?Granite and rig required for short  
hole in Lower Pit.  
CONDITION OF HOLE ON COMPLETION:  
CASING:  
CEMENTED:  
BORE HOLE SURVEY: Multishot to 81 m, hole cave in after that.  
WATER:  
COMMENTS ON DRILLING CONDITIONS:

## CORE RECOVERY

D.D.H. No. D 180/11

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.5 m	2.5	0.18	32
2.5 - 5.7	3.2	3.0	94
5.7 - 11.2	5.5	5.5	100
11.2 - 12.6	1.4	1.3	93
12.6 - 13.5	0.9	0.8	89
13.5 - 15.5	2.0	1.9	95
15.5 - 16.3	0.9	0.7	88
16.3 - 17.3	1.0	0.9	90
11.3 - 19.7	2.4	2.3	96
19.7 - 21.2	1.5	1.4	93
21.2 - 23.6	2.4	2.4	100
23.6 - 26.6	3.0	3.0	100
26.6 - 29.6	3.0	3.0	100
29.6 - 32.6	3.0	3.0	100
32.6 - 35.6	3.0	3.0	100
35.6 - 38.5	2.9	2.9	100
38.5 - 40.6	2.1	2.2	105
40.6 - 43.3	2.7	2.7	100
43.3 - 45.4	2.1	2.0	95
45.4 - 48.3	2.9	2.9	100
48.5 - 51.1	2.8	2.8	100
51.1 - 52.6	1.5	1.7	113
52.6 - 55.4	2.8	2.8	100
55.4 - 58.4	3.0	3.0	100
58.4 - 61.3	2.9	2.9	100
61.3 - 62.9	1.6	1.6	100
62.9 - 64.4	1.5	1.5	100
64.4 - 66.2	1.8	1.8	100
66.2 - 69.1	2.9	2.9	100
69.1 - 70.8	1.7	1.8	106
70.8 - 72.6	1.8	1.8	100
72.6 - 75.3	2.7	2.4	89
75.5 - 77.9	2.6	2.5	96
77.9 - 80.3	2.4	2.4	100
80.3 - 83.0	2.7	2.7	100
83.0 - 84.4	1.4	1.4	100
84.4 - 85.6	1.2	1.2	100
85.6 - 88.3	2.7	2.7	100
88.3 - 89.0	0.7	0.4	57
EOH			
89.0 m			

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No.     D 180/11

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TURES /m	JOINT ANGLE (WRT/ LAOC)	JOINT FILLING	BEDDING ANGLE (W R T/ L A Q C)	% CORE RECO- VERY	R Q D	REMARKS (WEATHERING)
0.0 - 15.7	B Lens	8-15		cc/Pugh/clay/chlor			24	
15.7 - 25.0	bh	3-12		chlor			78	
25.0 - 28.9	pgh	3-6		cc/clay/chlor			91	
28.9 - 41.5	gh	2-6		cc/chlor			93	
41.5 - 72.6	bfb	3-16		cc/chlor/clay			84	
72.6 - 86.9	LV	2-18		clay/chlor			69	
86.9 - 89.0	Granite	12-17		cc/pugh/clay			19	

FURTHER DATA & REMARKS

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

## GEOLOGY - KING ISLAND SCHEELITE

## ASSAY DATA

D.D.H. No. D 180/11

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO <sub>3</sub>	Mo		
D 12316	0	1	1.0	1.0	<0.01	<0.01		
17	1	2	"	"	<0.01	<0.01		
18	2	3	"	"	<0.01	<0.01		
19	3	4	"	"	<0.01	<0.01		
20	4	5	"	"	<0.01	<0.01		
21	5	6	"	"	<0.01	<0.01		
22	6	7	"	"	0.01	0.01		
23	7	8	"	"	0.71	0.01		
24	8	9	"	"	<0.01	<0.01		
25	9	10	"	"	<0.01	0.01		
26	25	26	"	"	0.02	<0.01		
27	26	27	"	"	0.41	<0.01		
28	27	28	"	"	0.21	0.01		
29	28	29	"	"	0.07	0.01		
30	29	30	"	"	0.95	<0.01		
31	30	31	"	"	1.43	0.01		
32	31	32	"	"	1.48	<0.01		
33	32	33	"	"	1.54	<0.01		
34	33	34	"	"	1.12	<0.01		
35	34	35	"	"	0.51	<0.01		
36	35	36	"	"	0.20	<0.01		
37	36	37	"	"	0.79	<0.01		
38	37	38	"	"	1.03	0.01		
39	38	39	"	"	0.75	0.01		
40	39	40	"	"	1.01	0.01		
41	40	41	"	"	0.47	<0.01		
42	41	42	"	"	0.08	<0.01		
43	42	43	"	"	<0.01	<0.01		
44	43	44	"	"	<0.01	<0.01		
45	44	45	"	"	<0.01	<0.01		
46	45	46	"	"	0.01	0.05		
47	46	47	"	"	<0.01	<0.01		
48	47	48	"	"	<0.01	0.01		
49	48	49	"	"	0.02	0.01		
50	49	50	"	"	0.01	<0.01		
51	50	51	"	"	<0.01	<0.01		
52	51	52	"	"	<0.01	<0.01		
53	52	53	"	"	<0.01	<0.01		
54	53	54	"	"	<0.01	<0.01		
55	54	55	"	"	<0.01	<0.01		
56	55	56	"	"	0.04	0.01		
57	56	57	"	"	<0.01	<0.01		
58	57	58	"	"	0.03	<0.01		
59	58	59	"	"	<0.01	0.01		
60	59	60	"	"	0.02	0.01		
61	66	67	"	"	0.08	0.01		
62	67	68	"	"	0.13	0.01		
63	68	69	"	"	0.07	0.01		
64	69	70	"	"	0.63	<0.01		
65	70	71	"	"	0.15	<0.01		
66	75	76	"	"	<0.01	<0.01		

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 180/11

Summary:	0.0 - 15.7 m	B Lens
	14.7 - 25.0 m	Biotite Hornfels
	25.0 - 28.9 m	Pyroxene Garnet Hornfels
	28.9 - 41.5 m	Garnet Hornfels
	41.5 - 72.6 m	Banded Footwall Beds
	72.6 - 86.9 m	?Lower Volcanics
	86.9 - 89.0 m	Granite

0.0 - 15.7 m

B LENS

Generally broken core, few pieces larger than 20 cm, several local zones of broken or puggy rock, variety of rock types.

0.0 - 7.0 m	Fresh, grey marble, local puggy ground with pyroxene hornfels alteration @ 5.6 - 5.7 m and 3.8 - 3.9 m. Poor recovery of first 2.5 m of core was due to rig being on fill in drive.
7.0 - 9.0 m	Altered marble, replaced to pyroxene hornfels and some grossular, unit appears disturbed in places. Scattered flecks of scheelite are present in both these sub units.
9.0 - 9.5 m	Interbedded biotite hornfels and pyroxene hornfels dominantly pyroxene hornfels at first then biotite hornfels at base.
9.5 - 10.1 m	Fine grained aplite with scheelite in a vein @ 9.9 m.
10.1 - 15.7 m	Biotite hornfels/pyroxene hornfels. A rather disturbed sub unit, having a biotite hornfels background with, a number of thin (1-2 cm) aplite dykes and pyroxene hornfels injections running subparallel to LCA. The pyroxene hornfels injections usually have a grossularite core. From 13.5 - 13.6 the rock has been brecciated, then rehealed. An aplite dyke crosscuts from 13.9 - 14.1 m. Most of the core below 14 m is dominantly massive biotite hornfels with little pyroxene hornfels and no aplite. Area of broken core occurs at 11.1 - 11.2 m, 12.6 m, 13.4 - 13.5 m. 15.5 - 15.7 m.

Bedding is @	67 <sup>o</sup>	to LCA @	4.5 m
"	48 <sup>o</sup>	"	7.6 m
"	58 <sup>o</sup>	"	9.4 m
"	24 <sup>o</sup>	"	10.5 m

15.7 - 25.0

BIOTITE HORNFELS

Massive fine grained, generally competent biotite hornfels. Areas of broken core occurs at 16.2 - 16.4 m, 17.2 - 17.3 m, 19.0 - 19.7 m, 21.0 - 21.2 m, 23.5 - 23.6 m. An aplite occurs from 18.6 - 18.8 m.

Bedding is @ 36<sup>o</sup> to LCA 17.6 m.

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 180/11

25.0 - 28.9 m PYROXENE GARNET HORNFELS

Well intermixed pyroxene hornfels and garnet hornfels, but not well podded. Sparsley mineralised probably sub grade. Rock appears competent.

The first 90 cm is dominantly biotite hornfels with small (1-2 cm) pods of pyroxene hornfels and garnet hornfels.

28.9 - 41.5 GARNET SKARN

Massive competent, khaki brown andradite garnet skarn with many small crystals of scheelite. It is uniformly mineralised to high grade, in excess of 1%.

41.5 - 72.6 BANDED FOOTWALL BEDS

Mineralisation is poorly disseminated through most of this unit and probably nowhere reaches ore grade.

41.5 - 44.4 m Mostly a massive bedded dark green biotite pyroxene hornfels. It is conformable with the overlying garnet hornfels unit. The first 10 cm is pale green pyroxene hornfels. At 44 - 44.3 m, the rock contains numerous pale green inclusions roughly conformable to bedding, and presumably represent, deposition of larger and exotic clasts.

41.4 - 72.6 m The bulk of the unit is represented by interbedded, biotite hornfels, pyroxene hornfels with subsidiary marble and minor pyroxene. Initially units are thin, (0.5 - 5.0 cm) but thicken towards the base, finishing with biotite hornfels from 60.1 - 67.0 m intruded by aplite from 62.6 - 65.0 m, and marble present from 70.3 - 72.6 m.

In places significant pyrrhotite is present in the rock mass.

From 47.65 - 47.75 is a calcite/pyrrhotite/amphibole infilling of a cavity formed by brecciation of the host biotite hornfels.

Bedding is @	34°	to LCA @	41.6 m
"	55°	"	45.0 m
"	73°	"	54.7 m
"	68°	"	58.5 m
"	71°	"	49.0 m
"	74°	"	67.2 m
"	66°	"	71.9 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 180/11

72.6 - 86.9 m

LOWER VOLCANICS

Khaki green to grey mostly massive rock, often with a spotted texture. The top contact (72.6 - 73.2 m) is mainly green and appear disturbed.

Broken core is present from 74.5 - 76.9 m, and does contain some scheelite, otherwise the unit is barren.

From 83.3 m down to the base are a member of small zones of broken, pughy and rotten core.

86.9 - 89.0

GRANITE

Initially rather broken, with much clayey and pughy material between fragments. At the base it appears as a white recrystallised chill zone.

EOH 89.0 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 180/10

PLANNING PROPOSER: S. G. Brown DEPTH: 65 m  
LOCATION: N13  
PURPOSE OF HOLE: Test Southern Area  
PROPOSED CO-ORDS: 220 180 E 563 900 N  
INCLINATION:  $-90^{\circ}$   
BEARING: -  $^{\circ}$  GRID  $^{\circ}$  MAG  
TARGET: E N  
DEPTH:  
CHECKED BY: S. G. Brown DATE: 17/4/80

SURVEY SURVEY CO-ORDS: E N  
SURVEYED BEARING:  $84^{\circ} 28'$   $^{\circ}$  GRID  $^{\circ}$  MAG  
SURVEYED IN BY: J. Cook DATE:  
ACTUAL CO-ORDS: 220 180.11 E 563 901.80 N  
R.L. OF COLLAR: -209.23  
INCLINATION OF HOLE:  $-88^{\circ} 37'$   
PICKED UP BY: J. Cook DATE: 24/4/80

SUMMARY LOGGED BY: R. E. Sandell Davies  
RESULTS: No Economic Mineralisation

DRILLING DATE COMMENCED: 18/4/80 DATE TERMINATED: 15/5/80  
DRILLER/CONTRACTOR: Joe Penna/K.I.S.  
CASING: SIZE:  
DEPTH:  
CORE: SIZE: BQ  
DEPTH:  
WEDGE PLACED: DEPTH: PROPOSER:  
EXTENSION:  
FINAL DEPTH: 63.3 m  
REASON FOR TERMINATION: In Granite  
CONDITION OF HOLE ON COMPLETION: Good  
CASING:  
CEMENTED:  
BORE HOLE SURVEY: Multishot to 61.1 m  
WATER: No  
COMMENTS ON DRILLING CONDITIONS: Good

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No.     D 180/10

Surveyed method: Multishot  
 Final depth: 63.3 m  
 Casing depth: 1 m

Depth surveyed to: 61.10 m  
 Date surveyed: 16/5/80  
 Surveyed by: B. Schneiders  
 Checked by:

Depth (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corr.			
7	71°	61°	0° 45'	-89° 15'			
19	53°	43°	0° 45'	-89° 15'			
34	66°	56°	0° 10'	-89° 49'			
49	51°	41°	0° 15'	-89° 45'			
55	144°	134°	0° 20'	-89° 40'			
61.10	80°	78°	0° 20'	-89° 40'			

REMARKS:     Unable to survey last 2.20 m due to cave in at 61.10 m.

GEOLOGY - KING ISLAND SCHEELITE

CORE RECOVERY

D.D.H. No. D 180/10

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.8 m	2.8	1.9	68
2.8 - 5.0	2.2	2.0	91
5.0 - 6.0	1.0	1.0	100
6.0 - 8.9	2.9	2.9	100
8.9 - 12.0	3.1	3.1	100
12.0 - 14.9	2.9	2.9	100
14.9 - 17.9	3.0	3.0	100
17.9 - 20.9	3.0	3.0	100
20.9 - 21.3	0.4	0.3	75
21.3 - 22.3	1.0	0.9	90
22.3 - 24.0	1.7	1.7	100
24.0 - 26.2	2.2	2.2	100
26.2 - 28.6	2.4	2.4	100
28.6 - 30.3	1.7	1.7	100
30.3 - 31.2	0.9	0.9	100
31.2 - 33.8	2.6	2.6	100
33.8 - 35.0	1.2	0.5	42
35.0 - 36.8	1.8	1.7	94
36.8 - 39.8	3.0	3.0	100
39.8 - 41.0	1.2	1.2	100
41.0 - 44.1	3.0	3.0	100
44.1 - 45.6	1.5	1.5	100
45.6 - 47.6	2.0	2.0	100
47.6 - 53.1	5.5	5.2	95
53.1 - 55.2	2.1	2.1	100
55.2 - 57.4	2.2	2.2	100
57.4 - 60.3	2.9	2.0	69
60.3 - 61.4	1.1	1.1	100
61.4 - 63.3	1.9	1.9	100
EOH 63.3 m			

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. D 180/10

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TURES /m	JOINT ANGLE (WRT/ LAOC)	JOINT FILLING	BEDDING ANGLE (W. R. T./ L. A. Q. C.)	% CORE RECO- VERY	R. Q. D.	REMARKS (WEATHERING)
0.0 - 18.63 m	B Lens	2-12		Pug/cc/clay			75	
18.63 - 32.25	bh	3-15		Chlor/cc			67	
32.25 - 45.4	Pgh	4-6		cc/clay			89	
45.4 - 55.4	bph	3-8		chlor			78	
55.4 - 63.3	Aplite	7-18		cc			53	

FURTHER DATA & REMARKS

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

GEOLOGY - KING ISLAND SCHEELITE

ASSAY DATA

D.D.H. No.     D 180/10    

SAMPLE NO.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	To	Length	Length Rec.	WO <sub>3</sub>	Mo		
D 12197	0	1	1.0	1.0	1.05	0.01		
98	1	2	"	"	0.12	0.01		
99	2	3	"	"	<0.01	<0.01		
200	3	4	"	"	<0.01	<0.01		
01	4	5	"	"	<0.01	<0.01		
02	5	6	"	"	<0.01	<0.01		
03	6	7	"	"	<0.01	<0.01		
04	7	8	"	"	<0.01	<0.01		
05	8	9	"	"	<0.01	<0.01		
06	9	10	"	"	<0.01	<0.01		
07	10	11	"	"	0.01	<0.01		
08	11	12	"	"	<0.01	<0.01		
09	12	13	"	"	0.17	0.01		
10	13	14	"	"	<0.01	<0.01		
11	16	17	"	"	<0.01	0.01		
12	17	18	"	"	<0.01	<0.01		
13	18	19	"	"	<0.01	<0.01		
14	34	35	"	"	<0.01	0.01		
15	35	36	"	"	<0.01	0.01		
16	36	37	"	"	<0.01	<0.01		
17	37	38	"	"	0.07	0.01		
18	38	39	"	"	<0.01	<0.01		
19	39	40	"	"	<0.01	<0.01		
20	40	41	"	"	0.18	<0.01		
21	41	42	"	"	0.11	0.01		
22	42	43	"	"	<0.01	<0.01		
23	43	44	"	"	0.25	0.01		
24	44	45	"	"	0.42	0.01		
25	45	46	"	"	0.34	0.01		
26	54	55	"	"	<0.01	<0.01		
27	55	56	"	"	<0.01	<0.01		
28	56	57	"	"	<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 180/10

0.0 - 18.63 m B LENS

An intermixed assemblage of marble/pyroxene hornfels/garnet hornfels and biotite hornfels. Low grade mineralisation is present throughout.

The pyroxene hornfels layers are usually associated with fractured and weak rock.

Marble/pyroxene hornfels is the dominant lithology for the first 13 m, the rest of the unit being mostly biotite hornfels with subsidiary pyroxene hornfels.

Bedding is @ 59° to LCA @ 3.2 m  
" 65° " 6.7 m  
" 63° " 8.8 m

18.63 - 35.25 BIOTITE HORNFELS

Black, fine grained uniform biotite hornfels bedding occasionally present.

Aplite occurs from 32.2 - 32.7 m

Bedding is @ 64° to LCA @ 38 m

Pyrite is present in the biotite hornfels.

35.25 - 45.4 PYROXENE GARNET HORNFELS

Generally poorly mineralised podded pyroxene garnet hornfels, but with small pod diameters, mostly 1-3 cm.

45.4 - 55.4 BIOTITE PYROXENE HORNFELS

A well interbedded biotite pyroxene hornfels unit, with occasional grossularite bands. The bedding is on a millimeter scale. The initial 2 m of core are predominantly biotite hornfels.

Pyroxene hornfels content seems to increase down the core.

A coarse grained aplitite occurs from 52.9 - 53.2 m.

A small amount of scheelite is present in a zone 20 cm wide directly above the granite contact.

Bedding is @ 73° to LCA @ 49.4 m  
" 11° " 50 m  
" 69° " 54.2 m  
" 62° " 55.2 m

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 180/10

55.4 - 63.3 m APLITE

Fine grained pink aplite extensively fractured and forming loose and broken core in pieces 5 - 25 cm long, most surfaces being lined with small iron stained calcite crystals. This fractured core continues to 60.4 m, below this, the aplite/granite is only normally jointed.

EOH 63.3 m

GEOLOGY - KING ISLAND SCHEELITE

LOG OF D.D.H. No. D 180/9E

PLANNING PROPOSER: D. Bedford DEPTH:

LOCATION:

PURPOSE OF HOLE: Test Sandfill in Wedge Area.

PROPOSED CO-ORDS: 220180.5E 564195.5 N

INCLINATION: +50°

BEARING: 105° °GRID °MAG

TARGET: 4.30 m E N

DEPTH:

CHECKED BY:

DATE:

SURVEY SURVEY CO-ORDS: E N

SURVEYED BEARING: 105° 04' °GRID °MAG

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

ACTUAL CO-ORDS: 220180.46 E 564195.47 N

R.L. OF COLLAR: -126.85

INCLINATION OF HOLE: +49° 11'

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

SUMMARY LOGGED BY: R. H. Davies

RESULTS: Not Split

DRILLING DATE COMMENCED: Dec 1979 DATE TERMINATED: Dec 1979

DRILLER/CONTRACTOR: KIS

CASING: SIZE:  
DEPTH:

CORE: SIZE: 46TT  
DEPTH: 4.30

WEDGE PLACED: DEPTH: PROPOSER:

EXTENSION:

FINAL DEPTH: 4.30 m

REASON FOR TERMINATION:

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY: Not Surveyed

WATER:

COMMENTS ON DRILLING CONDITIONS: Good

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY STRUCTURAL DATA

D.D.H. No. 180/9E

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TURES /m	JOINT ANGLE (WRT/ LAOC)	JOINT FILLING	BEDDING ANGLE (W R T/ L A Q C)	% CORE RECO- VERY	R Q D	REMARKS (WEATHERING)
0.00 - 0.87 m	Gh	14.0	12° 60°	Qtz/carb		84%	0.49	
0.87 - 4.00	Bh/ph	11.0	40°	Carb	40° 57°	88	2.30	Foliation
4.00 - 4.30	Fill							
EOH 4.30 m								

FURTHER DATA & REMARKS

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

GEOLOGY - KING ISLAND SCHEELITE

GEOLOGICAL LOG

D.D.H. No. D 180/9E

0.00 - 0.87 m GARNET HORNFELS

This unit consists of a medium grained andradite garnet skarn. The matrix consists of calcite quartz and amphibole. Disseminated  $WO_3$  mineralisation is present throughout the 0.87 m but is strongest near the boundary with the biotite hornfels unit. Wide, (1.5 cm) quartz veins are also present and these contain coarse euhedral scheelite crystals..

The unit is massive and has a mottled pale green appearance and is broken in the first 0.3 m.

Major Joints    0.10 m 12° LCA  
                  0.40 m 60° LCA

0.87 - 4.00 BIOTITE HORNFELS AND BIOTITE HORNFELS/PYROXENE HORNFELS

This unit is dark olive green in colour with irregular pale green patches and is strongly foliated.

0.87 - 1.30    0.87 - 1.30 m This zone is composed of a mottled olive green biotite hornfels, which has no pronounced foliation.  
1.30 - 4.00    In this zone the foliation is very pronounced and is caused by parallel alignment of biotite flakes. This alignment may be indicative of a relict bedding or may be cleavage. This zone also contains an increase in the incidence of pale green alteration (metamorphic?) mineral, probably hornblende. The amphibole seems to have developed as an alteration of the biotite along a relict bedding. However, in many places cross cutting veins (across So) of the amphibole occur with associated quartz veins. At 2.70 m a relict clast? may be observed.

Joints    1.80 m 40° LCA  
          2.70 m 57° LCA

Major Joints    1.90 m 40°  
                  2.70 m 40°

4.00 - 4.30 m SANDFILL

EOH    4.30 m

GEOPEKO - KING ISLAND

LOG OF D.D.H. No. D 180/B

PLANNING

PROPOSER: G. J. Buftor

DEPTH:

LOCATION: -150 m R.L.

PURPOSE OF HOLE: To determine position of Decline Fault at approx.

CO-ORDS; 220 180 E 563950 N -60 m R.L.

INCLINATION: +45°

BEARING: 90 °GRID °MAG

TARGET: E N

SURVEY

SURVEY CO-ORDS: E N

SURVEYED BEARING: 91° 33' °GRID °MAG

SURVEYED IN BY: DATE:

ACTUAL CO-ORDS; 220189.3 E 563949.3 N

R.L. OF COLLAR: -138.0

INCLINATION OF HOLE: +44° 43' 1978

PICKED UP BY: B. Davies DATE: 29-9-1978

SUMMARY

LOGGED BY: G. J. Buftor

RESULTS: Decline Fault 95-102 m Water Flow -

DRILLING

DATE COMMENCED: 5-10-78 DATE TERMINATED: 17-11-78

DRILLER/CONTRACTOR: A.D.D.

CASING: SIZE:  
DEPTH:

CORE: SIZE: 40mm  
DEPTH: 103.3m

WEDGE PLACED: DEPTH:

EXTENSION:

FINAL DEPTH: (?) 103.3 m

REASON FOR TERMINATION: Successfully intersected the Decline Fault zone.

CONDITION OF HOLE ON COMPLETION:

CASING:

CEMENTED:

BORE HOLE SURVEY:

WATER: Significant water flow in Decline Fault.

COMMENTS ON DRILLING CONDITIONS:

GEOLOGY - KING ISLAND SCHEELITE

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 180/8

Surveyed method: Single shot  
Final depth: 103.5m  
Casing depth: 3m (Stem Pipe)

Depth surveyed to: 10.00m  
Date surveyed: 20/11/78  
Surveyed by: L. Denby  
Checked by: A. Younger

Bearing			Inclination		True Vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corr.		N	E
10	91	81	45	+45	7.07	1.11	6.98
101.5	91	81	45	+45	71.77	11.23	70.88

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 180/8

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 3.0	3.0	3.0	100
3.0 - 6.0	3.0	3.0	100
6.0 - 9.0	3.0	2.4	80
9.0 - 12.0	3.0	3.0	100
12.0 - 15.0	3.0	3.0	100
15.0 - 16.6	1.6	1.6	100
16.6 - 21.0	3.0	5.6	187
21.0 - 22.2	1.2	1.8	150
22.2 - 25.2	3.0	3.0	100
25.2 - 28.5	3.3	3.0	91
28.5 - 30.5	2.0	2.0	100
30.5 - 33.75	3.25	3.25	100
33.75- 34.85	1.10	1.10	100
34.85- 39.30	4.55	75.0	110
39.30- 42.50	3.10	71.0	31
42.50- 44.8	2.30	2.1	91
44.8 - 47.0	2.20	2.65	120
47.0 - 49.2	2.20	2.20	100
49.2 - 51.1	1.90	1.90	100
51.1 - 51.5	6.4	0.4	100
51.5 - 52.7	1.2	1.2	100
52.7 - 54.2	1.5	1.2	80
54.2 - 54.6	0.4	0.4	100
54.6 - 57.1	2.5	2.5	100
57.1 - 58.9	1.8	1.7	94
58.9 - 60.5	1.6	1.6	100
60.5 - 63.5	3.0	3.0	100
63.5 - 66.5	3.0	2.8	93
66.5 - 68.8	2.3	2.3	100
68.8 - 71.8	3.0	3.0	100
71.8 - 74.8	3.0	3.0	100
74.8 - 77.4	2.6	2.6	100
77.4 - 81.1	3.7	4.85	131
81.1 - 84.1	3.0	3.0	100
84.1 - 87.1	3.0	3.0	100
87.1 - 90.1	3.0	3.0	100
90.1 - 93.1	2.2	2.4	109
93.1 - 95.1	2.0	1.23	65
95.1 - 99.1	4.0	2.70	68 broken/breccia
99.1 - 100.0	0.9	0.45	50
100.0 - ?103.3	3.3	?3.0	91 many blocks with no's washed off.
EOH 103.3m (?)			

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 180/8

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TURES /m	JOINT ANGLE (WRT LAOC)	JOINT FILLING	BEDDING ANGLE (W.R.T. L.A.O.C.)	% CORE RECO- VERY	R.Q.D.	REMARKS (WEATHERING)
0.0 - 6.0	Bh	10-12		Chl, Clay, Carb		100	30	
6.0 - 26.0	Bh	6-8		Chl, Clay, Carb		100	77	
26.0 - 38.5	Vol	15-20		Clay, Chl		100	49	
38.5 - 42.5	Vol	∅		Chl, Clay, Carb			8	2.5 m core loss fault (?)
42.5 - 51.5	Vol	6-8		Chl, Clay, Carb		100	74	
51.5 - 60.5	Vol	8-15		Chl, Clay		98	55	
60.5 - 94.85	Vol	6		Clay, Chl, Carb		100	79	
94.85 - (?)102.0	<u>DECLINE FAULT ZONE</u>							
102.0 - (?)103.3	Vol	>20		Clay, Chl, Carb		91	30	
EOH (?)103.3 m.								

FURTHER DATA & REMARKS

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

GEOPEKO - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/8

0.0 - 226.00 m

BIOTITE HORNFELS

Grey to dark brown coloured biotite hornfels which appears to be somewhat broken at the top of the hole and towards the Upper Volcanics contact.

From 3.7 - 5.7 m, the core is a recemented breccia with abundant pyroxene hornfels and some grossular with carbonate. The zone no doubt represents a fault.

From 13.0 m onwards, the biotite hornfels is somewhat schistose in appearance with a possible incipient cleavage developing:-

S <sub>1</sub>	52°	to	LCA at	15.2m
S <sub>1</sub>	65°	to	LCA at	21.2m

Minor rare scheelite is present in the fault zone from 3.7 - 5.7 m.

An aplite dyke/vein occurs from 218.85 - 219.1 m (trays disturbed?).

226.00 - 294.85 m

UPPER VOLCANICS

Dominantly grey, and in places greenish coloured volcanics with distinctive ?biotite or ?actinolite spotting.

A probable unconformity occurs around 26.0 m where the core is very much clayey and slightly fractured.

The following major broken zones were noted:-

28.5 - 29.3 m (clay, breccia, pug & shearing);  
33.35- 34.55m (fractured);  
38.5 - 41.6 m (clay, pug, breccia & 2.5 m core loss);  
around 42.5 m (clay, pug), 51.5 (chlorite, rubble),  
52.7 (rubble), 54.2 m (rubble), around 58.0 (fractured rubble), 80 m (fractured rubble), 83.5 (clay, pug fault zone) around 87.1 (broken rubble), 92.5 (minor rubble).

Note: From 90 m onwards the core blocks don't seem to make much sense (lousy drillers!)

Minor free Mo along a joint/fracture around 86.97 m.

GEOPEKO - KING ISLAND

GEOLOGICAL LOG

D.D.H. No.D 18/8

794.85 - 7102.9 m

DECLINE FAULT ZONE

Broken, fractured and brecciated (often recemented) with numerous open calcite/carbonate lined cavities. Core loss is present but the exact amount is difficult to determine due to wrongly marked core blocks and drillers not knowing their exact depth!

The last occurrence of breccia appears around 7102 m.

7102 - 7103.4 m

UPPER VOLCANICS

Typical upper volcanics consisting of broken and fractured core with numerous open calcite lined vughs and cavities.

EOH 103.3?

Note:- From 90 m onwards the core blocks are incorrectly marked and exact depths are unknown.

GEOPEKO DIVISION - King Island

LOG OF D.D.H. No. D 180/7

**PLANNING**  
 Proposer: ... G. J. Bujtor ..... Depth: .....  
 Location: ... W 24 Cuddy on 100 m. R.L. (Opposite 016) .....  
 Purpose of Hole: .. To test B lens mineralization. ....  
 Co-ords: ..... 220180 ..... E 564150 ..... N  
 Inclination: +55° .....  
 Bearing: ..... 180° ..... °Grid ..... °Mag  
 Target: ..... E ..... N  
 Depth: .....  
 Approved by: ..... Date: .....

**SURVEY**  
 Survey Co-ords: .. 220180° ..... E ..... N  
 Surveyed Bearing: .. 184° 20' ..... °Grid ..... °Mag  
 Surveyed in by: ... W. Davies ..... Date .. 5/7/1978 ...  
 Actual Co-ords: .. 220180.8 ..... E .. 564155.4 ..... N  
 R.L. of Collar: .. -92.3 .....  
 Inclination of Hole: .. 55° 48' .....  
 Picked up By: ..... W. Davies ..... Date .. 24/7/1978 .....

**SUMMARY**  
 Logged By: ... G. J. Bujtor ..... Date .....  
 Results: .. 22 - 28 m, 6 m @ 0.42% WO<sub>3</sub> .. B lens .....  
 .. 35 - 37 m, 2 m @ 0.33% WO<sub>3</sub> .. B lens .....  
 .....

**DRILLING**  
 Date Commenced: ... 14-7-1978 ..... Date Terminated... 20-7-1978 .....  
 Driller/Contractor A.D.D. ....

Casing:	Size :			
	Depth :			
Core:	Size :	46TT		
	Depth :	46.5 m		

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

Extension:  
 Final Depth: 46.5 m  
 Reason for Termination: Successfully tested B lens

Condition of hole on completion:  
 Casing;  
 Cemented:  
 Bore hole survey: Surveyed to 46.5 m  
 Water: Normal  
 Comments on Drilling Conditions: Normal

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. 010/1

Survey method: Singleshot Camera  
Final depth: 46.5  
Casing depth: Nil

Depth surveyed to: 46.5 m  
Date surveyed 20-7-1978  
Surveyed by: L. Denby  
Checked by: A. Younger

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		N	W
16.5	<del>184</del> 004	<del>17A</del> 354	35	+55	13.52	9.41	0.99
46.5	<del>184</del> 001	<del>171</del> 351	35	+55	38.10	26.41	3.68

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 180/7

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 2.88	2.88	2.88	100 broken
2.88 - 5.70	2.82	2.82	100 "
5.70 - 8.50	2.80	2.8	100 "
8.50 - 10.70	2.20	2.2	100
10.70 - 16.20	5.50	5.0	91
16.20 - 19.20	3.0	3.0	100
19.20 - 19.50	0.3	0.7	233 broken
19.50 - 23.80	4.3	3.8	88 "
23.80 - 25.20	1.4	1.4	100
25.20 - 27.60	2.4	2.4	100
27.60 - 29.40	1.8	1.5	83
29.40 - 31.70	2.3	2.3	100
31.70 - 33.80	2.1	2.1	100 broken
33.80 - 35.70	1.9	1.9	100
35.70 - 38.70	3.0	3.0	100
38.70 - 41.70	3.0	3.0	100
41.70 - 44.70	3.0	3.0	100
44.70 - 46.50	1.8	1.8	100
EOH 46.50			

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 180/7

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO <sub>3</sub>	Mo		
D 7443	22	23	1.0	1.0	0.41	0.09		
44	23	24	"	"	0.68	0.09		
45	24	25	"	"	0.32	0.03		
46	25	26	"	"	0.24	0.02		
47	26	27	"	"	0.34	0.04		
48	27	28	"	"	0.5	0.05		
49	28	29	"	"	<0.01	<0.01		
50	29	30	"	"	0.07	<0.01		
51	30	31	"	"	0.06	<0.01		
52	31	32	"	"	0.22	0.02		
53	32	33	"	"	0.13	<0.01		
54	33	34	"	"	<0.01	<0.01		
55	34	35	"	"	0.03	0.03		
56	35	36	"	"	0.34	0.03		
57	36	37	"	"	0.32	0.05		
58	37	38	"	"	<0.01	0.04		
59	38	39	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

Depth (metres):

Rock Type :

S.G. :

Determined by:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 180/7

DEPTH INTERVAL (METRES)	ROCK TYPE	FRAC- TURES /m	JOINT ANGLE (WRT L.A.O.C.)	JOINT FILLING	BEDDING ANGLE (W.R.T. L.A.O.C.)	% CORE RECO- VERY	R.Q.D.	REMARKS (WEATHERING)
0.0 - 8.0	PGH	10		Clay, chl, carb, cal		100	43	Broken
8.0 - 19.4	Bh	6-8		Chl, sulph		98	51	
19.4 - 22.45	<u>WEDGE FAULT ZONE</u>							
22.45 - 28.0	B lens GPH	4-5		Chl, sulph, carb		100	78	
28.0 - 34.0	B lens	12		Chl, clay, carb, sulph	60° : 30.6m	100	54	
34.0 - 46.5	B lens, BH	4-7		Chl, sulph, carb	67° : 35.15m	100	79	
EOH 46.50 m								

FURTHER DATA & REMARKS

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

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/7

0.0 - ? 8.00

PYROXENE GARNET HORNFELS

Typical well podded pyroxene garnet hornfels. Mineralized pyroxene garnet hornfels with abundant grossular garnet occurs in the top 2 m. The unit is rather fractured and broken. Heavy carbonate veining occurs around 7.0 m.

From 7.0 - 8.0 m, pods became sparse and tend to be siliceous fragments within a biotite matrix. The base of the unit appears faulted.

?8.00 - ?19.40 m

BIOTITE HORNFELS

A grey coloured, spotted biotite hornfels. The brownish coloured spots average 5 mm in size and appear slightly elongate. The core in places is fractured.

?19.40 - 22.45 m

WEDGE FAULT ZONE

Sheared, fractured, broken chloritic pug zone.

22.45 - ?40.70

B LENS

B lens consisting of the following subdivisions -

22.45 - 28.10 m. Garnet pyroxene skarn - medium grained garnet pyroxene rock with minor fine disseminated scheelite present. Coarse skarn (somewhat disturbed) occurs immediately adjacent the Wedge Fault at 22.45 - 23.4 m. Some recemented breccia occurs around 23.2 m. Andradite appears to be the dominant garnet type.

28.10 - 36.15 m. Pyroxene hornfels - dominantly fine grained greenish colour pyroxene hornfels with a few patches of coarser garnets (29.4 - 30.0 m) Grossular garnet (pinkish red) appears to be the dominant garnet type. Some fine disseminated scheelite is present.

The core is somewhat fractured and broken especially at the top of the sequence from 28.1 - 30.0 m.

?So 60° to LCA at 30.6 m  
So 67° to LCA at 35.15 m

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/7

36.15 - 40.7 m. Pyroxene hornfels / biotite hornfels  
Sequence consisting of mostly pyroxene hornfels (70%)  
and lesser amounts of unreplaced biotite hornfels (30%)  
Rare specks of scheelite are present.

This sequence may in fact be replaced / altered biotite  
hornfels overlying B lens. The boundary is quite  
arbitrary.

SO 50° to LCA at 28.0 m.

40.7 - 46.50 m

BIOTITE HORNFELS

Dark brown fine grained hangingwall biotite hornfels  
with numerous zones and patches of pyroxene hornfels  
alteration. No scheelite is present.

EOH 46.50 m.

GEOLOGY - KING ISLAND SCHEELITE

CHECK ASSAY DATA

D.D.H. No.     D 180/7    

LAB. K.I.S.			LAB. K.I.S. CHECK			LAB. AMDEL			LAB. A.C.S.L.			
Original Sample No	WO <sub>3</sub>	Mo	Check Sample No	WO <sub>3</sub>	Mo	Check Sample No	WO <sub>3</sub>	Mo	Check Sample No	WO <sub>3</sub>	Mo	
7446	0.24	0.02	11712	0.40	<0.01	11713	0.39		11714	0.37		
7456	0.34	0.03	11715	0.57	<0.01	11716	0.42		11717	0.42		

Drill log

GEOPEKO DIVISION - King Island

LOG OF D.D.H. No. D 180/6

PLANNING

Proposer: ..A. Younger..... Depth: 75 m.....  
 Location: ..W24 cuddy -100m. R.L.....  
 .....  
 Purpose of Hole: ..To Test B lens In Upper Central Area.....  
 Co-ords: ..... 220180 ..... E ..... 564156 ..... N  
 Inclination: ..... +30° .....  
 Bearing: ..... 180° ..... °Grid ..... °Mag  
 Target: ..... E ..... N  
 Depth: .....  
 Approved by: ..... Date: 4-7-1978 .....

SURVEY

Survey Co-ords: ..... 220180 ..... E ..... N  
 Surveyed Bearing: ..... 184° 05' ..... °Grid ..... °Mag  
 Surveyed in by: ..... W. Davies ..... Date 5-7-1978 .....

Actual Co-ords: ..... 220180.8 ..... E ..... 564154.4 ..... N  
 R.L. of Collar: ..... 93.1 .....  
 Inclination of Hole: ..... 30° 29' .....  
 Picked up By: ..... W. Davies ..... Date 24-7-1978 .....

SUMMARY

Logged By: ..... G. J. Bujtor ..... Date .....  
 Results: ..... 27-38 m, 11m @ 0.88% WO<sub>3</sub> .....  
 ..... 40-44 m, 4m @ 0.39% WO<sub>3</sub> .....  
 .....  
 .....

DRILLING

Date Commenced: ..5-7-1978..... Date Terminated 14-7-1978 .....

Driller/Contractor ..... A.D.D. ....

Casing:	Size :			
	Depth :			
Core:	Size :	46TT		
	Depth :	74.5m		

**Wedge Runoff:**

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

Extension: Nil  
 Final Depth: 74.5  
 Reason for Termination: Successfully tested B lens

**Condition of hole on completion:**

Casing: Nil  
 Cemented:

Bore hole survey: Surveyed to 74.5 m

Water:

Comments on Drilling Conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 180/6

Survey method: Singleshot  
Final depth: 74.5 m  
Casing depth: Nil

Depth surveyed to: 74.5 m  
Date surveyed 13-7-1978  
Surveyed by: L. Denby  
Checked by:

Bearing			Inclination		True vertical Depth (m)	Co-ordinates	
Depth (m)	Grid	Mag.	Read	Corrected		N	W
0	002	352	61.25°	+28.75°	0	0	0
74.5	002	352	61.25°	+28.75°	35.83	64.68	9.09

REMARKS:

GEOPEKO LIMITED - KING ISLAND

CORE RECOVERY

D.D.H. No. D 180/6

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0.0 - 4.0	4.0	4.0	100 broken
4.0 - 5.6	1.6	2.0	125 broken
5.6 - 7.1	1.5	1.5	100
7.1 - 10.1	3.0	3.0	100
10.1 - 12.0	1.9	1.9	100 broken
12.0 - 12.5	0.5	0.6	120 "
12.5 - 13.2	0.7	0.9	129
13.2 - 14.5	1.3	1.0	77 broken
14.5 - 17.0	2.5	2.5	100 "
17.0 - 18.5	1.5	1.5	100 "
18.5 - 20.7	2.2	2.2	100 "
20.7 - 23.5	2.8	2.8	100
23.5 - 25.0	1.5	1.7	113 broken
25.0 - 26.0	1.0	1.2	120 "
26.0 - 27.8	1.8	1.8	100
27.8 - 30.8	3.0	3.0	100
30.8 - 33.8	3.0	3.0	100
33.8 - 36.8	3.0	3.0	100
36.8 - 39.0	2.2	2.0	91
39.0 - 41.5	2.5	2.5	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 - 53.2	2.8	2.8	100
53.2 - 56.2	3.0	3.0	100
56.2 - 58.9	2.7	2.7	100
58.9 - 61.5	2.6	2.6	100
61.5 - 63.9	2.4	3.0	125
63.9 - 66.9	3.0	3.0	100
66.9 - 70.0	3.1	3.0	100
70.0 - 71.5	1.5	1.7	113
71.5 - 74.5	3.0	3.0	100
EOH 74.50 m			

GEOPEKO LIMITED - KING ISLAND

ASSAY DATA

D.D.H. No. D 180/6

Sample No.	DEPTH (METRES)				ELEMENTS			COMMENTS
	From	TO	Length	Length Recovered	WO <sub>3</sub>	Mo		
D 8044	0	1	1.0	1.0	0.05	<0.01		
45	1	2	"	"	0.09	0.01		
46	2	3	"	"	0.18	0.01		
47	3	4	"	"	<0.01	<0.01		
48	22	23	"	"	<0.01	<0.01		
49	23	24	"	"	0.24	0.01		
D 7401	24	25	"	"	0.01	<0.01		
2	25	26	"	"	0.25	0.01		
3	26	27	"	"	0.14	0.01		
4	27	28	"	"	0.59	0.02	↑ 11 m @ 0.88% WO <sub>3</sub> ↓	
5	28	29	"	"	1.26	0.07		
6	29	30	"	"	0.46	0.03		
7	30	31	"	"	0.46	0.02		
8	31	32	"	"	3.90	0.17		
9	32	33	"	"	0.75	0.05		
10	33	34	"	"	0.94	0.07		
11	34	35	"	"	0.44	0.03		
12	35	36	"	"	0.23	0.01		
13	36	37	"	"	0.39	0.02		
14	37	38	"	"	0.3	0.02		
15	38	39	"	"	0.19	0.01		
16	39	40	"	"	<0.01	<0.01		
17	40	41	"	"	0.6	0.05	↑ 4 m @ 0.39% WO <sub>3</sub> ↓	
18	41	42	"	"	0.02	<0.01		
19	42	43	"	"	0.45	0.02		
20	43	44	"	"	0.48	0.11		
21	44	45	"	"	<0.01	0.1		
22	45	46	"	"	<0.01	0.08		
23	46	47	"	"	0.09	0.06		
24	47	48	"	"	0.06	0.01		
25	48	49	"	"	5.40	0.21		
26	49	50	"	"	0.26	0.02		
27	50	51	"	"	0.16	0.01		
28	51	52	"	"	0.35	0.02		
29	52	53	"	"	0.23	0.02		
30	53	54	"	"	0.05	0.02		
31	54	55	"	"	<0.01	<0.01		

SPECIFIC GRAVITY

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

Determined by:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

DDH No. D 180/6

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 - 11.3	PGH	7- >20		Clay, chl, carb		100	50	Broken
11.3 - 18.4	Bh	9- >20		Chl, sulph, carb		99	36	Broken
18.4 - 18.7	<u>WEDGE FAULT ZONE</u>							
18.7 - 25.0	B lens ch	4- >20		Clay, carb	27°:19.3 m 14°:22.9 m	100	52	Broken
25.0 - 46.0	GPH	8		Clay, chl, carb, sulph		100	72	
46.0 - 57.0	Ph	5-6		Chl, carb, qtz	27°:54.1 m	100	88	
57.0 - 74.5	Ph/Bh	8-10		Chl, carb, qtz		100	41	

FURTHER DATA & REMARKS

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

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/6

0.0 - 11.30 m

PYROXENE GARNET HORNFELS

Typical podded pyroxene garnet hornfels with abundant broken ground and faulting in the top 6 m. Very minor mineralization occurs from 0.0 - 4.0 m. The base of the unit is faulted with biotite hornfels below.

Calcite/marble fragments are well developed from 6.0 - 10.1m with typical reaction rims.

11.30 - 18.40 m

BIOTITE HORNFELS

Fine grained dark brown biotite hornfels. The Upper contact with pyroxene garnet hornfels above is faulted and sheared. The core is somewhat broken and fractured.

18.40 - 18.70

WEDGE FAULT

Fractured, broken, clayey pug.

18.70 - 60.90 m

B LENS

Typical B lens consisting of the following subdivisions.

18.70 - 25.00 m. Marble dominantly grey to whitish coloured marbles with rare scheelite mineralization. The core is quite fractured with abundant soft altered clay zones, particularly from 18.7 - 20.7 and 24.0 - 25.0. The zone from around 24 - 25 m is extremely badly fractured and clayey (probable fault).

So 27° to LCA at 19.3 m

So 14° to LCA at 22.9 m

25.00 - 46.00 m. Garnet - pyroxene skarn. Coarse andradite garnet - pyroxene skarn with fair to good scheelite mineralization. Some grossular garnet is also present but most common towards the base of the unit.

From 25 - 27 m the core is broken and fractured. Shearing and minor pug (fault zone) occurs around 39 m. Minor fractured core around 44.5 m. The unit becomes increasingly pyroxene rich towards the base.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/6

?46.0 - 60.90 m. Pyroxene hornfels Pale green fine grained and 'siliceous looking pyroxene hornfels with rare scheelite mineralization. Bedding in places is well developed (53-56m). Minor grossular garnet occurs at the top of the unit.

From 57-60.9 m the core is rather fractured and broken with numerous siliceous and carbonate veins.

?So 27° to LCA at 54.1 m.

60.90 - 74.50 m

BIOTITE HORNFELS

Dark brown, fine grained biotite hornfels with numerous pyroxene hornfels alteration zones and patches. Numerous siliceous aplite veins are also present. No scheelite mineralization noted. Some shearing occurs from 62.0 - 62.6 m. An aplite vein/dyke occurs from 71.5 - 71.94 m.

EOH 74.50 m.

GEOLOGY - KING ISLAND SCHEELITE

CHECK ASSAY DATA

D.D.H. No.         D 180/6        

LAB. K.I.S.			LAB. K.I.S. CHECK			LAB. AMDEL			LAB. A.C.S.L.			
Original Sample No	WO <sub>3</sub>	Mo	Check Sample No	WO <sub>3</sub>	Mo	Check Sample No	WO <sub>3</sub>	Mo	Check Sample No	WO <sub>3</sub>	Mo	
7406	0.46	0.03	11700	0.57	<0.01	11701	0.53		11702	0.51		
7417	0.60	0.05	11703	0.69	<0.01	11704	0.71		11705	0.64		
7427	0.16	0.01	11706	0.20	<0.01	11707	0.12		11708	0.17		
8046	0.18	0.01	11709	0.14	<0.01	11710	0.26		11711	0.13		

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 180/5.

PLANNING

Proposer: G.L. Buckland Depth: 60m  
Location: 018 cuddy, B lens drive, -75m R.L.

Purpose of hole: Locate the Wedge fault and oreblock B lens.

Co-ordinates: 220 180 E 564 179 N  
Inclination: +20° Magnetic  
Bearing: 180 Grid Target depth:  
Target: E N  
Approved by: M.J. Danielson Date: 22/10/75

SURVEY

Survey Co-ords: E N  
Survey bearing: 183°20' Grid Magnetic  
Surveyed in by: Date:  
Actual Co-ords: 220 180.5 E 564 179.2 N  
R.L. of collar: -72.50 Inclination of hole: +18°40'  
Picked up by : R.J.H. Date: 7/11/75

SUMMARY

Logged by : G.L. Buckland  
Results: B lens: 26 - 32m, 6m @ 0.59% WO<sub>3</sub>. Wedge Fault: 24.54m

DRILLING

Driller/Contractor: A.D.D.  
Date commenced: 5/11/75 Date terminated: 12/11/75

Casing: Size :	Nil		
Depth :			
Core: Size :	A17		
Depth :	62.0		

Wedge Runoff:

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

Extension: Nil

Reason for termination: Hole passed above B lens Final depth: 62.00m

Condition of hole on completion:

Casing : Nil

Cemented : No

Bore hole survey: No - camera absent being repaired.

Water:

Comments on drilling conditions:

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 180/5

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 2.70	2.70	2.34	87
5.25	2.55	2.08	82
9.70	4.45	4.33	97
12.75	3.05	2.96	97
15.80	3.05	2.96	97
18.85	3.05	2.85	93
21.90	3.05	3.18	104
24.95	3.05	2.96	97
29.50	4.55	4.10	90
32.55	3.05	3.09	101
35.60	3.05	2.96	97
37.60	2.00	2.11	106
40.65	3.05	3.12	102
43.70	3.05	3.14	103
46.75	3.05	3.10	102
49.80	3.05	3.11	102
52.85	3.05	3.06	100
55.90	3.05	3.05	100
58.95	3.05	3.08	101
62.00	3.05	3.00	98

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 180/5

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)
0 - 15.80	bah	10	-	minor pyrite, chlorite, carbonate.	-	93	55	Rubble: 3.93 - 4.10, 4.46 - 5.10, 10.27 - 11.54, 12.75 - 13.0, Core is riddled with carbonate veinlets: 11.02 - 11.15
15.80 - 24.95	bah	15	-	chlorite e.g. @ 17.80	-	98	14	Very poor core quality. Core has no structural strength. (also brecciated): 18.15 - 18.40 (Fault)? and at 18.75. 24.55 - 24.95: core is weakly leached. Core brecciated: 17.70 - 17.90
24.95 - 35.60	Wedge Fault/gph	8	-	clay, chlorite	-	95	67	24.95 - 25.94: Core is weakly leached. Rubble with chlorite on fracture surfaces: 25.85 - 25.95 Core becomes more broken

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) =  $\frac{\text{length core } > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size. A 17 ( 32mm dia)

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 180/5

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)
35.60 - 43.70	bh/ph	15	-	pyrite	-	103	25	from 34.70. Poor quality core. Brecciated core: 42.70 - 42.90
43.70 - 62.00	ph/bh	5	-	minor pyrite	50.5m 58	100	85	Good quality core: Breccia with carbonate filling at 52.60. Minor fault?

FURTHER DATA & REMARKS

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

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 180/5

SAMPLE No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	To	Length	Length Recovered	WO <sub>3</sub>	Mo	
D4446	25	26	1.0	1.0	0.06	0.02	B lens 26 -32m, 6m @ 0.59% WO <sub>3</sub> 0.03% Mo.
7	26	27	"	"	0.48	0.03	
8	27	28	"	"	0.75	0.06	
9	28	29	"	0.55	0.28	0.04	
50	29	30	"	1.0	0.73	0.01	
1	30	31	"	"	0.84	0.05	
2	31	32	"	"	0.46	0.01	
D4453	32	33	"	"	0.01	0.04	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 180/5

LAB. K.I.S.			LAB. <u>K.I.S.</u>			LAB. <u>ANGL.</u>			LAB. <u>A.C.S.I.</u>		
Original Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.
D4447	0.48	0.03	D4655	0.55		D4656	0.72		D4657	0.76	
D4451	0.84	0.05	D4658	0.86		D4659	0.95		D4660	0.92	

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/5

0 - 24.54

BIOTITE ACTINOLITE HORNFELS

Dominantly a purple (bh) and grey (ah) coloured rock having a uniform fine grained texture throughout. No bedding.

Two minor features of interest are:-

- 1). From 2.3 to 3.4m a spotted texture is developed.  
- the spots being composed of lustrous brown biotite.
- 2). From approximately 8.20 - 10.10m the core exhibits pygmatic quartz veining. Sulphides (pyrrhotite and chalcopyride) are often associated with this veining.

Core quality is poor to 15.80m (RQD 55, J/M 10) and very poor to 24.95m (RQD 14, J/M +15) chlorite is an abundant joint coating from about 16 - 24m and the core is brecciated and has no structural strength: 18.15 - 18.40. Fault?

24.54 - 25.89

MYLONITE (WEDGE FAULT)

A light green fine grained, weakly leached rock which appears to have formed from ground up bh and gph in the vicinity of the Wedge Fault.

Core is brecciated: 25.77 - 25.89 10% core loss: 24.95 - 29.50.

25.89 - 34.68

GARNET PYROXENE HORNFELS

A fine grained rock containing both pink grossularite and brown andradite garnet with a green pyroxene rich groundmass with subordinate white carbonate.

This interval contains good grade yellow fluorescing scheelite mineralisation to 31.53m but then appears barren to 34.68.

34.68 - 38.45

BIOTITE HORNFELS

A badly broken grey/black barren fine grained bh.

38.45 - 50.37

PYROXENE HORNFELS

A pale green coloured massive barren ph. No. bedding.

Core is brecciated: 42.70 - 42.90.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/5

50.37 - 62.00

BIOTITE HORNFELS

Predominantly a fine grained purple bh with occasional pale green beds of ph developed (thickest occurs from 51.45 - 53.15) to 55.15m, perhaps representing a transition zone between the underlying ph and this uppermost bh unit.

Bedding (?) 50.5m 58° LCA.

From approximately 57.85 - 61.10m the core displays the odd "ovoid". As an example of an ovoids' composition - at 60.75 the ovoid has a long axis subparallel to LAOC, containing quartz (?) in the central core together with sulphide mineralisation (pyrrhotite and chalcopyrite) surrounded by a pale green pyroxene rich reaction rim.

62.00

E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.I.D.H. No. D 180/4

PLANNING

Proposer: G.L. Buckland Depth: 50m  
Location: 018 cuddy, -75m R.L.

Purpose of hole: Exploration of B lens.

Co-ordinates: 220 180 E 564 193 N  
Inclination: +55° Magnetic  
Bearing: 360 Grid Target depth:  
Target: E N  
Approved by: M.J. Danielson. Date: 22/10/75

SURVEY

Survey Co-ords: E N  
Survey bearing: 02°20' Grid Magnetic  
Surveyed in by: Date:  
Actual Co-ords: 220 180.6 E 564 192.4 N  
R.L. of collar: -70.6 Inclination of hole: + 54°30'  
Picked up by : R.J.H. Date: 29/10/75

SUMMARY

Logged by : G.L. Buckland  
Results: B lens 26 - 49.9m, 23.9m @ 0.70% WO<sub>3</sub>

DRILLING

Driller/Contractor: A.D.D.  
Date commenced: 24/10/75 Date terminated: 4/11/75

Casing: Size :	A		
Depth :	1.52		
Core: Size :	BQ	A17	
Depth :	1.5	49.9	

Wedge Runoff:

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

Extension: Nil

Reason for termination: Hole terminated approx. Final depth: 49.9m  
20m below the sea bed.

Condition of hole on completion:  
Casing : 1.52m A remains.  
Cemented : No.

Bore hole survey: No - camera malfunction

Water: Trickle on completion - quantity not measured.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 180/4

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 - 12.0	bah	10		clay, carbonate	62 : 55°	96	54	Brecciated core: 10.26 - 10.28. Fault? Core riddled with carbonate veinlets: 10.0 - 10.66
12.0 - 25.50	bah	12		clay, carbonate, minor pyrite	13m : 45° 14.5 : 52° 17m : 44°	89	49	Broken ground: (rubble): 12.0 - 12.13, 21.35 - 21.63, 22.0 - 25.13 40% core loss: 21.45 - 25.50 and brecciated core 24.90 - 25.0 Puggy weathered chlorite. chlorite. Fault? Brecciated core 13.7, 16.48 - 16.66, 17.7
25.50 - 40.75	gph	3		minor clay and carbonate		99	92	Excellent core <del>recovery</del> . quality
40.75 - 44.40	Tuffite	+15		chlorite @ 44.10 and puggy @ 43.75		91	22	Brecciated core 43.47.
44.40 - 49.90	gph	3		minor clay.		99	92	Excellent core quality.

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) =  $\frac{\text{length core} > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size. 0 - 1.5m BQ (36.5mms dia).  
1.50 - 49.90 A17 (32mms dia).

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 180/4

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 3.0	3.0	2.75	92
6.25	3.25	3.22	99
9.30	3.05	3.03	99
12.0	2.70	2.46	91
15.35	3.35	3.44	103
18.40	3.05	3.09	101
21.45	3.05	3.06	100
25.50	4.05	2.45	60
28.55	3.05	3.00	98
31.60	3.05	3.00	98
34.65	3.05	3.07	101
37.70	3.05	3.03	99
40.75	3.05	3.05	100
43.80	3.05	2.71	89
46.85	3.05	2.97	97
49.90	3.05	3.10	102

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 180/4

SAMPLE		DEPTH (METRES)			ELEMENTS		COMMENTS
No.	From	To	Length	Length Recovered	WO <sub>3</sub>	Mo	
D4421	25	26	1.0	1.0	0.01	<0.01	B lens 26 - 49.9m, 23.9m @ 0.70% WO <sub>3</sub> 0.05% Mo (sample D4435 truncated to 4.0%).
2	26	27	"	"	0.40	0.02	
3	27	28	"	"	0.18	<0.01	
4	28	29	"	"	0.42	0.01	
5	29	30	"	"	0.66	0.05	
6	30	31	"	"	0.18	0.03	
7	31	32	"	"	1.27	0.13	
8	32	33	"	"	0.45	0.01	
9	33	34	"	"	0.37	0.01	
30	34	35	"	"	0.46	0.01	
1	35	36	"	"	1.35	0.10	
2	36	37	"	"	1.20	0.05	
3	37	38	"	"	0.71	0.11	
4	38	39	"	"	0.68	0.02	
5	39	40	"	"	4.7	0.34	
6	40	41	"	"	0.38	0.04	
7	41	42	"	"	0.34	0.01	
8	42	43	"	0.83	0.01	<0.01	
9	43	44	"	1.0	0.01	<0.01	
40	44	45	"	"	0.32	0.03	
1	45	46	"	"	1.70	0.11	
2	46	47	"	"	0.52	0.04	
3	47	48	"	"	0.50	0.02	
4	48	49	"	"	0.28	0.01	
D4445	49	49.9	0.9	0.9	0.32	0.03	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 180/4

LAB. K.I.S.			LAB. K.I.S.			LAB. AMDEL			LAB. A.C.S.L.		
Original Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.
D4422	0.40	0.02	D4646	0.22		D4647	0.29		D4648	0.32	
32	1.20	0.05	49	1.20		50	1.39		51	1.26	
D4442	0.52	0.04	D4652	0.54		D4653	0.63		D4654	0.67	

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/4

0 - 25.14

BIOTITE ACTINOLITE HORNFELS

A poorly bedded, barren purple bh and grey ah. This rock displays a weakly fragmental texture throughout - having angular (ah) and ovate (bh) fragments set in a fine grained groundmass. eg 19.1m, 21.0m.

Minor thin (< 1cm) interbeds of green ph and pink grossular garnet are developed in the interval 16.93 - 17.25.

Bedding 6.2m 55° LAOC,  
13m 45° LAOC,  
14.5m 52° LAOC,  
17m 44° LAOC.

Brecciated core: 10.26 - 10.28  
(possible fault) 24.90 - 25.0  
16.48 - 16.66

Generally the core is of poor quality. 40% core loss occurs in the interval 21.45 - 25.50, indicating a possible fault zone as the core is also brecciated here.

25.14 - 41.28

GARNET PYROXENE HORNFELS

Pale green pyroxene pink grossular garnet and the occasional needle - like cluster of green actinolite surrounded by carbonate are the main constituents of this moderately mineralised gph. Fine grained scheelite is disseminated throughout while coarse scheelite occurs at 31.72 and 39.01 - 39.25.

Free Mo  $S_2$  is present in a cluster at 36.10 while chalcopyrite occurs at 39.10.

Core quality is excellent (RQD 92%, J/M 3 : 25.50 - 40.75).

41.28 - 44.76

TUFFITE?

A badly broken, barren zone of rock which contains lustrous scales of biotite surrounded by a fine grained groundmass, which displays a vaguely tuffaceous texture.

Core quality is poor (RQD 22%) and chlorite is an abundant joint filling.

44.76 - 49.90

GARNET PYROXENE HORNFELS

A moderately mineralised gph (as above), the core being enriched in pyroxene from approximately 46.9m.

Fine grained disseminated scheelite occurs throughout.

49.90 E.O.H.

NOTE: This hole was terminated within B lens mineralisation as mining considerations necessitated termination approximately 20m below the sea - bed.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 180/3

PLANNING

Proposer: G.L. Buckland Depth: 10m  
Location: 015 cuddy, B lens drive, -75m level.

Purpose of hole: Locate lower stratigraphic contact of B lens.

Co-ordinates: 220 180 E 564 100 N

Inclination:  $-90^{\circ}$  Magnetic

Bearing: Grid Target depth:

Target: E N

Approved by: M.J. Danielson Date: 3/10/75

SURVEY

Survey Co-ords: E N

Survey bearing:  $339^{\circ}00'$  Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 180.1 E 564 100.3 N

R.L. of collar: -76.2 Inclination of hole:  $-88^{\circ}30'$

Picked up by : R.J.H. Date: 14/10/75

SUMMARY

Logged by : G.L. Buckland.

Results: B lens: 0 - 3m, 3m @ 0.84%  $WO_3$

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 10/10/75

Date terminated: 11/10/75

Casing: Size : Nil

Depth :

Core: Size : A17

Depth : 7.0

Wedge Runoff:

Wedge placed: Nil

Depth:

Proposed by :

Approved by:

Reason:

Extension: Nil

Reason for termination: Hole in bh below Blens Final depth: 7.0m

Condition of hole on completion:

Casing : Nil

Cemented : No

Bore hole survey: No

Water: Nil.

Comments on drilling conditions:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 180/3

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 - 4.2	gph	6		minor carbonate and chlorite		92	54	
4.2 - 7.0	bh	13		minor pyrite chlorite @ 6.67	6.7m: 50°	105	41	

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) =  $\frac{\text{length core} > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size, A17 (32mms diameter)

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 180/3

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 3.1	3.10	2.84	92
4.2	1.10	1.02	93
5.6	1.40	1.34	96
7.0	1.40	1.60	114

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 180/3

SAMPLE		DEPTH (METRES)			ELEMENTS			COMMENTS
No.	From	To	Length	Length Recovered	WO <sub>3</sub>	Mo		
D4416	0.15	1.0	0.85	0.85	1.24	0.06	B lens: 0 - 3m, 3m @ 0.84% WO <sub>3</sub> 0.04% Mo	
7	1	2	1.0	1.0	0.50	0.02		
8	2	3	"	0.60	<0.01	0.01		
D4419	3	4	"	1.0	0.79	0.04	NB. Inspection of the split core reveals that the last metre of this split is barren. Definitely, the sample tags have been reversed.	

SPECIFIC GRAVITY

Determined by:

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

NOTE: 0 - 0.15m concrete.

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 180/3

LAB. K.I.S.			LAB. K.I.S.			LAB. AMDEL			LAB. A.C.S.L.			
Original Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	
D4417	0.50	0.02	D4643	0.66		D4644	0.73		D4645	0.75		

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/3

0 - 0.15  
0.15 - 4.2

CONCRETE  
GARNET PYROXENE HORNFELS

A fine grained weakly mineralised grossular garnet and pyroxene rich rock with free  $\text{MoS}_2$  3.1 - 3.15m.

4.2 - 7.0

BIOTITE HORNFELS

A barren purple fine grained bh with the occasional interbeds of ph developed within the last 0.5m.

Pyrite is present on joints.

Bedding 6.7m: 50° LAOC

7.0m

E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 180/2

PLANNING

Proposer: G.L. Buckland.

Depth: 15m.

Location: 015 cuddy, B lens drive, -75m R.L.

Purpose of hole: Exploration of B lens and to locate the Central Fault.

Co-ordinates: 220 180 E 564 100 N

Inclination: zero

Magnetic

Bearing: 180

Grid

Target depth:

Target:

E

N

Approved by: M.J. Danielson.

Date: 3/10/75

SURVEY

Survey Co-ords: E

N

Survey bearing: 181°10' Grid

Magnetic

Surveyed in by:

Date:

Actual Co-ords: 220 180.0 E 564 097.9 N

R.L. of collar: -74.7

Inclination of hole: +00°00'

Picked up by : R.J.H.

Date: 9/10/75

SUMMARY

Logged by : G.L. Buckland

Results: B lens: 1 - 10m, 9m @ 0.72% WO<sub>3</sub>

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 8/10/75

Date terminated: 10/10/75

Casing: Size : Nil

Depth :

Core: Size : A17

Depth : 24.50

Wedge Runoff:

Wedge placed: Nil

Depth:

Proposed by :

Approved by:

Reason:

Extension: Nil

Reason for termination: Hole passed beyond the Final depth: 24.5m

Condition of hole on completion: "slicer" fault.

Casing : Nil

Cemented : No

Bore hole survey: No

Water: -

Comments on drilling conditions: E 500 machine

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.H. No. D 180/2

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 - 9.8	gph	5		minor clay and carbonate		92	64	
9.8 - 24.50	Acid dyke/gph	7		clay		86	56	Broken ground: 15.6 - 15.95 Core brecciated and weakly leached: 23.48 - 23.68 (Fault?)

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation)  $\pm = \frac{\text{length core } > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size. A 17 (32mm dia)

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 180/2

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 2.3	2.30	2.20	96
5.4	3.10	2.84	92
7.4	2.00	1.83	92
9.8	2.40	2.15	90
12.8	3.00	2.77	92
15.95	3.15	2.78	88
19.75	3.80	3.21	84
24.50	4.75	3.88	82

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 180/2

SAMPLE No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	To	Length	Length Recovered	WO <sub>3</sub>	Mo	
D4405	0	1	1.0	1.0	0.12	<0.01	B lens 1 - 10m, 9m @ 0.72% WO <sub>3</sub> 0.02% Mo
6	1	2	"	0.91	0.45	0.02	
7	2	3	"	1.0	0.92	0.07	
8	3	4	"	"	0.74	0.03	
9	4	5	"	0.75	0.68	0.01	
10	5	6	"	1.0	0.16	<0.01	
1	6	7	"	"	0.80	<0.01	
2	7	8	"	"	1.62	0.05	
3	8	9	"	0.81	0.64	0.01	
4	9	10	"	1.0	0.47	0.01	
D4415	10	11	"	"	0.01	<0.01	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D 180/2

LAB. K.I.S.			LAB. K.I.S.			LAB. AMDEL			LAB. A.C.S.L.		
Original Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.
D4406	0.45	0.02	D4637	0.62		D4638	0.72		D4639	0.66	
D4412	1.62	0.05	D4640	1.82		D4641	2.40		D4642	1.70	

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/2

0 - 10.20

GARNET PYROXENE HORNFELS

Pale pink grossularite and pale green pyroxene are the dominant minerals of this gph, while blue fluorescing scheelite and the yellow type are disseminated throughout.

10.20 - 21.42

ACID DYKE

Minute crystals of lustrous mica(?) are surrounded by a quartz rich groundmass.

Coarse scheelite is present from 11.33 - 11.56 where a fracture intersects the core, subparallel to the LAOC.

Weathered mica (?) is the characteristic joint filling.

21.42 - 24.50

GARNET PYROXENE HORNFELS

A rock composed of grossularite with a green ph groundmass containing a few specks of scheelite.

Coarse scheelite is developed in a 2cm wide vein at 23.25m.

The core is brecciated and weakly leached 23.48 - 23.68.  
Fault?

24.50

E.O.H.

GEOPEKO LIMITED - KING ISLAND

LOG OF D.D.H. No. D 180/1

PLANNING

Proposer: G.L. Buckland  
Location: 015 cuddy, B lens drive, -75 m R.L. Depth: 20m

Purpose of hole: Exploration of B lens

Co-ordinates: 220 180 E 564 100 N

Inclination: +90 Magnetic

Bearing: Grid Target depth:

Target: E N

Approved by: M.J.D. Date: 3/10/75

SURVEY

Survey Co-ords: E N

Survey bearing: 111°50' Grid Magnetic

Surveyed in by: Date:

Actual Co-ords: 220 180.1 E 564 100.3 N

R.L. of collar: -71.0 Inclination of hole: +88°30'

Picked up by : R.J.H. Date: 6/10/75

SUMMARY

Logged by : G.L. Buckland.

Results: B lens 0 - 5m, 5m @ 0.58% WO<sub>3</sub>

DRILLING

Driller/Contractor: A.D.D.

Date commenced: 6/10/75

Date terminated: 8/10/75

Casing: Size : Nil

Depth :

Core: Size : A17

Depth : 19m

Wedge Runoff:

Wedge placed: Nil.

Depth:

Proposed by :

Approved by:

Reason:

Extension: Nil.

Reason for termination: Hole passed above B lens. Final depth: 19.0

Condition of hole on completion:

Casing : Nil.

Cemented : No.

Bore hole survey: Yes, to 7.0m

Water: Hole making a trickle of water on completion - quantity not measured.

Comments on drilling conditions: -

GEOPEKO LIMITED - KING ISLAND

SUMMARY BORE HOLE SURVEY DATA

D.D.H. No. D 180/1

Survey method : Multishot camera  
Final depth : 19.0  
Casing depth : Nil

Depth surveyed to : 7m.  
Date surveyed : 8/10/75  
Surveyed by : G.L.B.  
Checked by : G.L.B.

DEPTH (m)	Bearing		Inclination		True Vertical Depth (m)	Co-ordinates	
	Grid	Mag.	Read	Corrected		E	N
7	105°	095°	1° 45'	+88° 15'	Not calculated.		

REMARKS:

GEOPEKO LIMITED - KING ISLAND

SUMMARY STRUCTURAL DATA

D.D.E. No. D 180/1

Depth Interval (metres)	Rock Type	Fractures /m.	Joint Angle (wrt LACC)	Joint Filling	Bedding Angle (w.r.t. L.A.O.C.)	% Core Reco- very	R.Q.D.	Remarks (weathering)
0 - 7.5	gph/ph	5		carbonate @ 2.75, clay		99	75	
7.5 - 11.5	pgh/tuffite bph	13		carbonate, minor pyrite	10m: 80°	110	45	Broken ground: 8.33 - 8.51, 9.70 - 9.90, 11.36 - 11.5. Generally poor ground
11.5 - 19.0	bh/ph	8		carbonate minor pyrite	11.6m: 60°	90	50	Broken ground 12.81 - 13.07, 13.56 - 13.9

FURTHER DATA & REMARKS

- Detailed % core recoveries within each depth interval is shown in the core recovery tabulation.
- R.Q.D. (rock quality designation) =  $\frac{\text{length core} > 10 \text{ cms}}{\text{length drilled}} \%$
- Core size. A17 (32mms dia).

GEOPEKO LIMITED - King Island

CORE RECOVERY

D.D.H. No. D 180/1

INTERVAL (m)	LENGTH (m)	LENGTH RECOVERED (m)	% CORE RECOVERY
0 - 3.1	3.10	3.08	99
6.1	3.00	2.89	96
7.5	1.40	1.47	105
9.9	2.40	1.93	80
11.5	1.60	2.48	155
13.90	2.40	2.32	97
16.80	2.90	2.38	116
18.0	1.20	1.04	87
19.0	1.00	0.98	98

GEOPEKO LIMITED - DOLPHIN MINE

ASSAY DATA

D.D.H. No. D 180/1

SAMPLE No.	DEPTH (METRES)				ELEMENTS		COMMENTS
	From	To	Length	Length Recovered	WO <sub>3</sub>	Mo	
D4399	0	1	1.0	1.0	0.64	0.02	
400	1	2	"	"	0.30	0.01	B lens 0 - 5m, 5m @ 0.58% WO <sub>3</sub> 0.03% Mo.
1	2	3	"	"	0.37	0.01	
2	3	4	"	"	0.56	0.03	
3	4	5	"	"	1.01	0.08	
D4404	5	6	"	"	<0.01	<0.01	

SPECIFIC GRAVITY

Determined by:

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

GEOPEKO LIMITED - KING ISLAND

CHECK ASSAY DATA

D.D.H. D180/1

LAB. K.I.S.			LAB. K.I.S.			LAB. AMDEL			LAB. A.C.S.L.		
Original Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.	Check Sample No.	WO <sub>3</sub>	Mo.
D4399	0.64	0.02	D4631	0.73		D4632	0.96		D4633	0.88	
D4403	1.01	0.08	D4634	1.64		D4635	1.45		D4636	1.08	

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/1

- 0 - 5.16                   GARNET PYROXENE HORNFELS
- A rock containing abundant pale pink grossularite and dark brown andradite garnet, surrounded by a fine grained pyroxene rich groundmass with occasional quartz porphyroblasts. Weak disseminated scheelite occurs throughout while coarse scheelite is present: 4.56 - 4.61. The interval 2.79 - 3.37 appears barren, is enriched in pyroxene and has not developed an obvious skarn texture. Carbonate is the dominant joint coating eg 3.3, 4.0m.
- 5.16 - 7.08               PYROXENE HORNFELS
- A barren fine grained pale green ph.
- 7.08 - 7.46               PYROXENE GROSSULAR HORNFELS
- A fine grained pyroxene grossular hornfels with coarse scheelite developed within a quartz vein (2cm wide) at 7.44m. Remnant bedding (?) is displayed throughout.
- 7.46 - 7.86               TUFFITE
- A rock containing small crystals of mica (?) set in a grey (feldspar) and pale green (pyroxene) groundmass. The uppermost contact is represented by 4cm of rubble with weathered chlorite on the fracture surfaces.
- 7.86 - 9.24               PYROXENE GROSSULAR HORNFELS
- As above, with coarse scheelite present in quartz veins at 7.89 and 9.22.
- 9.24 - 11.86              BIOTITE PYROXENE HORNFELS
- A barren purple fine grained bh with the occasional interbed (<3cm) of pale green ph. Bedding 10m: 80° LAOC.
- 11.86 - 12.21             TUFFITE
- As above.
- 12.21 - 13.52             BIOTITE HORNFELS
- A barren fine grained purple bh with one remnant bed of pale green ph developed 13.07 - 13.16.

GEOPEKO LIMITED - KING ISLAND

GEOLOGICAL LOG

D.D.H. No. D 180/1

13.52 - 13.65

APLITE DYKE

13.65 - 14.87

PYROXENE HORNFELS

Needle shaped crystals of green actinolite are set in  
a barren fine grained pale green ph.

14.87 - 19.0

BIOTITE HORNFELS

A barren purple bh.  
Aplite 18.02 - 18.11.

19.0

E.O.H.