



### Abstract

Zeehan 1, EL 28/88 covers 29 km<sup>2</sup> located near Zeehan on the Tasmanian W coast (Plan Tv 1309). EL 28/88 was granted to "His Grace, The Most Noble, The Duke of Avram" on 9th December, 1988, and transferred to Major Mining Ltd on the 23rd November 1989. Rio Tinto Exploration Pty. Limited entered into a joint venture agreement with Major Mining to explore EL 28/88, commencing on 23rd April 1991. Major Mining Ltd divested its interest in the joint venture to Allegiance Mining NL, with the exploration tenements transferred to Rio Tinto (90%) and Allegiance (10%) as tenants in common on 22nd January 1994.

Rio Tinto's principal focus in the Zeehan area is Irish-style carbonate hosted zinc mineralisation in the Ordovician Gordon Limestone Formation

EL 28/88 was reduced in size by 55% during the last annual reporting period (Plan Tv1309).

This report summarises all exploration conducted on the area recommended for relinquishment to Mineral Resources Tasmania on 10th December 1997.

Work conducted on the area being relinquished includes;

- Diamond drilling (11 holes, 2508.8m)
- Aircore drilling (246 holes)
- Deep overburden wacker sampling (192 holes)
- Rockchip sampling (10 samples)
- Panned concentrate sampling (13 samples), (Aircore/wacker bedrock samples)
- Detailed Helimag Survey (approximately 60m spacing at 30m flying height)
- Mineralogical Reports
- Basin Analysis Study

Most of Rio Tinto's work focussed on four main prospects: Myrtle, Pyramid, Firewood Siding and Sassafras. Results were not sufficiently encouraging to continue exploration.

**Table of Contents**

	<b>Page No.</b>
Abstract	
List of Plans	
List of Appendices	
1. Conclusions and Recommendations	1
2. Introduction	1
3. Summary of Exploration	1
3.1 Geology and Mineralisation	1
3.2 Myrtle Prospect	2
3.3 Pyramid Prospect	2
3.4 Firewood Siding Prospect	3
3.5 Sassafras Prospect	3
3.6 Helimag Survey	4
3.7 Basin Analysis Study	4
4. Rehabilitation	4
5. References	5
6. Location	5
7. Keywords	5

### List of Plans

Plan No.	Title	Scale
Tv 1309	EL 28/88 Zeehan 1 Location Plan	1:100,000
Tv714	EL 28/88 Zeehan 1 Zeehan Carbonate - Myrtle Prospect Geology and Drillhole Location Plan	1:2,500
Tv1018	EL 28/88 Zeehan 1 Zeehan Carbonate - Pyramid Prospect Geology and Drillhole Location Plan	1:2,500
Tv1017	EL 28/88 Zeehan 1 Zeehan Carbonate - Sassafras Prospect Geology and Deep Overburden Sample Location Plan	1:2,500
Tv1142	Zeehan Helimag Survey EL 28/88 Zeehan 1- Myrtle Prospect Vertical Derivative Image, Flight Line Overlay and Modelled Anomalies	1:10,000
Tv1141	Zeehan Helimag Survey EL 28/88 Zeehan 1- Pyramid Prospect Vertical Derivative Image, Flight Line Overlay and Modelled Anomalies	1:10,000
Tv1143	Zeehan Helimag Survey EL 28/88 Zeehan 1/EL 34/88 Zeehan 2- Firewood Siding Prospect Vertical Derivative Image, Flight Line Overlay and Modelled Anomalies	1:10,000
Tv1147	Zeehan Helimag Survey EL 28/88 Zeehan 1- Sassafras Prospect Coloured Total Field on Shaded Relief Image	1:25,000

### List of Tables

Table 1	Summary of Rehabilitation
---------	---------------------------

### List of Appendices

- Appendix 1 Geological Logs and Assay Ledgers for DD94ZM185-187, DD95ZM188-190 and DD96ZM191 - Myrtle Prospect
- Appendix 2 Relogged EZ Diamond Drill Logs and Geochemistry - Myrtle Prospect
- Appendix 3 Geological Logs and Assay Ledgers for DD95ZP63 and DD96ZP64-65, Pyramid Prospect
- Appendix 4 Geological Logs and Assay Ledgers for DD96ZF37 - Firewood Siding Prospect
- Appendix 5 Aircore Drilling and Geochemistry - Myrtle Prospect
- Appendix 6 Aircore Drilling and Geochemistry - Pyramid Prospect
- Appendix 7 Rockchip and Wacker Sampling Ledgers and Geochemistry - Myrtle Prospect
- Appendix 8 Wacker Sampling Ledgers and Geochemistry - Pyramid Prospect
- Appendix 9 Wacker Sampling Ledgers and Geochemistry - Firewood Siding Prospect
- Appendix 10 Wacker Sampling Ledgers and Geochemistry - Sassafras Prospect
- Appendix 11 Mineralogical Reports - Myrtle Prospect

## 1. Conclusions and Recommendations

- EL 28/88 was reduced in size by 55% during the last annual reporting period, and now covers an area of 29 km<sup>2</sup> (Plan Tv1309).
- This report summarises all exploration conducted on the area recommended for relinquishment to Mineral Resources Tasmania on 10th December 1997.

## 2. Introduction

Zeehan 1, EL 28/88 covers 29 km<sup>2</sup> located near Zeehan on the Tasmanian W coast (Plan Tv 1021). EL 28/88 was granted to "His Grace, The Most Noble, The Duke of Avram" on 9th December, 1988, and transferred to Major Mining Ltd on the 23rd November 1989. Rio Tinto Exploration Pty. Limited entered into a joint venture agreement with Major Mining to explore EL 28/88, commencing on 23rd April 1991. Major Mining Ltd divested its interest in the joint venture to Allegiance Mining NL, with the exploration tenements transferred to Rio Tinto (90%) and Allegiance (10%) as tenants in common on 22nd January 1994.

Rio Tinto's principal focus in the Zeehan area is Irish-style carbonate hosted zinc mineralisation in the Ordovician Gordon Limestone Formation

## 3. Summary of Exploration

### 3.1 Geology and Mineralisation

The search for carbonate hosted base metal orebodies has concentrated on the Ordovician Gordon Limestone of the Zeehan area. Depositional environments and syn-sedimentary tectonism of the Gordon Limestone are similar to the carbonate rocks that host the Navan Mine in Ireland (published reserves 80mT @ 10% Zn).

Approximately 500m of limestone stratigraphy occurs in the Zeehan area and is thought to have been deposited within a sub-basin of the statewide Gordon Limestone. The limestone is underlain by clastics of the Ordovician Owen Conglomerate and Moina Sandstone. The limestone is overlain by Silurian Crotty Quartzite. Devonian deformation has folded the sequence, locally as tight folds. There is evidence which indicates that Ordovician syn-sedimentary faults have been reactivated as brittle faults during the Devonian.

Zinc mineralisation occurs at three stratigraphic positions within the limestone;

- 1) Towards the base of the limestone
- 2) Beneath an argillaceous clastic unit within the middle of the limestone
- 3) At the top of the limestone close to its contact with the overlying Silurian Crotty Quartzite.

### 3.2 Myrtle Prospect

- Highly anomalous surface Zn geochemistry related to the Siltstone Unit.
- Outcropping barite, pyrite and sphalerite mineralisation in dark grey clay (Siltstone Unit).
- The major Professor Range Fault cuts the area, near to mineralisation
- 7 diamond drill holes totalling 1768.8m were completed at the Myrtle Prospect. Drilling failed to intersect significant mineralisation. Drill logs, geochemistry and target descriptions are included in Appendix 1.
- Best diamond drilling;
 

ZM1008	3.0m @ 6.7% Zn (<0.1% Pb)
	3.6m @ 4.3% Zn (2.9% Pb)
ZWM18	7.05m @ 2.4% Zn (<0.1% Pb)
DD94ZM185	0.6m @ 14.9% Zn (<0.1% Pb)
- 184 aircore holes were drilled at the Myrtle Prospect. Sample and assay ledgers are provided in Appendix 5. Best anomalies were followed up with diamond drillholes.
- Air-core drilling of near-surface decomposed limestone at Myrtle intersected significant Zn mineralisation in several holes (best hole ZM18 - 36m @ 4.3% Zn). The Zn is present as clean monominerallic grains of low Fe sphalerite, apparently easily liberated from the unconsolidated pug.
- Some sampling of previously unsampled EZ drillcore was carried out with the best result being 7.05m @ 2.4% Zn from 6.85m. Drill logs and geochemical assay results for these EZ drill holes are included in Appendix 2.
- 40 wacker samples and 10 rockchip samples collected from road cuttings were submitted for multi-element geochemical analysis. Assay and sample ledgers are included in Appendix 7.
- 13 Panned concentrates were collected and sent for mineralogical analysis. Report findings are detailed in Appendix 11.
- A summary exploration for the Myrtle Prospect is given in Plan Tv714.

### 3.3 Pyramid Prospect

- Open-file literature review revealed the presence of significant surface enrichment of Zn within residual black clays developed over Ordovician Gordon Limestone.
- Proximal and along strike from the Oceana Resource 4Mt @ 18% Pb, 9% Zn; a stratabound replacive orebody.
- Previous shallow diamond drilling intersected base metal mineralisation 1m @ 2.77% Zn (2.1% Pb) in an assumed 'Oceana horizon' position. Untested at depth.
- Major clastic sequence within the middle of the limestone sequence - indicating proximity to a major syn-sedimentary structure.
- There is a major structure in the south of the area.
- Air-core drilling of near-surface decomposed limestone at Pyramid showed patchy weak mineralisation was developed in several holes. A total of 62 aircore holes were drilled. Sample and assay ledgers are

included in Appendix 6.

- 3 diamond drill holes totalling 528m were completed at the Pyramid Prospect. Geological logs and assay results are included in Appendix 3.
- DD95ZP63 was designed to test the lower sandstone/limestone contact close to where siderite alteration was recorded in AC94ZP43. Assay results for the dark clay unit at the lower contact were disappointing (0.21% Zn for 1.5m from 201m).
- DD96ZP65 intersected 100m of quartzite within the carbonate sequence. Small scale galena and sphalerite veins were intersected between 40.9m and 41.2m giving a maximum lead value of 1.4% and a maximum zinc value of 0.4%.
- 2 reconnaissance bedrock wacker sampling lines (22 wacker samples) were completed at the central and southern parts of the Pyramid Prospect. Elevated zinc values up to 1780 ppm Zn were found in association with siderite alteration at the Moina Sandstone/Gordon Limestone contact on the western limb of the Pyramid syncline. Sample and assay ledgers are included in Appendix 8.
- A summary exploration for the Pyramid Prospect is given in Plan Tv1018.

### 3.4 Firewood Siding Prospect

- Wacker sampling of limestone at the northern end of Firewood Siding Prospect returned strongly elevated Zn values near the contact with Silurian Crotty Quartzite. Sample and assay ledgers are provided in Appendix 9.
- One diamond drill hole was drilled at Firewood Siding (212m) to test this bedrock wacker geochemical anomaly. Elevated zinc grades (0.38% Zn) were intersected over 10m from 59m across the Crotty Quartzite/Upper Dolomite contact, and also associated with brown dolomite zones for 3.2m @ 0.5% Zn from 87.8m. Geological logs and assay results are included in Appendix 4.
- A gravity anomaly was identified south of the Firewood Siding Fault. This was previously attributed to overburden depths, however remodelling is required.
- Flat lying limestone is proximal to the Firewood Siding Fault. Any potential Zn orebody, might therefore, have a limited surface geochemical expression.
- North of the fault is close to the basin margin.

### 3.5 Sassafras Prospect

- Geology at the Sassafras Prospect consists of a relatively simple limestone sequence with limited faulting.
- Reconnaissance wacker drilling (130 holes) defined an elongate base metal anomaly associated with the lower sandstone/limestone contact (+/- siderite alteration). Moina Sandstone, however, is absent in most instances with limestone overthrust by Cambrian Dundas Group sediments. Results showed a peak zinc value of 2590 ppm (mean 164 ppm) with lead values up to 441 ppm (mean 31 ppm). Sample and assay ledgers are included in Appendix 10.
- No diamond drilling was conducted.

- A summary of exploration conducted at the Sassafras Prospect is shown in Plan Tv1017.

### **3.6 Helimag Survey**

- The Gordon Limestone in the Zeehan area was flown over as part of a sub-regional helicopter magnetic survey. Line spacing was approximately 60m with an average flight height of 30m. Sampling intervals were approximately every 3-4m. A feature of the survey was that the flight lines were aimed at being perpendicular to the strike of the limestone.
- Results and preliminary interpretation of this data has been lodged with Mineral Resources Tasmania (Rio Tinto Report No. 22222).
- Plans Tv1142, Tv1141, Tv1143 and Tv1147 show images and flight lines for all relevant prospects within the area being relinquished.

### **3.7 Basin Analysis Study**

- A basin analysis study was conducted by Dr Clive Burrett from Geosea Consultants. Three formations were recognised in the Gordon Limestone, corresponding to different carbonate depositional environments.
- A copy of the report is contained in the relevant annual report for EL28/88 Zeehan 1.

## **4. Rehabilitation**

A summary of all work relating to rehabilitation conducted within the relinquished area of EL 28/88 Zeehan 1 was compiled and is included in Table 1.

## 5. References

- |                        |       |   |
|------------------------|-------|---|
| Parkinson RG           | 1992b | Zeehan No. 1 EL 28/88, Tasmania.<br>Report on exploration for the fourth year<br>of tenure, 9/11/91 to 9/10/92.<br><i>Rio Tinto Report No. 18355.</i> |
| Parkinson RG           | 1993  | Zeehan No. 1 EL 28/88, Tasmania.<br>Report on exploration for the fifth year of<br>tenure, 9/11/92 to 9/11/93.<br><i>Rio Tinto Report No. 19284.</i>  |
| Parkinson RG           | 1994  | Zeehan No. 1 EL 28/88, Tasmania.<br>Report on Exploration for the Sixth Year<br>of Tenure 9/11/93 - 9/11/94.  |
| Russell SAJ<br>Tear SJ | 1996  | Zeehan No. 1 EL 28/88, Tasmania.<br>Report on Exploration for the Eighth<br>Year of Tenure 9/11/95 - 9/11/96.<br><i>Rio Tinto Report No. 22160</i>    |
| Summons TG             | 1991  | EL 28/88 Zeehan, Tasmania. Statutory<br>Progress Report for the Period Ending<br>9th November 1991.<br><i>Rio Tinto Report No. 17636.</i>             |
| Tear SJ                | 1995  | Zeehan No. 1 EL 28/88, Tasmania.<br>Report on Exploration for the Seventh<br>Year of Tenure 9/11/94 - 9/11/95.<br><i>Rio Tinto Report No. 21102.</i>  |

## 6. Location

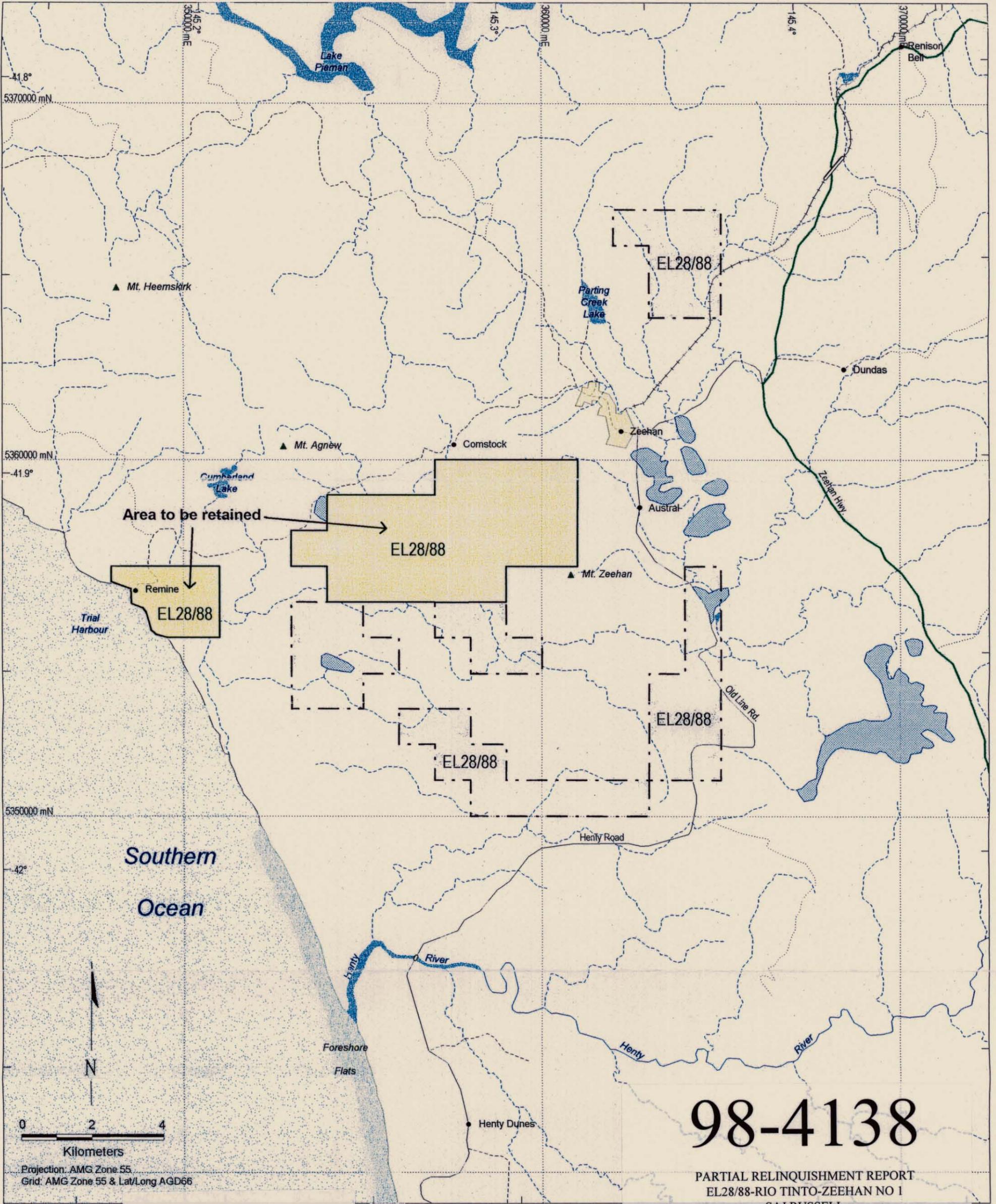
Queenstown	SK55-5	1:250,000
Pieman	7914	1:100,000
Zeehan	7914-S	1:50,000

## 7. Keywords

Tasmania, Late Proterozoic, Ordovician, Gordon Limestone, Helicopter-borne  
Magnetics, Diamond Drilling, Zinc, Wacker Sampling, Aircore drilling

**Table 1 EL 28/88 Zeehan 1 - Summary of Rehabilitation**

Drill Hole ID	Prospect	EL	Easting	Northing	Total Depth (m)	Rehabilitation Conducted
DD95ZP63 DD96ZP64 DD96ZP65	Pyramid	28/88	364311 364335 364329	5356348 5356607 5356591	228 48 252	These holes were drilled by a truck mounted U250 rig. The holes were drilled on button grass plains. They all had above ground sumps, and drill cuttings were collected and removed from site. The holes were capped and left for natural regeneration.
DD94ZM185 DD94ZM186 DD94ZM187 DD95ZM188	Myrtle	28/88	363743 364285 364419 364473	5351786 5352296 5352296 5351780	137 120.9 103.5 201.1	LY38 rig used to drill these holes, and brought on site by an excavator. All holes were drilled on already disturbed ground (old costeans). Drill holes were capped and rehabilitated. Drill sumps were back filled using an excavator.
DD95ZM190	Myrtle	28/88	364448	5351933	203.9	Hole was drilled on button grass plain by a truck mounted U250. An above ground sump was used, and drill cuttings were collected and removed from site. The hole was capped and left for natural regeneration.
DD95ZM189 DD96ZM191	Myrtle	28/88	364288 364056	5351001 5352092	702.4 300	Both holes were drilled on button grass plains. A U250 rig was used to drill holes. An above ground sump was used to collect drill cuttings. All cuttings and rubbish were removed from site. The holes were capped and left for natural regeneration.
DD96ZF37	Firewood Siding	28/88	362759	5347544	49.9	This hole was in dense bush, and the drill site was cleared using chainsaws. A helicopter supported LY38 rig was used to drill the hole. An above ground sump was used and drill cuttings were bagged and removed from site. Native vegetation was dragged over disturbed areas to promote natural regeneration.



# 98-4138

PARTIAL RELINQUISHMENT REPORT  
EL28/88-RIO TINTO-ZEEHAN NO 1  
SAJ RUSSELL

RIO TINTO EXPLORATION PTY. LIMITED

EL28/88 Zeehan 1

## Location Plan 234012

Author: Sarah Russell

Reference: SW Tasmania SK55-22

Drawn: John Terrill

File Name: Tv1309.wor

Date: March 1998

Report No:

5 cm

### Legend

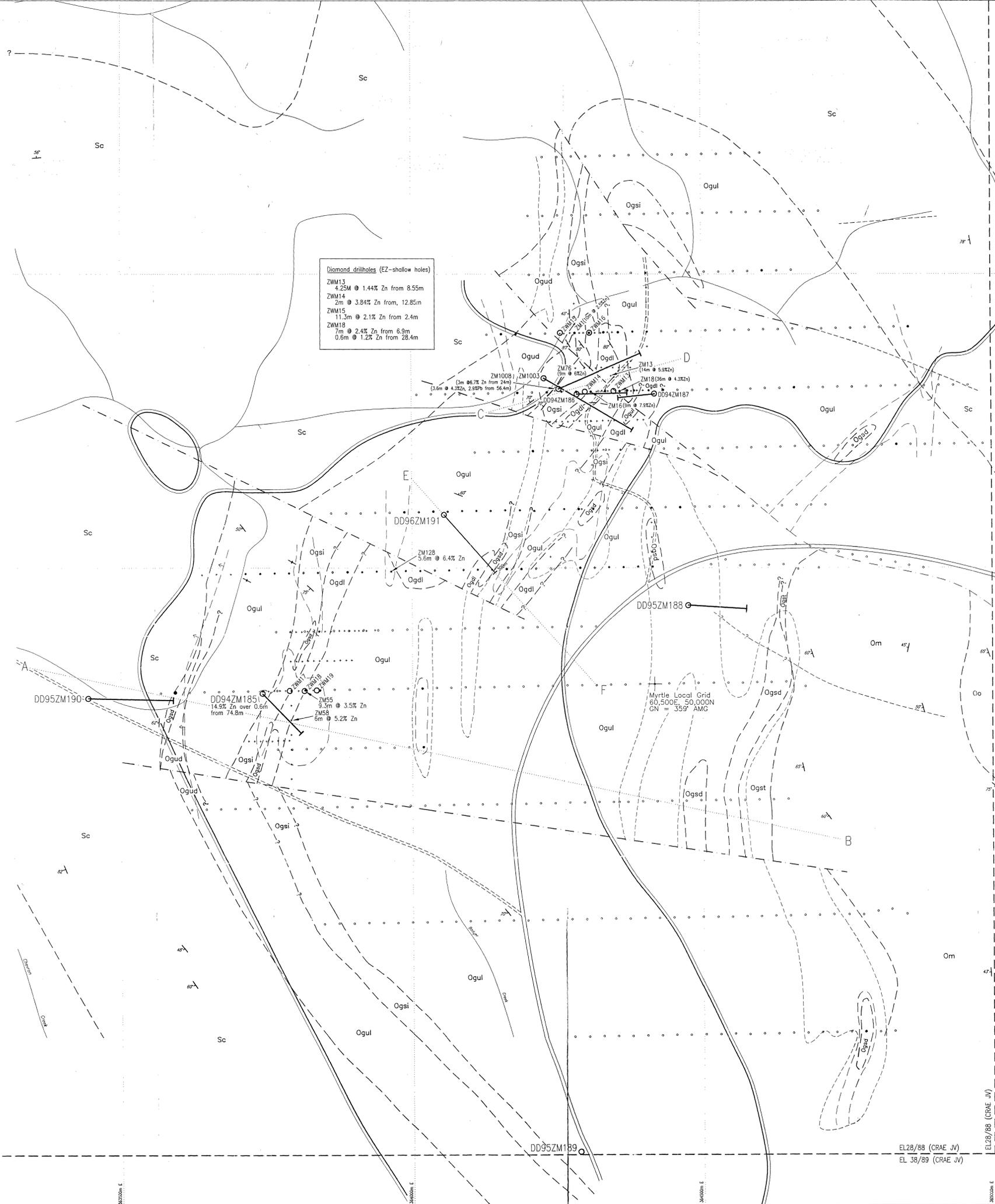
- Town
- ▲ Mountain
- - - EL Boundary
- Perennial Drainage
- - - Non-Perennial Drainage
- Highway
- Secondary Road
- - - Minor Road
- - - Track
- Railway
- Lake
- Swamp
- Urban



Location Diagram

Conical Rocks 7814	Pieman 7914	Sophia 8014
	Cape Sorell 7913	Franklin 8013

Mansheet Reference



**LEGEND**

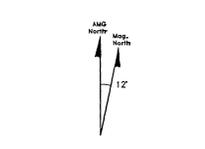
--- Air Photo Lines  
 - - - Faults  
 - - - Geological Boundary  
 - - - Significant Zn/Pb Anom. (>100ppm Zn & Pb)  
 - - - Fe Enriched Zones  
 - - - Gravity High  
 ○ Diamond Drillhole and Trace  
 ● Aircore Drillholes  
 ● Rockchip or Wicker Bedrock Sample <0.1% Zn  
 ● Rockchip or Wicker Bedrock Sample >0.1% Zn  
 30° Dip of Cleavage  
 45° Dip of Bedding  
 == Road, Track  
 ~ Creek  
 A - - - B Section Line

Sc Crinly Quartzite  
 Ogul Upper Dolomite Unit  
 Ogdi Silstone Unit  
 Ogul Undifferentiated Limestone  
 Ogdi Undifferentiated Dolomite  
 Ogmu Laminated Marble Unit  
 Ogdu Oolite Unit  
 Ogdi Siderite Unit  
 Ogdc Dark Grey / Black Clay Unit  
 Ogfc Ferruginous Clay Unit  
 Ogme Massive Sulphide Unit  
 Ogft Silty Transition Unit  
 Ogfr Fault Zone  
 Ogbr Carbonate Breccia  
 Om Mottled Sandstone  
 Oo Open Conglomerate  
 Od Dundas Group (undifferentiated)

Silurian  
 Ordovician  
 Cambrian

234013  
**98-4138**

PARTIAL RELINQUISHMENT REPORT  
 EL28/88-RIO TINTO-ZEEHAN NO 1  
 SAJ RUSSELL



GRA EXPLORATION PTY LIMITED			
EL 28/88 ZEEHAN 1			
Zeehan Carbonate			
Myrtle Prospect			
Geology and Drillhole Location Plan			
Ref:	SK55-05	Author:	S Teer
Scale:	1 : 2500	Drawn:	Humbertine Staffing & Tony Scapellato
Date:	July 1996	Report:	22160
		Plan No:	IV 714

Projection:  
 Australian Map Grid (AMG) Zone 55

Note:  
 Detailed Mapping Revised from EZ report TCR 86-2547  
 Additional mapping from geochemical interpretation  
 (Lecher and circles overlaid)

EL28/88 (CRAE JV)  
 EL34/88 (CRAE JV)

EL28/88 (CRAE JV)  
 EL 38/89 (CRAE JV)

DD95ZM189

DD95ZM190

DD94ZM185

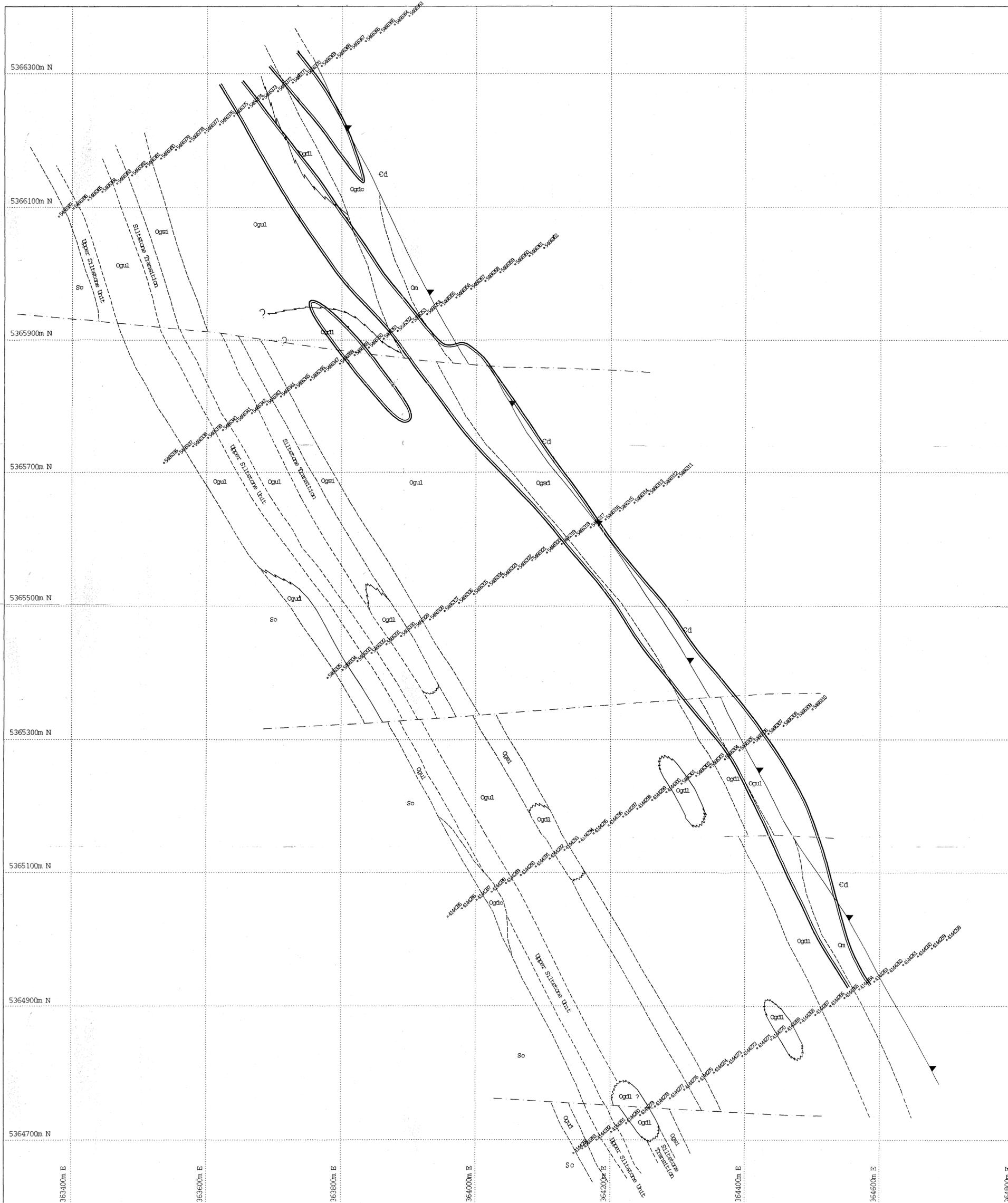
DD96ZM191

DD95ZM188

Myrtle Local Grid  
 60.5000E, 50.0000N  
 GN = 359° AMG

**Diamond drillholes (EZ-shallow holes)**

ZWM13	4.25m @ 1.44% Zn from 8.55m
ZWM14	2m @ 3.84% Zn from, 12.85m
ZWM15	11.3m @ 2.1% Zn from 2.4m
ZWM18	7m @ 2.4% Zn from 6.9m
	0.6m @ 1.2% Zn from 28.4m



**LEGEND**

- ▲ Thrust Fault
- - - Inferred Fault
- - - Geology Boundaries
- Significant Zn + Pb anomaly >100ppm
- sample
- Sc Crotty Quartzite Silurian
- Ogr1 Upper Dolomite Unit
- Ogr2 Siltstone Unit
- Ogr3 Undifferentiated Limestone
- Ogr4 Undifferentiated Dolomite
- Ogr5 Laminated Micrite Unit
- Ogr6 Oolite Unit
- Ogr7 Siderite Unit
- Ogr8 Dark Grey / Black Clay Unit
- Ogr9 Ferruginous Clay Unit
- Ogr10 Massive Sulphide Unit
- Ogr11 Silty Transition Unit
- Ogr12 Fault Zone
- Ogr13 Carbonate Breccia
- Ogr14 Moins Sandstone
- Ogr15 Owen Conglomerate
- cd Dundas Group (undifferentiated) Cambrian

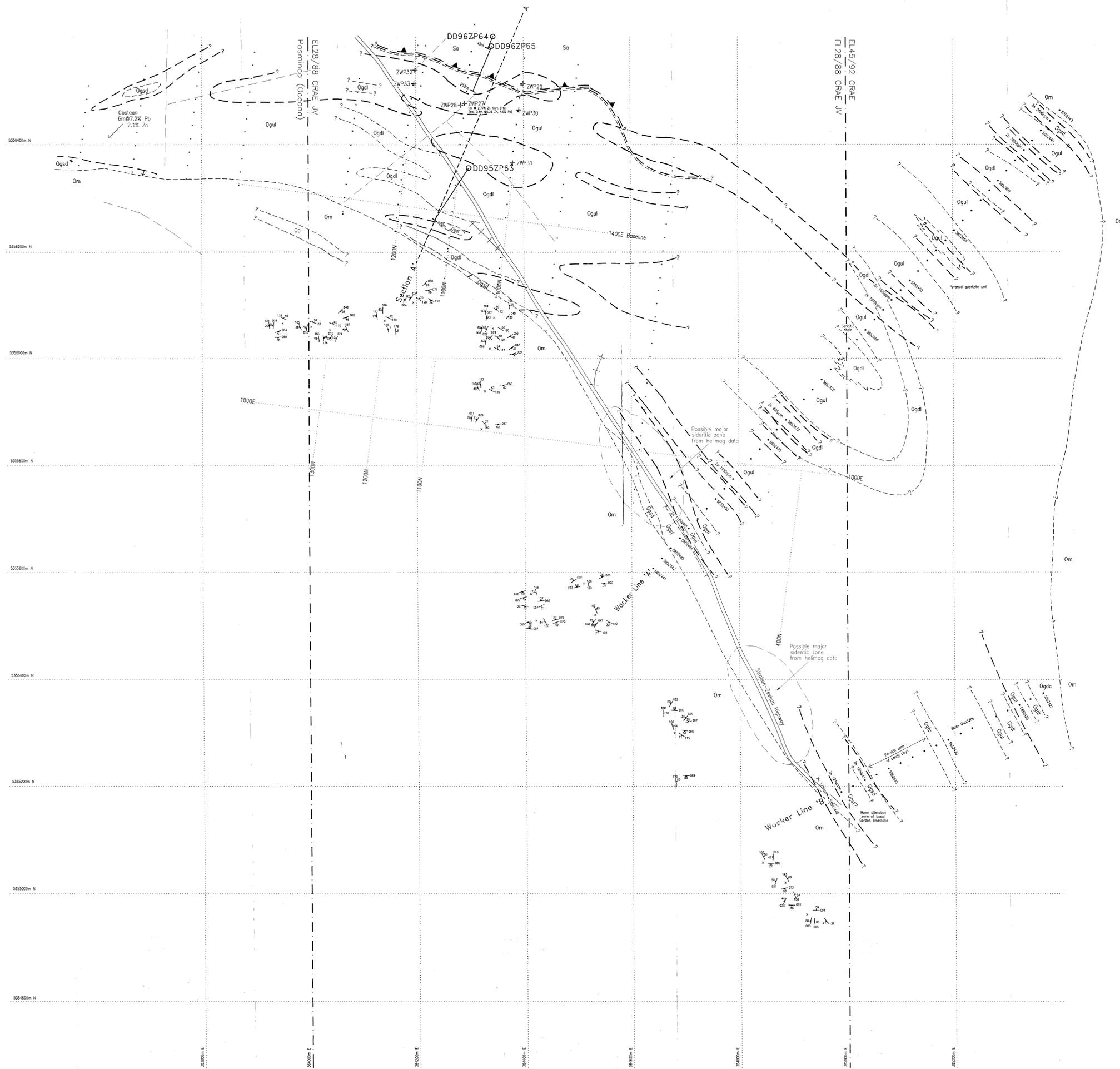
**98-4138**

PARTIAL RELINQUISHMENT REPORT  
EL28/88-RIO TINTO-ZEEHAN NO 1  
SAJ RUSSELL

5 cm

**MICRO FILMED  
IN COLOUR**

CRA EXPLORATION PTY LIMITED			
EL 28/88 ZEEHAN 1			
Zeehan Carbonate Sassafras Prospect			
Geology & Deep Overburden			
Sample Location Plan			
Ref.	SK55-05	Drawn	Burbridge Bratton & Tony Sargent
Author	S. Tear	Report	21102
Scale	1:2500	Plan No	TV 1017
Date	14-11-95		

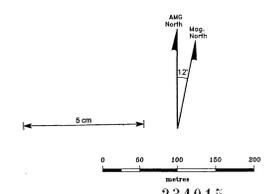


**LEGEND**

	Strahan-Zeehan Highway
	Dashed boundary
	Local Grid (E2)
	Wacker Bedrock Sample Site
	Arcore Sample Site
	Wacker Bedrock Sample Site (1996)
	E2 Diamond Drillhole
	CRA diamond drill hole collar & traps
	Field Survey Control Point
	Strike & Dip of bedding
	Strike & Dip of joint
	Intersect Lithological Boundary
	Thrust Fault
	Ground Magnetic Line
	Significant Zn/Pb Anomaly (>1000 ppm Zn & Pb)
	Significant Iron Enhancements

Oc	Crilly Quartzite	Shinarump
Ogul	Upper Dolomite Unit	Dundas Limestone
Ogpi	Silstone Unit	
Ogpl	Undifferentiated Limestone	
Ogpr	Undifferentiated Dolomite	
Ogmu	Laminated Marble Unit	
Ogpo	Oolite Unit	
Ogpd	Siderite Unit	
Ogpc	Dark Grey / Black Clay Unit	
Ogfc	Ferruginous Clay Unit	
Ogms	Massive Sphulphide Unit	
Ogpt	Silty Transition Unit	Dundas
Ogts	Fault Zone	Cambrian
Ogtr	Carbonate Breccia	
Om	Mollic Sandstone	
Oo	Dawn Conglomerate	
Od	Dundas Group (undifferentiated)	

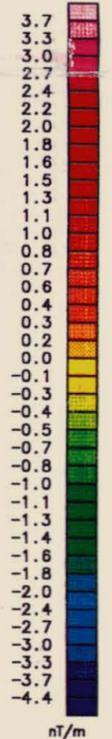
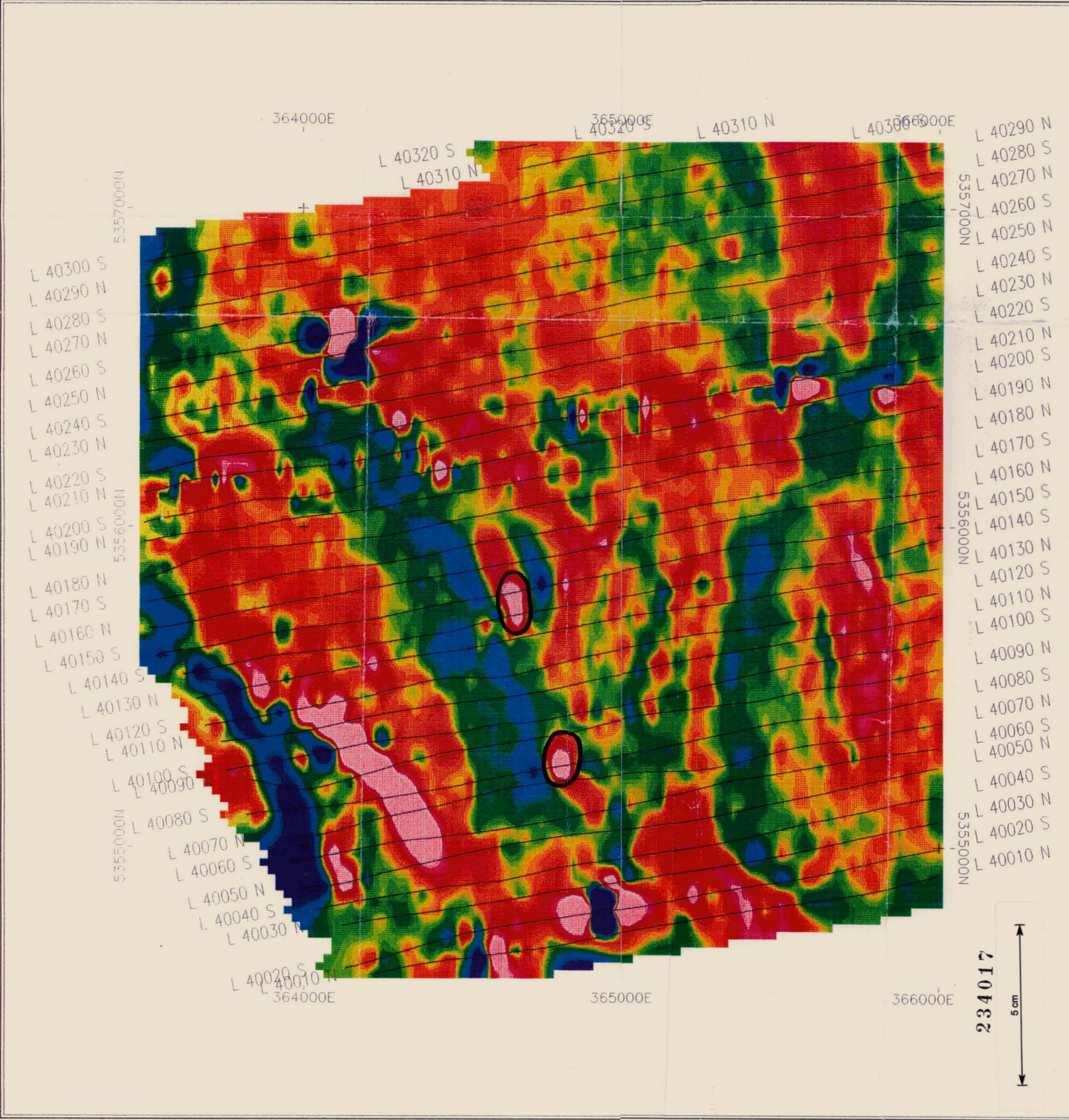


Projection: Australian Map Grid (AMG) Zone 55  
 Note: Approximate topographic error of up to 2cm

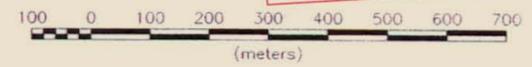
Ref:	SK55-05	Drawn:	Hartbees, G. (1996)
Author:	S. Tear	Report:	22160
Scale:	1 : 2500	Plan No:	TV 1018
Date:	14-11-95		

234015  
 CRA EXPLORATION PTY LIMITED  
 EL 28/88 ZEEHAN 1  
 Zeehan Carbonate Pyramid Prospect  
 Geology & Drillhole  
 Location Plan





**MICRO FILMED  
IN COLOUR**

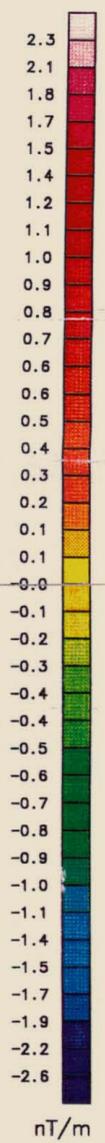
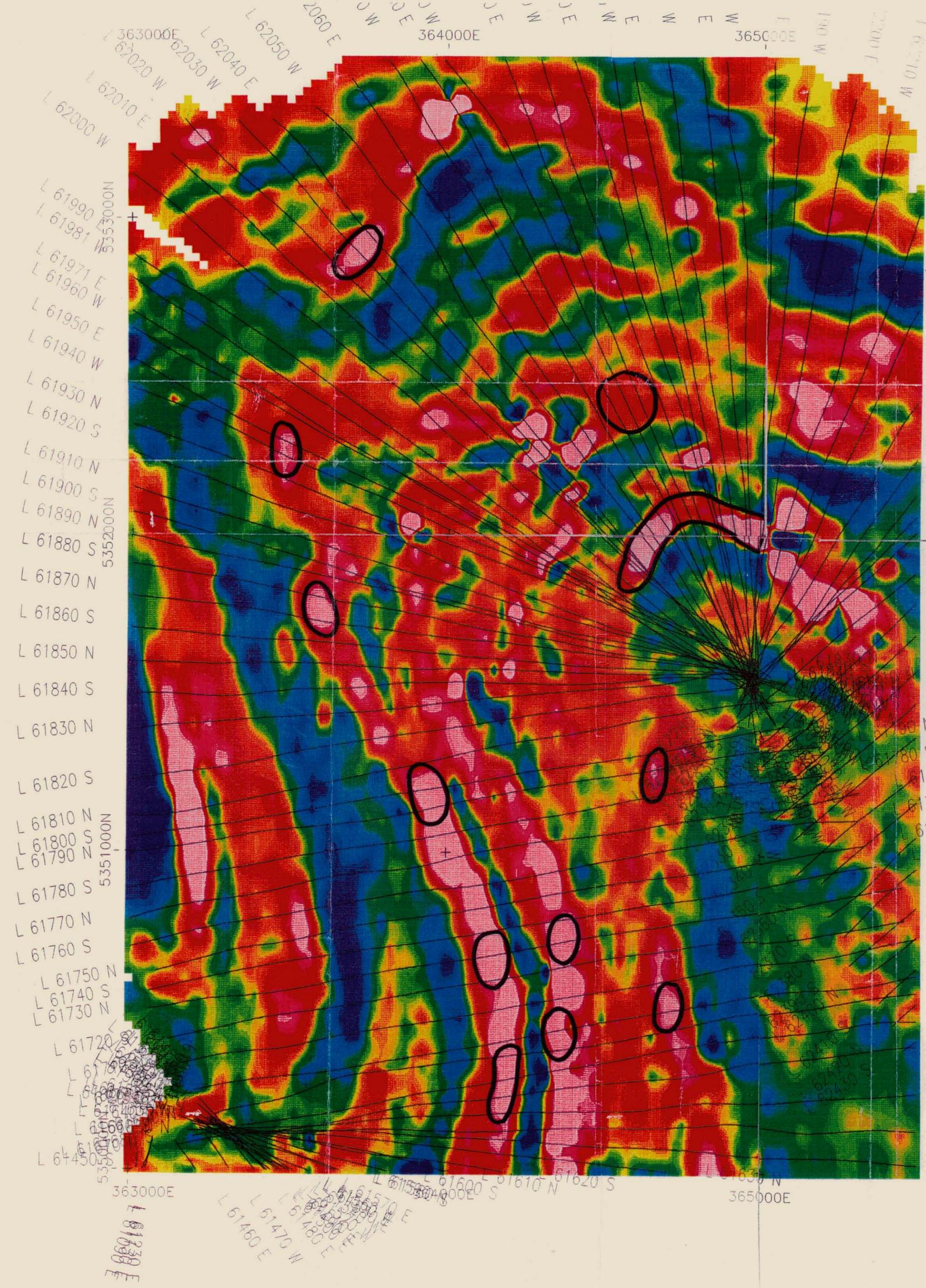


234017  
5 cm

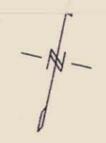
**98-4138**

PARTIAL RELINQUISHMENT REPORT  
EL28/88-RIO TINTO-ZEEHAN NO 1  
SAJ RUSSELL

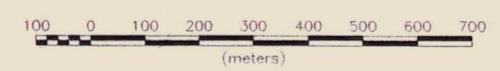
CRA EXPLORATION PTY. LIMITED	
Zeehan Helimag Survey	
EL28/88 Zeehan 1 - Pyramid Prospect	
Vertical Derivative Image, Flight Line Overlay & Modelled Anomalies	
Author: John Tesselaar	Reference: SK55-05
Drawn: John Tesselaar	File Name:
Date: July 1996	Report No: 22222
Scale: 1:10,000	Plan No: Tv1141



234018



**MICRO FILMED  
IN COLOUR**



**98-4138**

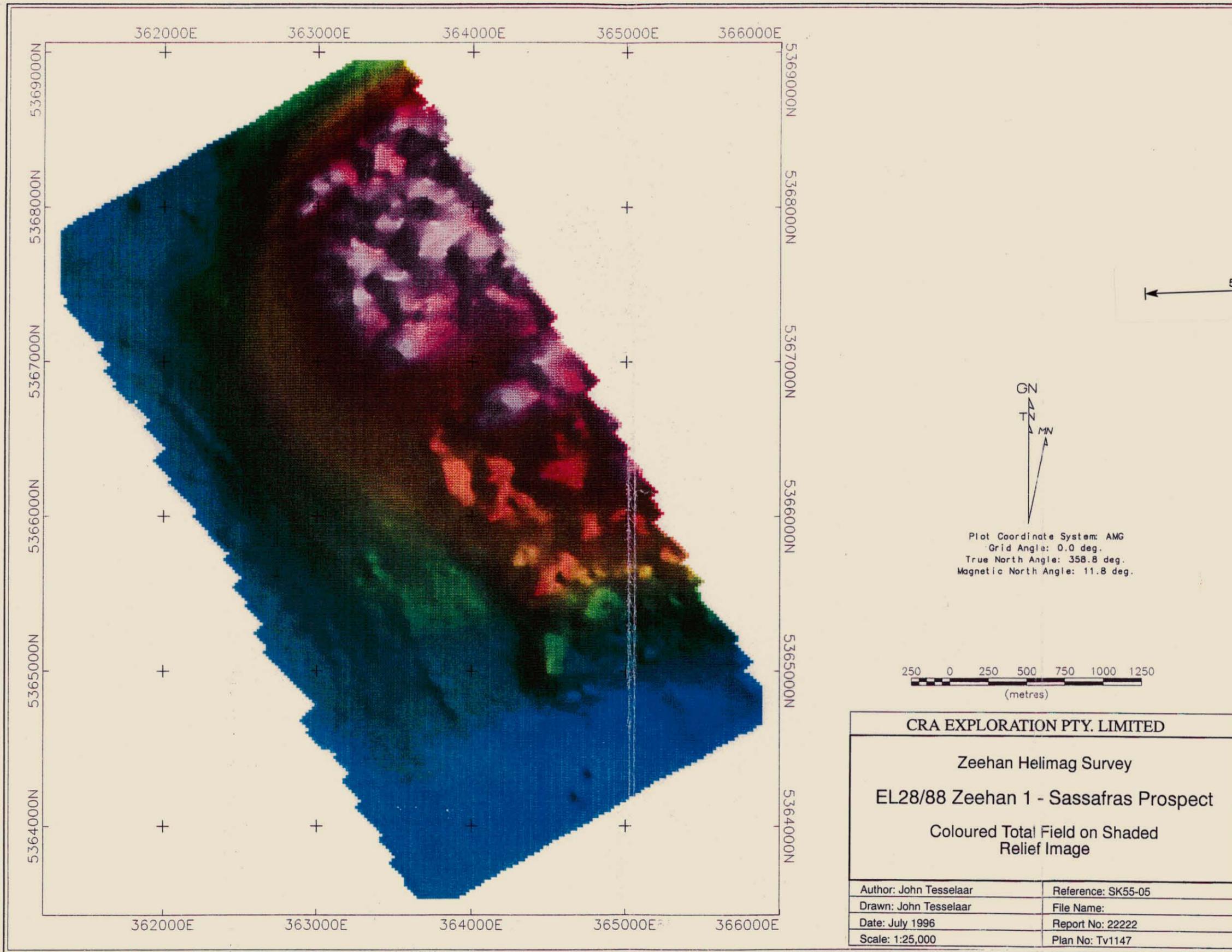
PARTIAL RELINQUISHMENT REPORT  
EL28/88-RIO TINTO-ZEEHAN NO 1  
SAJ RUSSELL

CRA EXPLORATION PTY. LIMITED

Zeehan Helimag Survey  
EL28/88 Zeehan 1 - Myrtle Prospect

Vertical Derivative Image, Flight Line  
Overlay & Modelled Anomalies

Author: John Tesselaar	Reference: SK55-05
Drawn: John Tesselaar	File Name:
Date: July 1996	Report No: 22222
Scale: 1:10 000	Plan No: Tv1142



**98-4138**

PARTIAL RELINQUISHMENT REPORT  
 EL28/88-RIO TINTO-ZEEHAN NO 1  
 SAJ RUSSELL

**234019**

**MICRO FILMED  
 IN COLOUR**

**Appendix 1**

**Geological Logs and Assay Ledgers for  
DD94ZM185 - 187  
DD95ZM188 - 190  
DD96ZM191  
Myrtle Prospect**

## ROCKCHIP AND DRILLING CODES

22/2/1994

## BMR/LJTH

Rock code as per published geological map  
For time designation use:-

Q Quaternary	M Permian	P Proterozoic
T Tertiary	C Carboniferous	A Archaean
	S Silurian	
K Cretaceous	D Devonian	
R Triassic	O Ordovician	
J Jurassic	E Cambrian	

## FIELD ID

Field term for rock type  
Broad groupings are:-

S Sedimentary	I Intrusive	C Surficial
M Metamorphic	E Extrusive	O Others

## SEDIMENTARY

Scg Conglomerate	Sls Limestone	Sw Wacke
Sss Sandstone	Sdl Dolomite	Sag Agglomerate/mixtite
Sst Siltstone		
sh Shale	Sch Chert	Sbx Breccia
sbs Black shale	Sif BIF	

## METAMORPHIC

Msl Slate	Mq Quartzite	Mmg Migmatite
Mph Phyllite	Mm Marble	
Msc Schist	Ma Amphibolite	Msk Skarn
Mbs Graphitic schist	Mcs Calcisicate	
Mgn Gneiss	Mh Hornfels	

## INTRUSIVE IGNEOUS

If Felsic undiff.	ii Intermed undiff.	Iu Ultramafic
Iip Felsic porphyry	lip Intermed porph	Ius Serpentinite
Iap Aplite	Im Mafic undiff.	
Igr Granite	Ido Dolerite	Ipg Pegmatite
Igd Granodiorite	Igb Gabbro	

## EXTRUSIVE IGNEOUS

Ery Rhyolite	Ean Andesite	Et Tuff undiff
Edc Dacite	Eb Basalt	Eft Felsic tuff
		Emt Mafic tuff

## SURFICIAL (COVER) MATERIAL

Ca Alluvium	Clt Laterite	Csg Gossan
Cco Colluvium	Cap Piscolites	Ccy Clay
Cs Sand	Csf Ironstone	
Cbs Black soil	Csi Silcrete	Cv Vegetation/peat
Cg Gravel	Cd Calcrete	

## OTHERS

Ovq Vein quartz	Omy Mylonite	Oms Massive sulphide
Ovc Vein carbonate	Obx Breccia	Oxc Contamination
Ovs Vein sulphide	Of Fault gouge	Ox Unknown

## TEXTURAL CODES

## WEATHERING/SURFICIAL FEATURES

We Weathered	Fe Ferruginous
Bl Bleached	Fo Fe ox in fract
Le Leached	

## MINERALISATION/ALTERATION FEATURES

Gs Gossanous	Vs Vein sulphide	Al Altered
Vn Veined	Ds Dissemin sulph	Sl Silicified
Vc Vein carbonate	Fs Fracture sulph	
Vq Vein quartz	Bs Banded sulph	Di Disseminated

## GEOLOGICAL FEATURES

Bd Bedded	Fr Fractured	Po Porphyritic
Bn Banded	Ib Interbedded	Sc Schistose
Bx Brecciated	Lm Laminated	Sh Sheared
Fi Fissile (slaty)	Ma Massive	Vu Vuggy

## DIAGNOSTIC MINERALOGY

## PRIMARY MINERALISATION

Ga Galena	Py Pyrite	Ni Ni sulphides
Sp Sphalerite	Po Pyrrhotite	
Cp Chalcopyrite	Su Unknown sulph	

## SECONDARY MINERALISATION

Ls Lead secondaries	Cs Copper sec.	Ni Ni secondaries
Zs Zinc	Us Uranium	

## ALTERATION/DIAGNOSTIC MINERALS

Cy Clay	He Haematite	Gt Garnet
Ep Epidote	Mt Magnetite	Ky Kyanite
Cc Carbonate	Js Jarosite	To Tourmaline
Sd Siderite/Ankerite	Mn Manganese mins	Cl Chlorite
Di Dolomite		

## COLOUR CODES

L Light	A Banded	M Mottled
D Dark		
N Black	P Purple	V Green
G Grey	R Red	K Pink
B Brown	O Orange	E Blue
W White	Y Yellow	S Silver

Diamond

APPENDIX 5: Myrtle prospect. 1994 <del>drillhole</del> diamond drillhole logs and geochemistry.									
DPO 77853									
Hole	DFrom	DTo	Sample	MRLith	FieldID	Texture	Alt/Min	Colour	Comments
ZM185	0.00	8.00		Og?	Sai?				Precollar - no core
ZM185	8.00	17.80		Og	Sai	WeFo		DG	Carbonaceous siltstone
ZM185	17.80	29.80		Og	Sai	WeLe?		DGN	Carbonaceous siltstone
ZM185	29.80	33.30	3985984	Og	Sai	WeLe?		DGN	Carbonaceous siltstone
ZM185	33.30	35.10			Ox				No rec.
ZM185	35.10	40.50	3985985		Of			GDG	Fault
ZM185	40.50	48.00	3985986		Of			GDG	Fault
ZM185	48.00	49.70		Og	Sai	WeLe?		DGN	Carbonaceous siltstone
ZM185	49.70	55.40		Og	Ss			LG	Soft sed deformed limestone
ZM185	55.40	57.30			Of			G	Fault
ZM185	57.30	64.30		Og	Sai	Sh?		G	Siltstone
ZM185	64.30	73.80		Og	SaiSls	lbBn		ALGDG	Interbedded limestone and siltstone
ZM185	73.80	74.80		Og	SaiSls	lbBnVcBx		ALGDG	Interbedded limestone and siltstone
ZM185	74.80	75.40	3985987	Og	SlsSbx	Ds	Sp	G	Limestone breccia with 15% Sphalerite
ZM185	75.40	79.00	3985988	Og	Sls	VcDs	Sp	G	Cc veined Limestone with <0.5% Sphalerite
ZM185	79.00	82.75	3985989	Og	Sls	VcDs	Sp	G	Cc veined Limestone with <0.5% Sphalerite
ZM185	82.75	107.50		Og	Sls	VcDs	Sp	LG	Cc veined Limestone with <0.1% Sphalerite
ZM185	107.50	114.85		Og	Sls			LG	Limestone
ZM185	114.85	117.30	3985990	Og	SlsSbx	Ds	Sp	G	Limestone breccia with 2% Sphalerite
ZM185	117.30	121.50		Og	SlsSbx			LG	Limestone and limestone breccia
ZM185	121.50	137.00		Og	Sls			LG	Limestone
ZM188	0.00	30.00			Ox				Precollar - no core
ZM188	30.00	32.60	3985991	Og	Coy			DG	Clay
ZM188	32.60	34.50		Og	Sls	Bn		ALGDG	Lime mudstone
ZM188	34.50	36.70	3985992	Og	Coy			DG	Puggy clay
ZM188	36.70	40.20		Og	Sls	Bn		ALGDG	Lime mudstone
ZM188	40.20	42.85	3985993	Og	Coy			DG	Puggy clay
ZM188	42.85	50.20		Og	Sls	Bn		ALGDG	Lime mudstone
ZM188	50.20	80.00		Og	Sls	Lm		LG	Stylolaminated limestone
ZM188	80.00	84.20		Og	Sls	BnVc		AGDG	Lime mudstone
ZM188	84.20	72.50		Og	Sls			G	Calcarene with ovoids
ZM188	72.50	88.80		Og	Sls	Lm		LG	Stylolaminated limestone
ZM188	88.80	92.60	3985994	Og	Sls	LmVc		LG	Veined stylo-laminated limestone
ZM188	92.60	96.05	3985995	Og	Sls	LmVc		LG	Veined stylo-laminated limestone
ZM188	96.05	98.20	3985996	Og	SlsSbx	VcBs	Py	GDG	Veined limestone breccia.
ZM188	98.20	120.90		Og	SlsSbx			GDG	Heterogeneous 1st and 1st breccia
ZM187	0.00	17.70		Og	Ox				Precollar - no core
ZM187	17.70	79.30		Og	Sls			G	Burrowed limestone
ZM187	79.30	80.65	3985997	Og	Sls	VcVuLe		G	Vuggy leached limestone
ZM187	80.65	82.30	3985998	Og	Sls	Lm		LG	Stylolaminated limestone
ZM187	82.30	85.50	3985999	Og	Of			G	Fault
ZM187	85.50	89.80	3988000	Og	Of			G	Fault
ZM187	89.80	103.50		Og	Sls	Vc		G	Burrowed limestone

Appendix 5 Myrtle prospect. ~~Assays~~ drillhole logs and assays.  
Diamond

Diamond

APPENDIX 5 Myrtle prospect. 1994 ~~assays~~ drillhole logs and geochemistry.

DPO 77653

Hole	DFrom	DTa	Sampno	Ag ppm	Al%	As ppm	Ba ppm	Ce%	Cu ppm	Fe%	K%	Mg%	Mn ppm	Pb ppm	S%	Zn ppm
ZM185	0.00	8.00														
ZM185	8.00	17.90														
ZM185	17.90	29.90														
ZM185	29.90	33.30	3985984	-5	5.78	33	328	0.08	12	1.74	3.22	0.49	28	-50		530
ZM185	33.30	36.10														
ZM185	35.10	40.50	3985985	-5	6.19	30	198	0.10	14	2.85	3.10	0.51	22	-50		888
ZM185	40.50	48.00	3985986	-5	7.87	25	432	0.20	14	1.77	3.93	0.60	28	-50		919
ZM185	48.00	49.70														
ZM185	49.70	55.40														
ZM185	55.40	57.30														
ZM185	57.30	64.30														
ZM185	64.30	73.80														
ZM185	73.80	74.90														
ZM185	74.80	75.40	3985987	8	0.80	47	44	22.00	185	1.01	0.39	1.85	275	293	7.85	149000
ZM185	75.40	79.00	3985988	-5	0.43	-20	24	27.10	25	0.68	0.20	2.85	211	140	0.57	6240
ZM185	79.00	82.75	3985989	-5	0.73	-20	40	30.40	21	0.28	0.37	0.80	106	52		282
ZM185	82.75	107.50														
ZM185	107.50	114.85														
ZM185	114.85	117.30	3985990	-5	0.74	-20	32	29.40	21	0.27	0.37	0.63	125	-50		1590
ZM185	117.30	121.50														
ZM185	121.50	137.00														
ZM186	0.00	30.00														
ZM186	30.00	32.60	3985991	-5	1.24	-20	294	23.70	15	1.20	0.53	4.00	125	61		2720
ZM186	32.60	34.60														
ZM186	34.50	36.70	3985992	-5	1.42	-20	159	20.40	13	1.24	0.62	6.18	126	274		3670
ZM186	36.70	40.20														
ZM186	40.20	42.85	3985993	-5	1.37	-20	130	24.00	16	0.79	0.61	4.51	119	-50		1410
ZM186	42.85	50.20														
ZM186	50.20	60.00														
ZM186	60.00	64.20														
ZM186	64.20	72.50														
ZM186	72.50	88.80														
ZM186	88.80	92.60	3985994	-5	0.83	-20	125	30.90	18	0.41	0.28	1.40	149	-50		94
ZM186	92.60	96.05	3985995	-5	0.95	-20	128	30.60	20	0.70	0.35	1.21	211	-50		556
ZM186	96.05	98.20	3985996	-5	0.90	42	95	27.20	23	2.64	0.30	2.78	215	123		847
ZM186	98.20	120.90														
ZM187	0.00	17.70														
ZM187	17.70	79.30														
ZM187	79.30	80.65	3985997	-5	0.49	-20	42	32.20	21	0.65	0.17	1.20	677	-50		195
ZM187	80.65	82.30	3985998	-5	0.57	-20	43	32.10	19	0.28	0.23	1.24	141	-50		29
ZM187	82.30	85.50	3985999	-5	0.56	28	38	30.50	19	0.63	0.20	2.36	185	-50		145
ZM187	85.50	89.80	3986000	-5	0.53	20	84	31.30	17	0.63	0.18	1.68	211	-50		147
ZM187	89.80	103.50														

CRA EXPLORATION PTY. LIMITED  
 DRILL-HOLE SUMMARY LOG

EL NAME: ZEEHAN 1 HOLE NAME: DD94 ZM185  
 EL NUMBER: EL28/88 PROSPECT: MYRTLE  
 DATE DRILLED: APR 1994  
 LOGGED BY: RGP

AMG EAST: 363748.5 GRID EAST: 59825  
 AMG NORTH: 5351804 GRID NORTH: 49996  
 RL: \_\_\_\_\_ TOTAL DEPTH: 137.0

DEPTH	AZIM. ( <del>MAG</del> ) AMG	INCLIN.
0	118	-45
70	136	-49
137	137	-46.5

OBJECTIVES OF HOLE: To test for suspected stratobound mineralisation intersected in air-core holes ZM55, ZM57, ZM58 (Zm 58 6m @ 5.2% Zn).

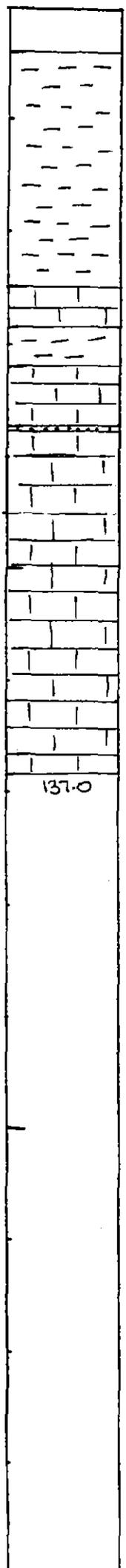
LITHOLOGICAL SUMMARY:

DFROM	DTO	COMMENTS
0	8.0	PRECOLLAR
8.0	49.7	CARBONACEOUS SILTSTONE
49.7	57.3	LIMESTONE
57.3	64.3	SILTSTONE
64.3	74.8	LIMESTONE
74.8	75.4	CARBONATE BRECCIA WITH 15% SPHALERITE
75.4	82.75	LIMESTONE WITH TRACE SPHAL
82.75	114.85	LIMESTONE
114.85	117.3	LIMESTONE WITH TRACE SPHAL
117.3	137.0	LIMESTONE

MINERALISATION SUMMARY:

DFROM	DTO	COMMENTS
74.8	75.4	0.6m @ 14.9% Zn

CONCLUSIONS: Uncertain if sphalerite at 74.8-75.4 is depth extension of shallow minerals intersected by air-core holes. Intersection is late-stage, infilling a breccia with calcite cement. Additional shallow stalling required. No alteration of carbonate.



363748-5  
5351804

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 1 of 4

TENEMENT NAME ZEEHAJ No. 28/20

MYRILE

CO-ORDINATES 59825E 49996N AZIMUTH 118 AMG DRILLERS DD TAS COMMENCED 26/4/94 DEPTH 137.0m HOLE No. 0942M185  
RL COLLAR INCLINATION -45° DRILL TYPE LY 38 COMPLETED 4/5/94 CASING LEFT DPO No(s) 77653

PLAN - MAP REFERENCE

DEPTH		Core Rec. (M)	Core Size	Graphic Log R/L	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by)				
From (M)	To (M)										DRILL RUNS				
											FR	TO	REL	R/L	
0	8.0	-	-		PRECOLLAR - No core							0	8.0	-	-
8	17.8	HQ	4C		WEATHERED CARBONACEOUS SILTSTONE Dark grey fine grained carbonaceous siltstone. Strongly cleaved. Minor Fe oxides on cleavage partings								10.4	2.4	4C
													12.0	1.6	
													13.5	1.5	
													15.2	1.7	
													16.5	1.3	
													17.8	1.3	5C
17.8	33.3	HQ	4C		CARBONACEOUS SILTSTONE (WEATHERED?) Dark grey to black strongly carbonaceous siltstone. Strongly cleaved. Core has fine spongy appearance as if partly leached 26.0 cleavage 3-C.A. 60°		3985984	29.6	33.3				19.5	1.5	4C
													22.5	1.3	5X
													23.6	0.4	
													24.6	0.5	
													25.5	0.8	4C
													26.6	1.0	
33.3	46.0	HQ	5X		FAULT ZONE Grey to dark grey puggy clay and carbonaceous siltstone fragments. No recovery 33.3-35.1m.		985	35.1	40.5				27.3	0.8	
							986	40.5	46.0				28.5	0.5	
													29.6	0.5	
													30.8	1.0	5X
													32.1	0.9	
46.0	49.7	HQ	4C		CARBONACEOUS SILTSTONE (WEATHERED?) As for 17.8-33.3m.								33.3	1.0	
													35.1	-	-
													36.0	0.45	5X
49.7	55.4	HQ	1 1/2 C		DISRUPTED LIMESTONE Light grey fine grained lime mud, dismembered and distorted in a matrix of grey med g/s crystalline carbonate. Not really a breccia as the deformation looks soft and prelithification.								36.9	0.5	
													38.6	0.2	
													39.4	0.55	
													40.5	0.7	
													41.5	0.2	
													43.5	1.4	
													45.0	0.9	
55.4	57.3	HQ	5X		FAULT ZONE Grey puggy clay with limestone & siltstone fragments.								46.8	1.4	
													47.8	0.8	5X
													49.25	1.2	4C

234025



DRILL CORE LOG

TENEMENT NAME..... No.....

PLAN - MAP REFERENCE.....

CO-ORDINATES..... AZIMUTH..... DRILLERS..... COMMENCED..... DEPTH..... HOLE No. Zm185

RL COLLAR..... INCLINATION..... DRILL TYPE..... COMPLETED..... CASING LEFT..... DPO No(s).....

DEPTH		Core Rec. (M)	Core Size	Graphic Rec	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)				
From (M)	To (M)										Zn%	Fr	TO	RE	Res
74.8	75.4	0.6	HQ	IF	CARBONATE BRECCIA WITH SPHALERITE Grey limestone mosaic breccia with matrix of dark grey silt and white calcite cement. Coarse (2-10mm) euhedral zoned sphalerite, 15% of interval. Sph is pale brown.		3985987	74.8	75.4		14.9	82.2	82.5	2.2	IF
													85.5	3.0	
													88.5		
													91.5		
													92.5		
													97.5		
75.4	82.75		HQ	IF	LIME MUDSTONE WITH TRACE SPHALERITE Grey fine grs lime mud with common but minor fossil fragments. Minor irregular patches of med grs crystalline carbonate, infilling voids? Also 2-20mm black carbonaceous bands. Core is locally brecciated with white calcite cement. Traces of coarse pale brown sphalerite in cement, 20-5% of interval. Strongly calcite veined.		988	75.4	79.0		0.6	100.5			
							989	79.0	82.75		0.03	108.5			
													106.5	2.9	
													109.5	3.1	
													12.5	3.0	
													115.5	3.0	
													118.5	3.0	
82.75	114.85		HQ	IF	LIMESTONE - LIMESTONE BRECCIA. Light grey med grs lst, mostly massive, but with some irregular grey to dark grey med grs crystalline carbonate. Some irregular rounded stylolites. Minor zones of mosaic breccias - angular lst frags in dark grey silty matrix, look like sedimentary breccias (e.g. 108.9-111.8). Very strong calcite veining to 107.5 m with trace sphalerite (20-5% of interval). 110.5 So? & -CA 50-										
114.85	117.3		HQ	IF	LIMESTONE - LIMESTONE BRECCIA WITH MINOR SPHALERITE As for 82.75-114.85, but with 2% pale brown sphalerite in white calcite as cement of lst breccia (silty matrix to breccia).		990	114.85	117.3						

234027



CRA EXPLORATION PTY. LIMITED  
DRILL-HOLE SUMMARY LOG

EL NAME: ZEEHAN 1 HOLE NAME: DD94 ZM186  
 EL NUMBER: EL28/88 PROSPECT: MYRTLE  
 DATE DRILLED: MAY 1994  
 LOGGED BY: RGP

AMG EAST: 364291 GRID EAST: 60377  
 AMG NORTH: 5352354 GRID NORTH: 50496  
 RL: \_\_\_\_\_ TOTAL DEPTH: 120.9

DEPTH	AZIM. ( <del>MAG</del> ) AMG	INCLIN.
0	090	-45°
50	091	-45.5

OBJECTIVES OF HOLE: To test depth extension of mineralisation intersected in costean and in air-core hole ZM18 (36m @ 4.3% Zn).

## LITHOLOGICAL SUMMARY:

DFROM	DTO	COMMENTS
0	30.0	PRECOLLAR - NO CORE
30.0	50.2	LIME MUDSTONE
50.2	60.0	STYLOLAMINATED LIMESTONE
60.0	64.2	LIME MUDSTONE
64.2	72.5	CALCARENITE
72.5	88.8	STYLOLAMINATED LIMESTONE
88.8	96.05	d.tto + 10% C + dol VEINS
96.05	98.2	LIMESTONE BRECCIA + 20% C VEINS. PY BAND AT 96.1-96.3.
98.2	120.9	HETEROGENEOUS LIMESTONE

## MINERALISATION SUMMARY:

DFROM	DTO	COMMENTS

CONCLUSIONS: No significant alteration or mineralisation observed. Zone of 10-20% C-dol veining between 88.8 - 98.2m may be down-dip extension of shallow mineralisation ⇒ Late-stage, not stratabound. May be patchy and irregular.  
 Additional shallow drilling needed to determine if Zn-rich portion has a plunge.

No  
REC

LST

LST

120.9

364291E  
5352354N

MYRTL

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 143

TENEMENT NAME..... No.....

CO-ORDINATES 60377E 50496N..... AZIMUTH -45° DRILLERS DD TAS COMMENCED 6/5/94..... DEPTH 120.9m..... HOLE No. DD94Zm186  
RL COLLAR..... INCLINATION 090 AMG DRILL TYPE L738 COMPLETED 10/5/94..... CASING LEFT..... DPO No(s) 77653

DEPTH		Core Rec. (M)	Core Size	Graphic Log RQ	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)				
From (M)	To (M)										DRILL RUNS				
											FR	TO	REL	RQ	
0	30.0				PRECOLLAR - No core.						0	30.0	-	-	
30.0	32.6		HQ	5	PUGGY CLAY Dark grey.		398591	30.0	32.6			31.5	0.2	5	
32.6	50.2		HQ	2	IRREGULARLY BANDED LIME MUDSTONE Banded light and dark grey. Light grey fine gls lime mud containing coral and mollusc fragments. Dark grey irregular bands + patches of med gls crystalline CO <sub>2</sub> , possibly recrystallizing within CO <sub>2</sub> mud. Dark grey pug zones at 34.5-36.7 40.2-42.85		992 993	34.5 40.2	36.7 42.85			32.6	0.4	5	
												34.5	1.45	5/2F	
												37.5	1.45	2F	
												40.5	2.8	2F	
												42.7	0.25	5	
												43.5	0.85	5/4V	
												45.6	2.05	2V	
												46.5	0.9	23	
												49.5	2.95	1F	
												50.7	1.15	2F	
												REDUCE TO HQ			
50.2	60.0		HQ	2F	STYLOLAMINATED LIMESTONE light gray very fine gls lst, almost cryptocrystalline Fine network of stylolites that define bedding - possibly cleavage. St. 2 S <sub>0</sub> - C.A. 3 38° " cleavage 3 30° S <sub>0</sub> - cleavage 3 +115° Reduce to HQ 50.7m.							50.7	51.4	0.65	2F
												54.6	2.95	2F	
												57.75	3.05	2F	
												60.0	2.1	3F	
												61.5	1.55	3F	
												64.5	3.0	2F	
60.0	64.2		HQ	2F	IRREGULARLY BANDED LIME MUDSTONE Grey fine to med gls lst with dark grey fine gls lst bands, plasticly distorted. St. 5-30mm calcite veins. 63.9m S <sub>0</sub> - C.A. 3 50°										

234030



DRILL CORE LOG

TENEMENT NAME..... No.....

PLAN - MAP REFERENCE.....

CO-ORDINATES..... AZIMUTH..... DRILLERS..... COMMENCED..... DEPTH..... HOLE No. 2m 186

RL COLLAR..... INCLINATION..... DRILL TYPE..... COMPLETED..... CASING LEFT..... DPO No(s).....

DEPTH		Core Rec. (M)	Core Size	Glass Leg Rec	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)				
From (M)	To (M)										DRILL RUNS				
											FR	TO	REL	RA	
96.05	98.2		NQ		VEINED LIMESTONE BRECCIA. As for 98.2-120.9 but with 20% calcite veins and breccia cement up to 200mm thick. 200mm of 50% py at 96.1-96.3 within breccia matrix.		3985996	96.05	98.2			96.6	99.7	3.05	1F
												102.6	2.8		
												105.45	3.1		
												108.7	3.0		
												111.8	3.05	1F	
												114.8	3.0	1S	
98.2	120.9		NQ		HETEROGENEOUS DISRUPTED LIMESTONE + BRECCIA. Grey and dark grey highly variable limestone, from fine grs lime mud to calcarenite. Bands show abundant soft seal <del>depression</del> distortion progressing through to chaotic slumping + brecciation, all pre-lithification. Minor fossil fragments, mostly corals.							117.85	3.05	1F	
												120.9	3.05	2F	
					EOH 120.9m.										
					DH SURVEYS										
					0m -45° 090 AMG										
					50m -45.5° → 091 AMG										

234032

CRA EXPLORATION PTY. LIMITED  
DRILL-HOLE SUMMARY LOG

EL NAME: ZEEHAN 1 HOLE NAME: DD94 Zm187  
 EL NUMBER: EL28/88 PROSPECT: MYRTLE  
 DATE DRILLED: MAY 1994  
 LOGGED BY: RGP

AMG EAST: 364424.7 GRID EAST: 60510  
 AMG NORTH: 5352314.4 GRID NORTH: 50494  
 RL: \_\_\_\_\_ TOTAL DEPTH: 103.5

DEPTH	AZIM. ( <del>MAG</del> ) AMG	INCLIN.
0	269	-50
50	258	-51
103	262	-51

OBJECTIVES OF HOLE: To intersect depth extension of mineralisation in air-core hole Zm18 (36m @ 4.3% Zn). Scissor hole to Zm186.

## LITHOLOGICAL SUMMARY:

DFROM	DTO	COMMENTS
0	17.7	PRECOLLAR - NO CORE
17.7	79.3	BURROVED LIMESTONE
79.3	80.65	STRONGLY VEINED LIMESTONE
80.65	82.3	STYLOLAMINATED LIMESTONE
82.3	89.8	FAULT ZONE
89.8	103.5	BURROVED LIMESTONE

## MINERALISATION SUMMARY:

DFROM	DTO	COMMENTS

CONCLUSIONS: No significant alteration or mineralisation observed. Fault zone between 82.3-89.8 may be depth extension of shallow Zn mineralisation.

?

Lst

Lst

103.5



C.R.A. EXPLORATION PTY. LIMITED  
 DRILL CORE LOG

SHEET No. 202

TENEMENT NAME..... No.....

PLAN - MAP REFERENCE.....

CO-ORDINATES..... AZIMUTH..... DRILLERS..... COMMENCED..... DEPTH..... HOLE No. ZM187

RL COLLAR..... INCLINATION..... DRILL TYPE..... COMPLETED..... CASING LEFT..... DPO No(s).....

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)								
From (M)	To (M)										DRILL RUNS								
											FR	TD	REL	RCL					
82.3	89.8		NQ	5X	FAULT ZONE		2985999	82.3	85.5										
					Gray. Zone of strongly broken limestone, calcifer dolomite veins - vein rubble, - leached limestone similar to 79.3-80.65.		3986000	85.5	89.8										
					Cavity at approx 83.5-85.5.														
					82.7 So? (leached stylol) - C.A. $\approx$ 33°														
89.8	103.5		NQ	3F	BURROWED LIMESTONE														
	EOH				Similar to 17.7-79.3														
					Gray fine-med g/s limestone with minor tubular structures filled with white calcite - burrows? No other fossils visible.														
					5% irregular calcite veins 0.5-5 mm wide.														
					103.5 ~ END OF HOLE														
					DH SURVEYS														
					0 ~ -50° 269 AMG														
					50 ~ -51° 258 AMG														
					103 ~ -51° 262 AMG														

234035



DRILL CORE LOG

TENEMENT NAME MYRILE

364473E

CO-ORDINATES S3519.33N AZIMUTH 093° (true) DRILLERS DD & TAS COMMENCED 5.6.95 DEPTH 201.1m HOLE No. ZM 133  
 RL COLLAR ..... INCLINATION 60° DRILL TYPE D 4250 COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH		Core Rec	RC DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analyzed by.....)				
From (M)	To (M)										Fe (%)	Al (%)	Ca (%)	Mg (%)	
0	0.4	100	5	Qha	Peat Overburden.							0	44	12	27
0.4	4.0	11	5	Qha	White friable sandstone.							44	62	16	89
4.0	5.0	100	5	Qha	Brown shaly clay	Fabric 65° E c/A.						62	37	03	12
5.0	8.5	28	5	Qha	Light grey/white clay							37	10.2	0.6	40
8.5	13.7	50	5	Qha	Dark grey/black clays ?rotted limestone.	Fabric 75° E c/A.	5465815	8.5	10.2			10.2	11.7	1.3	87
							6	10.2	11.7			11.7	13.7	0.4	20
												13.7	15.2	0.15	50
												15.2	16.7	1.5	100
												16.7	18.2	0.2	13
												18.2	19.7	0.3	53
13.7	25.7	66	5	Qha	Dark grey/black clays with no weathered limestone unit. Minor cavities with sand infill.	Bedding 70° E c/A. Pore pyrite zone 15.6-15.75 Brown sandy zone 19.4-19.7 at brown silty clay zone 22-22.3						19.7	21.2	1.4	93
							7	11.7	13.7			21.2	22.7	1.2	80
							8	13.7	15.2			22.7	24.2	1.0	66
							80	16.7	18.2			24.2	25.7	0.15	50
							1	18.2	19.7			25.7	26.6	0.15	17
							2	19.7	21.2			26.6	28.7	1.4	67
25.7	30.2	50	5	Qha	Dk grey/brown/black rotted limestone - non calcareous	?Sideritic alteration						28.7	30.2	0.5	33
							3	21.2	22.7			30.2	31.7	0.6	40
							4	22.7	24.2			31.7	33.2	1.4	93
							5	24.2	25.7			33.2	34.7	0.5	33
30.2	40.6	50	5	Qha	Dark grey clays with sand-filled cavities One competent rock (rotted) non calcareous.	Resembling pyrite @ 35m ? Breccia zone with ?? sphaerite (at 6.0m) in matrix for 10cm.						34.7	36.2	1.0	67
							6	25.7	28.7			36.2	37.7	0.9	60
							7	28.7	30.2			37.7	39.2	0.25	17
							8	30.2	31.7			39.2	40.7	0.75	50
							9	31.7	33.2			40.7	42.2	1.2	80
							90	33.2	34.7			42.2	43.7	0.75	50
40.6	41.3	75	3	Qha	Dk grey/black non calcareous ?sil breccia conglomerate - poss fault breccia.							43.7	45.7	0.15	5
							1	34.7	36.2			45.7	47.7	0	0
							2	36.2	37.7			47.7	49.7	0	0
							3	37.7				49.7	51.7	0	0
							4	40.6	41.3			51.7	53.7	0	0
41.3	42.4	50	4X	Qha	Red shale - brittle brecciated probably fault related; angular clasts.							53.7	55.7	0	0
							5	41.3	42.4			55.7	57.7	0	0
							6	42.4	43.7						
							7	43.7	46.7						

234037

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 11  
No. 511

TENEMENT NAME MYRTLE

PLAN - MAP REFERENCE

CO-ORDINATES 364473E 5351933N AZIMUTH DRILLERS DPTAS COMMENCED 5.6.95 DEPTH 201.1m HOLE No. ZM188  
RL COLLAR INCLINATION 60° DRILL TYPE U250 COMPLETED CASING LEFT DPO No(s)

DEPTH		Core Rec. %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)				
From (M)	To (M)										REC (mm)	REC (Fe)	REC (Cu)	REC (Zn)	
42.4	43.7	50	5	Qha	Dark grey black clay Major zone of core loss							57.5	58.1	0.5	84
												58.1	59.5	0.5	39
												59.5	60.7	0.8	67
43.7	46.7	5	5	Ogfl	Dark grey ?dolomitised calcareous - nodular + weakly calcareous.							60.7	61.7	0.9	90
												61.7	63.0	0.9	70
												63.0	66.1	2.0	63
												66.1	67.1	0.3	10
46.7	57.5	0	-	Oad1	CAVITY							67.1	72.1	2.0	67
												72.1	75.1	2.0	67
57.5	58.1	84	5	Ogfs	Dark grey/black clay with nodular dk grey calcareous pieces	calcite veining massive scale	5465878	57.5	57.5			75.1	78.1	2.7	90
												78.1	81.1	1.0	33
												81.1	82.6	1.0	33
												82.6	84.1	0.3	20
58.1	59.5	37	5x	Ogfs	Brecciated calcarenite with minor clay zones.	irregular calcite veining						84.1	87.1	3.0	100
												87.1	89.0	1.1	100
												89.0	91.2	2.2	100
59.5	60.7	70	4x	Ogfs	light grey fine grained calcareous micritic in places; localized hematite alteration.	calcite veining with hematite alteration	711	59.5	60.7			91.2	93.1	1.6	89
												93.1	94.8	1.7	100
												94.8	96.6	1.8	100
												96.6	99.1	2.5	100
												99.1	102.1	3.0	100
60.7	61.3	90	3x	Ogfs	Red hematitic shale - calcareous; red alteration associated with calcite veining.		5465900	60.7	61.3			102.1	105.1	3.0	100
												105.1	108.1	3.0	100
												108.1	111.1	3.0	100
												111.1	114.1	3.0	100
												114.1	117.1	3.0	100
61.3	62.7	90	3x	Ogfl	laminated micrite unit with red shale zones - surface burrowing with emergence.	Bedding 75° to c/n.	5466001	61.3	62.7			117.1	119.4	1.5	100
												119.4	120.6	0.4	33
												120.6	123.1	1.5	100
												123.1	124.4	0.9	69
												124.4	125.6	0.3	25

234038

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 3  
No. 11

TENEMENT NAME MYRTLE  
PLAN - MAP REFERENCE.....  
DEPTH 201.1m HOLE No. ZM188  
CASING LEFT..... DPO No(s).....

364473E  
CO-ORDINATES 5351933N AZIMUTH..... DRILLERS DOTAS COMMENCED 5.6.95  
RL COLLAR..... INCLINATION 60° DRILL TYPE U250 COMPLETED.....

DEPTH		Core Rec. %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)											
From (M)	To (M)																					
62.7	70.8	45	2	Qzsl	Mixed light grey micrite with calcite veining and limestone conglomerate units; clasts of veined micrite + dark grey black crystals angular to sub rounded clasts. Coarsening upwards in conglomerate units and within units. Micrite locally fractured; Dk grey clay zone from 69m for ~20cm. followed by calcite breccia vein for 3cm.	Minor pyrite black with vein (phosphatic).	5466002	62.7	64.2													
							3	64.7	66.1													
							4	66.1	69.1													
							5	69.1	70.8													
70.8	82.6	65	3V	Qzsl	light grey micrite with spherulites and calcite veining - locally brecciated and fine grained. Most part unit of base.	Note: condensed zones of minor quartz veining possible delimitation in calcite was shearing, foliation sub parallel to cliff - veining (calcite) sub parallel to c.f.A and 45° to f.A.		72.1	75.1													
							6	72.1	75.1													
							7	75.1	78.1													
							8	81.1	82.6													
82.6	84.25	20	5x	Qzsl	Por. micrite - possible cavity; some irregular calcarenite + light grey clay/sand material																	
84.25	85.55	100	3	Qzsl	Grey med fine grained calcarenite intermixed with dk grey argillaceous calcarenite	Minor spongy brecciation and some hematitic ulm at 84.2m - breccia related																

234039









C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 8  
No. of 11

TENEMENT NAME MYRTLE  
PLAN - MAP REFERENCE.....  
DEPTH 201.1m HOLE No. 2M 188  
CASING LEFT..... DPO No(s).....

364473 E  
CO-ORDINATES S351933N AZIMUTH.....  
DRILLERS DD TAS COMMENCED 5.6.0  
RL COLLAR..... INCLINATION 60° DRILL TYPE U250 COMPLETED.....

DEPTH		Core Rec	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)			
From (M)	To (M)										g/t	g/t	g/t	g/t
143.0	145.4	75	3f	Oguf	Grey med/fine grained calcarenite with interstitial argillite zones						125.6	127.1	1.0	67
											127.1	128.1	1.0	100
											128.1	130.6	2.2	90
145.4	146.7	75	3	Ogfa	Weakly laminated rotted lt grey micrite unit	Bedding 70° to c/a					130.6	133.4	2.8	100
											133.4	135.0	0.15	25
											135.0	136.0	1.0	100
146.7	147.8	63	5x	Ogfa	Clay gouge zone with red shale fragments and altered argillaceous calcarenite	Clay zone 30° to c/a minor pyrite blebs					136.0	137.9	1.6	85
											137.9	139.4	1.5	100
											139.4	141.1	0.9	50
											141.1	142.6	1.5	100
147.8	149.3	33	2	Ogfa	Biohermal grey calcarenite unit - fault altered	Heavily calcite veined.					142.6	144	1.1	77
											144	145.4	1.2	84
											145.4	146.9	1.3	86
149.3	151.6	25	5x	Ogfa	Red shale unit - heavily brecciated with a zone of micritic calcarenite with argillite		54660 22	149.3	151.6		146.9	147.8	0.5	55
											147.8	149.3	0.5	33
											149.3	150.6	0.6	46
											150.6	151.6	0.15	15
											151.6	153.1	0.5	33
151.6	156.2	52	3x	Ogfa	Faulted zone - abundant calcite veining and occ clay gouge in brecciated calcarenite.		23	151.6	154.6		153.1	154.6	1.0	67
							24	154.6	156.2		154.6	156.1	1.5	100
											156.1	157.6	0.6	40
											157.6	159.1	0.65	44
											159.1	160.6	0.7	46
156.2	171.0	40	4x	Ogfa	lt grey micritic limestone; locally well rotted; with clay zones and laminated zones	U. localised zones of pyrite very fine. Bedding 90° to c/a.	25	156.2	157.6		160.6	161.6	0.5	50
							26	157.6	160.6		161.6	163.6	0.9	45
							27	163.6	165.1		163.6	165.1	0.9	60
							28	165.1	166.6		165.1	166.6	0.4	26
							29	166.6	168.1		166.6	168.1	0.9	60
							30	168.1	169.6		168.1	169.6	0.15	10
							31	169.6	170.9		169.6	171.1	0.9	60
171.0	174.1	30	5x	Ogfa	Dark grey fault altered and rotted argillaceous calcarenite with some argillite + interstitial fill.		32	170.9	172.6		171.1	172.6	0.3	20

234044

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 9  
No. of 11

TENEMENT NAME MYRTLE

PLAN - MAP REFERENCE

CO-ORDINATES 364473E 5351933N AZIMUTH DRILLERS DDTAS COMMENCED 56.75 DEPTH 201.1m HOLE No. Zm 188

RL COLLAR INCLINATION 60° DRILL TYPE U250 COMPLETED CASING LEFT DPO No(s)

DEPTH		Core Rec %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)				
From (M)	To (M)										REC (mm)	REC (T <sub>0</sub> )	REC (m)	REC (%)	
174.1	178.9	40	Sx	Og/z	Fault zone - clay gouge with altered calcareous fragment, argillite fragments and red shale fragments.	Possible fabric 75° to c/a.	5466033	172.6	174.1			172.6	174.1	0.6	40
							34	174.1	175.6			174.1	175.6	0.6	40
							35	175.6	177.1			175.6	177.1	0.6	40
							36	177.1	178.9			177.1	178.6	0.3	20
178.9	179.1	100	3	Og/dc	Siderite zone with brecciated ?limestone fragments; breccia fragments re-broken and held by clays.	Pyrite matrix to breccia	37	178.9	179.1			178.6	180.1	1.0	67
												180.1	181.6	1.5	100
												181.6	183.1	1.5	100
												183.1	184.6	1.5	100
												184.6	186.1	1.5	100
												186.1	187.6	0.75	50
179.1	180.1	40	Sx	Og/z	Light grey calcareous clay ?heavily rotted ?micrite.		38	179.1	180.1			187.6	188.5	0.3	33
												188.5	190.1	1.1	69
												190.1	191.2	1.0	90
180.1	180.65	100	Sx	Og/z	Fault zone - clay gouge with brecciated fragments including red shale; non calcareous.	Fabric 75° to c/a.	39	180.1	181.6			191.2	193.1	1.2	60
												193.1	194.5	0.2	14
												194.5	195.7	1.2	100
												195.7	196.6	0.70	77
180.65	182.3	100	Sx	Og/z	Fault zone - clay gouge with smaller fragments, i.e. vein quartz.	Disseminated pyrite throughout latter half of core ?10%. Fabric 70° to c/a.	40	181.4	182.3			196.6	198.3	1.7	00
												198.3	199.2	0.9	100
												199.2	199.6	0.3	75
												199.6	201.1	1.5	100
182.43	182.9	100	Sx	Og/z	Clay zone with sub rounded light grey/brown clots - fault gouge or weathered conglomerate bands within dark grey clay.	Coarser grained dismembered of pyrite associated with conglom. bands.	41	182.3	182.9						
182.9	183.9	100	Sx	Og/dc	Dark grey/black rotted sandstone and siltstone (+/- shales) - now a dark grey clay.		42	182.9	183.9						

234045



C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 11 of 11

TENEMENT NAME MYRTLE

PLAN - MAP REFERENCE

3644732  
CO-ORDINATES 5351933 N

DRILLERS DDTAS

COMMENCED 5.6.95

DEPTH 201.1 m

HOLE No. 2M188

RL COLLAR INCLINATION 60°

DRILL TYPE U250

COMPLETED

CASING LEFT

DPO No(s)

DEPTH		Core Rec.	RQ	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)												
From (M)	To (M)																						
196.6	198.65	95	3x	Ogsk	Interbedded and inter laminated fine grained sandstones and siltstones with clay breccia zones	Bedding 65° to c/A Fine disse of pyrite locally	5466049	196.6	198.65														
198.65	199.6	80	3f	Om.	light grey siliceous quartzite well fractured with buff clay material and locally conglomeratic	Bedding 70° to c/A.	50	198.65	199.6														
199.6	200.22	100	4x	Om	light grey/green siltstone heavily fractured; basal 20cm comprises a clay (possible ? fault) which is siliceous.	clay upper contact parallel to bedding 65° to c/A.	51	199.6	200.22														
200.22	201.1	100	3	Om	Siliceous quartzite Basal 20cm contains pink sub rounded clasts.	Bedding 65° to c/A.	52	200.22	201.1														
END OF HOLE 201.1m.																							

234017

					Ag	Al	Ar	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
77379																
ZM188	5465875	8.5	10.3	-5	6.41	8	296	-05	196	1.82	2.65	.42	23	23	67	31
ZM188	5465876	10.2	11.7	-5	6.93	-5	330	-05	9	.37	2.9	.44	38	13	13	15
ZM188	5465877	11.7	13.7	-5	7.88	15	382	-05	44	1.63	3.22	.43	25	24	24	28
ZM188	5465878	13.7	15.2	-5	4.15	55	176	-05	20	4.55	1.52	.21	19	25	25	225
ZM188	5465879	15.2	16.7	-5	8.95	33	332	-05	10	2.84	3.37	.45	42	37	37	125
ZM188	5465880	16.7	18.2	-5	8.65	39	350	-05	30	2.34	3.63	.46	32	27	27	109
ZM188	5465881	18.2	19.7	-5	6.32	150	250	-05	22	5.88	1.97	.3	40	46	46	167
ZM188	5465882	19.7	21.2	-5	9.02	16	364	-05	29	4.46	3.44	.44	50	47	47	89
ZM188	5465883	21.2	22.7	-5	7.86	83	258	-05	23	4.93	2.46	.33	42	51	51	240
ZM188	5465884	22.7	24.2	-5	9.08	68	317	-05	26	4.5	3.15	.4	60	49	49	301
ZM188	5465885	24.2	25.7	-5	8.4	23	327	-05	39	3.83	3.19	.4	25	30	30	64
ZM188	5465886	25.7	28.7	-5	8.12	33	257	-05	18	2.68	2.3	.27	34	29	29	402
ZM188	5465887	28.7	30.2	-5	9.03	29	291	-05	23	2.08	2.69	.31	28	35	35	503
ZM188	5465888	30.2	31.7	-5	7.57	56	297	-05	29	3.87	.3	.37	38	43	43	122
ZM188	5465889	31.7	33.2	-5	5.25	94	247	-05	24	3.7	2.6	.32	32	34	34	50
ZM188	5465890	33.2	34.7	-5	3.92	36	229	.05	24	2.56	.2	.25	26	26	26	159
ZM188	5465891	34.7	36.2	-5	6.02	96	203	-05	21	2.81	1.81	.24	21	49	49	240
ZM188	5465892	36.2	37.7	-5	6.41	69	227	.12	19	3.84	2.54	.35	34	54	54	97
ZM188	5465893	37.7	40.6	-5	8.9	9	341	1.31	26	2.57	2.91	1.27	115	45	45	371
ZM188	5465894	40.6	41.3	-5	4.67	6	144	13.4	12	3.86	1.37	6.91	796	23	23	123
ZM188	5465895	41.3	42.4	-5	2.98	-5	84	18	15	3.19	.89	9.43	738	19	19	143
ZM188	5465896	42.4	43.7	-5	7.87	11	246	11.1	23	2.3	2.31	5.93	398	26	26	161
ZM188	5465897	43.7	46.7	-5	2.18	-5	87	16.9	9	1.87	.92	8.5	255	15	15	29
ZM188	5465898	47.5	49.5	-5	2.67	27	96	19.9	5	1.46	.38	2.61	276	25	25	45
ZM188	5465899	49.5	60.7	.7	.88	34	29	33.7	-5	.78	.25	.52	389	31	31	19
ZM188	5465900	60.7	61.3	-5	7.32	-5	241	16.7	19	1.11	1.48	.96	323	29	29	61
ZM188	5466001	61.3	62.7	-5	2.28	-5	76	27	7	1.14	.7	1.04	317	25	25	44
ZM188	5466002	62.7	64.2	-5	1.68	-5	53	24.5	6	1.85	.63	1.91	526	23	23	63
ZM188	5466003	64.2	66.1	-5	1.56	-5	51	29.6	5	1.23	.54	1.33	445	26	26	23
ZM188	5466004	66.1	69.1	-5	2.03	-5	89	23.8	6	1.77	.67	2.93	469	32	32	74
ZM188	5466005	69.1	70.8	-5	.1	8	16	25.6	7	6.73	.35	1.21	229	18	18	75
ZM188	5466006	72.1	75.1	.5	.71	-5	27	33.8	-5	.34	.29	.56	131	18	18	-5
ZM188	5466007	75.1	78.1	.9	.67	-5	24	33.4	-5	.7	.28	1.02	180	21	21	-5
ZM188	5466008	81.1	82.6	-5	.57	-5	21	33.9	-5	1.07	.25	.9	474	21	21	-5
ZM188	5466009	91.2	93.1	-5	.91	-5	36	30.1	-5	.55	.34	.64	69	19	19	-5
ZM188	5466010	102.1	104.2	-5	.84	-5	32	30.5	-5	.71	.36	1.3	137	20	20	-5
ZM188	5466011	114.3	116.5	-5	.68	-5	25	30.4	-5	1.08	.3	1.32	222	17	17	-5
ZM188	5466012	117.7	119.4	-5	1.1	-5	40	28.2	-5	.95	.46	2.02	263	17	17	12
ZM188	5466013	119.4	120.6	-5	.38	-5	16	28.9	-5	.69	.18	2.68	106	18	18	-5
ZM188	5466014	120.6	123.1	.5	.43	-5	18	29.9	-5	.76	.2	1.83	166	18	18	-5
ZM188	5466015	123.1	124.4	-5	1.51	-5	56	22.8	7	1.38	.59	2.32	264	15	15	6
ZM188	5466016	124.4	126.9	-5	1.24	-5	44	25.9	19	4.67	.42	1.45	247	16	16	21
ZM188	5466017	126.9	128.9	-5	.94	-5	35	29.8	-5	.91	.37	2.32	241	15	15	-5
ZM188	5466018	131.4	133.4	-5	.6	-5	20	29.6	-5	1.17	.23	1.56	359	16	16	-5
ZM188	5466019	133.4	135.0	-5	.35	-5	18	19	-5	17.9	.16	2.45	663	22	22	80
ZM188	5466020	135.0	136.7	-5	1.01	-5	33	29.8	-5	1.12	.32	3.23	287	29	29	18
ZM188	5466021	141.1	143.0	-5	1.06	-5	33	26.3	6	2.18	.35	4.45	651	44	44	35
ZM188	5466022	149.3	151.6	-5	7.42	20	270	10.6	20	4.39	1.92	2.32	405	42	42	17
ZM188	5466023	151.6	154.6	-5	.94	-5	30	26.7	-5	1.38	.3	5.41	324	27	27	43
ZM188	5466024	154.6	156.2	-5	.77	-5	27	30.1	-5	1.24	.29	4.81	361	27	27	6
ZM188	5466025	156.2	157.6	-5	.6	-5	23	31	-5	.91	.29	2.64	306	26	26	-5
ZM188	5466026	157.6	160.6	-5	1.7	34	63	29.7	7	1.86	.59	.88	377	22	22	-5
ZM188	5466027	163.6	165.1	-5	.73	-5	26	33.7	-5	.84	.27	1.31	161	24	24	-5
ZM188	5466028	165.1	166.6	-5	1.54	11	55	28.8	-5	1.34	.58	1.65	271	20	20	-5
ZM188	5466029	166.6	168.1	-5	1.35	-5	49	28.6	6	1.54	.48	1.8	151	34	34	107
ZM188	5466030	168.1	169.6	-5	.24	-5	10	35	5	.42	.13	1.29	110	26	26	-5
ZM188	5466031	169.6	170.9	-5	.58	8	20	30.2	9	1.03	.24	1.59	120	24	24	9
ZM188	5466032	170.9	172.6	-5	1.29	-5	46	28.3	6	1.33	.42	2.61	241	25	25	10
ZM188	5466033	172.6	174.1	-5	1.56	5	56	26.3	6	2.28	.45	2.85	542	34	34	72
ZM188	5466034	174.1	175.6	-5	3.21	-5	104	21.6	15	2.06	.89	3.06	228	31	31	22
ZM188	5466035	175.6	177.1	-5	5.22	18	168	14.2	16	2.99	1.35	2.1	327	30	30	46
ZM188	5466036	177.1	178.9	-5	2.75	-5	92	21.7	9	1.88	.84	3.15	335	25	25	17
ZM188	5466037	178.9	179.1	-5	1.53	10	57	10.4	-5	17.8	.52	2.76	5630	-10	-10	8
ZM188	5466038	179.1	180.1	-5	.91	-5	32	27.5	-5	2.25	.32	2.36	633	20	20	-5
ZM188	5466039	180.1	181.4	-5	7.59	94	246	2.25	25	3.47	2.17	1.43	186	38	38	63
ZM188	5466040	181.4	182.3	-5	7.02	366	221	.14	25	7.88	2.56	.4	34	113	113	209
ZM188	5466041	182.3	182.9	-5	10.6	273	346	.08	41	6.56	3.56	.46	36	115	115	278
ZM188	5466042	182.9	183.9	-5	9.93	91	312	.06	40	4.56	3.68	.51	46	90	90	717
ZM188	5466043	183.9	186.1	-5	11.1	32	362	.06	33	2.15	3.03	.55	28	61	61	144
ZM188	5466044	186.1	188.6	-5	9.91	18	333	-05	32	1.37	2.97	.46	25	46	46	116
ZM188	5466045	188.6	189.8	-5	6.98	34	204	-05	24	2.61	2.45	.5	51	68	68	121
ZM188	5466046	189.8	192.4	-5	7.23	39	256	-05	23	2.39	2.5	.44	30	39	39	92
ZM188	5466047	192.4	194.5	-5	6.52	40	188	-05	23	2.75	2.08	.23	34	72	72	556
ZM188	5466048	194.5	196.6	-5	2.1	29	62	.18	22	1.36	.74	.09	38	24	24	93
ZM188	5466049	196.6	198.7	-5	8.26	25	223	-05	66	1.63	2.98	.26	19	42	42	40
ZM188	5466050	198.7	199.6	-5	3.25	-5	100	-05	7	.44	1.2	.11	13	16	16	57
ZM188	5466051	199.6	200.2	-5	9.53	22	276	-05	5	.84	3.52	.23	10	12	12	31
ZM188	5466052	200.2	201.1	-5	2.13	5	70	-05	10	.45	.88	.08	21	-10	-10	14

DRILL-HOLE SUMMARY LOG

HOLE NAME: DD95ZM189 AMG EAST 364288 NORTH 5350999  
 PROSPECT: MYRTLE GRID EAST 60356 NORTH 49200  
 EL: ZEEHAN 1 EL 28/88 RL \_\_\_\_\_ DEPTH 702.4m

DATE DRILLED: 5/6/95  
 LOGGED BY: S. MENPES; S. S. TEAR  
 DRILLING CO.: ALMAC  
 DRILL TYPE: DIAMOND  
 DRILL RIG: LY444  
 LOC DRILL CORE: ZEEHAN

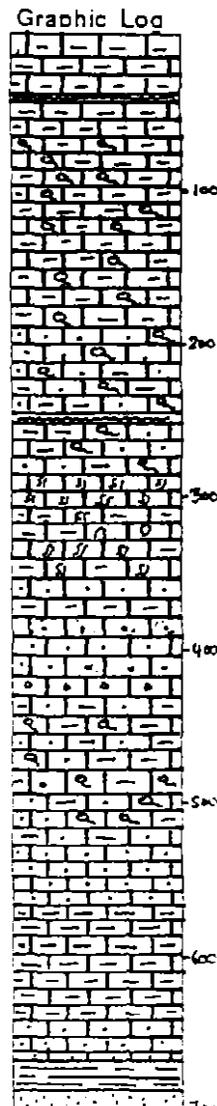
SURVEYS:					
DEPTH	AZIM (AMG)	DIP	DEPTH	AZIM (AMG)	DIP
0	-	90°	350	018°	81°
50	304°	98°	400	021°	80°
100	293°	89°	450	020°	79.5°
150	300°	88°	500	017°	80°
200	342°	86.5°	550	014°	80.5°
250	282°	85°	600	012°	81°
300	015°	81.5°			

OBJECTIVES OF HOLE:  
 DIAMOND DRILL TEST THE SOUTHERN (SHALLOWER) END OF THE MYRTLE GRAVITY ANOMALY - TESTING THE LOWER SANDSTONE/LIMESTONE CONTACT. ALSO A STRATIGRAPHIC HOLE

LITHOLOGICAL SUMMARY:			
FROM	TO	FORM CODE	COMMENTS
0	3.8	Qha	Overburden; no recovery
3.8	38.4	Ogul.	Massive argillaceous fine grained calcarenites
38.4	42.6	Ogmu	Laminated micrite Unit
42.6	201.1	Ogul	Massive argillaceous fine grained calcarenites
201.1	247.0	Ogul	Bedded variably argillaceous fine grained calcarenites
247.0	252.9	Ogmu	Laminated Micrite Unit.
252.9	288.3	Ogul.	Mixed Limestone sequence including cherty zones.
288.3	345.6	Ogul	Burrowed argillaceous calcarenites with fine calcarenites
345.6	376.1	Ogul.	Intermixed clean calcarenites, micrites with ore argillaceous calcisiltites
376.1	410.0	Ogul.	Equigranular calcarenites
410.0	532.1	Ogul	Intermixed fine calcarenites, micrites and argillaceous calcisiltites occ clean equigranular calcarenite. Repeated cycles
532.1	570.1	Ogul	Equigranular calcarenites
570.1	611.7	Ogul	Argillaceous bioclastic calcarenites
611.7	664.6	Ogul	Mixed argillaceous calcarenites and micrites
664.6	670.0	Ogul	Bioclastic Equigranular calcarenites
670.0	689.0	Ost	Silty Transition Unit
689.0	702.4	Om	Moine Sandstone

MINERALISATION SUMMARY:		
FROM	TO	COMMENTS
		Slight zinc elevation with 655.4 - 690m - Argillaceous calcarenites and the Silty Transition Unit

CONCLUSIONS:  
 Bedding @ 35m 82.3° to c/a @ 235m 36° to c/a @ 350m 45° to c/a @ 431m 50° to c/a  
 @ 595m 60° to c/a @ 695m 45° to c/a.  
 Gravity anomaly possibly due to i) thicker clean calcarenites from 376m onwards  
 ii) thicker than normal limestone sequence.  
 Good stratigraphic hole, virtually unfaulted.















C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 7  
No. of 15

364 288 E

TENEMENT NAME MYALE

CO-ORDINATES S350999N AZIMUTH.....

DRILLERS ALMAC

COMMENCED 5.6.95

PLAN - MAP REFERENCE.....

DEPTH 702.4m

HOLE No. 2m89

RL COLLAR.....

INCLINATION.....

DRILL TYPE L744

COMPLETED.....

CASING LEFT.....

DPO No(s).....

DEPTH		Core Rec %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)										
From (M)	To (M)																				
323.9	335.8	100	1	Ogul	INTERMIXED FINE GRAINED CALCARENITE AND MICRITE Mixed facies unit. Locally argillaceous laminae @ 327.2-327 with bedding 55° to c/a 323.9-324.62 - Grey micrite with minor coarse dk grey calcarenite. 324.62-326.4 mixed micrite & argillaceous calcarenite micrite bed. 326.4-329.5 micrite dominant unit with argillaceous calcarenite 329.5-330.72 Heavily bioturbated micrite & dark grey calcarenite 330.72-331.96 Grey clay micrite. Calcite vein @ 331.65-331.72 with reddened micrite bed varying 55° to c/a Fabric/cleavage is micrite 37° to c/a ? Parallel to bedding 331.96-335.8 mixed fine grained grey calcarenite/micrite and dark grey argillaceous calcarenite. abundant micro-veining (calcite) cleavage 40° to c/a. well closed																
335.8	345.6	100	1	Ogul	BURROUGHS FINE GRAINED CALCARENITE WITH MICRITES cleavage subparallel to c/a minor blebs of pyrite @ 341.6m associated with a large laminar vein	546569	338.3	340.4													
345.6	349.4	100	1	Ogul	FINE GRAINED CLEAN CALCARENITES AND MICRITES. Localised zones of hard eye micrites, minor calcite veining Also zones of argillaceous material interstitial fill - almost penetrated.																
349.4	358.25	100	1	Ogul	INTERMIXED UNIT OF CALCARENITES AND ARGILLACEOUS CALCINITES, CALCARENITES Argillaceous calcarenite units up to 20cm thick Interlaminated unit 353.0-355 bedding 45° to c/a Coarse bioturbated unit 356.7-358.35	546571	353.0	355.4													

234056

DRILL CORE LOG

TENEMENT NAME MARBLE

PLAN - MAP REFERENCE

CO-ORDINATES 364288E  
5350979N AZIMUTH ?

DRILLERS ALMAC COMMENCED 5.6.95

DEPTH 702.4m HOLE No. ZM189

RE COLLAR

INCLINATION

DRILL TYPE LY44

COMPLETED

CASING LEFT

DPO No(s)

DEPTH		Core Rec %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weather, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)					
From (M)	To (M)										REC (mm)	REC (T)	REC (M)	REC (%)		
358.25	359.70	100	1	Ogsh.	WELL CLEANED BIRDS EYE MICRITE lt grey fine grained calcarenite various 55° to c/a @ 359m minor cleavage parallel argillite zone - locally graphitic							358.4	358.4	3.0	100	
												363.4	363.4	3.0	100	
												366.4	366.4	3.0	100	
												369.4	369.4	3.0	100	
												372.4	372.4	3.0	100	
351.70	363.6	100	1	Ogsh.	INTERMIXED FINE CALCARENITE AND ARGILLACEOUS CALCISILTITE locally interbedded / interlaminated - bedding 45° to c/a. Some calcarenite grades into argillaceous calcarenite - locally burrowed non-biolaritic - slight nodular effect.							358.4	358.4	3.0	100	
												361.4	361.4	3.0	100	
												364.4	364.4	3.0	100	
												367.4	367.4	3.0	100	
363.6	376.1	100	1	Ogsh.	CLEAN CALCARENITES AND MICRITES lt grey fine grained calcarenite and light grey micrites - locally fine grained biolaritic; minor fossiliferous limestone - from 367.2 interlaminated with argillite v. thin laminae (?st. l. thin) cleavage 20° to c/a. Bedding 45° to c/a Calcite veining prominent. varying angles to c/a. 45°, 60° mainly From 372.5 increase in argillite parting thickness (<0.5cm) ? stylolites with marked increase in calcite veining 45° to c/a - pink calcite veining locally eg 373m.		5465612	365.4	367.2				370.4	370.4	3.0	100
												373.4	373.4	3.0	100	
												376.4	376.4	3.0	100	
												379.4	379.4	3.0	100	
												382.4	382.4	3.0	100	
												385.4	385.4	3.0	100	
												388.4	388.4	3.0	100	
												391.4	391.4	3.0	100	
												394.4	394.4	3.0	100	
												397.4	397.4	3.0	100	
												400.4	400.4	3.0	100	
376.1	410.0	100	1	Ogsh.	FOURGRANULAR CLEAN CALCARENITES lt grey med/coarse grained biolaritic calcarenites with micrite nodules (<1cm); minor amounts of argillite usually with associated diagenetic pyrite blobs, persistent calcite veining 377.4-379.1 thin (<0.5cm) argillite bands - stylolites? 380.6-384.4 " " " " " " above units tend to be more micritic After 384.4 calcarenite med/fine grained. Bedding 45° to c/a. Localised nodular effect.		5465674	378.9	380.7				403.4	403.4	3.0	100
												406.4	406.4	3.0	100	
												409.4	409.4	3.0	100	
												412.4	412.4	3.0	100	
												415.4	415.4	3.0	100	
												418.4	418.4	3.0	100	
												421.4	421.4	3.0	100	
												424.4	424.4	3.0	100	
												427.4	427.4	3.0	100	
												430.4	430.4	3.0	100	
												433.4	433.4	3.0	100	

234057



364288E  
 CO-ORDINATES 535.9977N AZIMUTH DRILLERS ALMAC COMMENCED 5.6.95 DEPTH 702.4m HOLE No. 2M189  
 RL COLLAR INCLINATION DRILL TYPE LY 44 COMPLETED CASING LEFT DPO No(s)

DEPTH		Core Rec.	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)			
From (M)	To (M)									REC (From)	REC (To)	REC (m)	REC (%)
4363	440.5	100	1	Agul.	INTERMIXED <del>3</del> CALCARENITES Med to fine grained dk grey + grey calcarenites - disrupted look due to possible faulting - major zone of calcite veining 4363-4392.5; veins up to 40cm thick	5465678	4359	437.4		4334	4364	30	100
						79	437.4	439.4		4364	4394	30	100
										4394	4424	30	100
										4424	4454	30	100
440.5	444.2	100	1	Agul.	CLEAN MED-FINE GRAINED CALCARENITE Clean, light grey to grey calcarenites - locally med. grained and possibly biotitic; stibitic with minimal argill. material and occ calcite veins only; almost caliche in places.	4.80	441.0	443.0					
444.2													

234059







364288E

CO-ORDINATES S35°59'N AZIMUTH..... DRILLERS ALMPC COMMENCED 5.6.95 DEPTH 702.4m HOLE No. Zm139  
 RL COLLAR..... INCLINATION..... DRILL TYPE L744 COMPLETED..... CASING LEFT..... DPO No(s).....

PLAN - MAP REFERENCE.....

DEPTH		Core Rec. or DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weather, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)			
From (M)	To (M)												
615.2	611.7	100	1	Ogul	ARGILLACEOUS BIOLASTIC CALCARENITE Medium looking appearance fine grained grey calcarenite with red brown grain biolastic planar micritic argillaceous material on minor scale grey calcarenite with (red fine grain) with becoming more argillaceous downward fine micrite. minor calcite veins 55° to c/a No. close core collection @ 607m	5465692	604.4	606.4					
617	651.2	100	1	Ogul	MIXED MICRITES AND ARGILLACEOUS CALCARENITES Grey med fine grained grey calcarenites; only see coarse biolastic with zones of burrowed argillaceous calcarenite 615.5-619.0m lt grey calcarenite bedding 40° to c/a locally diffuse laminations present; shale to beds are micritic. 6225-6262 Dotted calcarenite 45° to c/a 6266-6272 Fine grained grey calcarenite with beds arg micritic. 6267-6302 Shaly calcarenite zone - almost micritic in places underlain by small laminated unit 630.2-630.8 Zone of calcite veining 630.2-630.8m cleaning generally 20° to c/a	93	615.5	619.0					
						94	627.9	630.0					
						95	630.0	631.9					
						96	640.4	642.7					
651.2	664.6	100	1	Ogul	ARGILLACEOUS CALCARENITES with micrites Dark grey fine grained calcarenite (almost micritic) with major zones of argillaceous material (calcarenite) Bedding on in an argillaceous bed unit 661-661.5 - in 65° to c/a underlain by a small chamo breccia unit with minor pyrite Other breccia units occur below < 30cm with minor kinds of pyrite	97	655.4	657.4					
						98	661.0	662.9					
666	670.0	100	1	Ogul	BIOLASTIC EQUIGRANULAR CALCARENITE Grey locally coarsely biolastic calcarenite, possibly oncoidal Passes into a dk grey fine grained argillaceous calcarenite with	99	664.6	666.6					
						5466002	666.6	669.2					
						063	669.2	670.0					

234063



234065

				11380	Ag	Al	As	Ba	Ca	Cu	Fe	K	Hg	Mn	Pb	Zn
ZM139	5465794	3.00	12.00	5465794	-5	.89	-5	45	33.2	-5	.55	.41	2.02	97	-10	-5
ZM139	5465795	16.40	20.30	5465795	1	.69	-5	35	34.6	-5	.28	.32	.55	55	-10	5
ZM139	5465796	37.00	40.40	5465796	.9	1.52	-5	74	31.5	7	.43	.74	1.4	82	-10	-5
ZM139	5465797	60.00	62.00	5465797	1.6	.36	-5	28	36.3	12	.2	.18	.58	41	-10	20
ZM139	5465798	71.00	74.00	5465798	1.4	.61	-5	53	35.4	-5	.25	.28	.59	59	-10	-5
ZM139	5465799	92.00	95.00	5465799	-5	1.06	-5	50	32.4	-5	.48	.48	.95	96	-10	-5
ZM139	5465800	115.00	117.00	5465800	1	.78	-5	40	34.4	-5	.62	.38	2.01	85	-10	11
ZM139	5465656	127.00	129.00	5465656	2.5	.88	-5	41	31.5	-5	.46	.47	1.58	88	-10	-5
ZM139	5465657	142.00	144.00	5465657	1.3	1.54	-5	81	27.3	-5	.93	.8	2.9	137	-10	-5
ZM139	5465658	151.00	153.00	5465658	2.4	1.81	-5	92	29.1	-5	.79	.92	1.78	133	-10	-5
ZM139	5465659	162.00	164.00	5465659	2.4	1.45	-5	70	32.6	5	.54	.74	.79	114	12	-5
ZM139	5465660	202.00	204.70	5465660	1.5	.81	-5	45	32.4	-5	.57	.4	1.36	90	-10	-5
ZM139	5465661	229.00	232.10	5465661	1.4	1.7	-5	84	30	-5	.77	.82	1.23	131	-10	-5
ZM139	5465662	247.40	250.40	5465662	.8	1.03	-5	61	32.7	-5	.55	.48	.84	94	-10	-5
ZM139	5465663	262.40	265.40	5465663	2	1.39	-5	81	30.1	-5	.72	.65	1.21	115	11	-5
ZM139	5465664	274.40	277.40	5465664	.9	1.23	-5	63	33.7	-5	.47	.57	1.08	78	-16	-5
ZM139	5465665	289.40	291.80	5465665	1.5	.76	-5	40	30.7	-5	.64	.38	2.75	93	-10	-5
ZM139	5465666	299.08	299.95	5465666	1.1	.45	-5	41	33.2	-5	.4	.19	1.05	80	-10	-5
ZM139	5465667	304.40	307.40	5465667	.7	.75	-5	43	29	-5	.59	.33	3.96	109	-10	-5
ZM139	5465668	317.70	319.50	5465668	.6	1.56	-5	96	27.4	-5	.61	.68	1.85	124	-10	-5
ZM139	5465669	333.70	335.20	5465669	1.6	.96	-5	44	32	-5	.47	.43	1.49	90	11	23
ZM139	5465670	338.30	340.40	5465670	.9	1.76	-5	78	27.4	-5	.72	.85	2.58	149	-10	10
ZM139	5465671	355.00	355.40	5465671	.3	1.37	-5	51	25.5	-5	.72	.55	2.4	117	10	-5
ZM139	5465672	365.40	367.20	5465672	1.2	.28	-5	23	33.8	-5	.27	.15	1.13	86	-10	-5
ZM139	5465673	372.90	374.00	5465673	1.2	.91	-5	30	32	-5	.44	.4	.77	84	-10	-5
ZM139	5465674	378.90	380.70	5465674	.5	.61	-5	19	32.2	-5	.48	.27	1.54	117	-10	-5
ZM139	5465675	388.40	390.50	5465675	1	.44	-5	17	34.2	-5	.41	.2	1.37	127	-10	-5
ZM139	5465681	399.20	401.40	5465676	.8	.35	-5	11	34.4	-5	.34	.17	1.71	80	-10	-5
ZM139	5465676	416.70	418.70	5465677	-5	.68	-5	23	31.8	-5	.62	.32	1.9	335	11	-5
ZM139	5465677	422.50	424.90	5465678	.9	.3	-5	8	35.5	-5	.5	.14	2.89	566	-10	-5
ZM139	5465678	435.90	437.40	5465679	1.1	.69	-5	21	31.6	-5	.48	.34	2.56	164	-10	23
ZM139	5465679	437.40	49.40	5465680	1.5	.26	-5	9	34.2	-5	.5	.15	1.24	112	-10	-5
ZM139	5465680	441.00	443.00	5465681	1.6	.4	-5	14	33.8	-5	.32	.2	1.07	76	-10	-5
ZM139	5465682	449.60	451.40	5465682	.7	.53	-5	17	31.1	-5	.39	.28	2.66	91	-10	6
ZM139	5465683	469.40	471.40	5465683	1.6	.37	-5	11	32.8	-5	.46	.15	1.84	252	-10	-5
ZM139	5465684	493.40	495.80	5465684	-5	.47	-5	16	34.2	-5	.4	.26	1.85	376	-10	-5
ZM139	5465685	511.40	514.00	5465685	.7	.56	-5	18	32.1	-5	.41	.28	3.32	221	-10	6
ZM139	5465686	514.40	517.40	5465686	1.5	.21	-5	11	34.5	-5	.37	.11	2.81	305	-10	-5
ZM139	5465687	523.40	525.30	5465687	1.2	.74	-5	24	32.5	-5	.52	.35	2.23	277	-10	12
ZM139	5465688	533.10	535.40	5465688	1.3	.06	-5	-5	36.6	-5	.25	-.05	1.82	225	-10	-5
ZM139	5465689	556.40	558.40	5465689	1	.07	-5	-5	35.4	-5	.29	.05	1.76	142	12	-5
ZM139	5465690	571.40	573.40	5465690	1.4	.88	-5	29	32.8	-5	.4	.43	1.62	106	13	64
ZM139	5465691	587.40	589.40	5465691	1.1	.75	-5	28	34.4	-5	.59	.36	.36	342	32	768
ZM139	5465692	604.40	606.40	5465692	-5	2.41	-5	79	24.6	-5	.97	1.13	3.65	150	14	8
ZM139	5465693	615.50	619.00	5465693	.9	.45	-5	19	34.5	-5	.28	.2	.67	80	-10	-5
ZM139	5465694	627.90	630.00	5465694	.6	.56	-5	17	32	-5	.41	.26	1.11	106	-10	-5
ZM139	5465695	630.00	631.80	5465695	.7	.52	-5	18	34.9	-5	.39	.23	.9	234	12	-5
ZM139	5465696	640.40	642.70	5465696	.6	.61	-5	18	34.6	-5	.3	.23	.6	110	-10	-5
ZM139	5465697	655.40	657.40	5465697	-5	2.21	-5	33	21.6	-5	1.58	.95	4.57	355	12	17
ZM139	5465698	661.00	662.80	5465698	.9	2.61	3	73	24.3	7	2.03	1	2.24	368	31	193
ZM139	5465699	664.60	666.60	5465699	-5	1.74	-5	49	23.7	8	1.54	.47	1.78	522	32	66
ZM139	5466062	666.60	669.20	5466062	-5	.59	-5	18	20.6	-5	.84	.2	1.48	450	14	26
ZM139	5466063	669.20	670.00	5466063	-5	1.66	7	45	22.1	22	3.13	.68	5.76	1070	13	48
ZM139	5465700	670.00	671.10	5465700	-5	5.41	38	144	11.5	35	3.32	1.97	4.36	823	36	205
ZM139	5466053	671.10	673.40	5466053	-5	.83	23	19	13.5	14	2.69	.3	6.45	934	47	128
ZM139	5466064	673.40	677.50	5466064	-5	1.81	12	53	11.1	23	2.65	.76	5.25	896	26	45
ZM139	5466234	677.5	679.85	5466234	-5	1.14	-5	33	13.1	-5	3.59	.4	5.34	1290	21	58
ZM139	5466235	679.85	681.6	5466235	-5	.53	-5	18	11.3	-5	2.73	.2	5.17	1070	-10	63
ZM139	5466054	681.60	683.40	5466054	-5	.97	-5	30	13.7	9	3.39	.4	6.69	1240	-10	39
ZM139	5466065	683.40	687.40	5466065	-5	3.27	13	105	9.51	32	3.68	1.48	4.32	1320	11	31
ZM139	5466055	687.40	689.00	5466055	-5	4.47	29	147	4.73	-5	2.66	1.96	1.82	777	-10	20
ZM139	5466066	689.00	691.40	5466066	-5	.89	21	29	4.07	-5	2.06	.37	1.46	610	-10	17
ZM139	5466056	691.40	693.30	5466056	-5	.81	12	26	3.3	-5	1.73	.33	1.13	483	-10	16
ZM139	5466057	700.40	702.40	5466057	-5	4.72	12	210	.89	-5	2.13	1.97	.62	163	-10	14

073.8  
 38-384  
 384-42.6 gr  
 426-100  
 100-150  
 150-201.1  
 201.1-227.0  
 227.0-252.9  
 252.9-269.2  
 269.2-288.3  
 288.3-312.7  
 312.7-325.6

363.6-423.9  
 423.95-428.5  
 428.5-527.7  
 527.7-532.1  
 532.1-570.1  
 570.1-611.7  
 611.7-651.2  
 651.2-664.6  
 664.6-670.0  
 670.0-689.0  
 689.0-702.4

CRA EXPLORATION PTY. LIMITED  
DRILL-HOLE SUMMARY LOG

HOLE NAME: DD95ZM190      AMG    EAST 363448    NORTH 5351780  
 PROSPECT: MYRTLE      GRID    EAST 59530    NORTH 49995  
 EL: ZEEHAN 1      EL 28/88    RL      DEPTH 203.9

DATE DRILLED: 1/7/95  
 LOGGED BY: S.J. TEAR  
 DRILLING CO.:  
 DRILL TYPE: DIAMOND  
 DRILL RIG: LY44  
 LOC DRILL CORE: ZEEHAN

## SURVEYS:

DEPTH	AZIM (AMG)	DIP	DEPTH	AZIM (AMG)	DIP
0	90°	45°			
63m	92°	43.5°			
100.00m	92°	43.5°			
150.00m	91°	44°			
203.9m	91°	43°			

## OBJECTIVES OF HOLE:

DIAMOND DRILL TEST OF UPPER SANDSTONE/LIMESTONE CONTACT

## LITHOLOGICAL SUMMARY:

FROM	TO	FORM CODE	COMMENTS
0	18m	Qha	Overburden; no recovery
18	33.3	Sc	Medium grained well bedded sandstone - Crotty Quartzite
33.3	53.1	Sc	Sheared dark grey clay zones - Crotty Quartzite
53.1	77.5	Ogud	Upper Dolomite Unit
77.5	80.6	Ogsd	Siderite Unit
80.6	85.0	Ogud	Upper Dolomite Unit
85.0	96.0	-	Cavity
96.0	107.3	Ogul	Argillaceous bioclastic calcarenites
107.3	108.15	Ogms	Laminated micrite Unit
108.15	203.9	Ogul	Argillaceous bioclastic calcarenite with burrows

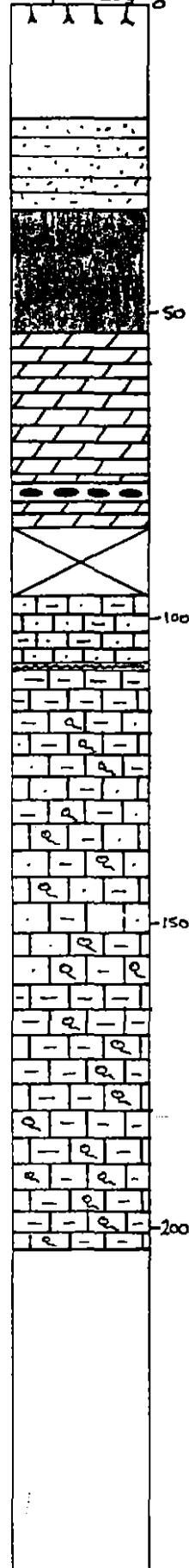
## MINERALISATION SUMMARY:

FROM	TO	COMMENTS
51.0	53.1	0.18% Zn in sheared(?) sandstone/siltstone
71.7	72.5	0.28% Zn associated with semi-massive pyrite zone

## CONCLUSIONS:

Bedding @ 26m 75° to c/a @ 108m 60° to c/a  
 Confirmation of minor mineral in Crotty sandstone immediately above limestone contact. Probably a major sheared contact - displacement unknown. Minor siderite alteration in middle of dolomite.

## Graphic Log



C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. ①.5

TENEMENT NAME MYRTLE No.

PLAN - MAP REFERENCE

CO-ORDINATES 363448E 5351780N AZIMUTH 090° (Amc) DRILLERS ALMAR COMMENCED 1.7.1995 DEPTH 203.9 m HOLE No. ZM190

RL COLLAR INCLINATION 4.5° DRILL TYPE L744 COMPLETED 16.7.95 CASING LEFT DPO No(s)

DEPTH		Core Rec. %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)				
From (M)	To (M)										REC (FAN)	REC (TO)	REC (M)	REC (%)	
0	18.0	-	-	Qha	Overburden							0	18	0	0
18.0	26.4	100	2	Sc	Grey medium grained locally well bedded massive sandstone; bioturbated zone 18.8 - 19m.	Banding 75° to c/A. (slight variation to 65° to c/A)	5466292	19.7	22.4			18.3	21.3	3.0	100
												21.3	22.4	1.1	100
												22.4	24.3	1.9	100
												24.3	25.3	1.0	100
												25.3	26.6	1.3	100
26.4	28.30	60	Sx	Sc	Broken core + core loss associated with grey sandstone possible bioturbated		93	26.4	28.3			26.6	26.8	0.1	50
												26.8	26.9	0.1	100
												26.9	27.3	0.3	21
												27.3	30.3	0.7	35
28.3	30.3	35	4f	Sc	Bioturbated sandstone - ?laminated to limestone		84	28.3	30.3			30.3	33.3	2.4	80
												33.3	36.3	3.0	100
												36.3	39.3	3.0	100
30.3	33.3	80	S	Sc	Clay and brecciated sandstone fragments - non calcareous		95	30.3	33.3			31.3	42.3	2.7	90
												42.3	45.0	1.0	40
												45.0	48.0	1.5	50
33.3	37.95	100	S	Sc	Dark grey clay		96	33.3	36.80			48.0	57.0	1.5	50
							97	35.8	37.80			51.0	53.1	0.7	33
37.95	42.3	63	S	Sc	light grey (intermixed with dark grey clay bands) clay		98	37.95	39.95			53.1	54.3	0.7	72
							99	39.95	42.3			54.3	54.9	0.4	75
												54.9	55.4	0.3	70
42.3	53.1	40	Sx	Sc	stained dark grey sandy ? dolomite or sandstone; non calcareous; locally more clayey.		90	42.3	45.0			55.4	55.6	0.2	100
							91	45.0	48.0			55.6	56.9	0.3	20
							92	48.0	51.0			56.9	57.5	0.3	50
							93	51.0	53.1			57.5	58.6	0.7	63
												58.6	58.8	0.1	50
53.1	77.5		Sx	Agad	Dark grey dolomite - broken core	Minor amount of scattered pyrite blebs and veinlets localized.	94	53.1	54.3			58.8	59.9	0.9	72
							95	54.3	56.9			59.9	60.4	0.5	100
							96	56.9	58.8			60.4	63.3	1.9	100
							97	58.8	60.4			62.3	63.3	0.7	70

234067

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

MYRTLE SHEET No. 0.5

TENEMENT NAME ~~MYRTLE~~ No. ....

PLAN - MAP REFERENCE .....

363448E

CO-ORDINATES 5351780N AZIMUTH ..... DRILLERS ALMAC COMMENCED 1.7.1995 DEPTH 108.15 HOLE No. 2M190

RL COLLAR ..... INCLINATION ..... DRILL TYPE LY44 COMPLETED 16.7.95 CASING LEFT ..... DPO No(s) .....

DEPTH		Core Rec. %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by .....				
From (M)	To (M)										Rec (M)	Rec (%)	Rec (M)	Rec (%)	
					Minor scattered zones of dol veining + pyrite stringer veining	Dolomitised veining 61-62.3	98	60.4	62.3			63.3	65.1	1.8	100
						30°+10° to c/a. possible fault zone.	299	62.3	63.7			65.1	66.6	1.5	100
						Small dolomite breccia @ 64m	5466300	63.7	65.1			66.6	67.8	0.4	33
					Badly broken core.	followed by pyritic zone - pyrite in red ground stringers	5468901	65.1	66.6			67.8	69.1	1.0	80
						vein. fissiles @ 64.5m.	2	66.6	68.6			69.1	69.9	0.4	50
							3	68.6	70.5			69.9	70.5	0.3	50
							4	70.5	71.7			70.5	71.7	0.9	75
							5	71.7	72.5			71.7	72.5	0.8	100
						Semi massive pyrite @ 72m for 15cm. Minor veins of sphalerite	6	72.5	75.0			72.5	73.0	0.4	80
						poss 2 phase of pyrite + fine grain + coarse grain type.	7	75.0	76.9			73.0	73.6	0.45	75
							8	76.9	77.5			73.6	75.0	0.9	63
							9	77.5	78.8			75.0	75.5	0.25	50
							10	78.8	80.6			75.5	76.9	0.46	380
							11	80.6	82.1			76.9	77.5	0.15	25
77.5	80.6			Ognd	Possible siderite zone (or pyrite) Broken + partially weathered core. within dolomite		12	82.1	84.3			77.5	78.8	0.86	50
							13	84.3	85.0			78.8	80.6	0.1	5
							14	86.0	99.3			80.6	82.1	0.6	40
							15	99.3	102.3			82.1	84.3	0.4	18
80.6	85.0			Ognd	Dolomite with zones of calcareous material							84.3	85.0	0.2	28
												85.0	87.3	0	0
												87.3	90.0	0	0
85.0	96.0				CAVITY - NO RECOVERY							90.0	93.0	0	0
												93.0	96.0	0	0
96.0	107.3			Ognd.	Grey/Dark grey med/fine grained calcareous - broken core and slightly rotted. Minor argillite zones locally coarse biotite some ?hydroxide	Calcite veining mainly on stringers 105.8-106.0 Calcite vein sub parallel to c/a.	16	102.3	105.3			96.0	99.3	1.1	33
							17	105.3	107.3			99.3	102.3	1.5	50
												102.3	105.3	2.4	80
												105.3	107.3	2.4	80
												107.3	111.3	3.0	100
												111.3	114.3	3.0	100
107.3	108.15	80	3	Ognd	Laminated massive unit.	Balding 60° to c/a.	18	107.3	108.15			114.3	117.3	3.0	100
												117.3	120.3	3.0	100

234068



C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. ④ of 5

363448E

TENEMENT NAME MYRTLE No. ....

CO-ORDINATES 5351780N AZIMUTH..... DRILLERS ALMAC COMMENCED 1.7.1995 PLAN - MAP REFERENCE.....

RL COLLAR..... INCLINATION..... DRILL TYPE LY44 COMPLETED 16.7.95 DEPTH 186.3 HOLE No. 2M190

DEPTH		Core Rec. %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)				
From (M)	To (M)										Rec (mm)	Rec (g)	Rec (m)	Rec (%)	
134.9	135.8	100	2	Ogul	Synsediimentary breccia zone Disrupted units with variable grain size of bioclots	Calcite veined 70° E c/A 10° E c/A	22	134.9	135.8			120.3	123.3	3.0	100
												125.3	126.3	3.0	100
												126.3	129.3	3.0	100
												129.3	132.3	3.0	100
135.8	145.45	100	1	Ogul	Fine/med grained grey calcarenite (locally bioclastic + locally almost micritic) with argillite discrete bands - some bands have fine grained bioclots. Argillite bearing less discrete + less frequent downhole.	Calcite vein 137.9-138.05 45° E c/A. - poro shear. Bedding 60° E c/A. Over mini-calcite veining.	23	135.8	138.3			132.3	135.3	3.0	100
												135.3	138.3	3.0	100
												138.3	144.3	3.0	100
												144.3	144.3	3.0	100
												144.3	147.3	3.0	100
												147.3	150.3	3.0	100
												150.3	153.3	3.0	100
												153.3	156.3	3.0	100
												156.3	159.3	3.0	100
145.45	153.8	100	1	Ogul	Grey, bioclastic, fine grained calcarenite with minor interstitial argillite; burrowed zones.	Calcite veining locally intense but irregular 145.45-150m.	546/8424	146.3	148.7			159.3	162.3	3.0	100
												162.3	165.3	3.0	100
												165.3	168.3	3.0	100
												168.3	171.3	3.0	100
												171.3	174.3	3.0	100
153.8	157.9	100	2	Ogul	Major zone of calcite veining	Centals of 10s cm thick veins 60° E c/A generally.	25	153.8	155.9			174.3	177.3	3.0	100
							26	155.9	157.9			177.3	180.3	3.0	100
												180.3	183.3	3.0	100
157.9	163.3	100	1	Ogul	Grey med/fine grained bioclastic calcarenite with minor interstitial argillite and thin bands. Becoming more calcilitic (darker grey) @ 163.3m.	Minor calcite veining mainly on sporadic stringers.	27	161.6	163.6			183.3	186.3	3.0	100
												186.3	189.3	3.0	100
												189.3	192.3	3.0	100
												192.3	195.0	2.7	100
												195.0	198.0	3.0	100
												198.0	201.0	3.0	100
												201.0	203.4	2.9	100
163.3	203.9	100	1	Ogul	Amorphous-looking med/fine grained bioclastic calcarenite with calcilitic appearance (locally)	Occ bands calcite veins up to 8cm thick ~ 60° E c/A. Calcite vein @ 175.7 for 32m with joints at base 45° E c/A.	28	174.3	176.0						
							29	183.3	186.3						

234070



			77388	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
190	19.7	22.4	5466282	-5	1.85	-5	103	-.05	6	.53	.89	.12	22	11	39
190	26.4	28.3	5466283	-5	3.44	21	202	.05	9	.74	1.61	.21	30	19	210
190	28.3	30.3	5466284	-5	4.38	17	258	-.05	14	.7	2.05	.28	19	20	56
190	30.3	33.3	5466285	-5	6.9	63	373	.13	18	1.73	3.44	.55	20	37	117
190	33.3	35.8	5466286	-5	8.05	37	499	.32	23	2.12	4.12	.63	22	33	292
190	35.8	37.8	5466287	-5	8.7	30	543	.23	20	2.01	4.38	.72	21	35	139
190	37.8	39.95	5466288	-5	8.15	28	523	.26	22	2.42	4.08	.68	25	42	112
190	39.95	42.3	5466289	-5	8.4	24	597	.53	23	1.6	4.24	.7	30	65	234
190	42.3	45	5466290	-5	9.23	7	772	.22	23	1.59	4.76	.83	23	16	36
190	45	48	5466291	-5	9.66	42	821	.36	27	3.92	4.99	.82	1670	14	32
190	48	51	5466292	-5	7.74	17	769	.98	20	7.32	4.1	.63	3340	20	53
190	51	53.1	5466293	-5	5.26	84	924	5.66	23	4.97	2.59	3.5	1330	184	1800
190	53.1	54.3	5466294	-5	.89	-5	128	18.7	5	2.18	.47	10.4	702	25	1440
190	54.3	56.9	5466295	-5	1.44	-5	229	17.7	-5	1.75	.75	9.77	582	30	75
190	56.9	58.8	5466296	-5	1.28	-5	231	18.6	-5	1.25	.67	10.5	539	29	61
190	58.8	60.4	5466297	-5	1.01	-5	183	18.9	-5	1.23	.53	10.8	512	13	17
190	60.4	62.3	5466298	-5	1.06	-5	259	19.1	-5	1.41	.56	10.8	507	21	18
190	62.3	63.7	5466299	-5	1.02	77	207	18.6	-5	1.88	.51	10.7	480	26	134
190	63.7	65.1	5466300	-5	.69	-5	140	19.1	-5	2.41	.35	10.9	416	32	431
190	65.1	66.6	5468401	-5	.64	-5	127	19.8	-5	1.06	.31	11.4	515	12	63
190	66.6	68.6	5468402	-5	2.54	8	287	18	9	1.84	.63	10.4	625	69	209
190	68.6	70.5	5468403	-5	.58	-5	115	19.1	-5	1.11	.3	10.8	517	22	160
190	70.5	71.7	5468404	-5	.58	-5	119	19.3	-5	1.31	.31	11	483	16	50
190	71.7	72.5	5468405	-5	.84	17	117	17	11	5.92	.43	9.68	405	176	2820
190	72.5	75	5468406	-5	.83	-5	87	19.4	8	1.39	.43	11.2	431	22	55
190	75	76.9	5468407	-5	2.22	-5	241	15.3	10	1.84	1.19	8.33	653	22	87
190	76.9	77.5	5468408	-5	2.86	-5	308	13.6	6	4.03	1.51	7.3	1900	22	32
190	77.5	78.8	5468409	-5	2.64	-5	267	8.83	-5	16.3	1.39	3.47	8960	-10	12
190	78.8	80.6	5468410	-5	1.57	-5	171	8.14	-5	22.2	.82	2.63	13100	-10	16
190	80.6	82.1	5468411	-5	4.07	-5	305	11.5	6	3.61	2.13	5.81	1460	14	26
190	82.1	84.3	5468412	-5	4.07	-5	308	14.2	-5	1.97	2.17	4.44	565	15	23
190	84.3	85	5468413	-5	4.39	-5	341	12.6	6	1.96	3.33	5.58	380	18	31
190	86	99.3	5468414	-5	.96	-5	71	30.7	-5	.56	.52	.72	237	-10	38
190	99.3	102.3	5468415	-5	.9	-5	67	31.3	-5	1.2	.45	.95	440	12	28
190	102.3	105.3	5468416	-5	.6	-5	48	29.6	-5	1.02	.31	2.47	455	172	65
190	105.3	107.3	5468417	-5	.98	-5	68	29.9	-5	.84	.53	1.29	355	237	16
190	107.3	108.15	5468418	-5	.77	-5	55	31.5	-5	.26	.41	.68	139	22	11
190	108.15	111	5468419	-5	.63	-5	57	28.3	-5	.48	.45	2.21	186	-10	32
190	120.9	122.9	5468420	-5	.41	-5	27	32	-5	.3	.52	1.24	137	-10	20
190	132.3	134.9	5468421	-5	1.11	-5	58	27.2	-5	.84	.6	2.22	299	16	46
190	134.9	135.8	5468422	-5	.72	-5	40	31.4	-5	.53	.35	1.76	191	-10	12
190	135.8	138.3	5468423	-5	.81	-5	41	30.4	-5	.59	.43	1.36	251	16	20
190	146.3	148.7	5468424	-5	.32	-5	16	34.1	-5	.25	.17	.98	123	-10	7
190	153.8	153.9	5468425	-5	.21	-5	13	32.9	-5	.27	.09	2.07	165	-10	-5
190	155.9	157.9	5468426	2.2	.24	-5	16	37.4	-5	.35	.11	1.68	283	13	25
190	161.6	163.6	5468427	2.4	.25	-5	12	37.7	-5	.27	.12	2.07	126	12	23
190	174.3	176	5468428	1.2	1.34	-5	72	32.9	-5	1.34	.71	1.67	247	18	36
190	183.3	186.3	5468429	1.8	1.13	-5	55	29.8	-5	.47	.61	2.72	96	-10	5
190	201	203.9	5468430	1.6	.68	-5	33	31.7	-5	.42	.37	3.92	90	-10	16

CRA EXPLORATION PTY. LIMITED  
DRILL-HOLE SUMMARY LOG

234073

Graphic Log

HOLE NAME: DD96ZM191  
PROSPECT: MYRTLE  
L: ZEEHAN 1 EL29/88

AMG EAST 364056 NORTH 5352092  
GRID EAST 60144E NORTH 50296N.  
FL 149m. DEPTH 300M

DATE DRILLED: 24/4/96  
LOGGED BY: S.J. TEAR  
DRILLING CO.: DD.TAS.  
DRILL TYPE: DIAMOND  
DRILL RIG: U.250  
LOC DRILL CORE: ZEEHAN

SURVEYS:

DEPTH	AZIM (AMG)	DIP	DEPTH	AZIM (AMG)	DIP
0	134°	60°	251m	142°	59°
50m	137°	60°	299m	141°	59°
101m	139°	60°			
149m	138°	60°			
200m	140°	60°			

OBJECTIVES OF HOLE:  
Diamond Drilltest of the sub-siltstone unit sequence

LITHOLOGICAL SUMMARY:

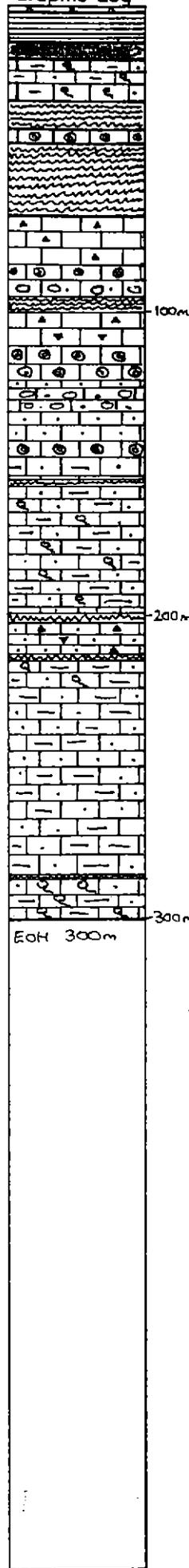
FROM	TO	FORM CODE	COMMENTS
0	2	Qha	Overburden
2	11.7	Ogfc	Ferruginous clays
11.7	17.0	Ogdc	Dark grey clays
17.0	31.3	Ogul	Nodular calcarenite and bioclastic argillite.
31.3	68.5	Ogmu	Laminated micrite unit.
68.5	158.3	Ogul	Mixed sequence of shallow water/intertidal limestones
158.3	286.8	Ogul	Mixed sequence of argillites and calcarenites
286.8	300.0	Ogul	Sub-tidal shallow/subtidal mixed sequence of laminated micrite units, bioclastic units and argillaceous calcarenites.

MINERALISATION SUMMARY:

FROM	TO	COMMENTS
15.5	17.0	Sulphidic dark grey clays at base of unit. 0.62% Zn.

CONCLUSIONS:  
The hole seemingly missed its target unless the top most dark clays represented the siltstone unit - the underlying slightly coarse bioclastic <sup>calcarenite</sup> and laminated micrite unit may be a clue.

Bedding @ 32.1m 60° to c/a. @ 101.3m 45° to c/a @ 156m 55° to c/a @ 200.8m 80° to c/a @ 286.8m 70° to c/a.



C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 1 of 8

TENEMENT NAME MYRTLE No. 28/88

PLAN - MAP REFERENCE

AMG { 36 4056 E.  
CO-ORDINATES SSS 2092 N. AZIMUTH 134° DRILLERS POTAS COMMENCED 24/4/1996  
RL COLLAR 149m INCLINATION 60° DRILL TYPE U250 Diamond COMPLETED 10/5/1996

DEPTH 300m HOLE No. DD96ZM191  
CASING LEFT DPO No(s) 82167

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	(CL = CORE LOSS)											
From (M)	To (M)									Magnetic susceptibility				REC (mm)	REC (1/2)	REC (cm)	REC (%)				
										Depth	Value	Depth	Value	Depth	Value	REC	REC	REC	REC		
0	9.5	28	5x	Qha	Light grey/orange/white clay with sandstone material		5471079	0	2.0	0	CL 15.5	0	31	4	0	2.0	0.5	25			
							80	2.0	3.3	0.5	CL 16	5	31.5	5	2.0	3.5	0.75	50			
							81	3.3	6.5	1	CL 16.5	CL 32	5	3.5	5.0	0.15	10				
9.5	11.7		5x	Ogfc	Orange ferruginous clays		82	6.5	8.0	1.5	CL 17	5	32.5	2	5.0	6.5	0.1	7			
							83	8.0	9.5	2	0	17.5	0	33	5	6.5	8.0	0.6	40		
11.7	17.0		5x	Ogdc	Black/dark grey clay (locally light grey)		84	9.5	11.0	2.5	0	18	CL 33.5	9	8.0	9.5	0.6	40			
							85	11.0	11.7	3	CL 18.5	CL 34	7	9.5	11.0	0.5	33				
							86	11.7	12.5	3.5	1	19	CL 34.5	5	11.0	12.5	1.4	93			
17.0	20.5		5	Ogul	Rotted argillaceous limestone		87	12.5	14.0	4	0	19.5	CL 35	5	12.5	14.0	1.2	80			
							88	14.0	15.5	4.5	CL 20	CL 35.5	5	14.0	15.5	0.8	53				
20.5	31.3		1	Ogul	Intermixed nodular argillaceous bioclastic calcarenite; bioclasts in argillite; nodules have irregular margins - mottled appearance.		89	15.5	17.0	5	CL 20.5	CL 36	6	15.5	17.0	0.9	60				
							90	17.0	18.5	5.5	0	21	5	36.5	0	17.0	18.5	0.75	50		
							91	23.0	24.5	6	CL 21.5	4	37	8	18.5	20.0	-	0			
											6.5	CL 22	2	37.5	4	20.0	20.7	0.3	43		
											7	0	22.5	0	38	4	20.7	21.7	0.95	95	
											7.5	0	23	6	38.5	2	21.7	23.0	1.3	100	
31.3	40	100	1	Ogmu	Micrite unit - partially laminated; with bird's eye; locally massive micrite. Stylolitic with pyrite on seams	Bedding @ 32.1m 60° to c/a. shear vein zone calcite @ 39.8m 75° to c/a; breccia vein.	92	35.0	36.5	8	CL 23.5	10	39	0	23.0	26.0	3.0	100			
											8.5	0	24	5	39.5	4	26.0	29.0	3.0	100	
											9	0	24.5	5	40	0	29.0	32.0	3.0	100	
											9.5	CL 25	5	40.5	5	32.0	33.5	1.5	100		
											10	5	25.5	7	41	5	33.5	35.0	1.5	100	
											10.5	CL 26	8	41.5	6	35.0	36.5	1.5	100		
40	45.9	100	1	Ogul	Oncolite unit up to 3cm oncolites in diameter. Fine grained calcarenite/micrite & minor argillite	Calcite breccia vein 75° to c/a 25cm thick in middle of unit. Calcite breccia vein 15cm thick 70° to c/a @ 45.9m.	93	42.2	44.0	11	7	26.5	5	42	8	36.5	38.0	1.25	83		
											11.5	9	27	8	42.5	5	38.0	41.0	3.0	100	
											12	12	27.5	5	43	5	41.0	42.5	1.5	100	
											12.5	0	28	6	43.5	9	42.5	44.0	1.5	100	
											13	0	28.5	5	44	2	44.0	47.0	3.0	100	
45.9	68.5	100	1	Ogmu	Micrite unit - weakly laminated in places, with bird's eye micrites; with stylolites and argillaceous stylolites.	Cleavage 15° to c/a - 35° to c/a Bedding 45° to c/a Calcite veining? bedding parallel? 63m for 15cm.	94	53.0	54.5	13.5	0	29	6	44.5	5	47.0	50.0	3.0	100		
							95	68.0	71.0	14	0	29.5	5	45	5	50.0	51.5	1.5	100		
											14.5	0	30	5	45.5	8	51.5	53.0	1.5	100	
											15	0	30.5	5	46	0	53.0	56.0	3.0	100	

234074

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 2 of 8

TENEMENT NAME MYRTLE No 28/88

AMG 364056E  
CO-ORDINATES 5352092N AZIMUTH 134° AMG DRILLERS DOTAS COMMENCED 24/4/96 DEPTH 300M HOLE No DD96ZM191  
RL COLLAR 149M INCLINATION 60° DRILL TYPE 0250 COMPLETED 10/5/96 CASING LEFT DPO No(s) 82/67

PLAN - MAP REFERENCE

DEPTH 300M HOLE No DD96ZM191

CASING LEFT DPO No(s) 82/67

DEPTH		Core Rec. %	ROD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	ASSAY VALUES (Analysed by.....)										
From (M)	To (M)									Mag. BUS.										
										Depth	Value	Depth	Value	Depth	Value	REC (ppm)	REC (to)	REC (M)	REC (%)	
					localised zone of fenestral micrite with both dark argillaceous calcarenite fill and calcite fill. Some light grey seemingly coarser bands maybe large coral <30cm @ 64.9m - INTERTIDAL FACIES	Calcite breccia vein with large zoned calcite veining. Bedding 45° to c/a @ 65m					46.5	10	62	10	77.5	10	56.0	57.0	1.0	100
											47	10	62.5	10	78	9	57.0	59.0	2.0	100
											47.5	6	63	2	85	8	59.0	62.0	3.0	100
											48	5	63.5	0	79	6	62.0	65.0	3.0	100
											48.5	5	64	0	78.5	9	65.0	68.0	3.0	100
											49	5	64.5	9	80	9	68.0	71.0	3.0	100
											49.5	5	65	2	80.5	0	71.0	74.0	3.0	100
											50	5	65.5	8	81	10	74.0	77.0	3.0	100
68.5	82.1	100	1	Ogpl	Slightly deeper water intermixed argillite and light grey/grey calcarenite micrite - burrowed and bioturbated; occ coral bioclasts. Occ more micritic zones; possible syn-sedimentary breccia zones; possible oncolites						50.5	5	66	8	81.5	6	77.0	80.0	3.0	100
											51	5	66.5	6	82	5	80.0	83.0	3.0	100
											51.5	5	67	10	82.5	5	83.0	85.8	2.8	100
											52	5	67.5	10	83	0	85.8	89.0	3.2	100
											52.5	6	68	9	83.5	6	89.0	92.0	3.0	100
											53	4	68.5	5	84	5	92.0	95.0	3.0	100
											53.5	5	69	10	84.5	6	95.0	98.0	3.0	100
											54	2	69.5	10	85	7	98.0	101.0	3.0	100
											54.5	6	70	5	85.5	10	104.0	104.0	3.0	100
											55	5	70.5	6	86	5	104.0	107.0	3.0	100
82.1	83.4	100	1	Ogpl	Light grey possibly bioclastic equigranular calcarenite.		5471096	83	85.8		55.5	5	71	8	86.5	0	107.0	110.0	3.0	100
											56	5	71.5	4	87	3	110.0	113.0	3.0	100
											56.5	8	72	6	87.5	2	113.0	116.0	3.0	100
83.4	94.4	100	1	Ogpl	Intermixed argillite and bioclastic calcarenite with more <del>and</del> equigranular calcarenite zones; possibly bioclasts and possible oncolites + possible syn-sedimentary breccias	Thin calcite veining < 2mm 70° to c/a.					57	5	72.5	5	88	5	116.0	119.0	3.0	100
											57.5	8	73	5	88.5	5	119.0	122.0	3.0	100
											58	6	73.5	8	89	6	122.0	125.0	3.0	100
											58.5	2	74	9	89.5	5	125.0	128.0	3.0	100
											59	5	74.5	9	90	0	128.0	131.0	3.0	100
											59.5	5	75	8	90.5	4	131.0	134.0	3.0	100
											60	4	75.5	9	91.0	5	134.0	137.0	3.0	100
94.4	96.3	100	2	OgFZ	Ag above with calcite veining + breccia veining Possible fault zone	lower contact 70° to c/a.	5471098	94	96.3		60.5	6	76	5	91.5	9	137.0	140.0	3.0	100
											61	8	76.5	4	92	5	140.0	143.0	3.0	100
											61.5	7	77	5	92.5	5	143.0	146.0	3.0	100

234075

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 3 of 8

TENEMENT NAME MYRTLE No. 28188

AMA 364056E  
CO-ORDINATES S352092N AZIMUTH 134° AMG DRILLERS DOTAS COMMENCED 24/4/96  
RL COLLAR 14.1m INCLINATION 60° DRILL TYPE U250 COMPLETED 10/5/96

PLAN - MAP REFERENCE  
DEPTH 300M HOLE No. DD962M191  
CASING LEFT DPO No(s) 82167

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	ASSAY VALUES (Analysed by.....)									
From (M)	To (M)									Mag				SUS					
										Depth	Value	Depth	Value	REC (mm)	REC (t)	REC (m)	REC (%)		
96.3	101.3	100	1	Ogml	Micritic looking fine grained calcarenite; with birds eye micrite zones becoming more argillaceous (as stylolites) after 100m. Stromatolite cavities 100.7-101.2 in ? coral.	Minor calcite veining until 100m.				93	3	108.5	11	124	0	146.0	149.0	3.0	100
										93.5	5	109	10	124.5	5	149.0	152.0	3.0	100
										94	5	109.5	8	125	4	152.0	158.5	1.5	100
										94.5	0	110	5	125.5	2	158.5	155.0	1.5	100
										95	5	110.5	10	126	6	158.0	159.0	3.0	100
										95.5	0	111	9	126.5	6	159.0	161.0	3.0	100
										96	0	111.5	4	127	5	161.0	164.0	3.0	100
										96.5	5	112	5	127.5	6	164.0	167.0	3.0	100
										97	4	112.5	5	128	6	167.0	170.0	3.0	100
101.3	111.7	100	1	Ogul	Shallow water possibly intertidal fine grained micritic calcarenites with birds eye micrites + fenestral micrite calcarenite; possible branching unknown texture @ 105.5m	Bedding 45° to c/n. Calcite veining low sub. parallel to c/n.	5471098	107.0	108.5	97.5	8	113	8	128.5	9	170.0	173.0	3.0	100
										98	4	113.5	5	129	5	173.0	176.0	3.0	100
										98.5	0	114	0	129.5	4	176.0	179.0	3.0	100
										99	5	114.5	6	130	4	179.0	182.0	3.0	100
										99.5	9	115	5	130.5	5	182.0	185.0	3.0	100
										100	5	115.5	5	131	5	185.0	188.0	3.0	100
										100.5	6	116	2	131.5	5	188.0	191.0	3.0	100
										101	0	116.5	6	132	4	191.0	194.0	3.0	100
111.7	121.2	100	1	Ogul	Oolite? zone with red grained calcarenites and bioclasts. Syn sedimentary breccias, with large >20cm coral fragments; vicrene in amount of argillite.		5471099	115	117	101.5	6	117	5	132.5	5	194.0	197.0	3.0	100
										102	10	117.5	6	133	4	197.0	200.0	3.0	100
										102.5	5	118	5	133.5	5	200.0	203.0	3.0	100
										103	5	118.5	6	134	6	203.0	206.0	3.0	100
										103.5	6	119	4	134.5	4	206.0	209.0	3.0	100
										104	5	119.5	6	135	2	209.0	212.0	3.0	100
										104.5	5	120	5	135.5	8	212.0	215.0	3.0	100
121.2	126.3	100	1	Og10	Med grained equigranular grey bioclastic calcarenite with occ argillaceous stylolite; occ micrite clast		54710100	124	126	105	9	120.5	5	136	8	215.0	218.0	3.0	100
										105.5	5	121	5	136.5	5	218.0	221.0	3.0	100
										106	6	121.5	2	137	6	221.0	224.0	3.0	100
										106.5	9	122	5	137.5	9	224.0	227.0	3.0	100
										107	8	122.5	5	138	10	227.0	230.0	3.0	100
126.3	134.0	100	1	Ogul	Synsedimentary breccia/heavily bioturbated argillaceous bioclastic calcarenite.					107.5	10	123	2	138.5	10	230.0	233.0	3.0	100
										108	11	123.5	5	139	9	233.0	236.0	3.0	100

234076

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 14 of 28

CO-ORDINATES 364056E 5352092N AZIMUTH 134° AMG DRILLERS OOTAS COMMENCED 24/4/96  
RL COLLAR 14.9M INCLINATION 60° DRILL TYPE U250 COMPLETED 10/5/96

TENEMENT NAME MYRTLE No. 28188  
PLAN - MAP REFERENCE  
DEPTH 300M HOLE No. DD962M191  
CASING LEFT DPO No(s) 82167

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	ASSAY VALUES (Analysed by.....)										
From (M)	To (M)									Mag Sus				REC (mm)	REC (G)	REC (C)	REC (P)			
										Depth	Value	Depth	Value	Depth	Value					
					occ large coral fragment numerous bioclots in argillite interstitial and fine grained calcarenite; becoming more equigranular calcarenite at base						131.5	9	155	6	170.5	7	234.0	239.0	3.0	100
											140	9	155.5	10	171	9	239.0	244.0	3.0	100
											140.5	10	156	10	171.5	2	242.0	246.0	3.0	100
											141	10	156.5	8	172	9	245.0	248.0	3.0	100
											141.5	10	157	10	172.5	9	248.0	251.0	3.0	100
											142	9	157.5	6	173	10	249.0	254.0	3.0	100
											142.5	10	158	5	173.5	8	251.0	257.0	3.0	100
134	134.8	100	1	Og00	Equigranular bioclastic calcarenite unit with calcite veining parallel to c/a						143	9	158.5	9	174	5	257.0	260.0	3.0	100
											143.5	10	159	10	174.5	6	260.0	263.0	3.0	100
											144	2	159.5	0	175	5	262.0	266.0	3.0	100
											144.5	4	160	9	175.5	9	266.0	269.0	3.0	100
134.8	138.4	100	1	Og1	Sequence of interbedded dark grey argillaceous calcarenite and fine grained (oncolitic) grey calcarenite; often get bioclastic grey calcarenite bands - particularly towards base - lam brachiopod shells	Bedding: slightly irregular contacts (70° to c/a) - dense to disturbed by ? burrowing or dewatering. Minor zone of pyrite? clots @ 137.3m.					145	10	160.5	10	176	7	269.0	272.0	3.0	100
											145.5	6	161	8	176.5	10	272.0	274.6	3.0	100
											146	7	161.5	10	177	10	274.6	277.6	3.0	100
											146.5	10	162	10	177.5	5	277.6	280.8	3.0	100
											147	10	162.5	10	178	6	280.8	284.0	3.0	100
											147.5	10	163	8	178.5	9	284.0	287.0	3.0	100
											148	10	163.5	9	179	6	287.0	290.0	3.0	100
											148.5	8	164	10	179.5	8	290.0	293.0	3.0	100
138.4	143.4	100	1	Og1	Burrowed fine grained grey calcarenite with argillite <del>thin</del> cross laminae locally; occ argillite band. rare bioclots until 141m coarse brachiopods - possible oncolites towards base. Well cleaved c/a planes	5cm calcite @ 143.4m - pyrite on lower contact. bedding parallel 60° to c/a with slickensides. V. minor diam blabs of pyrite @ 142m, 142.2m cleavage 45° to c/a - major 30° to c/a then 2 phos calcite breccia vein @ 139.3m 50° to c/a // to bedding locally?	5471271	140.0	141.5		149	10	164.5	6	180	6	293.0	296.0	3.0	100
											149.5	10	165	9	180.5	6	296.0	299.0	3.0	100
											150	10	165.5	10	181	4	299.0	300.0	3.0	100
											150.5	12	166	5	181.5	8				
											151	10	166.5	5	182	10				
											151.5	11	167	5	182.5	6				
											152	11	167.5	10	183	5				
											152.5	10	168	9	183.5	6				
											153	5	168.5	10	184	10				
											153.5	9	169	9	184.5	5				
143.4	144.3	100	1	Og1	Oncolite Unit	Minor veining with pyrite clots					154	6	169.5	11	185	7				
											154.5	5	170	9	185.5	10				

234077

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 5 of 9  
No. 28188

TENEMENT NAME MYRTLE  
PLAN - MAP REFERENCE

CO-ORDINATES 364056E S352092N AZIMUTH 134° AMG DRILLERS DOPAS COMMENCED 24/4/96 DEPTH 300m HOLE No. DD96ZM191  
RL COLLAR 149m INCLINATION 60° DRILL TYPE U250 COMPLETED 10/5/96 CASING LEFT DPO No(s) 22167

DEPTH		Core Rec. %	RAD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)								
From (M)	To (M)										Mag SUS		Depth	Value	Depth	Value			
144.3	156.0	100	1	Ognd	Burrowed argillaceous calcarenite with equigranular unit at top; locally argillite dominant units. Occ bioclastic band	cleavage subparallel to c/a. + variable 35° to c/a. Minor slabs often with calcite veinlets eg 150-2 150m bedding 60° to c/a some py in cover units	5471271	152.0	153.5			186	11	201.5	4				
												186.5	6	202	4				
												187	9	202.5	5				
												187.5	5	203	2				
												188	6	203.5	4				
												188.5	6	204	3				
												189	7	204.5	4				
156.0	156.8	100	1	Ognd	Possible oncolite band with coarse bioclasts passing into an inter laminated argillite/calcarenite unit - ? cleavage related	Bedding 55° to c/a.						189.5	6	205	0				
												190	6	205.5	5				
												190.5	6	206	0				
												191	9	206.5	0				
												191.5	10	207	0				
												192	10	207.5	0				
156.8	158.3	100	1	Ognd	med/coarse equigranular bioclastic unit - calcite filled cavities - ?stromatolites	Pyrite blabs at top contact.						192.5	5	208	2				
												193	5	208.5	2				
												193.5	4	209	2				
												194	5	209.5	5				
												194.5	9	210	4				
158.3	165.7	100	1	Ognd	Intermixed and bedding disturbed light grey almost micritic calcarenite and argillaceous calcarenite; calcite vug infill. Occ bioclasts in argillite burrowed in places. 159-159.7 - recrystallised carbonate unit or large coral bioclasts < 30cm. Becoming less argillaceous after 164m. more micritic with birds eyes + burrows.							195	9	210.5	4				
												195.5	10	211	5				
												196	5	211.5	5				
												196.5	5	212	2				
												197	5	202.5	0				
												197.5	9	213	0				
												198	6	213.5	0				
												198.5	0	214	0				
												199	9	214.5	0				
												199.5	4	215	4				
												200	5	215.5	0				
												200.5	6	216	5				
												201	5	216.5	8				

234078

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

TENEMENT NAME... MYRTLE No. 28/88

SHEET No. 1 of 1

AMG 364050E  
CO-ORDINATES S352092N AZIMUTH 134° AMG DRILLERS DOTAS COMMENCED 24/4/96 DEPTH 300M HOLE No. DD962m191  
RL COLLAR 149m INCLINATION 60° DRILL TYPE U250 COMPLETED 10/5/96 CASING LEFT DPO No(s) 82167

PLAN - MAP REFERENCE.....

DEPTH		Core Rec. %	RFD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weather, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)			
From (M)	To (M)										Mag Sus			
										Depth	Value	Depth	Value	
165.7	173.0	100	1	Opal	Intermixed argillaceous burrowed bioclastic calcarenite; with calcite filled vugs + recrystallizations. Disturbed bedding (heavy) locally; argillaceous calcarenite bands. 167-167.6 syn sed breccia.	Minor pyrite in calcite blobs.	5471273	165.5	167.0		217	3	2325	5
											217.5	5	233	6
											218	5	2335	7
											218.5	4	234	5
											219	6	2345	5
											219.5	10	235	10
											220	6	2355	5
											220.5	4	236	5
											221	5	2365	6
170.8	173	100	1	Opal	Med/fine grained calcarenite almost micritic; fine grained abundant bioclots; burrowed appearance. Increase in argillaceous calcarenite material after 169.3m.	Well cleaved unit 50-40° to e/a. Calcite in 3cm 60° to c/a @ 173.9m Bedding @ 169m 65° to c/a.					221.5	6	237	5
											222	5	2375	6
											222.5	10	238	5
											223	9	2385	5
											223.5	5	239	10
											224	11	2395	5
											224.5	9	240	2
											225	6	240.5	4
173.0	192.2	100	1	Opal	Fine grained grey calcarenite and dark grey argillaceous calcarenite; with oolitic bioclastic bands. Beds of argillite orientated along cleavage. oolitic burrowed zone. Calcite filled elongated burrows. V. featureless limestone often lath-like bioclots in argillaceous patches after 188m.	Bedding 70° to c/a. cleavage 25° to c/a. Small blobs of pyrite in small calcite vugs @ 182.4m	5471274	174.0	176.0		225.5	7	241	2
											226	5	241.5	2
											226.5	10	242	0
											227	10	242.5	4
											227.5	10	243	5
											228	0	243.5	0
											228.5	10	244	6
											229	5	244.5	6
											229.5	10	245	7
											230	5	245.5	5
											230.5	7	246	9
192.2	193.5	100	1	Opal	Zone of small scale equigranular bioclastic calcarenite - channel samples.						231	5	246.5	8
											231.5	0	247	3
											232	0	247.5	2

234079

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 7 of 8

TENEMENT NAME MYRTLE No. 28/88

AMG 364056E  
CO-ORDINATES 5352092N AZIMUTH 134° AMG DRILLERS NOTAS COMMENCED 24/4/96 DEPTH 300M HOLE No. DD962m91  
RL COLLAR 149m INCLINATION 60° DRILL TYPE U250 COMPLETED 10/5/96 CASING LEFT DPO No(s) 82167

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)			
From (M)	To (M)										Mg		SiS	
										Depth	Value	Depth	Value	
192.5	198.4	100	1	Ogcl	fine grained grey calcarenite with calcite veins on base of more micritic units. Argillaceous beds/bands < 5cm becoming more burrowed after 197.3m						248	4	248.5	5
											248.5	5	264	5
											249	10	264.5	3
											249.5	6	265	4
											250	9	265.5	4
											250.5	7	266	3
											251	6	266.5	5
198.4	200.8	100	1	Ogcl	V. fine grained calcarenite / micrite with med grained argillaceous calcarenite as interstitial fill - ? cleavage affected. Calcite filled elongate burrows?						251.5	11	267	5
											252	10	267.5	5
											252.5	14	268	6
											263	13	268.5	6
											268.5	7	269	9
											269	11	269.5	4
											269.5	8	270	9
200.8	203.7	100	1	Ogmu	laminated micrite with birds eye micrites.	bedding 80° to c/A.	S471276	200.6	203		255	14	270.5	1
											255.5	5	271	1
											256	5	271.5	2
203.7	214.1	100	1	Ogcl	Fine grained calcarenite with bioclasts and birds eyes. Argillite bands and occ channel sands - shallow sub-tidal.		S471277	211.0	212.5		256.5	5	272	1
											257	9	272.5	2
											257.5	9	273	1
											258	11	273.5	0
											258.5	11	274	4
											259	5	274.5	5
214.1	216.7	100	1	Ogmu	laminated micrite with	bedding 70° to c/A Core Orientation @ 215m bedding closer to sub-vertical.					259.5	5	275	4
											260	2	275.5	4
											260.5	5	276	0
											261	5	276.5	0
216.7	221.0	100	1	Ogcl	V. fine grained bioclastic calcarenite with irregular argillite bands.						261.5	3	277	0
											262	10	277.5	2
											262.5	5	278	4
											263	6	278.5	5

234080

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 2 of 8  
No. 28188

TENEMENT NAME MYRTLE  
PLAN - MAP REFERENCE  
DEPTH 300M HOLE No. DD96ZM191  
DPO No(s) 82167

AMG: 364056E  
CO-ORDINATES 5352092N AZIMUTH 134° AMG DRILLERS DOTAS COMMENCED 24/4/96  
RL COLLAR 149M INCLINATION 60° DRILL TYPE U250 COMPLETED 10/5/96

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)			
From (M)	To (M)										MAG SUS.			
221.0	226.8	100	1	Ognd	Fine grained calcarenite locally micritic with irregular argillite bands occ burrowing zone. channel @ 227.5 - 228.2m. are other small channels. has distinct argillite banding downhole. Possible mottled zones locally.	Calcrete vein + veining zone @ 231.6m - 232.3m. Veining either as thin veinlets < 3mm thick or 5-10cm masses. Calcite vein from 236.1 - 237m.	8471278	227.0	228.5		279	1	245	S
											279.5	1	285	S
							79	242.8	244.7		280	5	255	0
											280.5	6	296	0
							80	259.2	261.7		281	8	265	2
											281.5	5	297	S
							81	274.2	276.1		282	6	275	S
											282.5	6	298	S
							82	280.8	282.8		283	1	288	S
											283.5	2	299	S
286.9	287.4	100	1	Ogms	Laminated micrite unit	Bedding. 70° to c/a					284	1	295	0
											284.5	1	300	S
287.4	300.0	100	1	Ognd	V. fine grained locally coarsely bioclastic calcarenite with argillaceous bands. Increased effect of cleavage - possible contorted bedding. V. shallow sub-tidal - wie channel deposits + coarse bioclastic in micrites.	Calcrete vein 5mm 15° E c/a with dissen blobs of pyrite. Bedding back to 55° E c/a @ 298.6m.	83	289.6	292.2		285	2	300	EOH
											285.5	2		
							84	294.0	295.9		286	2		
											286.5	5		
											287	1		
											287.5	0		
											288	0		
											288.5	1		
											289	5		
											289.5	9		
											290	10		
											290.5	4		
											291	6		
											291.5	2		
											292	2		
											292.5	1		
											293	4		
											293.5	4		
											294	2		

END OF HOLE - 300m.

234081

bhole	lilidh	D	s	Prog	EL	afrom	alo	aag	aal	aas	aca	aca	acu	ale	p'	amg	amn	app	azn	as	Lith
bhole	lilidh	DPO	smprno	Prospect																as	MRTLith
ZM191	DD96ZM191	82167	5471079	Myrtle	28/88	0	2	-0.5	8.5	33	899	0.09	31	2.57	3	0.3	16	1580	108		Oha
ZM191	DD96ZM191	82167	5471080	Myrtle	28/88	2	3.3	-0.5	7.97	42	1080	-0.05	18	2.81	3.3/	0.31	10	423	49		Ogic
ZM191	DD96ZM191	82167	5471081	Myrtle	28/88	3.3	6.5	-0.5	8.48	-5	757	-0.05	15	1.4	3.38	0.31	-10	216	29		Ogic
ZM191	DD96ZM191	82167	5471082	Myrtle	28/88	6.5	8	-0.5	8.38	14	1020	-0.05	14	1.67	3.63	0.41	12	192	67		Ogic
ZM191	DD96ZM191	82167	5471083	Myrtle	28/88	8	9.5	-0.5	7.51	23	650	-0.05	15	1.25	3.49	0.34	-10	297	60		Ogic
ZM191	DD96ZM191	82167	5471084	Myrtle	28/88	9.5	11	-0.5	5.78	133	311	0.09	64	10.2	2.07	0.23	127	974	2330		Ogic
ZM191	DD96ZM191	82167	5471085	Myrtle	28/88	11	11.7	-0.5	6.81	100	400	0.08	45	10.88	2.55	0.29	100	631	2480		Ogic
ZM191	DD96ZM191	82167	5471086	Myrtle	28/88	11.7	12.5	1.5	5.61	34	319	0.09	35	2.11	2.43	0.3	12	126	4960		Ogic
ZM191	DD96ZM191	82167	5471087	Myrtle	28/88	12.5	14	-0.5	7.24	44	343	0.05	55	2.1	3.18	0.37	20	62	3150		Ogic
ZM191	DD96ZM191	82167	5471088	Myrtle	28/88	14	15.5	-0.5	7.34	14	301	0.05	17	0.96	3.07	0.33	13	40	834		Ogic
ZM191	DD96ZM191	82167	5471089	Myrtle	28/88	15.5	17	-0.5	5.45	187	241	1.37	26	7.18	2.44	0.6	30	247	6180	9.2	Ogic
ZM191	DD96ZM191	82167	5471090	Myrtle	28/88	17	18.5	0.9	0.58	-5	22	31.62	-5	0.51	0.28	2.6	95	16	55		Ogul
ZM191	DD96ZM191			Myrtle	28/88	18.5	23														Ogul
ZM191	DD96ZM191	82167	5471091	Myrtle	28/88	23	24.5	-0.5	0.66	-5	28	32.5	-5	0.47	0.32	2.08	86	12	17		Ogul
ZM191	DD96ZM191			Myrtle	28/88	24.5	35														Ogul
ZM191	DD96ZM191	82167	5471092	Myrtle	28/88	35	36.5	0.5	0.57	-5	26	34.92	-5	0.17	0.26	0.29	70	11	15		Ogmu
ZM191	DD96ZM191			Myrtle	28/88	36.5	42.2														Ogmu
ZM191	DD96ZM191	82167	5471093	Myrtle	28/88	42.2	44	-0.5	0.13	-5	-5	35.28	-5	0.27	0.06	0.88	85	11	222		Ogmu
ZM191	DD96ZM191			Myrtle	28/88	44	53														Ogmu
ZM191	DD96ZM191	82167	5471094	Myrtle	28/88	53	54.5	0.8	0.52	-5	22	36.95	-5	0.22	0.24	0.47	60	10	15		Ogmu
ZM191	DD96ZM191			Myrtle	28/88	54.5	68														Ogmu/Ogub
ZM191	DD96ZM191	82167	5471095	Myrtle	28/88	68	71	-0.5	0.58	-5	27	33.65	-5	0.39	0.3	1.79	86	16	192		Ogul
ZM191	DD96ZM191			Myrtle	28/88	71	83														Ogul/Ogub
ZM191	DD96ZM191	82167	5471096	Myrtle	28/88	83	85.8	-0.5	1.11	-5	58	30.02	-5	0.59	0.56	2.24	108	20	27		Ogul
ZM191	DD96ZM191			Myrtle	28/88	85.8	94														Ogul
ZM191	DD96ZM191	82167	5471097	Myrtle	28/88	94	96.3	-0.5	1.31	-5	70	31.32	-5	0.71	0.65	1.95	178	202	154		Ogul
ZM191	DD96ZM191			Myrtle	28/88	96.3	107														Ogul
ZM191	DD96ZM191	82167	5471098	Myrtle	28/88	107	108.5	0.7	0.34	-5	14	32.42	-5	0.32	0.18	2.11	70	11	16		Ogul
ZM191	DD96ZM191			Myrtle	28/88	108.5	112.5														Ogul
ZM191	DD96ZM191			Myrtle	28/88	112.5	115														Ogub
ZM191	DD96ZM191	82167	5471099	Myrtle	28/88	115	117	-0.5	1.08	-5	50	29.23	-5	0.61	0.55	3.61	86	10	9		Ogub
ZM191	DD96ZM191			Myrtle	28/88	117	121.3														Ogub
ZM191	DD96ZM191			Myrtle	28/88	121.3	124														Ogub
ZM191	DD96ZM191	82167	5471100	Myrtle	28/88	124	126	-0.5	0.39	-5	20	36.76	-5	0.37	0.21	0.74	109	12	18		Ogub
ZM191	DD96ZM191			Myrtle	28/88	126	140														Ogul
ZM191	DD96ZM191	82167	5471271	Myrtle	28/88	140	141.5	-0.5	1.6	-5	74	26.91	-5	0.89	0.78	1.68	140	-10	8		Ogul
ZM191	DD96ZM191			Myrtle	28/88	141.5	152														Ogul
ZM191	DD96ZM191	82167	5471272	Myrtle	28/88	152	153.5	0.6	1.88	-5	79	25.3	-5	1.1	0.79	2.27	147	11	9		Ogul
ZM191	DD96ZM191			Myrtle	28/88	153.5	156.7														Ogul
ZM191	DD96ZM191			Myrtle	28/88	156.7	158.3														Ogmu
ZM191	DD96ZM191			Myrtle	28/88	158.3	165.5														Ogul
ZM191	DD96ZM191	82167	5471273	Myrtle	28/88	165.5	167	-0.5	1.14	-5	51	29.53	-5	0.61	0.55	1.77	78	-10	9		Ogul
ZM191	DD96ZM191			Myrtle	28/88	167	174														Ogul
ZM191	DD96ZM191	82167	5471274	Myrtle	28/88	174	176	-0.5	1.73	-5	82	30.11	-5	0.66	0.82	1.38	112	-10	11		Ogul
ZM191	DD96ZM191			Myrtle	28/88	176	185														Ogul
ZM191	DD96ZM191	82167	5471275	Myrtle	28/88	185	186.5	-0.5	0.86	-5	43	30.47	-5	0.58	0.42	2.25	89	11	12		Ogul
ZM191	DD96ZM191			Myrtle	28/88	186.5	200.6														Ogul
ZM191	DD96ZM191	82167	5471276	Myrtle	28/88	200.6	203	1	0.71	-5	36	30.52	-5	0.27	0.36	0.7	66	-10	9		Ogmu
ZM191	DD96ZM191			Myrtle	28/88	203	203.7														Ogmu
ZM191	DD96ZM191			Myrtle	28/88	203.7	211														Ogul
ZM191	DD96ZM191	82167	5471277	Myrtle	28/88	211	212.5	-0.5	0.66	-5	36	25.57	-5	0.48	0.34	1.88	71	-10	-5		Ogul
ZM191	DD96ZM191			Myrtle	28/88	212.5	214.2														Ogul
ZM191	DD96ZM191			Myrtle	28/88	214.2	216.7														Ogmu
ZM191	DD96ZM191			Myrtle	28/88	216.7	227														Ogul
ZM191	DD96ZM191	82167	5471278	Myrtle	28/88	227	228.5	0.6	0.75	-5	41	25.77	-5	0.5	0.37	1.86	68	10	18		Ogul
ZM191	DD96ZM191			Myrtle	28/88	228.5	242.8														Ogul
ZM191	DD96ZM191	82167	5471279	Myrtle	28/88	242.8	244.7	1.2	0.56	-5	18	31.93	-5	0.48	0.26	1.66	142	12	15		Ogul
ZM191	DD96ZM191			Myrtle	28/88	244.7	259.2														Ogul
ZM191	DD96ZM191	82167	5471280	Myrtle	28/88	259.2	261.7	-0.5	0.67	-5	22	30.13	-5	0.47	0.33	1.11	177	11	24		Ogul
ZM191	DD96ZM191			Myrtle	28/88	261.7	274.2														Ogul
ZM191	DD96ZM191	82167	5471281	Myrtle	28/88	274.2	276.1	-0.5	0.73	-5	22	32.01	-5	0.48	0.36	0.98	248	16	15		Ogul
ZM191	DD96ZM191			Myrtle	28/88	276.1	280.8														Ogul
ZM191	DD96ZM191	82167	5471282	Myrtle	28/88	280.8	282.8	-0.5	0.91	-5	30	28.48	-5	0.68	0.44	2	199	15	21		Ogul
ZM191	DD96ZM191			Myrtle	28/88	282.8	289.6														Ogul
ZM191	DD96ZM191	82167	5471283	Myrtle	28/88	289.6	292.2	-0.5	2.13	-5	76	23.55	-5	0.89	1	1.37	148	17	16		Ogul
ZM191	DD96ZM191			Myrtle	28/88	292.2	294														Ogul

bhole	fulldh	DPO	smpno	Prospect	EL	afrom	ato	aag	aal	aas	aba	aca	acu	afe	ak	amg	amn	apb	azn	as	MRTLth	
ZM191	DD96ZM191	82167	5471284	Myrtle	28/88	294	295.9	-0.5	1.36	5	46	27.93	5	0.97	0.65	1.28	128	13	18		Ogul	
ZM191	DD96ZM191			Myrtle	28/88	295.9	300															Ogul

234083

**Appendix 2**

**Relogged EZ Diamond Drill Logs and Geochemistry  
Myrtle Prospect**

**APPENDIX 6:**

**Myrtle prospect relogged EZ diamond drill logs and geochemistry.**

Appendix 6 Myrtle prospect. EZ diamond drillhole logs and assays.

APPENDIX 6 Myrtle prospect. EZ diamond drillhole logs and geochemistry.																		
Hole	DFrom	DTo	Sampno	DPO	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Ba ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM1003	0.00	2.00	3984226	77147	Og	Ccy			N		-1		12	2.31	53	36		382
ZM1003	2.00	4.00	3984227	77147	Og	Ccy			N		-1		10	0.99	33	29		936
ZM1003	4.00	5.00	3984228	77147	Og	Ccy			N		-1		10	1.26	29	31		188
ZM1003	5.00	6.00		EZ		Ox				No rec.								
ZM1003	6.00	9.00	61305	EZ	Og	Ccy				No rec. Sludge assays	-0.5		30	2.95	30	25		165
ZM1003	9.00	12.00	61306	EZ	Og	Ccy				No rec. Sludge assays	-0.5		35	4.60	40	50		270
ZM1003	12.00	15.00	61307	EZ	Og	Ccy				No rec. Sludge assays	-0.5		40	3.25	55	70		820
ZM1003	15.00	18.00	61308	EZ	Og	Ccy				No rec. Sludge assays	-0.5		35	4.35	45	75		770
ZM1003	18.00	22.00	61321	EZ	Og	Ccy			DGN		-0.5	502	25	3.35	35	75		910
ZM1003	22.00	25.00	61322	EZ	Og	CcySsi	We		N	Poor rec	-0.5	570	30	0.98	40	45		910
ZM1003	25.00	27.00	61311	EZ	Og	CcySsi	We		N	No rec. Sludge assays	-0.5		30	2.05	40	50		345
ZM1003	27.00	30.00	61312	EZ	Og	CcySsi	We		N	No rec. Sludge assays	-0.5		30	1.40	35	45		345
ZM1003	30.00	33.00	61313	EZ	Og	CcySsi	We		N	No rec. Sludge assays	-0.5		30	1.85	30	50		220
ZM1003	33.00	36.00	61314	EZ	Og	CcySsi	We		N	No rec. Sludge assays	-0.5		30	1.40	40	50		250
ZM1003	36.00	37.00	61324	EZ	Og	CcySsi	We		N	Poor rec	-0.5	425	25	1.50	30	55		5500
ZM1003	37.00	40.00	61323	EZ	Og	CcySsi	We		N	Poor rec	-0.5	534	20	0.78	30	45		580
ZM1003	40.00	42.00	61316	EZ	Og	CcySsi	We		N	No rec. Sludge assays	-0.5		30	1.85	40	50		800
ZM1003	42.00	45.00	61317	EZ	Og	CcySsi	We		N	No rec. Sludge assays	-0.5		25	2.75	40	60		1200
ZM1003	45.00	48.00	61318	EZ	Og	CcySsi	We		N	No rec. Sludge assays	-0.5		20	1.75	30	45		490
ZM1003	48.00	51.00	61319	EZ	Og	CcySsi	We		N	No rec. Sludge assays	-0.5		50	2.80	50	60		910
ZM1003	51.00	54.00	61320	EZ	Og	CcySsi	We		N	No rec. Sludge assays	-0.5		20	1.65	35	60		500
ZM1003	54.00	57.00	61325	EZ	Og	CcySsi	We		N	Poor rec	-0.5	691	25	1.55	25	40		1600
ZM1003	57.00	60.00	61326	EZ	Og	SsiCcy	We		N		-0.5	1570	20	0.95	35	45		575
ZM1003	60.00	63.00	61327	EZ	Og	Ccy	De	Py	N		-0.5	1470	30	2.55	80	105		1500
ZM1003	63.00	68.00		EZ		Ox				Cavity								
ZM1003	68.00	70.00	3984229	77147	Og	Ssl			LGB		-1		3	0.37	156	11		68
ZM1003	70.00	99.00		EZ	Og	Sls	Bn		G									
ZM1003	99.00	186.00		EZ	Og	Sls												
ZM1003	186.00	188.00	62509	EZ	Og	Sls	BnSh		GDG		-0.5	26	15	1.45	250	50		65
ZM1003	188.00	190.00	62510	EZ	Og	SsiSls			DGN		-0.5	22	15	0.77	225	50		85
ZM1003	190.00	192.00	62511	EZ	Og	SsiSls			DGN		-0.5	17	15	0.49	280	70		100
ZM1003	192.00	194.00	62512	EZ	Og	SsiSls			DGN		-0.5	41	15	0.89	385	55		60
ZM1003	194.00	196.00	62513	EZ	Og	SsiSls			DGN		-0.5	15	10	0.35	205	65		45
ZM1003	196.00	198.00	62514	EZ	Og	SsiSls			DGN		-0.5	43	15	0.57	240	40		50
ZM1003	198.00	199.00	62515	EZ	Og	SsiSls			DGN		-0.5	16	10	0.65	250	45		60
ZM1003	199.00	201.00	62516	EZ	Og	SsiSls			DGN		-0.5	22	10	0.64	260	75		140
ZM1003	201.00	202.00	62517	EZ	Og	Sls			GDG			2 X	20	1.20	220	65		8400
ZM1003	202.00	203.00	62518	EZ	Og	Sls			GDG		-0.5 X		15	0.70	220	50		195
ZM1003	203.00	204.00	62519	EZ	Og	Sls			GDG		-0.5	15	10	0.59	280	50		150
ZM1003	204.00	206.00	62520	EZ	Og	Sls			GDG		-0.5	11	10	0.35	220	50		55
ZM1003	206.00	208.00	62521	EZ	Og	Sls			GDG		-0.5 X		10	0.30	190	95		45

Appendix 6 Myrtle prospect. EZ diamond drillhole logs and assay.

Hole	DFrom	DTo	Sampno	DPO	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Ba ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM1003	208.00	210.00	62522	EZ	Og	Sls			GDG		-0.5 X		10	0.40	240	45		65
ZM1003	210.00	211.90		EZ	Og	Sls			GDG									
ZM1003	211.90	212.80		EZ	Og	Ccy			Y									
ZM1003	212.80	218.00		EZ	Og	Sls	Sh		G									
ZM1003	218.00	223.40		EZ	Og	Sdl			G									
ZM1003	223.40	226.40		EZ	Og	OvqOvc												
ZM1003	226.40	256.00		EZ	Og	Sls												
ZM1003	256.00	268.00		EZ		Ox				Cavity								
ZM1003	268.00	303.00		EZ	Og	Sls												
ZM1008	0.00	3.00		EZ		Ox				Precollar								
ZM1008	3.00	4.50	61973	EZ	Og	SsiCcy	We		EG			430	10	1.94	20	35		3295
ZM1008	4.50	6.00	61974	EZ	Og	Ccy	De	Py	DG			400	10	3.14	15	30		2495
ZM1008	6.00	9.00	3984230	77147	Og	Ccy	De	Py	MYG		-1		15	1.49	57	21		1163
ZM1008	9.00	12.00	3984231	77147	Og	Ccy	De	Py	MYG		-1		17	1.36	28	19		1819
ZM1008	12.00	15.00	3984232	77147	Og	Sls?	AlBx		G		-1		13	1.62	29	30		1414
ZM1008	15.00	18.00	3984233	77147	Og	Sls?	AlBx		G		-1		12	2.37	31	45		1991
ZM1008	18.00	21.00	3984234	77147	Og	Ccy	De	Py	DG		-1		17	5.06	38	147		2729
ZM1008	21.00	24.00	3984235	77147	Og	Sdl			GDG		-1		11	4.89	29	157		2903
ZM1008	24.00	27.00	3984236	77147	Og	Sdl			GDG		1		12	2.93	27	187	7.1	67200
ZM1008	27.00	30.00	3984237	77147	Og	Sdl			GDG		-1		12	2.86	21	59		9200
ZM1008	30.00	31.60	3984238	77147	Og	Sdl			GDG		-1		15	1.81	24	34		1849
ZM1008	31.60	33.00		EZ		Ox				No rec								
ZM1008	33.00	34.00	3984239	77147	Og	Sdl			GDG		-1		28	2.27	34	29		7000
ZM1008	34.00	37.90	61983	EZ	Og	Ssi	VuWe		G			740	25	1.54	10	15		1095
ZM1008	37.90	41.90	61984	EZ	Og	Ssi	VuWe		G			730	10	1.74	10	15		1445
ZM1008	41.90	44.90	3984240	77147	Og	Sdl			GLG		-1		19	1.73	25	18		4874
ZM1008	44.90	48.00	3984241	77147	Og	Ccy	FeAl	SdSu?	NYG		-1		15	2.28	37	33		9800
ZM1008	48.00	51.00		EZ						No rec								
ZM1008	51.00	54.00	3984242	77147	Og	Ccy	FeAl	SdSu?	NYG		-1		12	1.38	32	87		2317
ZM1008	54.00	56.40	3984243	77147	Og	Ccy	FeAl	SdSu?	NYG		-1		16	1.63	27	237		3962
ZM1008	56.40	60.00	3984244	77147	Og	SlsSsi	VuLeDs	GaSpPy			12		32	1.38	21	28900	4.35	43300
ZM1008	60.00	61.00		EZ		Ox				Cavity								
ZM1008	61.00	61.20	3984245	77147	Og	Sls			DG		-1		4	0.74	186	91		452
ZM1008	61.20	63.80	61990	EZ	Og	Sls	Vc		G			2200	5	0.49	135	35		285
ZM1008	63.80	116.50		EZ	Og	Sls												
ZM1008	116.50	122.50		EZ	Og	SlsOf	VcShBx	Py										
ZM1008	122.50	172.70		EZ	Og	Sls												
ZM1008	172.70	205.00		EZ	Og	Sls	Vc											
ZM1008	205.00	208.30		EZ	Og	SlsOf	Vc											
ZM1008	208.30	299.00		EZ	Og	Sls												

Appendix G Myrtle prospect. EZ diamond drillhole logs and assay.

Hole	DFrom	DTo	Sampno	DPO	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Ba ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZWM13	0.00	8.55		EZ		Ox				Precollar								
ZWM13	8.55	10.50	65227	EZ	Og	SsiSbx?	WeFs	Py	EG				20	2.51	35	305		12900
ZWM13	10.50	12.80	65228	EZ	Og	SsiSbx?	WeFs	Py	EG				15	4.11	25	210		15900
ZWM13	12.80	15.10		EZ	Og	Ox?Ccy?				No rec								
ZWM13	15.10	22.10	65229	EZ	Og	Ox?Ccy?							15	1.81	180	935		5235
ZWM13	22.10	23.30	65230	EZ	Og	Ssi	Sh		G				15	1.61	290	190		3335
ZWM13	23.30	24.75	65231	EZ	Og	Ssi	Sh		G				15	1.51	280	110		7035
ZWM13	24.75	25.15	65232	EZ	Og	SsiSd	Sh		LG				5	0.40	175	35		250
ZWM14	0.00	2.30		EZ		Ox				Precollar								
ZWM14	2.30	3.50	65233	EZ	Og	Ssi	We		LG				5	0.48	10	70		25
ZWM14	3.50	6.40	65234	EZ	Og	Ssi	We	Py	DG				15	1.66	20	460		3535
ZWM14	6.40	8.35	65235	EZ	Og	Ssi	We	Py	DG				20	1.31	30	820		3785
ZWM14	8.35	10.95	65236	EZ	Og	Ssi			DG				15	1.21	20	650		4135
ZWM14	10.95	12.20	65237	EZ	Og	Ssi	Fr		DG		0.5		20	1.16	15	3370		6285
ZWM14	12.20	12.85	65238	EZ	Og	Ssi	We		DG		1		25	1.76	20	1320		7435
ZWM14	12.85	13.85	65239	EZ	Og	Ssi	VuLeDs	SpPy	DG		6		40	1.81	15	17400		34900
ZWM14	13.85	14.95	65240	EZ	Og	Ssi	VuLeDs	SpPy	DG		4		35	2.11	10	14400		41900
ZWM14	14.95	15.85		EZ		Ox				No rec								
ZWM14	15.85	25.90	65241	EZ	Og	Ssi	VuLeDs	PySp	N		3		45	2.40	-12	7900		2650
ZWM15	0.00	1.70		EZ		Ox				Precollar								
ZWM15	1.70	2.40	65242	EZ	Og	Ssi	WeLe		DRG				25	1.58	25	125		6100
ZWM15	2.40	8.60	65243	EZ	Og	Ssi?	VuLe		N				35	2.33	25	135		21000
ZWM15	8.60	13.70	65244	EZ	Og	Ssi?	VuLe		N				25	2.17	25	535		21300
ZWM15	13.70	22.80		EZ	Og	Ssi?	VuLe		N									
ZWM15	22.80	23.60	65245	EZ	Og	SdSbx			N				10	2.40	270	100		2650
ZWM15	23.60	26.20	65246	EZ	Og	SdSbx			N				10	1.50	310	45		730
ZWM15	26.20	28.50	65247	EZ	Og	Sd			DG				5	1.40	275	35		1500
ZWM15	28.50	31.30	65248	EZ	Og	SdSsi			DG				15	1.50	140	50		70
ZWM15	31.30	33.90	65249	EZ	Og	SdSbx			DG				10	1.50	190	40		505
ZWM15	33.90	35.10	65250	EZ	Og	SdSsi							15	2.00	190	40		65
ZWM15	35.10	38.10	65251	EZ	Og	SdSsi							10	1.90	180	50		55
ZWM16	0.00	5.70		EZ		Ox				Precollar								
ZWM16	5.70	8.35	3984246	77147	Og	Ssi?	WeFrLe		DG		-1		38	0.67	11	88		230
ZWM16	8.35	9.90	3984247	77147	Og	Ssi?Ccy	WeFe	Sd	EG		-1		217	1.30	20	1826		2748
ZWM16	9.90	13.70	3984248	77147	Og	SlsSsi	FeFrAl?		G		-1		48	0.81	17	280		1139
ZWM16	13.70	18.60	3984249	77147	Og	SlsSsi	FeFrAl?		G		-1		20	1.49	55	94		1079
ZWM16	18.60	19.20		EZ		Ox				No rec.								
ZWM16	19.20	20.70	3984250	77147	Og	SlsSsi	WeFrAl?		GDG		-1		17	1.67	43	75		280
ZWM16	20.70	22.30	3984251	77147	Og	SlsSsi	WeVu		G		-1		12	1.55	197	28		62

Appendix G Myrtle prospect. EZ diamond drillhole logs and assay

Hole	DFrom	DTTo	Sampno	DPO	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Ba ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZWM16a	0.00	18.00		EZ		Ox				Precollar								
ZWM16a	18.00	18.60		EZ	Og	CcySsi			DG									
ZWM16a	18.60	22.70		EZ	Og	Sts			G									
ZWM16a	22.70	25.60	3984252	77147	Og	Scl			DG		-1		7	1.43	234	13		21
ZWM16a	25.60	28.60		EZ	Og	Sts			G									
ZWM17	0.00	6.10		EZ		Ox				Precollar								
ZWM17	6.10	8.80	3984254	77147	Og	Ssi	WeFr		DBG		-1		18	1.55	43	48		1512
ZWM17	8.80	9.80	3984255	77147	Og	Ssi	WeFr		DBG		-1		16	4.41	42	49		4531
ZWM17	9.80	11.60	3984256	77147	Og	Ssi	WeFrFe	Sd?	BG		-1		16	1.49	34	49		2242
ZWM17	11.60	12.50		EZ		Ox				Gavity								
ZWM17	12.50	14.00	3984257	77147	Og	Ccy			LYG		-1		23	2.05	44	58		1304
ZWM17	14.00	15.25	3984258	77147	Og	Ssi	We		LG		-1		18	2.13	24	27		1927
ZWM17	15.25	16.90	3984259	77147		Ovq	Vs	Py			-1		5	1.70	54	21		610
ZWM18	0.00	6.85		EZ		Ox				Precollar								
ZWM18	6.85	13.90	3984260	77147	Og	Sts?	LeWeFe		FN		-1		26	3.94	84	8200	3.5	23700
ZWM18	13.90	14.90	3984261	77147	Og	Sts	Ds	Sp	G		-1		5	0.37	139	115		977
ZWM18	14.90	17.85	3984262	77147	Og	Sts			G		-1		3	0.36	131	731		97
ZWM18	17.85	20.90	3984263	77147	Og	Sts			G		-1		4	0.24	124	250		74
ZWM18	20.90	24.00	3984264	77147	Og	Sts			G		-1		3	0.22	81	53		12
ZWM18	24.00	26.50	3984265	77147	Og	Sts			G		-1		4	0.28	98	9		10
ZWM18	26.50	28.40	3984266	77147	Og	Sts			G		-1		5	0.38	100	12		12
ZWM18	28.40	29.00	3984267	77147	Og	Sts			G		-1		8	0.19	96	11	0.75	11700
ZWM18	29.00	31.30	3984268	77147	Og	Sts	Ds	Sp	G		-1		4	0.27	79	9		31
ZWM19	0.00	11.25		EZ		Sts?	WeLeFeDs	Sp		Precollar. Poor rec								
ZWM19	11.25	14.00	3984269	77147	Og	Sts			G		-1		4	0.26	136	11		15
ZWM19	14.00	18.60		EZ	Og	Sts			G									
ZWM19	18.60	21.00	3984270	77147	Og	Sts			G		-1		5	0.21	98	10		11
ZWM19	21.00	23.20	3984271	77147	Og	Sts			G		-1		2	0.12	120	6		5
ZWM19	23.20	24.70		EZ	Og	Sts			LG									
ZWM19a	0.00	1.50		EZ		Ox				Precollar								
ZWM19a	1.50	5.20	3984272	77147	Og	Sts?	WeFrVsDs	Sp			1		48	1.33	24	222		4612
ZWM19a	5.20	10.10	3984272	77147	Og	Ccy	Ds?	Sp			1		48	1.33	24	222		4612
ZWM19a	10.10	11.25	3984272	77147	Og	Sts			LG		1		48	1.33	24	222		4612
ZWM19a	11.25	11.60		EZ	Og	Sts			LG									

234089













EZ DDH ZWM-19, 19A. MYRTLE.

DRILL CORE LOG

TENEMENT NAME..... No. ....

PLAN - MAP REFERENCE.....

CO-ORDINATES..... AZIMUTH..... DRILLERS..... COMMENCED..... DEPTH..... HOLE No. ....

RL COLLAR..... INCLINATION..... DRILL TYPE..... COMPLETED..... CASING LEFT..... DPO No(s).....

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)												
From (M)	To (M)																						
0	11.25				ZWM-19 59,919 E / 50,000 N INCLINED 80° TO 090° AMG T.D. 24.7m. ALTERED LIMESTONE RUBBLE Dark gray robbly porous-leached, decarbonated silty limestone - strongly ferruginous, cavernous. Rubble includes coarse brown Sphalerite. V. Poor recovery (<10%) CALC SILTITE.																		
11.25	18.6				Mid grey massive - featureless with abundant fine stylolites, minor quartz-carbonate veins. CALC. SILTITE - ARENITE.		3984269	11.25	14														
							270	18.6	21														
18.6	24.7				Mid grey, leached and recrystallized with minor quartz-calcite filled burrows; moderately stylolitic; minor cream Ankerite alteration / recrystallization.		271	21	23.2														
	EOH.																						
1.5	11.6				ZWM-19A. 59,918 E / 50,000 N INCLINED 80° TO 090° AMG T.D. 11.6m. ALTERED LIMESTONE RUBBLE As per ZWM-19 above - contains coarse sphalerite. (Very poor recovery) - <10%		3984272	1.5	11.25														

234096

**Appendix 3**

**Geological Logs and Assay Ledgers for  
DD95ZP63  
DD96ZP64 - 65  
Pyramid Prospect**

**CRA EXPLORATION PTY. LIMITED**  
**DRILL-HOLE SUMMARY LOG**

234098

HOLE NAME: DD95ZP63      AMG    EAST    364311    NORTH    5356348  
 PROSPECT : PYRAMID      GRD    EAST    1476      NORTH    1065  
 EL: ZEEHAN 1      EL 29/88    RL      DEPTH    228.0m

DATE DRILLED: 10/7/95  
 LOGGED BY:    S.J. TEAR  
 DRILLING CO.: DD. TAS. LTD.  
 DRILL TYPE:    DIAMOND  
 DRILL RIG:     U250  
 LOC DRILL CORE: ZEEHAN

**SURVEYS:**

DEPTH	AZIM (AMG)	DIP	DEPTH	AZIM (AMG)	DIP
0	212°	60°			
48m	211°	60°			
102m	214°	59°			
150m	213.5°	59°			
228m	213°	62°			

**OBJECTIVES OF HOLE:**  
 Drill test zinc-rich siderite alteration associated with the basal contact between Moina Sandstone and Gordon Limestone

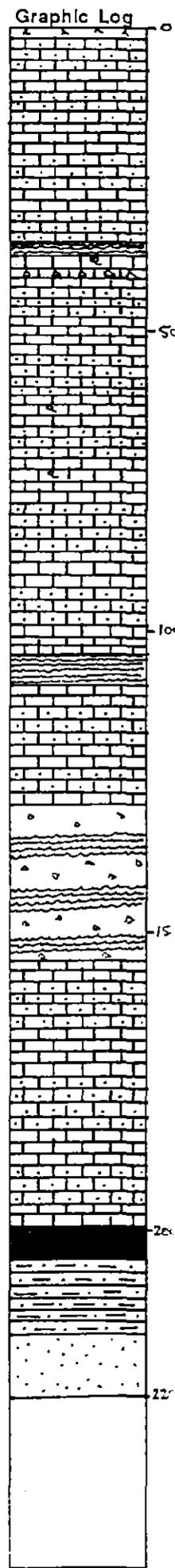
**LITHOLOGICAL SUMMARY:**

FROM	TO	FORM CODE	COMMENTS
0	1.5	Qha	Overburden ; no recovery
1.5	35.3	Ogul	Undifferentiated Limestones - Predominantly grey fine grained calcarenites.
35.3	37.5	Ogmu	Laminated micrite unit - shallow water algal mats.
37.5	104.3	Ogul	Undifferentiated Limestones
104.3	109.0	Ogmu	Laminated micrite unit
109.0	129.0	Ogfc	Fault zone - with grey calcarenites.
129.0	155.3	Ogmu	Laminated micrite unit with v. fine grained calcarenites.
155.3	199.5	Ogul	Undifferentiated Limestones with micrites
199.5	205.2	Ogdc	Dark Grey Clay Unit - with pyrite.
205.2	217.45	Ogst	Silty Transition Unit - mixed dk grey sandstones and siltstones
217.45	228.0	Om	Moina Quartzite - silicic + hematitic.

**MINERALISATION SUMMARY:**

FROM	TO	COMMENTS
43.8	45.0	0.22% Zn (0.11% Pb) Associated a ? synsedimentary breccia zone.
205.0	202.5	0.21% Zn Associated with pyritic dark grey clays.

**CONCLUSIONS:**  
 If the Synsedimentary breccia is proven - that is significant for Irish-style deposits. The Main micrite unit has not been seen elsewhere - it is a very clean, light grey unit - eminently reprobable.  
 Bedding @ 6.2m 60° E dA. @ 213.3m 65° E dA. @ 228m 75° E dA.



DRILL CORE LOG

TENEMENT NAME PYRAMID No.

CO-ORDINATES 364311 E 5356348 N AZIMUTH 200° mag DRILLERS DDTAS COMMENCED 10/7/95 PLAN - MAP REFERENCE 63

RL COLLAR INCLINATION 60 DRILL TYPE U250 COMPLETED 20/7/95 DEPTH 228m HOLE No. ZP36

CASING LEFT DPO No(s)

DEPTH		Core Rec. #	Graphical Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)					
From (M)	To (M)									REC FROM	REC TO	REC M	REC Z		
0	1.5		S	Qha Overburden via peat and sandstone fragments								0	1.5	33	60
												1.5	4.0	60	33
1.5	4.0		S	Qgd Weathered limestone - brown grey clay								4.0	4.5	0.5	100
												4.5	6.0	1.5	100
												6.0	7.5	1.5	100
												7.5	10.2	2.7	100
4.0	6.2	100	1	Qgd V. fine grained grey calcarenite (locally micritic with irregular thin beds?) of argillaceous calcarenite - ? stylolites. Occ bioclastic bands	Bedding 60° to c/a							10.2	11.8	1.6	100
												11.8	13.5	1.7	100
												13.5	15.0	1.2	80
												15.0	16.5	1.5	100
												16.5	18.0	1.2	80
												18.0	19.5	1.5	100
6.2	11.2	100	1	Qgd Fine grained grey calcarenite possibly micritic with v. minor argillite stylolites. Burrowed zones		5468431	7.5	10.0				19.5	21.0	1.5	100
												21.0	22.5	1.5	100
												22.5	24.0	1.5	100
												24.0	25.5	1.5	100
												25.5	27.0	1.5	100
11.2	12.4	100	1	Qgd Lighter grey fine grained calcarenite as for 4.0-6.2m. with stylolite bands. Slightly weathered.								27.0	28.5	1.5	100
												28.5	30.0	1.5	100
												30.0	31.5	1.5	100
												31.5	33.0	1.5	100
												33.0	34.5	1.5	100
12.4	21.4	100	1	Qgd Fine grained grey calcarenite (micritic) with stylolites (argillite) with occ bioclastic bands < 5cm.								34.5	36.0	1.5	100
												36.0	37.5	1.5	100
												37.5	39.0	1.5	100
												39.0	40.5	1.5	100
21.4	23.4	100	1	Qgd Fine grained grey nodular calcarenite with dark grey argillite zones beds. Minor burrowed patches		32	21.4	23.4				40.5	42.0	1.5	100
												42.0	43.5	1.5	100
												43.5	45.0	1.5	100
												45.0	46.5	1.5	100
												46.5	48.0	1.5	100

234099



C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 3/10

TENEMENT NAME Pyramid No. ....

PLAN - MAP REFERENCE ..... 2063

CO-ORDINATES 364311 E 5356348 N AZIMUTH 200° MAG DRILLERS DDTAS COMMENCED 10.7.95

DEPTH 228m HOLE No. 2063

RL COLLAR ..... INCLINATION 60° DRILL TYPE 4250 COMPLETED 20.7.95

CASING LEFT ..... DPO No(s) .....

DEPTH		Core Rec %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by .....					
From (M)	To (M)										REC (ppm)	REC (%)	REC (t)	REC (%)		
48.6	58.2	85	100	Agul	As above with well/come grained bioclastic bands are well burrowed	Some calcite veins (2) sub parallel to c/A.	36	48.6	51.0			48.0	51.0	3.0	100	
												51.0	94.0	2.0	66	
												54.0	57.0	2.4	80	
												57.0	60.0	3.0	100	
58.2	60.0	100	28	Ogms	Light grey micritic calcarenite almost laminated underlain by ? laminated argillite and micrite for 58.55 - 59.45m. Underlain by 0.5m of micrite							60.0	63.0	3.0	100	
												63.0	66.0	3.0	100	
												66.0	69.0	3.0	100	
												69.0	71.0	3.0	100	
												71.0	75.0	3.0	100	
												75.0	79.0	3.0	100	
60.0	68.7	100	1	Agul	Fine grained grey <sup>light grey</sup> calcarenite locally micritic with thin argillite bands - ? stylolites locally well grained bioclastic bands; bioturbated - small nodular effect - nodules are bioclastic; almost laminated in places - v fine calcarenite micrite locally Small argillite dominal zone 65.8-66.3m poss fault plane 60° to c/A bedding parallel.	Some irregular calcite vein sub parallel to c/A @ 62m.	37	63.9	66.0				79.0	81.0	3.0	100
												81.0	84.0	3.0	100	
												84.0	87.0	3.0	100	
												87.0	90.0	3.0	100	
												90.0	93.0	3.0	100	
												93.0	96.0	3.0	100	
												96.0	99.0	3.0	100	
												99.0	102.0	3.0	100	
												102.0	105.0	2.7	90	
												105.0	108.0	3.0	100	
												108.0	111.0	3.0	100	
												111.0	114.0	3.0	100	
68.7	70.8	100	1	Agul.	Mixed ? bedded dark grey black argillite bands and grey medium grained calcarenite possible nodular effect - unrounded look to carbonates		38	69.7	70.8				114.0	116.5	2.5	100
													116.5	117.1	0.3	50
													117.1	120.0	1.45	50
													120.0	121.6	1.2	75
													121.6	123.7	2.1	100
													123.7	126.4	0.55	30
70.8	73.5	100	1	Agul.	Mixed sequence of fine med calcarenite with locally coarsely bioclastic zones; burrowed minor argillite								126.4	129.0	3.0	83
													129.0	132.0	2.1	70
													132.0	133.9	1.3	67

234101







C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

TENEMENT NAME Pyramio No. ....

PLAN - MAP REFERENCE .....

CO-ORDINATES 3643 NE 5356348N AZIMUTH 200 MAC DRILLERS DOTAS COMMENCED 10.7.95 DEPTH 228 m HOLE No. ZP63

RL COLLAR ..... INCLINATION 60° DRILL TYPE U 250 COMPLETED 20.7.95 CASING LEFT ..... DPO No(s) .....

DEPTH		Core Rec. %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by .....			
From (M)	To (M)										REC (Pan)	REC (50)	REC (m)	PER (%)
129.0	140.4	85	3	Ogmu	light grey micritic calcarenite locally partially rotted with cavities; Bird's eye micrites and med grained equigranular calcarenites also present. Occ bioclasts. Occ clay zone. Argillaceous sphyllites from 133.2m. 134.1-136.3 Increase in argillite up to 50% locally. Calcarenite micrite is grey/dk grey.	Minor amounts of calcite veining; Some veining parallel to c/a.	52	129.0	132.0		138.9	131	3.1	100
							53	132.0	133.9		137	40.7	3.0	94
							54	133.9	136.3		40.7	44.4	2.1	68
							55	136.3	138.1		144	14.7	1.5	50
							56	138.1	140.4		147.0	15.0	2.1	70
											150.0	151.5	0.6	40
											151.5	153.0	0.15	10
											153.0	154.5	1.2	80
											154.5	156.0	1.5	100
											156.0	157.5	0.9	60
											157.5	159.0	1.2	90
140.4	140.7	100	4x	Ogmu	<del>micrite</del> Laminated micrite.	Bedding 65° to c/a.	57	140.4	142.0		159.0	160.0	0.7	63
											160.1	161.6	1.5	100
140.7	144.0	94	2	Ogmu	light grey micrite with sphyllites		58	142.0	144.0		161.6	163.4	1.5	94
											163.4	165.0	1.2	75
											165.0	166.5	1.5	100
144.0	150.0	60	2	Ogmu	Grey micritic calcarenite micrite med grained? burrowed. 2 cm argillite bed at base of unit		59	144.0	147.0		166.5	168.0	1.5	100
							60	147.0	150.0		168.0	169.5	0.3	20
											169.5	171.0	1.2	80
											171.0	172.5	0.3	20
											172.5	174.0	0.75	50
150.0	153.0	25	3f	Ogmu	Laminated micrite unit with clay zones and cavities? faulted?	Laminae 50° to c/a. Some calcite veining sub-parallel to c/a.	61	150.0	153.0		174.0	175.3	1.3	100
											175.3	177.0	1.5	90
											177.0	179.5	0.75	50
											179.5	180.0	1.2	90
153.0	155.3	100	1	Ogmu	light grey fine grained micritic calcarenite	Minor calcite streakwork veining locally.	62	153.0	155.3		180.0	181.5	0.3	20
											181.5	183.0	1.0	67
											183.0	184.5	0.9	60
155.3	155.8	100	1	Ogfcz	Calcite breccia zone + veining including 15cm? dolomitised zone (total dolomite? clast in vein)		63	155.3	155.8		184.5	186.0	1.35	90
											186.0	187.5	0.3	20
											187.5	189.0	1.35	90

234105



C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

TENEMENT NAME Pyramid SHEET NO. 10 No. ....

PLAN - MAP REFERENCE .....

CO-ORDINATES 364311 E 5356348 N AZIMUTH 200° MAG DRILLERS DDTAS COMMENCED 10.7.95 DEPTH 228 m HOLE No. ZP63

RL COLLAR ..... INCLINATION 60° DRILL TYPE H 2.50 COMPLETED 20.7.95 CASING LEFT ..... DPO No(s) .....

DEPTH		Core Rec %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)				
From (M)	To (M)										REC (From)	REC (To)	REC (M)	REC (%)	
175.3	180.0	75	4c	Og1	Bioclastic argillaceous calcarenite; bioclasts locally coarse. bioclasts in argillite zones; occ. clay zone.	cleavage 45° G c/A. Bedding 60° to c/A.	34684 37	175.3	177.0			189.0	190.5	0.3	20
												192.0	193.5	0.45	30
												192.0	193.5	0.9	60
												193.5	195.0	0.45	30
												195.0	196.5	0.15	10
180.0	181.5	20	5x	Og1z	Dark grey clay. ? fault zone		74	180.0	181.5			196.5	197.0	0	0
												198.0	199.5	0	0
181.5	199.5	40	4f	Og1	Grey partially rotted med/fine grained calcarenite with major argillite bands; bioturbated; clay from 182.1 - 182.9m. Argillite dominant locally localised bioclastic zones.	cleavage rarely developed	75	181.5	183.0			199.5	201.0	1.35	80
							76	183.0	184.5			201.0	202.5	0.5	33
							77	184.5	186.0			202.5	204.0	1.0	67
							78	186.0	187.5			204.0	205.5	1.2	80
							79	187.5	189.0			205.5	207.0	0.45	40
							80	189.0	190.5			207.0	208.5	0.6	30
							81	190.5	192.0			208.5	210.0	1.20	80
199.5	205.2	55	5	Og1k	Dark grey/black clays	Possible brown siderite or pyrite alteration	82	192.0	193.5			210.0	211.5	0.45	30
							83	193.5	195.0			211.5	213.0	1.0	67
							84	195.0	196.5			213.0	214.5	1.5	100
							85	199.5	201.0			214.5	216.0	1.5	100
205.2	213.3	50	5	Og1t	Grey/dark grey/black clays and silty/sandy clays - nonconformous	Dissem. pyrite in bedding parallel layers ? also sphalerite as well; bedding 65° to c/A.	86	201.0	202.5			216.0	217.5	0.9	60
							87	202.5	204.0			217.5	219.0	1.5	100
							88	204.0	205.2			219.0	220.5	1.5	100
213.3	214.55	56	3b	Og1t	Interbedded dark grey/black siltstone and grey sandstone - burrowed + bioturbated	Bedding 65° to c/A	89	205.2	207.0			222.5	223.0	1.5	100
							90	207.0	208.5			223.0	223.5	1.5	100
							91	208.5	210.0			223.5	225.0	1.5	100
							92	210.0	211.5			225.0	226.5	1.5	100
214.55	216.3	100	2b	Og1t	Medium grained light grey/fawn coloured sandstone becoming grey/green fine grained sandstone d/hole.	Bedding not obvious.	93	211.5	213.0			226.5	228.0	1.5	100
							94	213.0	214.5						
							95	214.5	216.3						
							96	216.3	217.45						
							97	217.45	219.2						
							98	219.2	220.5						

234107



			77390	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
ZP63	7.50	10.00	5468431	-0.5	1.02	-5	84	31.6	-5	0.57	0.46	1.79	136	-10	-5
ZP63	21.40	23.40	5468432	-0.5	1.57	-5	110	28.8	-5	1.1	0.75	3.81	272	91	350
ZP63	25.50	27.50	5468433	-0.5	1.11	6	78	31.5	-5	0.92	0.52	2.31	243	-10	-5
ZP63	35.30	37.50	5468434	-0.5	1.26	-5	99	31.9	6	0.56	0.61	1.19	173	-10	-5
ZP63	43.80	45.00	5468435	-0.5	0.6	-5	50	33.2	-5	0.72	0.29	2.18	939	1090	2350
ZP63	48.60	51.00	5468436	-0.5	1.29	-5	89	27.9	-5	0.89	0.6	3.14	310	165	1010
ZP63	63.90	66.00	5468437	-0.5	1.24	-5	88	30.2	-5	0.59	0.54	0.93	197	-10	7
ZP63	68.70	70.80	5468438	-0.5	2.28	12	145	23.9	5	1.17	1.03	3.63	178	-10	-5
ZP63	73.50	74.80	5468439	-0.5	0.31	-5	28	24.6	-5	0.22	0.12	0.62	65	-10	-5
ZP63	78.00	81.00	5468440	-0.5	1.18	-5	78	31.7	-5	0.57	0.55	1.73	147	-10	-5
ZP63	83.50	85.90	5468441	-0.5	0.97	-5	66	31.4	-5	0.44	0.47	1.17	132	-10	-5
ZP63	90.20	92.20	5468442	-0.5	1.26	16	78	21	-5	1.62	0.61	5.36	442	57	298
ZP63	99.00	102.00	5468443	-0.5	1.43	-5	87	28.6	-5	1.37	0.71	2.76	475	-10	16
ZP63	105.00	108.00	5468444	-0.5	1.1	-5	67	32.1	-5	0.63	0.56	1.58	243	22	126
ZP63	113.20	115.60	5468445	-0.5	0.98	-5	57	27.5	-5	0.84	0.49	6.38	177	-10	-5
ZP63	115.60	117.10	5468446	-0.5	1.29	-5	75	28.4	-5	1.24	0.67	3.27	182	14	50
ZP63	117.10	120.00	5468447	-0.5	1.8	13	106	25.7	-5	1.03	0.94	5.31	223	40	94
ZP63	120.00	122.70	5468448	-0.5	0.59	-5	40	34.6	-5	0.63	0.31	2.04	273	44	228
ZP63	122.70	125.40	5468449	-0.5	0.97	-5	62	31.7	8	0.7	0.52	1.44	249	117	539
ZP63	125.40	126.50	5468450	-0.5	0.1	-5	23	36.3	-5	0.33	-0.05	0.11	2050	-10	-5
ZP63	126.50	129.00	5468451	-0.5	0.88	-5	93	26.1	7	0.79	0.37	0.51	349	27	69
ZP63	129.00	132.00	5468452	-0.5	0.28	-5	21	36.6	-5	0.24	0.16	0.6	286	19	98
ZP63	132.00	133.90	5468453	-0.5	0.77	9	44	34.1	-5	0.48	0.43	1.32	383	36	251
ZP63	133.90	136.30	5468454	-0.5	1.24	-5	70	29.5	-5	0.73	0.67	2.72	276	82	271
ZP63	136.30	138.10	5468455	-0.5	0.89	-5	48	33.7	-5	0.55	0.44	2.37	295	25	129
ZP63	138.10	140.40	5468456	-0.5	0.72	-5	43	34.7	-5	0.43	0.41	1.29	170	-10	35
ZP63	140.40	142.00	5468457	-0.5	1.05	-5	60	32	-5	0.72	0.58	2.28	226	-10	53
ZP63	142.00	144.00	5468458	-0.5	0.34	-5	22	36.4	-5	0.31	0.19	1.56	108	-10	15
ZP63	144.00	147.00	5468459	-0.5	0.42	-5	30	35	-5	0.35	0.24	1.8	141	-10	21
ZP63	147.00	150.00	5468460	-0.5	0.69	-5	46	32.6	-5	0.48	0.38	1.64	267	10	116
ZP63	150.00	153.00	5468461	-0.5	0.66	-5	54	32.9	-5	0.41	0.36	1.55	242	13	97
ZP63	153.00	155.30	5468462	-0.5	0.25	-5	29	35.6	-5	0.22	0.13	0.72	166	-10	151
ZP63	155.30	155.80	5468463	-0.5	0.41	-5	75	28.9	5	0.81	0.16	0.27	3230	32	121
ZP63	155.80	157.50	5468464	-0.5	0.5	-5	31	30.7	-5	0.59	0.26	3.57	130	-10	31
ZP63	157.50	160.10	5468465	-0.5	0.72	-5	44	30.1	-5	0.72	0.38	2.7	226	-10	10

234109

	Ag	Al	As <del>Ba</del>	Ba	Ca	Cu <del>F</del>	Fe	K	Mg	Mn	Pb	Zn-			
ZP63	160.10	163.40	5468466	-0.5	1.5	-5	86	25.8	-5	1.41	0.78	3.45	342	30	27
ZP63	163.40	166.50	5468467	-0.5	0.7	-5	43	32.8	-5	0.68	0.37	2.13	201	22	43
ZP63	166.50	168.00	5468468	0.7	1.09	-5	60	28.2	-5	1.81	0.56	3.32	660	20	195
ZP63	168.00	171.00	5468469	-0.5	0.48	-5	28	33.9	-5	0.4	0.26	1.16	97	15	33
ZP63	171.00	172.50	5468470	-0.5	1.77	-5	105	23.1	8	1.09	0.88	4.76	207	19	97
ZP63	172.50	175.30	5468471	-0.5	0.79	-5	49	29.6	-5	1.53	0.4	3.36	486	22	84
ZP63	175.30	177.00	5468472	-0.5	0.66	-5	44	30.7	-5	0.86	0.33	3.95	240	-10	30
ZP63	177.00	180.00	5468473	-0.5	1.13	-5	70	25.2	-5	1.93	0.56	6.77	697	-10	-5
ZP63	180.00	181.50	5468474	-0.5	0.87	-5	54	29	-5	0.96	0.44	4.37	269	-10	13
ZP63	181.50	183.00	5468475	-0.5	1.34	-5	63	27.5	-5	0.94	0.61	3.13	179	-10	7
ZP63	183.00	184.50	5468476	-0.5	1.78	12	86	27.7	8	0.82	0.81	2.01	127	11	7
ZP63	184.50	186.00	5468477	-0.5	1.35	-5	66	29.7	5	1.12	0.61	1.88	313	-10	12
ZP63	186.00	187.50	5468478	-0.5	1.66	-5	77	29.8	-5	0.97	0.75	1.89	237	-10	-5
ZP63	187.50	189.00	5468479	-0.5	1.2	-5	57	32.5	-5	1.03	0.57	1.36	337	-10	-5
ZP63	189.00	190.50	5468480	-0.5	1.91	-5	86	26.2	-5	1.21	0.84	1.76	344	-10	9
ZP63	190.50	192.00	5468481	-0.5	1.16	-5	50	30	-5	0.79	0.51	1.33	215	-10	11
ZP63	192.00	193.50	5468482	-0.5	0.86	-5	39	26.7	-5	0.75	0.38	1.4	232	-10	9
ZP63	193.50	195.00	5468483	-0.5	1.75	-5	73	25.7	7	1.61	0.76	2.64	344	12	21
ZP63	195.00	196.50	5468484	-0.5	1.7	-5	76	24.1	8	1.53	0.75	2.78	426	-10	28
ZP63	199.50	201.00	5468485	-0.5	5.64	22	294	0.94	18	8.88	2.59	0.77	2500	52	506
ZP63	201.00	202.50	5468486	-0.5	5.91	35	297	0.37	20	12.6	2.77	0.53	928	244	2090
ZP63	202.50	204.00	5468487	-0.5	7.02	21	354	0.22	20	5.71	3.06	0.57	1080	103	206
ZP63	204.00	205.20	5468488	-0.5	7.4	43	384	0.16	25	4.87	3.38	0.65	69	116	352
ZP63	205.20	207.00	5468489	-0.5	5.93	23	284	0.12	21	3.82	2.8	0.49	34	154	373
ZP63	207.00	208.50	5468490	-0.5	6.56	25	282	0.14	34	3.46	3.21	0.56	53	118	703
ZP63	208.50	210.00	5468491	-0.5	6.41	26	303	0.11	13	2.13	3.19	0.72	18	24	162
ZP63	210.00	211.50	5468492	-0.5	4.41	27	196	0.16	20	4.74	2.05	0.36	32	19	108
ZP63	211.50	213.00	5468493	-0.5	3.59	51	156	0.08	112	3.03	1.73	0.27	31	43	74
ZP63	213.00	214.50	5468494	-0.5	4.1	24	175	0.15	77	1.45	2.02	0.28	23	40	195
ZP63	214.50	216.30	5468495	-0.5	4.27	9	174	0.22	28	1.03	2	0.31	15	-10	56
ZP63	216.30	217.45	5468496	-0.5	2.14	-5	95	0.1	13	1.02	0.98	0.16	24	-10	24
ZP63	217.45	219.20	5468497	-0.5	3.75	-5	141	0.06	8	0.96	1.63	0.17	21	12	64
ZP63	219.20	220.50	5468498	-0.5	1.42	-5	55	-0.05	11	0.64	0.61	0.06	26	10	29
ZP63	220.50	222.00	5468499	-0.5	0.4	-5	17	0.06	8	0.64	0.17	0.02	103	-10	19
ZP63	226.50	228.00	5468500	0.6	0.42	8	18	-0.05	11	0.47	0.16	0.02	41	15	23

234110

CRA EXPLORATION PTY. LIMITED  
DRILL-HOLE SUMMARY LOG

234111

HOLE NAME: DD96ZP64

AMG EAST 364335 NORTH 5356607

PROSPECT: PYRAMID

GAD EAST 1736E NORTH 1073N

EL: ZEEHAN 1 EL28/88

RL 129m. DEPTH 48m.

DATE DRILLED: 28/4/96

SURVEYS:

LOGGED BY: S.J. TEAR

DEPTH AZIM (AMG) DIP DEPTH AZIM (AMG) DIP

DRILLING CO.: DDTAS

0m 198° 60°

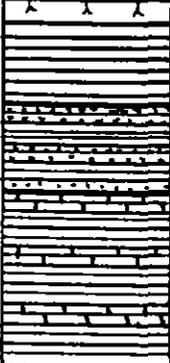
DRILL TYPE: DIAMOND

no surveys.

DRILL RIG: U250

LOC DRILL CORE: ZEEHAN

Graphic Log



EOH 48.0m - 50m

OBJECTIVES OF HOLE:

DIAMOND DRILLTEST OF 'OCEANA HORIZON' - below Ogsi (Siltstone Unit)  
Also subsurface test of ZWP27 mineralisation.

LITHOLOGICAL SUMMARY:

FROM	TO	FORM CODE	COMMENTS
0	3.2	Qha	Overburden.
3.2	13.5	Sa.	Dark grey green phyllite.
13.5	25.0	Ogsi	Dark grey shales with light grey sandstone bands.
25.0	48	Ogsi	Dark grey non-calcareous siltstone with bioclastic carbonate bands.

MINERALISATION SUMMARY:

FROM	TO	COMMENTS

CONCLUSIONS:

Hole abandoned due to flooding.  
Hole cored in Amber slate.  
Conodont age dating gave a Silurian-Devonian age for bioclastic zone ⇒ ∴ not siltstone unit?  
Bedding @ 13.5m 60° to c/a. @ 25.0m 55° to c/a.

DRILL CORE LOG

TENEMENT NAME EL 28/89 ZEERAN No. 12

PLAN - MAP REFERENCE Pyramid

CO-ORDINATES 364335E  
S 35 56 01 N AZIMUTH 198°

DRILLERS DD.TAS COMMENCED 28/3/1996

DEPTH 48m HOLE No. DD962P64

RL COLLAR 129m INCLINATION 60°

DRILL TYPE U250 COMPLETED 2/4/1996

CASING LEFT ..... DPO No(s) -

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)							
From (M)	To (M)										MAC SUs				REC (Fr)	REC (To)	REC (C)	REC (Cl)
											Depth	Value	Depth	Value				
0	3.2	45	5	Cha	Overburden: peat and gravel						3.0	C.L	18.5	20	0	1.5	1.0	67
											3.5	0	19.0	0	3.5	3.5	0.5	25
3.2	13.5	47	4x		Dark grey/green fine grained non calcareous siltstone zones of broken and fractured core.	Shearing ? sub parallel to c/a					4.0	C.L	19.5	0	3.5	5.0	0.3	20
											4.5	C.L	20.0	0	5.0	6.5	0.4	27
											5.0	5	20.5	2	6.5	8.0	0.5	33
											5.5	C.L	21.0	C.L	8.0	9.5	0.5	33
											6.0	C.L	21.5	0	9.5	11.0	0.1	7
13.5	25.0	74	3x		Dark grey/green fine grained non calcareous siltstone now with fine grained light grey sandstone bands.	Bedding 60° to c/a (? 55°) some shearing + disturbed bedding locally.					6.5	0	22.0	10	11.0	12.0	1.0	100
											7.0	C.L	22.5	15	12.0	12.6	0.6	100
											7.5	5	23.0	18	12.6	13.5	1.1	100
											8.0	4	23.5	10	13.5	14.5	0.9	90
											8.5	C.L	24.0	0	14.5	15.8	0.75	50
25.0	48.0	88	3f		Dark grey/green fine grained non calcareous siltstone now with limestone bands < 10cm thick +/- bioclasts limestone bands more frequent after 32.1m (more consistent core).	Sheared, some bedding parallel. Bedding 55° to c/a Irregular bedding @ 31.2m					9.0	C.L	24.5	5	15.8	16.7	0.65	50
											9.5	0	25.0	11	16.7	18.0	1.0	77
											10.0	C.L	25.5	11	18.0	19.0	0.7	70
											10.5	C.L	26.0	5	19.0	19.6	0.5	83
											11.0	0	26.5	12	19.6	20.7	0.9	81
											11.5	0	27.0	C.L	20.7	22.1	0.7	50
											12.0	2	27.5	11	22.1	23.1	0.9	90
											12.5	0	28.0	5	23.1	24.8	1.3	76
											13.0	0	28.5	10	24.8	26.0	1.2	100
											13.5	8	29.0	14	26.0	27.5	0.9	60
											14.0	5	29.5	2	27.5	28.8	1.1	85
											14.5	4	30.0	15	28.8	29.5	0.6	86
											15.0	C.L	30.5	15	29.5	30.6	1.0	90
											15.5	5	31.0	12	30.6	31.6	1.0	100
											16.0	C.L	31.5	10	31.6	33.1	1.5	100
											16.5	0	32.0	0	33.1	35.0	1.9	100
											17.0	0	32.5	15	35.0	36.5	1.5	100
											17.5	0	33.0	7	36.5	38.0	1.5	100
											18.0	0	33.5	15	38.0	39.5	1.5	100

END OF HOLE 48m

(no Surveys)

Hole stopped due to flooding

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 2 of 2

TENEMENT NAME Zeehan 1 No. 28188

PLAN - MAP REFERENCE PYRAMID

CO-ORDINATES AMG 364335E 5356607N AZIMUTH 198° DRILLERS DDIAS COMMENCED 28/3/96

DEPTH 48M HOLE No. DD962P64

RL COLLAR 129M INCLINATION 60° DRILL TYPE U250 COMPLETED 2/4/96

CASING LEFT..... DPO No(s)..... -

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)					
m	To (M)										MAG	SUS	REC (g/t)	REC (g/t)	REC (g/t)	REC (g/t)
											32.0	15	37.5	40.7	1.2	100
											34.5	10	40.7	41.5	0.6	75
											35.0	15	41.5	44.0	2.5	100
											35.5	10	44.0	44.7	0.7	100
											36.0	21	44.7	45.7	0.6	60
											36.5	14	45.7	47.6	0.7	77
											37.0	12	47.6	48.0	0.4	100
											37.5	C.L				
											38.0	5				
											38.5	16				
											39.0	5				
											39.5	2				
											40.0	5				
											40.5	0				
											41.0	5				
											41.5	B				
											42.0	15				
											42.5	8				
											43.0	5				
											43.5	2				
											44.0	5				
											44.5	16				
											45.0	C.L				
											45.5	5				
											46.0	5				
											46.5	5				
											47.0	0				
											47.5	0				
											48.0	5				

234113

CRA EXPLORATION PTY. LIMITED  
DRILL-HOLE SUMMARY LOG

234114

Graphic Log

HOLE NAME: DD96ZP65 AMG EAST 364329 NORTH 5356591  
 PROSPECT PYRAMID GRD EAST 1720E NORTH 1077N  
 EL: ZEEHAN | EL28/88 FL 129m. DEPTH 252m.

DATE DRILLED: 3/4/96  
 LOGGED BY: S.J. TEAR  
 DRILLING CO.: DD.TAS.  
 DRILL TYPE: DIAMOND  
 DRILL RIG: U250  
 LOC DRILL CORE: ZEEHAN

SURVEYS:

DEPTH	AZIM (AMG)	DIP	DEPTH	AZIM (AMG)	DIP
0m	200°	69°			
50m	202°	70°			
100.5m	200°	69°			
200m	198°	69°			
251m	198°	68°			

OBJECTIVES OF HOLE:

Diamond drilltest of near surface mineralisation in ZWP27  
 or around the 'Oceana Horizon' - middle zone test

LITHOLOGICAL SUMMARY:

FROM	TO	FORM CODE	COMMENTS
0	3.2	Qha	Overburden
3.2	18.7	Sa	Grey non-calcareous siltstone with grey sandstone bands.
18.7	35.4	Ogsi	Dark grey/black argillaceous calc-siltite with bioclastic minute bands
35.4	38.0	Ogdl.	Dolomite - ? shear zone
38.0	123.3	Ogsi	Series of silicic sandstones, quartzites and conglomerates.
123.3	125.8	Ogul	Rotted limestone unit.
125.8	132.3	Ogsi	Fine grained grey quartzite
132.3	137.5	Ogdl	Dolomite - hematitically altered - porous faulted zone.
137.5	140.9	Ogdl	Dolomite - hematitically altered
140.9	144.0	Ogfs	Sheared zone with dolomite and dolomite breccias.
144.0	164.8	Ogdl	Sheared dolomite - calcarenite at base.
164.8	180.9	Ogul	Argillaceous bioclastic calcarenite
180.9	206.5	Ogul	Shallow sub-tidal & intertidal calcarenites (+-ooidite) with oncolites.
206.5	234.6	Ogsl.	Argillaceous calcarenites with bioclastic bands.
234.6	252.0	Ogul	Fine grained slightly argillaceous calcarenite with laminated micrite with

MINERALISATION SUMMARY:

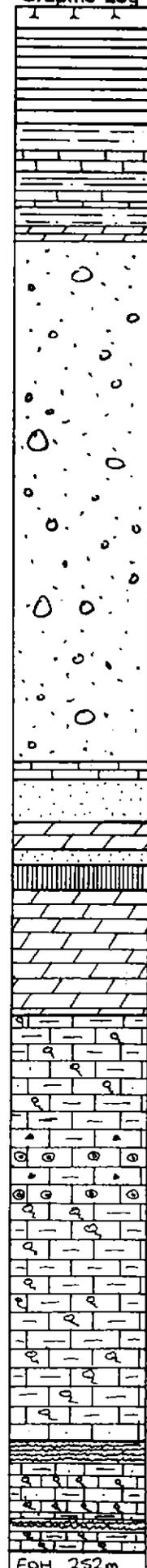
FROM	TO	COMMENTS
40.9	41.2	0.4% Zn, 1.4% Pb - Galena and sphalerite veins in silicic quartzite.
38.0	140.9	The silicic quartzite contains up to 9% Ca and averages nearly 500 ppm zinc.

CONODONT AGE DATING. - Inconclusive for top of hole.

CONCLUSIONS:

The age dating suggests the top phyllite is Amber Slote. This seems to pass conformably into Siltstone Unit with an Amber slate age! The Quartzite is a local feature within the limestone signifying major synsed faulting + rapid sedimentological deposition - Anomalous in zinc ∴ mineralising fluids have passed through.

Bedding @ 18.7m 60° to d/a. @ 108.5m 45° to d/a. @ 140.9m 60° to d/a. @ 164.8 50° to d/a @ 247.15m 55° to d/a.



EOH 252m

LOCAL 1720E  
 CO-ORDINATES 1077N  
 RL COLLAR 129m

C.R. KPLC ON LIM  
 DRILL CORE LOG

SHEET No. 1 of 8  
 TENEMENT NAME ZEPHANT 278 No.  
 PLAN - MAP REFERENCE PYRAMID  
 COMMENCED 3/4/96 DEPTH 252m HOLE No. DD962P65  
 COMPLETED 22/4/96 CASING LEFT DPO No(s) 82159

DEPTH		Core Rec. %	ROD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Mag Susceptibility													
From (M)	To (M)									Depth	Value	Depth	Value	Depth	Value	REC (mm)	REC (TO)	REC (m)	REC (%)				
0	3.2	25	5x	Qta	Overburden - peat and gravel.						0	0	15.5	10	31	10	0	2	0.7	20			
											0.5	CL	16	11	31.5	0	2	3.2	0.3	25			
											1	CL	16.5	0	32	0	3.2	4.2	0.7	70			
3.2	18.7	47	4x	Ogsi	Grey siltstone - tan calcareous with occ fine grained siltm bands of sandstones. Brittle core possible. Amber slate - or siltstone with	Plane 45° to c/a ? Bedding or cleavage. Bedding @ 7.6m 60° to c/a.	5471001	3.2	5.0		1.5	CL	17	CL	32.5	15	4.2	5.0	0.2	25			
											2	0	17.5	CL	33	15	5.0	6.4	1.1	79			
											3	15	18.5	55	34	5	7.8	9.4	0.8	50			
											3.5	CL	19	5	34.5	0	9.4	11.0	0.8	50			
											4	5	19.5	CL	35	10	11.0	12.5	0.3	20			
18.7	35.4	97	1	Ogsi	Dark grey/black argillaceous calcisiltite with light grey often bedded/laminated calcarenite bands. Argillite dominant. Occ bioclastic micrite band.	Bedding 60° to c/a. cleavage 15° to c/a. Calcite veining 70° to c/a in argillite only < 3mm s/10cm. Small shear zone @ 31m 45° to c/a. Bedding @ 33.2 35° to c/a.		18.7	20.4		4.5	CL	20	14	35.5	CL	12.5	14.0	0.4	7			
											5	12	20.5	15	36	CL	14.0	18.9	0.5	26			
											5	24.5	26.0	5.5	10	21	35	36.5	CL	15.9	18.9	2.0	67
											6	0	21.5	0	37	CL	18.9	20.0	0.9	81			
											6	29.0	29.9	6.5	5	22	10	87.5	15	20.0	21.5	1.5	100
											7	CL	22.5	10	38	10	21.5	23.0	1.5	100			
											7.5	13	23	8	38.5	5	23.0	24.5	1.5	100			
											8	10	23.5	5	39	0	24.5	26.0	1.5	100			
35.4	38.0	83	2f	Ogdl	Sheared zone with calcite dolomite veining. Appearance of disturbance at base.	Shearing? 70° to c/a.		35.4	38.0		8.5	CL	24	20	39.5	0	26.0	29.0	3.0	100			
											9	CL	24.5	20	40	5	29.0	29.9	0.8	98			
											9.5	10	25	11	40.5	0	29.9	32.0	2.1	100			
											10	CL	25.5	20	41	0	32.0	33.4	1.4	100			
											10.5	5	26	5	41.5	0	33.4	35.1	1.7	100			
38.0	43.7	100	1		Silicic white grey quartzite small vuggy appearance with al/dol +/- pyrite fill. <sup>Conformable upper contact.</sup> Medium grained with fine black shale specks	Minor irregular calcite veining semi-manive sphalerite/galena in calcite dolomite vein @ 41.05m for 2cm. 70° to c/a.		38.0	39.5		11	5	26.5	9	42	0	35.1	36.8	0.7	100			
											9	39.5	40.9	11.5	CL	27	10	42.5	0	36.8	38.0	0.8	67
											10	40.9	41.2	12	CL	27.5	10	43	2	38.0	39.5	1.5	100
											11	41.2	42.5	12.5	5	28	15	43.5	0	39.5	40.9	1.4	100
											12	42.5	43.7	13	CL	28.5	CL	44	0	40.9	42.5	1.6	100
											13.5	CL	29	15	44.5	0	42.5	44.0	1.5	100			
											14	11	29.5	11	45	5	44.0	47.0	3.0	100			
43.7	48.4	100	1		Med/coarse grained white/grey quartzite with alkali fsp clasts	Minor calcite veining 75° to c/a		43.7	46.0		14.5	CL	30	10	45.5	0	47.0	48.5	1.5	100			
											15	CL	30.5	5	46	0	48.5	50.0	1.5	100			

234115

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 2 of 8

TENEMENT NAME PYRAMID No. 2888

AMG 364329 E  
CO-ORDINATES 5356591N AZIMUTH 200° AMG DRILLERS DOTAS COMMENCED 31/1/96 DEPTH 252m HOLE No. DD962P6  
RL COLLAR 129m INCLINATION 69° DRILL TYPE U250 COMPLETED 22/4/96 CASING LEFT DPO No(s) 82159

PLAN - MAP REFERENCE

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Magnetic Susceptibility -										
From (M)	To (M)									Depth	Value	Depth	Value	Depth	Value	REC (Gm)	REC (T)	REC (M)	REC %	
					vic black phyllite fragments, pink fspar + jasper locally coarser particularly at base.	minor dissem of pyrite. ? Bedding 40° to c/a. @ 484 Calcite infill crystals. Calcarenous		80			46.5	2	62	12	71.5	0	50	51.5	1.5	100
											47	0	62.5	10	78	2	51.5	53.0	1.5	100
											47.5	0	63	5	78.5	4	63.0	54.5	1.5	100
											48	7	63.5	5	79	4	54.5	58.0	1.5	100
48.4	62.0	100	1		Fine grained silicic quartzite massive sandstone v. minor calcite in matrix - massive quartzite	Minor calcite veining; localised zones of brecciation. Quartz/calcite veining planar features possibly cleavage < 45° to c/a.	SFA1014	50	51.5		48.5	4	64	0	71.5	0	56.0	57.5	1.5	100
											49	5	64.5	2	80	4	57.5	59.0	1.5	100
											49.5	2	65	4	80.5	5	59.0	60.5	1.5	100
											50	0	65.5	8	81	10	60.5	62.0	1.5	100
											50.5	0	66	6	81.5	9	62.0	63.5	1.5	100
											51	2	66.5	10	82	7	63.5	65.0	1.5	100
62.0	65.0	100	1		White/grey massive quartzite with occ fine conglomerate bands vic black phyllite frag	Calcarenous veining locally more thinner + intense		17	62.0	63.5	51.5	0	67	4	82.5	10	65.0	66.5	1.5	100
											52	0	67.5	5	83	5	66.5	67.8	1.5	100
											52.5	20	68	5	83.5	4	67.8	69.3	1.5	100
											53	5	68.5	4	84	5	69.3	70.8	1.5	100
65.0	66.6	100	1		Fine grained conglomeratic quartzite with black phyllite clots + a variety of others	Calcarenous matrix locally (poss vug infill).					53.5	6	69	0	84.5	5	70.8	73.8	3.0	100
											54	5	69.5	9	85	0	73.8	75.3	1.5	100
											54.5	3	70	0	85.5	0	75.3	76.8	1.5	100
											55	0	70.5	0	86	0	76.8	78.3	1.5	100
66.6	92.6	100	1		Grey med/coarse grained silicic quartzite with black clots and of qtz vein clots; massive bedding Uniform looking; mixed angular + rounded clots. Occ finer zones.	Occ calcite veining generally 70° to c/a. More intense veining at basal metre.		18	67.8	69.3	55.5	4	71	0	86.5	5	78.3	79.8	1.5	100
											19	78.3	79.8	5	87	5	79.8	81.3	1.5	100
											20	88.8	90.3	5	87.5	5	81.3	82.8	1.5	100
											21	90.3	92.6	5	88	5	82.8	84.3	1.5	100
											57.5	6	73	0	88.5	0	84.3	85.8	1.5	100
											58	3	73.5	0	89	5	85.8	87.3	1.5	100
											58.5	12	74	4	89.5	2	87.3	88.8	1.5	100
											59	10	74.5	4	90	4	88.8	90.3	1.5	100
92.6	93.3	100	1		Altered fine conglomerate with calcite in matrix	Quartz/pink carbonate vein 12cm 45° to c/a with green (? fuchsite) mound on margin + surrounding veinlets		22	92.6	93.3	59.5	5	75	2	90.5	5	90.3	91.8	1.5	100
											23	93.3	94.8	5	91	2	91.8	93.3	1.5	100
											60.5	10	76	0	91.5	4	93.3	94.8	1.5	100
											61	5	76.5	0	92	2	94.8	96.3	1.5	100
											61.5	7	77	5	92.5	0	94.3	99.3	3.0	100

234116

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 3 of 8  
No. 28/88

TENEMENT NAME PYRAMID

PLAN - MAP REFERENCE

CO-ORDINATES 364329E 5356591N AZIMUTH 200° AMG DRILLERS DOTAS COMMENCED 31/4/96  
RL COLLAR 129M INCLINATION 69° DRILL TYPE U250 COMPLETED 22/4/96

DEPTH 25.2m HOLE No. DD962P65  
CASING LEFT DPO No(s) 92159

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Magnetic Susceptibility				Recovery					
From (M)	To (M)									Depth	Value	Depth	Value	Depth	Value	REC (cm)	REC (t)	REC (m)	REC (%)
93.3	97.8	100	1		Med/coarse silicic quartzite locally conglomeratic, grey reduction in amount of black angular clasts. patches of pink/brown alteration; more variety of clasts.	Occ calcite veining	5471024	96.3	97.8	93	4	108.5	11	124	5	99.3	100.8	1.5	100
										93.5	8	109	2	124.5	10	100.8	102.3	1.5	100
										94	10	109.5	5	125	7.5	102.3	103.8	1.5	100
										94.5	10	110	0	125.5	23	103.8	105.3	1.5	100
										95	10	110.5	0	126	2	105.3	106.8	1.5	100
										95.5	5	111	2	126.5	5	106.8	107.3	1.5	100
										96	10	111.5	0	2.7	9	109.3	109.9	1.5	100
										96.5	11	112	5	127.5	2	109.9	111.3	1.5	100
97.8	98.8	100	1		Brown, buff, pink altered? silicic med/coarse quartzite		25	97.8	98.8	97	9	112.5	4	128	10	111.3	112.8	1.5	100
										97.5	11	113	0	128.5	9	112.8	114.3	1.5	100
										98	7	113.5	0	129	5	114.3	115.8	1.5	100
98.8	104.8	100	1		light grey fine grained conglomerate - silicic massive - possible unpaired alteration? hydrothermal greater variety of generally rounded clasts.	occasional calcite veining localised brecciation	26	98.8	100.8	98.5	11	114	5	129.5	6	115.8	117.3	1.5	100
										99	6	114.5	0	130	9	117.3	118.8	1.5	100
										99.5	0	115	5	130.5	6	118.8	120.3	1.5	100
						light green veining @ 103.3-10 - chlorite or fuchsite				100	0	115.5	5	131	15	120.3	121.8	1.5	100
										100.5	0	116	4	131.5	6	121.8	123.3	1.5	100
										101	0	116.5	5	132	0	123.3	124.7	1.5	100
										101.5	0	117	5	132.5	10	124.7	126.2	1.5	100
104.8	106.9	100	1		Pink hue to ?feldspathic med/coarse grained qtzite with coarser ?alkali fsp clasts.	Pink feldspar - also pink calcite - calcareous.	27	103.3	104.8	102	0	117.5	5	133	CL	126.2	127.8	1.6	100
							28	104.8	106.8	102.5	0	118	8	133.5	25	127.8	129.3	1.5	100
										103	0	118.5	6	134	12	129.3	130.8	1.5	100
										103.5	0	119	8	134.5	15	130.8	132.3	1.3	97
										104	0	119.5	11	135	0	132.3	133.2	0.4	50
106.9	113.7	100	1		Med grained grey silicic quartzite with coarser zones	Thin calcite veining. occ green veining and pink carbonate zones in matrix Bedding contact @ 108.5m 40° to ch. ?Buff dolomite in matrix				104.5	0	120	9	135.5	14	133.2	134.6	1.4	100
										105	5	120.5	0	186	12	134.6	136.1	1.5	100
										105.5	0	121	20	136.5	5	136.1	136.8	0.7	100
										106	5	121.5	5	187	15	136.8	138.3	1.5	100
										106.5	5	122	5	137.5	12	138.3	139.8	1.5	100
										107	5	122.5	2	138	0	139.8	141.3	1.5	100
										107.5	3	123	22	138.5	11	141.3	142.8	1.5	100
										108	8	123.5	21	139	14	142.8	144.3	1.5	100

234117

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 4 of 9

TENEMENT NAME PYRAMID No. 28188

CO-ORDINATES 364329E 538591N AZIMUTH 200° AME DRILLERS OOTAS COMMENCED 2/14/96 DEPTH 252m HOLE No. DD96ZP65  
RL COLLAR 129m INCLINATION 69° DRILL TYPE U250 COMPLETED 22/4/96 CASING LEFT DPO No(s)

DEPTH		Core Rec. %	ROD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analyzed by.....)							
From (M)	To (M)										Mag Sus.		Mag Sus		Rec (mm)	Rec (in)	Rec (m)	Rec (%)
113.7	122.5	100	1		Medium grained dark grey silicic quartzite see conglomeratic band. massive	rose veining becoming greater intensity d.hole.	3471029	117.3	118.8		139.5	5	155	5	144.3	145.8	1.5	100
											140	9	155	11	145.8	147.3	1.5	100
											140.5	11	156	0	147.3	149.7	1.5	100
											141	20	156.5	15	147.8	150.3	1.5	100
											141.5	9	157	9	150.3	151.0	0.6	86
121.5	123.3	100	2		Fine grained ? sandstone (non-calcareous) with bands of coarser calcareous material - ? limestone. from dolomite.		30	121.9	123.3		142	5	157.5	0	151.0	152.5	1.5	100
											142.5	15	158	0	152.5	153.6	0.8	72
											143	10	158.5	6	153.6	155.2	1.1	69
											143.5	11	159	6	155.2	156.3	1.1	100
											144	14	159.5	8	156.3	157.8	1.4	93
											144.5	9	160	0	157.8	159.3	1.5	100
123.3	125.8	100	2F		? limestone band (argillaceous) matrix wuggy + calcareous	Top angle contact 10° c/A Bottom angle " 25° c/A.	31	123.3	125.8		145	10	160.5	0	159.9	161.4	1.6	100
											145.5	10	161	9	161.4	162.8	1.4	100
											146	9	161.5	4	162.8	163.8	1.0	100
125.8	132.3	95	1		med/fine grained grey quartzite; see black shale bands with shearing	Bedding sub parallel to c/a. Some cal dol veining and minor brecciation.	32	125.8	127.8		146.5	8	162	0	163.8	165.3	1.5	100
											147	5	162.5	0	165.3	166.8	1.5	100
							33	130.8	132.3		147.5	30	163	6	166.8	168.3	1.5	100
											148	9	163.5	0	168.3	169.8	1.5	100
132.3	133.2	50	5X		Broken core + core loss pass cavity.		34	132.3	133.2		148.5	14	164	0	169.8	171.3	1.5	100
											149	13	164.5	5	171.3	172.8	1.5	100
											149.5	9	165	4	172.8	174.3	1.5	100
133.2	137.5	100	3F	Ogd1	Brown/pink/buff ? dolomite massive looking (possibly a weakly calcareous silicic quartzite) - soft. Zones of grey dolomite	Red hematitic alteration minor thin veinlets minor disseminated pyrite	35	133.2	134.6		150	0	165.5	5	174.3	175.8	1.5	100
							36	134.6	136.8		150.5	5	166	5	175.8	177.3	1.5	100
							37	136.8	137.5		151	5	166.5	4	177.3	178.8	1.5	100
											151.5	0	167	5	178.8	180.3	1.5	100
											152	10	167.5	5	180.3	181.8	1.5	100
											152.5	0	168	11	181.8	183.3	1.5	100
137.5	140.9	100	3F		Possible calcareous quartzite; light grey with pink hue	Shear zone @ 139.9m.	38	137.5	139.9		153	0	168.5	5	183.3	184.8	1.5	100
							39	139.9	140.9		153.5	CL	169	5	184.8	186.3	1.5	100
											154	5	169.5	2	186.3	187.8	1.5	100
											154.5	CL	170	5	187.8	189.3	1.5	100

234118

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 5 of 9

TENEMENT NAME PYRAMID No. 28188

364329E.  
CO-ORDINATES 5356591N AZIMUTH 200° AMG DRILLERS DDTAS COMMENCED 3/4/96 DEPTH 252m HOLE No. DD96ZP65  
RL COLLAR 129m INCLINATION 69° DRILL TYPE U250 COMPLETED 22/4/96 CASING LEFT DPO No(s) 82159  
PLAN - MAP REFERENCE

DEPTH		Core Rec. %	RAD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)								
From (M)	To (M)										Mag	SUS	Mag	SUS	REC (Grm)	REC (%)	REC (m)	REC %	
												Depth	Value	Depth	Value				
140.9	142.9	100	1	Ogdl	Dolomite - grey/dark grey well bedded locally; argillaceous zones and dolomitized fenestral micrite.	bedding 60° to c/a but locally faulted	5471040	140.9	142.9			170.5	4	186	6	189.3	190.8	1.5	100
												171	4	86.5	5	190.9	192.3	1.5	100
												171.5	2	187	9	192.3	193.8	1.5	100
												172	0	187.5	6	193.8	195.3	1.5	100
												172.5	5	188	9	195.3	196.8	1.5	100
142.9	143.2	100	SX	Ogfl	Shear zone - brecciated dolomite clots.	Upper contact 45° to c/a.	41	142.9	144.3			173	0	188.5	10	196.8	198.3	1.5	100
												173.5	5	189	15	198.3	199.8	1.5	100
												174	2	189.5	16	199.8	201.3	1.5	100
143.2	143.45	100	1	Ogdl	Alteral dolomite.							174.5	0	190	16	201.3	202.8	1.5	100
												175	0	190.5	13	202.8	204.3	1.5	100
143.45	144.0	100	1	Ogbr	Pink/buff/brown/fawn calcate - dolomite vein - breccia vein with pink altered clots	Contacts 75° to c/a at base Top.						175.5	0	191	10	204.3	205.8	1.5	100
												176	2	191.5	10	205.8	207.3	1.2	80
												176.5	2	192	10	207.3	208.8	1.5	100
												177	0	192.5	10	208.8	210.3	1.5	100
												177.5	0	193	10	210.3	211.8	1.5	100
144.0	145.8	100	1	Ogms	Grey dolomitized fine grained calcarenite, locally bedded. Possibly a micrite (laminated) unit + birds eye micrite	Bedding 50° to c/a cal/dol veining <1cm to c/a 40° to c/a	42	144.3	145.8			178	5	193.5	12	211.8	213.3	1.5	100
												178.5	0	194	11	213.3	214.8	1.5	100
												179	2	194.5	14	214.8	216.3	1.5	100
												179.5	8	195	10	216.3	217.8	1.5	100
												180	5	195.5	9	217.8	219.3	1.5	100
												180.5	4	196	6	219.3	220.8	1.5	100
145.8	152.8	95	1	Ogdl	Grey dolomitized fine grained calcarenite ? locally argillaceous. + locally Ogms type.	ore cal/dol filled vug, bearing more varied even brecciated.	23	148.8	150.3			181	6	196.5	10	220.8	222.3	1.5	100
												181.5	5	197	20	222.3	223.8	1.5	100
												182	5	197.5	12	223.8	225.3	1.5	100
												182.5	10	198	20	225.3	226.8	1.5	100
												183	9	198.5	6	226.8	228.3	1.5	100
152.8	155.2	92	3F	Ogdl	Sheared zones in dolomite - possible cavities - dk grey clays.							183.5	5	199	14	228.3	229.8	1.5	100
												184	16	199.5	10	229.8	231.3	1.5	100
												184.5	10	200	10	231.3	232.8	1.5	100
155.2	155.8	100	1	Ogdl	Varied dolomite.		44	153.6	155.8			185	5	200.5	10	232.8	234.3	1.5	100
												185.5	5	201	9	234.3	235.8	1.5	100

234119

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 6 of 8

TENEMENT NAME PYRAMID No. 28188

364329E  
CO-ORDINATES 5356591N AZIMUTH 200° AMG DRILLERS DDTAS COMMENCED 3/4/96 DEPTH 252m HOLE No. DD967P65  
RL COLLAR 129m INCLINATION 69° DRILL TYPE U250 COMPLETED 22/4/96 CASING LEFT DPO No(s) 82159

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)							
From (M)	To (M)										Mag SULS		Mag SULS		REC (mm)	REC (t)	REC (m)	REC (%)
											Depth	Value	Depth	Value				
155.8	157.5	100	3f	Ogfb	Sheared zone with lt grey pink altered and brecciated ?dolomite locally	Calldol veins 70° to c/a. dol breccia 157.3-157.5. two phases of veining	5471045	155.8	157.5		201.5	10	217	10	235.8	237.2	1.0	71
											202	10	217.5	7	237.2	238.8	1.6	100
											202.5	12	218	11	238.8	240.3	1.5	100
											203	10	218.5	15	240.3	241.8	1.5	100
157.5	160.6	95	3f	Ogd1	Varied dolomitised fine grained calcarenites. etc small sheared zone	veining calldol and often small and irregular locally brecciation.	46	157.5	159.8		203.5	8	219	10	241.8	244.8	3.0	100
											204	10	219.5	6	244.8	247.8	3.0	100
											204.5	9	220	5	247.8	250.8	3.0	100
											205	5	220.5	7	250.8	252.0	1.2	100
160.6	164.8	100	1	Ogd1	Partially dolomitised burrowed calcarenite. - hunk of synsed breccias decrease in dolomitisation downhole.	occ calcite veining irregular Bedding @ 165.8 - 45° to c/a Pyrite clasts + semi massive with calcite infilling part of matrix to a synsed breccia @ 164.3m. minor pyrite with calcite veins	47	163.8	164.8		205.5	11	221	6				
											206	10	221.5	6				
											206.5	6	222	10				
											207	6	222.5	10				
											207.5	11	223	11				
											208	8	223.5	11				
											208.5	0	224	10				
											209	5	224.5	9				
											209.5	6	225	7				
164.8	171.8	100	1	Ogd1	Fine grained grey calcarenite locally micritic interbedded with more argillaceous med grained (locally non calcareous) calcarenites. light grey calcarenites can be burrowed. occ bioclastic band ?subtidal facies.	Bedding 50° to c/a.					210	5	225.5	6				
											210.5	6	226	9				
											211	5	226.5	6				
											211.5	6	227	10				
											212	9	227.5	10				
											212.5	5	228	12				
											213	9	228.5	13				
											213.5	10	229	5				
											214	10	229.5	9				
171.8	174.8	100	1	Ogd1	Argillaceous bioclastic calcarenite with tetradium. locally light grey micritic bands	Some calcite veining 70° to c/a.					214.5	6	230	5				
											215	7	230.5	2				
											215.5	10	231	6				
											216	6	231.5	5				
174.8	178.5	100	1	Ogpo	Dominantly med grained equigranular calcarenite	Calcite veining 1 per 10cm generally 70° to c/a.	48	176.8	177.3		216.5	8	232	2				

234120

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET No. 7 of 8  
No. 28188

TENEMENT NAME PYRAMID  
PLAN - MAP REFERENCE

364329 E  
CO-ORDINATES S35.6591N AZIMUTH 200° AMG DRILLERS DOTAS COMMENCED 3/1/96  
RL COLLAR 12.9m INCLINATION 69° DRILL TYPE U250 COMPLETED 22/4/96

DEPTH 252m HOLE No. DD96ZP65  
CASING LEFT DPO No(s) 82159

DEPTH		Core Rec. %	ROD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)			
From (M)	To (M)										Mag	Sus	Mag	Sus
78.5	180.9	100	1	Ogul	Dominantly argillaceous bioclastic calcarenite with tetradiam						232.5	5	248	0
											233	6	248.5	5
											233.5	5	249	7
											234	9	249.5	5
180.9	206.5	98	1	Ogul	Possible start of myrtle fm. Interbedded fine grained locally micritic + coarsely bioclastic calcarenite with argillaceous bands. ?PAC units - but no real laminated micritic units - Oncolites locally. Some biota eye micrite. Poss laminated micrite 182.3-183.3 more channel like towards base. Disturbed bedding at base (mic. variable bedding angles)	Bedding 50° to c/a. calcite veining increases in intensity towards base of units generally < 1cm 70° to c/a	541049	182.0	183.3		234.5	6	250	5
							50	192.3	193.8		235	5	250.5	6
											235.5	5	251	5
											236	4	251.5	0
							51	202.8	204.3		236.5	5	252	6
											237	CL	2	
							52	205.8	206.5		237.5	5		
											238	5		
											238.5	5		
											239	9		
											239.5	9		
											240	5		
											240.5	5		
											241	2		
206.5	207.7	90	1	Ogul	Altered (?rotted) argillaceous limestone		53	206.5	207.7		241.5	5		
											242	10		
											242.5	5		
207.7	216.3	100	1	Ogul	Interbedded argillaceous calcarenite and burrowed fine grained calcarenite with bioclastic calcarenite bands - bands rather uniform 10cm thickness		54	207.7	209.8		243	0		
											243.5	2		
											244	10		
											244.5	7		
											245	6		
											245.5	6		
											246	8		
216.3	231.9	100	1	Ogul	Fine grained grey calcarenite with occasional argillaceous beds and zones; occ bioclastic scattered occ argillaceous bioclastic uid.	Bedding 50° to c/a.	55	219.3	220.8		246.5	2		
											247	5		
											247.5	2		

234121



bhole	lulddh	DPO	sl	Prosp	EL	afrom	ato	aag	aal	aas	aba	aca	acu	afe	a'	amg	amn	apb	azn	as	MRTLth
ZP65	DD96ZP65			Pyramid	2	0	3.2														Qha
ZP65	DD96ZP65	82159	5471001	Pyramid	28/88	3.2	5	-0.5	7.84	18	2040	0.4	31	3.55	3.89	1.43	99	12	171		Sc
ZP65	DD96ZP65			Pyramid	28/88	5	9.4														Sc
ZP65	DD96ZP65	82159	5471002	Pyramid	28/88	9.4	11	-0.5	7.53	20	1560	0.35	20	3.38	3.7	1.4	89	21	149		Sc
ZP65	DD96ZP65			Pyramid	28/88	11	15.9														Sc
ZP65	DD96ZP65	82159	5471003	Pyramid	28/88	15.9	18.7	-0.5	8.61	10	1560	0.73	21	7.36	4.22	1.65	2310	14	104		Sc
ZP65	DD96ZP65	82159	5471004	Pyramid	28/88	18.7	20.4	-0.5	7.95	7	1290	2.82	24	4.94	3.92	1.7	987	12	109		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	20.4	24.5														Ogsl
ZP65	DD96ZP65	82159	5471005	Pyramid	28/88	24.5	26	-0.5	5.88	-5	1040	10.05	26	3.31	2.81	1.33	625	13	89		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	26	29														Ogsl
ZP65	DD96ZP65	82159	5471006	Pyramid	28/88	29	29.9	0.5	3.28	-5	368	13.42	-5	2.55	1.6	1.28	785	31	60		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	29.9	35.4														Ogsl
ZP65	DD96ZP65	82159	5471007	Pyramid	28/88	35.4	38	-0.5	4.56	9	558	7.17	12	3.04	2.42	1.51	720	110	527		Ogsl
ZP65	DD96ZP65	82159	5471008	Pyramid	28/88	38	39.5	1.2	0.83	11	98	2.4	9	1.24	0.45	0.72	411	941	348		Ogsl
ZP65	DD96ZP65	82159	5471009	Pyramid	28/88	39.5	40.9	0.8	0.49	21	87	1.71	10	1.03	0.21	0.49	444	597	372		Ogsl
ZP65	DD96ZP65	82159	5471010	Pyramid	28/88	40.9	41.2	5.8	0.4	11	48	2.27	81	1.2	0.2	0.59	743	14000	4020		Ogsl
ZP65	DD96ZP65	82159	5471011	Pyramid	28/88	41.2	42.5	-0.5	0.36	11	45	2.24	10	0.78	0.17	0.53	465	918	338		Ogsl
ZP65	DD96ZP65	82159	5471012	Pyramid	28/88	42.5	43.7	-0.5	0.5	-5	49	1.44	8	0.75	0.2	0.33	283	241	210		Ogsl
ZP65	DD96ZP65	82159	5471013	Pyramid	28/88	43.7	46	0.6	0.61	5	64	3.01	33	0.8	0.27	0.47	377	667	557		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	46	50														Ogsl
ZP65	DD96ZP65	82159	5471014	Pyramid	28/88	50	51.5	0.8	0.61	8	52	2.23	5	0.82	0.32	0.5	449	250	419		Ogsl
ZP65	DD96ZP65	82159	5471015	Pyramid	28/88	51.5	53	1	0.52	-5	85	8.57	-5	1.06	0.27	0.77	1220	192	634		Ogsl
ZP65	DD96ZP65	82159	5471016	Pyramid	28/88	53	54.5	0.7	0.6	-5	48	1.72	-7	0.72	0.31	0.23	221	66	287		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	54.5	62														Ogsl
ZP65	DD96ZP65	82159	5471017	Pyramid	28/88	62	63.5	-0.5	0.58	5	46	1.71	7	0.78	0.3	0.43	288	43	193		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	63.5	67.8														Ogsl
ZP65	DD96ZP65	82159	5471018	Pyramid	28/88	67.8	69.3	-0.5	0.66	14	50	4.14	7	1.81	0.35	0.89	822	27	176		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	69.3	78.3														Ogsl
ZP65	DD96ZP65	82159	5471019	Pyramid	28/88	78.3	79.8	-0.5	1.39	10	79	4.41	9	1.02	0.73	0.53	564	22	76		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	79.8	88.8														Ogsl
ZP65	DD96ZP65	82159	5471020	Pyramid	28/88	88.8	90.3	-0.5	1.56	-5	106	1.13	36	0.78	0.83	0.25	185	46	85		Ogsl
ZP65	DD96ZP65	82159	5471021	Pyramid	28/88	90.3	92.6	-0.5	1.35	6	121	2.64	56	0.72	0.72	0.3	323	70	174		Ogsl
ZP65	DD96ZP65	82159	5471022	Pyramid	28/88	92.6	93.3	-0.5	1.88	-5	135	5.71	69	1.14	0.99	0.74	700	155	1180		Ogsl
ZP65	DD96ZP65	82159	5471023	Pyramid	28/88	93.3	94.8	0.8	0.96	-5	85	7.04	38	2.01	0.52	1.71	1570	145	276		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	94.8	96.3														Ogsl
ZP65	DD96ZP65	82159	5471024	Pyramid	28/88	96.3	97.8	1.3	0.92	-5	105	9.48	49	1.99	0.5	1.78	1700	152	666		Ogsl
ZP65	DD96ZP65	82159	5471025	Pyramid	28/88	97.8	98.8	0.6	0.94	-5	131	8.65	152	1.88	0.5	1.85	1820	151	849		Ogsl
ZP65	DD96ZP65	82159	5471026	Pyramid	28/88	98.8	100.8	-0.5	0.67	-5	69	4.65	23	0.88	0.36	0.49	519	41	330		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	100.8	103.3														Ogsl
ZP65	DD96ZP65	82159	5471027	Pyramid	28/88	103.3	104.8	-0.5	1.23	-5	101	3.98	11	0.71	0.66	0.5	591	130	495		Ogsl
ZP65	DD96ZP65	82159	5471028	Pyramid	28/88	104.8	106.8	-0.5	1.35	-5	147	4.04	7	1.04	0.71	0.49	402	71	372		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	106.8	117.3														Ogsl
ZP65	DD96ZP65	82159	5471029	Pyramid	28/88	117.3	118.8	-0.5	1.41	-5	104	2.35	8	1.48	0.75	0.59	400	32	202		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	118.8	121.8														Ogsl
ZP65	DD96ZP65	82159	5471030	Pyramid	28/88	121.8	123.3	-0.5	1.69	-5	111	3.8	-5	1.87	0.94	0.78	734	49	359		Ogsl
ZP65	DD96ZP65	82159	5471031	Pyramid	28/88	123.3	125.8	-0.5	1.54	-5	94	7.32	6	3.22	0.83	1.33	1360	57	331		Ogsl
ZP65	DD96ZP65	82159	5471032	Pyramid	28/88	125.8	127.8	-0.5	2.28	-5	153	2.32	6	1.76	1.26	0.57	708	58	442		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	127.8	130.8														Ogsl
ZP65	DD96ZP65	82159	5471033	Pyramid	28/88	130.8	132.3	-0.5	3.43	6	218	3.29	10	2.21	1.91	0.99	699	41	315		Ogsl
ZP65	DD96ZP65	82159	5471034	Pyramid	28/88	132.3	133.2	-0.5	1.79	6	207	5.44	19	2.83	0.95	1.81	1190	34	623		Ogsl
ZP65	DD96ZP65	82159	5471035	Pyramid	28/88	133.2	134.6	0.9	0.51	-5	138	20.15	14	2.79	0.2	10.21	2190	78	1090		Ogsl
ZP65	DD96ZP65	82159	5471036	Pyramid	28/88	134.6	136.8	0.8	0.28	-5	107	18.03	11	1.76	0.14	9.13	1250	156	882		Ogsl
ZP65	DD96ZP65	82159	5471037	Pyramid	28/88	136.8	137.5	0.6	0.21	-5	86	18.28	8	1.98	0.08	9.12	1240	135	661		Ogsl
ZP65	DD96ZP65	82159	5471038	Pyramid	28/88	137.5	139.8	0.5	0.47	-5	102	20.65	10	1.09	0.26	11.51	736	94	536		Ogsl
ZP65	DD96ZP65	82159	5471039	Pyramid	28/88	139.8	140.9	-0.5	0.4	-5	62	19.47	9	0.96	0.22	10.51	633	145	380		Ogsl
ZP65	DD96ZP65	82159	5471040	Pyramid	28/88	140.9	142.9	0.9	1.12	12	96	18.29	16	2.33	0.65	8.88	908	344	461		Ogsl
ZP65	DD96ZP65	82159	5471041	Pyramid	28/88	142.9	144.3	0.9	0.56	-5	92	16.53	74	2.18	0.29	8.2	1130	659	760		Ogsl/Ogsl
ZP65	DD96ZP65	82159	5471042	Pyramid	28/88	144.3	145.8	0.7	1.02	-5	143	16.98	8	1.64	0.6	8.19	626	71	164		Ogsl
ZP65	DD96ZP65	82159	5471043	Pyramid	28/88	148.8	150.3	0.8	0.24	-5	290	20.32	11	1.07	0.13	10.28	718	66	547		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	150.3	153.6														Ogsl
ZP65	DD96ZP65	82159	5471044	Pyramid	28/88	153.6	155.8	1.2	0.86	-5	65	20.02	7	1.39	0.51	8.09	847	78	500		Ogsl
ZP65	DD96ZP65	82159	5471045	Pyramid	28/88	155.8	157.5	0.6	1.15	-5	259	19.24	13	2.19	0.62	8.55	1120	210	888		Ogsl
ZP65	DD96ZP65	82159	5471046	Pyramid	28/88	157.5	159.8	0.6	0.6	-5	134	19.26	8	1.59	0.32	9.12	840	187	429		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	159.8	163.8														Ogsl
ZP65	DD96ZP65	82159	5471047	Pyramid	28/88	163.8	164.8	0.8	1.03	-5	70	20.18	13	2.16	0.56	6.15	408	107	216		Ogsl
ZP65	DD96ZP65			Pyramid	28/88	164.8	175.8														Ogsl/Ogsl

234123

bhole	fulldh	DPO	smjno	Prospect	EL	alrom	ato	aag	aaf	aas	aba	aca	acu	afe	ak	amg	amn	apb	azn	as	MRTLith	
ZP65	DD96ZP65	82159	5471048	Pyramid	28/88	175.8	177.3	1.2	0.69	-5	62	27.31	-5	0.66	0.39	2.28	196	21	32		Ogou	
ZP65	DD96ZP65			Pyramid	28/88	177.3	182															Ogou/Ogul
ZP65	DD96ZP65	82159	5471049	Pyramid	28/88	182	183.3	0.6	1.56	-5	91	26.99	-5	0.6	0.89	1.12	140	13	45		Ogmu	
ZP65	DD96ZP65			Pyramid	28/88	183.3	192.3															Ogmu/Ogul
ZP65	DD96ZP65	82159	5471050	Pyramid	28/88	192.3	193.8	0.6	0.98	-5	64	25.82	-5	0.56	0.56	2.61	127	15	31		Ogul	
ZP65	DD96ZP65			Pyramid	28/88	193.8	202.8															Ogul
ZP65	DD96ZP65	82159	5471051	Pyramid	28/88	202.8	204.3	1.7	0.72	-5	79	29.29	-5	0.45	0.41	1.45	260	143	598		Ogul	
ZP65	DD96ZP65			Pyramid	28/88	204.3	205.8															Ogul
ZP65	DD96ZP65	82159	5471052	Pyramid	28/88	205.8	206.5	1.7	0.92	-5	87	28.35	-5	0.57	0.5	2.42	635	209	1820		Ogul	
ZP65	DD96ZP65	82159	5471053	Pyramid	28/88	206.5	207.7	2	1.08	-5	73	29.03	-5	1.43	0.61	0.68	661	146	378		Ogul	
ZP65	DD96ZP65	82159	5471054	Pyramid	28/88	207.7	208.8	0.9	1.31	-5	76	28.04	-5	0.66	0.75	1.76	177	16	68		Ogul	
ZP65	DD96ZP65			Pyramid	28/88	208.8	219.3															Ogul
ZP65	DD96ZP65	82159	5471055	Pyramid	28/88	219.3	220.8	-0.5	0.72	-5	60	29.17	-5	0.6	0.4	2.11	172	27	79		Ogul	
ZP65	DD96ZP65			Pyramid	28/88	220.8	232.8															Ogul
ZP65	DD96ZP65	82159	5471056	Pyramid	28/88	232.8	234.3	1.2	1.03	-5	62	26.69	-5	0.5	0.58	1.96	106	15	39		Ogul	
ZP65	DD96ZP65			Pyramid	28/88	234.3	240.3															Ogmu/Ogd
ZP65	DD96ZP65	82159	5471057	Pyramid	28/88	240.3	241.8	-0.5	1.22	-5	71	25.14	-5	0.8	0.68	3.81	224	91	195		Ogdi	
ZP65	DD96ZP65			Pyramid	28/88	241.8	249.4															Ogd/Ogmu
ZP65	DD96ZP65	82159	5471058	Pyramid	28/88	249.4	250.8	0.9	0.74	-5	52	26.55	-5	0.77	0.42	3.89	247	133	84		Ogdi	
ZP65	DD96ZP65			Pyramid	28/88	250.8	252															Ogdi

234124

**Appendix 4**

**Geological Logs and Assay Ledgers for  
DD96ZF37  
Firewood Siding Prospect**

DRILL-HOLE SUMMARY LOG

Graphic Log

HOLE NAME: DD95 ZF37      GRID AMG    EAST 59792    NORTH 44323  
 PROSPECT FIREWOOD STONE      GRID    EAST 360635.9    NORTH 5350142.6  
 EL: ZEEHAN 1      EL 288    RL      DEPTH 212.0

DATE DRILLED: MAY 1995  
 LOGGED BY: SJT / RGP  
 DRILLING CO.: DD TAS  
 DRILL TYPE: DD  
 DRILL RIG: LY38  
 LOC DRILL CORE: ZEEHAN

SURVEYS:					
DEPTH	AZIM (AMG)	DIP	DEPTH	AZIM (AMG)	DIP
0	082	-45°			
50	085	-48°			
100	085	-49°			
150	086	-49°			
200	086	-49.5°			

OBJECTIVES OF HOLE:

To test "upper zone" mineralisation in dolomitic Gordon Limestone near the Crotty Quartzite contact. Walker + air-core drilling in the vicinity intersected common 0.1-1% Zn.

LITHOLOGICAL SUMMARY:

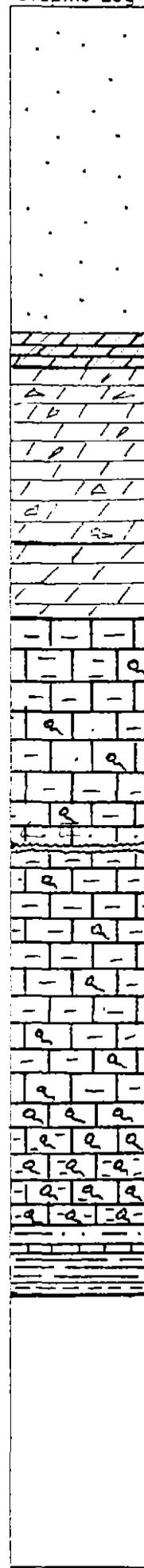
FROM	TO	FORM CODE	COMMENTS
0	85	Qha	Overburden; no recovery
8.5	28.3	Sc	White med grained sandstone - Crotty Quartzite
28.3	56.0	Sc	Sandy clays + sandstones/siltstone - Crotty Quartzite
56.0	76.0	Oqud	Dolomite - intermixed with sandstone.
76.0	100.3	Oqud	Dolomitised argillaceous calcarenite
100.3	137.0	Ogul	Fine grained argillaceous calcarenite with bioclots
137.0	139.0	Ogmu	Laminated Micrite Unit
139.0	180.5	Ogul	Fine grained calcarenite with bioclots + argillite
180.5	200.5	Ogul	Calcarenite with coarse bioclots + argillite
200.5	210.4	Ogsi	Transitional Siltstone Unit
210.4	212.0	Ogsi	Siltstone Unit

MINERALISATION SUMMARY:

FROM	TO	COMMENTS
49.0	59.0	0.38% Zn hosted by sandy clays of the Crotty Quartzite and dolomite of the Oqud unit of the Gordon Limestone
87.8	91.0	0.5% Zn hosted by brown clay zones - ? dolomite poor recovery.

CONCLUSIONS:

Extent of dolomitisation much reduced re DD95ZF37.  
 Breaching @ 20m 70° to c/a @ 53m 60° to c/a @ 134m 45° to c/a  
 @ 150.7 60° to c/a.



360 636 E  
535 0143 N

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET NO.

TENEMENT NAME BREWSTER SIDING No. 1095

CO-ORDINATES 59792 E  
44323 N

AZIMUTH 070°

DRILLERS DD TA

COMMENCED 18/5/95

PLAN - MAP REFERENCE

DEPTH 212.0 HOLE No. ZF37

RL COLLAR

INCLINATION 45°

DRILL TYPE L438

COMPLETED 2/6/95

CASING LEFT DPO No(s)

DEPTH		Core Rec. %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)				
From (M)	To (M)										Fe (ppm)	Si (ppm)	Al (ppm)	Mn (ppm)	
0	8.5	0		Qha	Overburden - no recovery.							0	8.5	0	0
8.5	9.8	77	3x	Sc	White med grained uniform sandstone; fabric parallel to c/a; cleavage; fabric 60° to c/a; bedding 65° to c/a.							8.5	9.8	0.9	69
												9.8	11.5	1.1	65
												11.5	12.9	1.0	71
												12.9	14.5	0.7	27
												14.5	15.5	0.8	90
												15.5	16.5	0.8	90
9.8	12.6	61	3	Sc	Brown weathered sandstone ? bioturbation.							16.5	17.5	0.4	40
												17.5	18.5	0.5	50
												18.5	20.0	1.2	80
12.6	12.9	100	5	Sc	Brecciated sandstone in a clay gouge - brown sandstone.							20.0	21.5	1.5	100
												21.5	23.5	1.6	80
												23.5	26.5	3.0	100
												26.5	28.0	1.1	73
12.9	16.0	61	5x	Sc	light grey/white sandstone locally brecciated with white gouge/clay; becoming browner downhole; grey/green clay zone 15.6-15.7m							28.0	29.5		
												29.5	32.5	3.0	100
												32.5	35.5	2.1	70
												35.5	38.5	3.0	100
												38.5	41.5	2.0	66
												41.5	44.5	1.0	33
16.0	20.5	67	4x	Sc	Grey sandstone with a clay gouge zone 16.4-16.55m 75° to c/a (partly coloured) white clay zones present.	Bedding 70° to c/a.						44.5	47.5	0.6	20
												47.5	50.5	1.5	50
												50.5	53.5	1.9	63
												53.5	56.5	2.0	80
												56	58	0.3	15
20.5	29.0	89	3	Sc	Grey uniform massive sandstone with weathered brown zones possibly bioturbated; becoming browner and more weathered downhole.							58	61	1.5	50
												61	64	1.5	50
												64	66.6	1.1	42
												66.6	68.5	1.0	53
												68.5	69.6	0.1	9
												69.6	71.0	0.2	14

234127



C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

SHEET NO. ....

TENEMENT NAME FIREWOOD SIDING No. 3  
0FS

PLAN - MAP REFERENCE .....

CO-ORDINATES 360636E AZIMUTH 070° DRILLERS DDTAS COMMENCED 18.5.95 DEPTH 212m HOLE No. 2F37

RL COLLAR 5350143N INCLINATION 45° DRILL TYPE LH38 COMPLETED 2.6.95 CASING LEFT ..... DPO No(s) .....

DEPTH		Core Rec %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by .....			
From (M)	To (M)										REC (g/t)	REC (g/t)	REC (g/t)	REC (g/t)
58.3	61.6	50	4x	Ogud	Grey dolomitised calcarenite						71	72	1.2	60
61.6	66.6	40	4x	Ogud	Dolomitised limestone +/- sandstone - transitional Severe Brown coloration						75	75.5	0.5	100
											75.5	77.5	1.3	65
											77.5	79	0.5	33
											79	81	1.3	65
66.6	69.6	35	4x	Ogud	Vuggy dolomite						80	82.3	1.0	77
											82.3	85.0	1.2	44
69.6	76.0	50	3x	Ogud	Vuggy grey dolomite with calcite infill locally	?ishite matrix brecciation locally - re lith type					85	87.8	0.9	50
											87.8	89	0.2	17
											89	91	0.7	35
76	87.8	50	4x	Ogud	Dark grey/grey dolomitised argillaceous calcarenite with brown clay surfaces Broken over core loss	Minor calcite/dolomite filled vugs					91	94	1.0	33
											94	97	3.0	100
											97	100	2.1	70
											100	103	2.1	70
											103	106	2.7	90
87.8	92.0	30	5x	Ogud	Brown/grey clay zones with weathered (?) dolomite zones poor recovery						106	108.7	2.7	100
											108.7	110.7	2.0	100
											110.7	112.0	1.3	100
											112.0	115	3.0	100
92.0	100.0	64	2x	Ogud	Dark grey extensive/partial dolomitised argillaceous calcarenite with localized sgsedimentary breccias	see vugs					115	117.3	2.3	100
											117.3	118	0.7	100
											118	121	3.0	100
											121	124	3.0	100
											124	127	3.0	100
100.0	100.5	50	5	Ogud	Broken core - see above						127	130	3.0	100
											130	133	3.0	100
100.5	104	80	2	Ogud	Grey/dark grey fine grained calcarenite with major argillite zones; ore biotitic band <10cm	Bedding 90° to c/a. Casidy 102.5-103 Minor irregular scale					133	136	3.0	100
											136	139	3.0	100
											139	142	3.0	100
											142	145	3.0	100

234120



C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

TENEMENT NAME FIREWOOD SPRING SHEET No. 5  
No. 5

CO-ORDINATES 360636E AZIMUTH 070 DRILLERS DDTAS COMMENCED 18.5.95 DEPTH 212 m HOLE No. ZF37  
RL COLLAR 5350143N INCLINATION 45 DRILL TYPE LY38 COMPLETED 2.6.95 CASING LEFT \_\_\_\_\_ DPO No(s) \_\_\_\_\_

DEPTH		Core Rec	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by _____)											
From (M)	To (M)																					
137.1	138.9	100	1	Opal	Interbedded argillite and fine grained grey calcarenite	Bedding 60° E. of A.																
138.9	139.5	100	1	Opal	Syn-sedimentary breccia as before.																	
139.5	147	100	1	Opal	Interbedded grey medium grained grey calcarenite and dark grey argillaceous ? micrite. Localised zones of birds eye micrite; well defined bedding	Bedding @ 146.5m 60° E. of A. Major large calcite veins @ 146.8m 3m calcite vein 45° E. of A.																
147.0	149	100	1	Opal	Fine grained, locally micritic calcarenite with minor argillite in irregular interbeds. Slight nodular appearance.																	
149		100	1	Opal	Zone of cavities, cone lens, and minor calcite veining	Bedding @ 150.7m 60° E. of A.																
See next page.																						

234131

C.R.A. EXPLORATION PTY. LIMITED  
DRILL CORE LOG

TENEMENT NAME FIREWOOD SIDING SHEET No. 5 of 5  
No. \_\_\_\_\_

CO-ORDINATES 360636E AZIMUTH 070° DRILLERS DDTMS COMMENCED 18.5.95 DEPTH 212 HOLE No. 2F37  
RL COLLAR S350143N INCLINATION 45° DRILL TYPE LY 38 COMPLETED 2.6.95 CASING LEFT \_\_\_\_\_ DPO No(s) \_\_\_\_\_

DEPTH		Core Rec. %	RQ DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by TRILL RWS)		
From (M)	To (M)										TO	RQ	REC
137.0	139.0		1F	Ogmu	LAMINATED MICRITE Grey micrite with planar algal laminations 138.3 S <sub>0</sub> - C.A. 58°						148	1F	3.0
											151	3F	2.2
											154		2.7
											156.7		2.7
139.0	167.1		3F	Ogul	PLANAR BEDDED LIME MUDSTONE Banded grey + dark grey 10-50mm lime mud bands between 50-200mm grey micrite bands. micrite locally has birdseye + star-shaped shrinkage? textures filled with calcite 143.0 S <sub>0</sub> - C.A. 59°						159.8		3.1
											162.9	2F	3.1
											166	3V	3.1
											169	3V	2.4
											171	3F	2.9
											174.4	2F	2.25
167.1	180.6		4X	Ogul	CALCITE + DOLomite VEINED LIMESTONE Limestone cut by 10-20% of 2-10mm calcite + dolomite veins. Massive dolomite vein between 175.9-178.0m						176.8	4F	0.8
											178	4F	0.3
											180.5	4X	0.3
											183.6	3F	1.95
											186.7	4F	1.3
180.6	210.4		2F	Ogul	CALC-RUDITE Grey richly fossiliferous calc-rudite. Large angular clasts in fossiliferous mud/calcareite matrix. Reef or reef slope?						187	5X	0.2
											190	3F	1.6
											193	2F	2.75
											196	1F	2.95
											199		3.0
											202		2.9
210.4	212.0		2F	Ogsi	SILTSTONE Dark grey massive siltstone. No reaction with 25% Hcl.						205	2F	2.7
											208	1F	2.95
											211	1F	2.8
											212	2F	1.0

234132

		77377	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn	
737	35.5	39.4	5465770	-1.5	7.78	46	452	-1.05	24	2.43	3.66	1.59	29	342	1750
737	39.5	44.5	5465771	-1.5	3.03	3	214	-1.05	3	1.77	1.29	14	140	74	
737	44.5	49.0	5465772	-1.5	5.23	-5	192	-1.05	22	1.42	1.71	1.27	15	285	83
737	49.0	53.0	5465773	-1.5	3.96	47	310	-1.05	33	1.87	3.96	1.66	13	1310	4200
737	53.0	56.0	5465774	-1.5	7.11	56	233	1.17	34	1.66	2.8	1.49	27	1130	3830
737	56.0	59.0	5465775	-1.5	3.16	37	107	11.2	21	1.19	1.32	6.34	141	917	3230
737	59.0	64.0	5465776	-1.5	.82	8	40	19.2	-5	.57	.42	11.1	250	155	522
737	64.0	68.5	5465777	-1.5	.65	-5	31	19.6	3	.39	.34	11.2	276	129	352
737	68.5	73.0	5465778	-1.5	.24	-5	13	19.5	-5	.24	.11	11.4	285	97	194
737	73.0	77.5	5465779	-1.5	.19	-5	9	19.8	-5	.72	.1	11.7	307	58	158
737	77.5	81.0	5465780	-1.5	.47	9	17	19.5	-5	.77	.24	11.4	334	153	225
737	81.0	85.0	5465781	.6	.4	-5	16	19.9	3	.72	.19	11.6	325	169	224
737	85.0	87.8	5465782	-1.5	.62	-5	26	20.1	-5	.54	.31	11.5	263	222	296
737	87.8	91.0	5465783	-1.5	1.22	14	57	18.1	2	1.62	.58	10.1	719	1090	4970
737	91.0	94.0	5465784	-1.5	1.68	-5	84	17.6	8	1.45	.76	9.8	563	608	2090
737	94.0	97.0	5465785	.6	1.88	8	84	16.8	5	1.28	.94	9.47	382	128	340
737	97.0	100.3	5465786	-1.5	1.43	-5	58	18.2	-5	1.36	.71	9.42	392	195	563
737	100.3	103.0	5465787	.6	1.6	-5	71	27	-5	.93	.78	2	253	92	194
737	167.1	171.5	5465788	-1.5	.45	-5	20	32.7	6	.4	.23	.55	343	371	154
737	171.5	175.9	5465789	.3	.46	-5	21	33.3	6	.37	.23	.68	291	223	321
737	175.9	178.0	5465790	-1.5	.1	-5	8	36.3	-5	.24	.06	.21	485	557	163
737	78.0	180.6	5465791	-1.5	.42	-5	20	28.3	-5	.27	.13	5.79	209	185	200
737	208.0	210.4	5465792	-1.5	1.38	-5	80	24.3	-5	.75	.71	3.35	171	21	-5
737	210.0	212.0	5465793	-1.5	3.14	13	188	13.9	-5	1.17	1.56	7.37	170	13	7

**Appendix 5**

**Aircore Drilling and Geochemistry  
Myrtle Prospect**

MYRTLE AIR-CORE DRILLING DATABASE - DRILLING LOGS AND ASSAY																
Database last updated 24/5/93																
Results in ppm (Fe in %)																
Hole names prefixed AC93---																
HOLE	DFROM	DTO	SAMPNO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	Zn	Pb	Ag	Cu	Fe%	Mn
ZM1	0.0	2.0	3527993	71534	Qha	Ccy			B		49	29	-1	2	0.24	22
ZM1	2.0	4.0	3527994	71534	Og	Ccy			DB		3173	204	4	10	0.41	18
ZM1	4.0	6.0	3527995	71534	Og	Sls	We				140000	2700	23	11	0.72	19
ZM1	8.0	8.0	3527996	71534	Og	Sls	We				61000	1200	7	10	1.54	23
ZM1	8.0	10.0	3527997	71534	Og	Sls	We				37100	800	3	10	2.14	21
ZM1	10.0	12.0	3527998	71534	Og	Sls	We				36300	679	3	10	1.81	23
ZM1	12.0	14.0	3527999	71534	Og	Sls	We		DGN		12800	210	1	13	2.78	30
ZM1	14.0	16.0	3528000	71534	Og	Sls	We		DGN		8500	95	1	16	1.49	27
ZM1	16.0	18.0	3528001	71534	Og	Sls	Ds	Sp	G		4230	78	-1	13	1.29	22
ZM1	18.0	20.0	3528002	71534	Og	Sls	Ds	Sp	G		1801	48	-1	21	1.42	28
ZM1	20.0	21.7	3528003	71534	Og	Sls	Vn	Cc	GN		624	39	-1	28	1.89	90
ZM2	0.0	2.0	3528004	71534	Qha	Ccy			G		31	24	-1	3	0.36	15
ZM2	2.0	3.3	3528005	71534	Og	Sls			N		43	103	-1	5	0.62	14
ZM3	0.0	2.0	3528006	71534	Qha	Ccy			B		452	149	-1	7	0.5	19
ZM3	2.0	4.0	3528007	71534	Og	Ccy			GN		624	216	-1	21	1.72	33
ZM3	4.0	6.0	3528008	71534	Og	Ccy			GNV		4609	255	1	21	2.14	34
ZM3	6.0	8.0	3528009	71534	Og	SlsCcy	We		GB		4597	122	1	17	2.43	35
ZM3	8.0	10.0	3528010	71534	Og	SshCcy			GN		4276	104	1	15	1.58	29
ZM3	10.0	12.0	3528011	71534	Og	Ssh					3441	496	1	16	2.12	31
ZM3	12.0	14.0	3528012	71534	Og	Ssh	Ds	Py		Py 10%	15100	1200	3	15	2.95	28
ZM3	14.0	14.5	3528013	71534	Og	Ssh	Ds	Py		Py 10%	28200	546	3	17	1.79	30
ZM4	0.0	2.0	3528014	71534	Og	Ccy			BGN		4412	352	1	19	0.93	19
ZM4	2.0	4.0	3528015	71534	Og	Ccy			GN		6200	355	1	22	1.64	33
ZM4	4.0	6.0	3528016	71534	Og	Ccy			GN		1949	255	1	23	2.32	35
ZM4	6.0	8.0	3528017	71534	Og	Ccy			GN		3927	303	-1	17	2.09	38
ZM4	8.0	10.0	3528018	71534	Og	SshCcy			GN		9800	1576	-1	9	1.79	26
ZM4	10.0	12.0	3528019	71534	Og	SshCcy			GN		3197	322	-1	12	1.84	81
ZM4	12.0	14.0	3528020	71534	Og	SshCcy	Ds	Py	GN		237	53	-1	10	1.31	185
ZM4	14.0	16.0	3528021	71534	Og	Ssh	Vn	Cc			164	35	-1	9	1.54	175
ZM4	16.0	18.0	3528022	71534	Og	Ssh	Vn	Cc			224	26	-1	7	1.7	154
ZM4	18.0	20.0	3528023	71534	Og	Ssh	Vn	Cc			175	24	-1	7	1.83	154
ZM4	20.0	22.0	3528024	71534	Og	SshCcy	Vn	Cc	GN		145	25	-1	11	2.31	150
ZM4	22.0	23.0	3528025	71534	Og	Ssh	Vn	Cc			135	21	-1	8	1.71	153
ZM5	0.0	1.3	3528026	71534	Og	SlsSsh					109	46	-1	10	1.1	51
ZM6	0.0	0.5	3528027	71534	Og	Sls					33	14	-1	5	0.73	108
ZM7	0.0	0.8	3528028	71534	QhaOg	CcySls					57	18	-1	4	0.57	79
ZM8	0.0	0.5	3528029	71534	QhaOg	CcySls					49	13	-1	5	0.63	81
ZM9	0.0	0.7	3528030	71534	QhaOg	CcySls					17	5	-1	7	0.37	111
ZM10	0.0	0.6	3528031	71534	QhaOg	CcySls					197	23	-1	5	0.88	99
ZM11	0.0	2.0	3528032	71534	Og	Ccy			GBV		1055	269	-1	48	0.91	19
ZM11	2.0	4.0	3528033	71534	Og	Ccy			DG		1893	64	-1	24	2.8	23
ZM11	4.0	6.0	3528034	71534	Og	Ssh					1871	247	-1	22	1.83	29

ZM11	6.0	8.0	3528035	71534	Og	Ssh					1693	103	-1	24	1.89	46
ZM11	8.0	9.5	3528036	71534	Og	Ssh					352	33	-1	10	2.36	116
ZM12	0.0	2.0	3528037	71534	QhaOg	Ccy			BG		128	756	2	100	2.5	24
ZM12	2.0	4.0	3528038	71534	Og	Ccy			G		107	694	6	42	2.99	16
ZM12	4.0	6.0	3528039	71534	Og	Ccy			G		99	487	2	23	0.61	19
ZM12	6.0	8.0	3528040	71534	Og	Ccy			DG		2964	2252	15	151	1.47	19
ZM12	8.0	10.0	3528041	71534	Og	Ccy			DG		8800	2000	12	56	1.56	27
ZM12	10.0	12.0	3528042	71534	Og	Ccy			DG		7900	921	3	25	1.74	26
ZM12	12.0	14.0	3528043	71534	Og	Ccy			DG		2119	624	2	31	0.73	15
ZM12	14.0	16.0	3528044	71534	Og	CcySsh	WeDs	Py	DG	Py 1%	2771	562	1	18	1.35	44
ZM12	16.0	16.4	3528045	71534	Og	CcySsh			G		1963	228	1	8	1.48	94
ZM13	0.0	2.0	3528046	71534	QhaOg	Ccy			Y		38	24	-1	2	1.67	14
ZM13	2.0	4.0	3528047	71534	QhaOg	Ccy			Y		34	76	-1	45	3.12	11
ZM13	4.0	6.0	3528048	71534	Og	Ccy			LGDG		201	481	-1	69	1.74	28
ZM13	6.0	8.0	3528049	71534	Og	CcySsh			DG		608	554	-1	21	2	61
ZM13	8.0	10.0	3528050	71534	Og	CcySsh			DG		2111	1908	3	104	2	49
ZM13	10.0	12.0	3528051	71534	Og	Ssh					5600	180	-1	17	1.98	35
ZM13	12.0	14.0	3528052	71534	Og	Ssh	Ds	Py			8500	347	-1	19	1.83	39
ZM13	14.0	16.0	3528053	71534	Og	Ssh	Ds	Py			9500	223	1	13	1.9	33
ZM13	16.0	18.0	3528054	71534	Og	Ssh	Ds	Py			20700	93	3	13	1.57	34
ZM13	18.0	20.0	3528055	71534	Og	Oms	Ms	Py			28800	211	7	26	4.5	33
ZM13	20.0	22.0	3528056	71534	Og	Oms	Ms	Py			21400	1100	13	41	24.9	30
ZM13	22.0	24.0	3528057	71534	Og	OmsSsh	Ms	Py			155000	1200	29	66	4.76	34
ZM13	24.0	26.0	3528058	71534	Og	OmsSsh	Ms	Py			145000	1800	50	84	10.4	34
ZM13	26.0	28.0	3528059	71534	Og	Ccy	Ds	Py	DG		34100	2500	11	40	2.77	42
ZM13	28.0	30.0	3528060	71534	Og	Ccy			DG		6200	223	2	19	2.28	32
ZM13	30.0	32.0	3528061	71534	Og	Ssh	Ds	Py			8400	419	2	22	2.32	40
ZM13	32.0	33.7	3528062	71534	Og	Ssh					3368	5600	2	11	1.98	112
ZM14	0.0	2.0	3528063	71534	Og	Ccy			N		555	56	-1	24	0.76	14
ZM14	2.0	4.0	3528064	71534	Og	Ccy			N		2526	40	-1	17	2.24	51
ZM14	4.0	6.0	3528065	71534	Og	Ssh					1733	24	-1	16	1.43	48
ZM14	6.0	8.0	3528066	71534	Og	Ssh					1453	27	-1	17	1.43	48
ZM14	8.0	10.0	3528067	71534	Og	Ssh					810	29	-1	15	1.28	50
ZM14	10.0	12.0	3528068	71534	Og	Ssh					955	27	-1	14	1.28	42
ZM14	12.0	14.0	3528069	71534	Og	Ssh					1050	28	-1	18	1.22	48
ZM14	14.0	16.0	3528070	71534	Og	Ssh					1392	29	-1	17	1.3	47
ZM14	16.0	18.0	3528071	71534	Og	Ssh					2587	34	-1	14	1.38	32
ZM14	18.0	20.0	3528072	71534	Og	Ssh	Ds	Py		Py 5%	3516	42	-1	15	1.85	34
ZM14	20.0	22.0	3528073	71534	Og	Sls	Ds	Py	DGLG		1561	27	-1	16	1.49	21
ZM14	22.0	24.0	3528074	71534	Og	Sls	Ds	Py	DGLG		1082	13	-1	12	0.94	21
ZM14	24.0	26.0	3528075	71534	Og	Sls	Ds	Py	DGLG		989	16	-1	11	0.79	23
ZM14	26.0	28.0	3528076	71534	Og	Ssh			DG		1198	18	-1	17	1.08	27
ZM15	0.0	2.0	3528077	71534	Og	Ccy			LGB		2143	28	-1	12	1.1	20
ZM15	2.0	4.0	3528078	71534	Og	Ccy			LBV		2818	18	-1	13	1.18	19
ZM15	4.0	6.0	3528079	71534	Og	Ccy			GB		6200	36	1	21	1.26	22
ZM15	6.0	8.0	3528080	71534	Og	Ccy			GB		4671	27	-1	16	1.2	24
ZM15	8.0	10.0	3528081	71534	Og	SshCcy					3821	26	-1	16	1.2	31
ZM15	10.0	12.0	3528082	71534	Og	SshCcy					12000	25	-1	17	1.65	35

234136

ZM15	12.0	14.0	3528083	71534	Og	SshCcy						5800	28	1	18	1.45	43
ZM15	14.0	16.0	3528084	71534	Og	SshCcy						1761	25	-1	19	1.4	47
ZM15	16.0	18.0	3528085	71534	Og	SshCcy						1826	18	-1	15	1.19	48
ZM15	18.0	20.0	3528086	71534	Og	SshCcy	Ds	Py				1505	25	-1	14	1.23	50
ZM15	20.0	22.0	3528087	71534	Og	SshCcy	Ds	Py				3142	29	-1	16	1.6	45
ZM15	22.0	24.0	3528088	71534	Og	SshCcy	Ds	Py				2614	28	-1	25	1.49	29
ZM16	0.0	2.0	3528089	71534	Qha	Ccy				Y		67	57	-1	3	0.58	15
ZM16	2.0	4.0	3528090	71534	QhaOg	Ccy				YG		1128	387	1	11	1.53	25
ZM16	4.0	6.0	3528091	71534	Og	Ccy				DG		3953	83	-1	18	6.69	36
ZM16	6.0	8.0	3528092	71534	Og	Ccy				DG		6700	217	-1	15	2.87	37
ZM16	8.0	10.0	3528093	71534	Og	Ccy				VB		7200	355	-1	13	1.7	42
ZM16	10.0	12.0	3528094	71534	Og	Ssh						2992	3382	3	100	0.64	17
ZM16	12.0	12.5	3528095	71534	Og	Ssh	Ds	PySp?				19800	13600	12	139	0.95	16
ZM17	0.0	2.0	3528096	71534	QhaOg	Ccy				LB		81	1167	1	6	0.29	20
ZM17	2.0	4.0	3528097	71534	Og	Ccy				LGB		60	1024	1	2	0.25	19
ZM17	4.0	6.0	3528098	71534	Og	Ccy				DG		3375	1402	2	16	0.67	18
ZM17	6.0	8.0	3528099	71534	Og	Ccy				DG		12400	9100	-1	17	3.98	22
ZM17	8.0	10.0	3528100	71534	Og	Ccy				DG		8200	8200	1	23	2.35	40
ZM17	10.0	12.0	3528101	71534	Og	Ccy				DG		11200	1800	-1	18	2.51	24
ZM17	12.0	14.0	3528102	71534	Og	SshCcy				DG		14200	337	-1	17	2.41	25
ZM17	14.0	16.0	3528103	71534	Og	Ssh	Ds	Py				6400	314	-1	13	1.81	41
ZM17	16.0	18.0	3528104	71534	Og	Ssh	Ds	Py				5800	108	-1	9	1.25	26
ZM17	18.0	20.0	3528105	71534	Og	SshCcy	Ds	Py	DG			13800	358	2	19	2.75	41
ZM17	20.0	22.0	3528106	71534	Og	SshCcy	Ds	Py	DG			9100	193	-1	18	2.3	43
ZM17	22.0	23.0	3528107	71534	Og	SshCcy	Ds	Py	DG			1942	152	-1	5	1.24	113
ZM18	0.0	2.0	3528108	71534	Og	Ccy	Ds	Py	G			15400	6100	18	40	12.3	34
ZM18	2.0	4.0	3528109	71534	Og	Ccy	Ds	Py	VB			82900	8800	46	90	11.5	27
ZM18	4.0	6.0	3528110	71534	Og	Ccy	Ds	Py	VB			55600	6200	23	42	4.61	40
ZM18	6.0	8.0	3528111	71534	Og	Oms	Ms	Py				68400	13000	35	62	14.8	58
ZM18	8.0	10.0	3528112	71534	Og	Oms	Ms	Py				35500	2000	7	21	3.88	18
ZM18	10.0	12.0	3528113	71534	Og	Ccy	Ds	Sp	YDG			24400	187	-1	8	0.89	9
ZM18	12.0	14.0	3528114	71534	Og	Ccy	Ds	Sp	YDG			38100	342	1	7	2.2	10
ZM18	14.0	16.0	3528115	71534	Og	CcyOms	Ms	PySp	YDG			14100	1500	4	31	9.37	29
ZM18	16.0	18.0	3528116	71534	Og	CcyOms	Ms	Py	DG			14400	545	1	19	4.65	49
ZM18	18.0	20.0	3528117	71534	Og	CcyOms	Ms	Py	DG			63600	4100	3	18	11.1	47
ZM18	20.0	22.0	3528118	71534	Og	CcyOms	Ms	Py	DG			55700	2000	3	17	6.53	34
ZM18	22.0	24.0	3528119	71534	Og	OmsSsh	Ms	Py	DG			62200	4000	4	17	9.5	31
ZM18	24.0	26.0	3528120	71534	Og	OmsSsh	Ms	Py				66400	5600	8	23	13.2	40
ZM18	26.0	28.0	3528121	71534	Og	OmsSsh	Ms	Py				65800	6500	5	24	15.1	56
ZM18	28.0	30.0	3528122	71534	Og	OmsSsh	Ms	Py				42000	5600	1	16	7.73	162
ZM18	30.0	32.0	3528123	71534	Og	OmsSsh	Ms	Py				19500	3900	2	19	5.73	135
ZM18	32.0	34.0	3528124	71534	Og	OmsSsh	Ms	Py				32500	4100	5	29	11.5	78
ZM18	34.0	36.0	3528125	71534	Og	OmsSsh	Ms	Py				18500	691	5	38	6.5	65
ZM19	0.0	2.0	3528126	71534	Og	Ccy				YDG		975	2169	10	82	5.77	17
ZM19	2.0	4.0	3528127	71534	Og	Ccy				YDG		850	729	9	53	3.7	14
ZM19	4.0	6.0	3528128	71534	Og	Ccy				YDG		20100	511	17	56	5.63	26
ZM19	6.0	8.0	3528129	71534	Og	Ccy				DG		21800	313	4	17	5.94	74
ZM19	8.0	10.0	3528130	71534	Og	Ccy				LG DG		5400	3400	4	41	5.7	29

234137

ZM20	2.0	4.0	3528131	71534	Og	SshCcy	De	Py	GV		7000	3000	4	39	6.82	38
ZM20	0.0	2.0	3528132	71534	Og	SshCcy	De	Py	GV		1009	2325	1	25	18.2	39
ZM20	4.0	6.0	3528133	71534	Og	SshCcy	De	Py	GV		1045	256	-1	9	5.96	130
ZM20	6.0	7.0	3528134	71534	Og	SshCcy	De	Py	G		3880	7300	1	75	4.89	46
ZM21	0.0	2.0	3528135	71534	Og	Ccy			LBVG		3325	1788	1	23	10.8	63
ZM21	2.0	4.0	3528136	71534	Og	Ccy	De	Py	DG		4021	1067	1	18	4.41	39
ZM21	4.0	6.0	3528137	71534	Og	Ccy	De	Py	VG		4049	1107	1	19	4.32	42
ZM21	6.0	8.0	3528138	71534	Og	Ccy	De	Py	VG		1374	331	1	19	3.59	53
ZM21	8.0	10.0	3528139	71534	Og	Ccy	De	Py	VG		802	59	-1	18	2.7	56
ZM21	10.0	12.0	3528140	71534	Og	Ccy	De	Py	VG		1030	47	-1	20	2.91	71
ZM21	12.0	14.0	3528141	71534	Og	Ccy	De	Py	DG		376	72	-1	19	2.91	68
ZM21	14.0	16.0	3528142	71534	Og	Ccy	De	Py	DG		1228	244	1	27	4.54	57
ZM21	16.0	18.0	3528143	71534	Og	Ccy	De	Py	DG		1090	191	-1	25	3.82	38
ZM21	18.0	20.0	3528144	71534	Og	Ccy	De	Py	DG		708	134	-1	25	2.54	20
ZM21	20.0	21.5	3528145	71534	Og	SlsCcy			DG		293	77	-1	21	3.42	81
ZM22	0.0	2.0	3528146	71534	Qha	Ccy			YLB		58	22	-1	4	0.86	39
ZM22	2.0	4.0	3528147	71534	Og	Ccy	De	Py	V		24700	6000	2	66	1.71	23
ZM22	4.0	6.0	3528148	71534	Og	SlsCcy			VDG		27300	1800	1	18	1.42	24
ZM22	6.0	8.0	3528149	71534	Og	SlsCcy			V		13400	1700	1	19	1.67	33
ZM22	8.0	10.0	3528150	71534	Og	Ssh	De	Py			19200	1900	1	13	4.61	23
ZM22	10.0	12.0	3528151	71534	Og	Ssh	De	Py			19300	2200	1	15	2.06	23
ZM22	12.0	14.0	3528152	71534	Og	Ccy			DV		8400	1300	1	26	1.78	34
ZM22	14.0	16.0	3528153	71534	Og	Ssh	De	Py			10300	5300	3	19	1.54	28
ZM22	16.0	18.0	3528154	71534	Og	SlsCcy	De	Py			10000	549	1	23	7.43	81
ZM22	18.0	20.0	3528155	71534	Og	SlsCcy	De	Py			5400	215	-1	7	6.7	148
ZM23	0.0	2.0	3528156	71534	QhaOg	Ccy			Y		202	788	1	16	0.53	18
ZM23	2.0	4.0	3528157	71534	Og	Ccy			LGDG		1825	177	1	20	0.86	18
ZM23	4.0	6.0	3528158	71534	Og	SlsCcy	De	Py	DG		2508	302	-1	27	1.21	27
ZM24	0.0	2.0	3528159	71534	QhaOg	Ccy			Y		56	446	-1	14	0.27	20
ZM24	2.0	4.0	3528160	71534	QhaOg	Ccy			Y		249	636	-1	31	0.34	16
ZM24	4.0	6.0	3528161	71534	Og	Ccy			YDG		2553	406	1	45	1.67	24
ZM24	6.0	6.6	3528162	71534	Og	SlsCcy	De	Py	DG		792	67	-1	11	1.2	111
ZM25	0.0	2.0	3528163	71534	QhaOg	Ccy			Y		244	113	-1	29	2.02	38
ZM25	2.0	4.0	3528164	71534	QhaOg	Ccy			YOG		512	224	-1	58	3.3	38
ZM25	4.0	6.0	3528165	71534	Og	Ccy			LGDG		100	64	1	50	0.33	15
ZM25	6.0	8.0	3528166	71534	Og	Ccy			DG		2185	121	1	71	3.31	60
ZM25	8.0	8.7	3528167	71534	Og	Sls			Y		524	18	-1	4	1.01	138
ZM26	0.0	2.0	3528168	71534	Qha	Ccy			Y		49	36	1	67	0.67	18
ZM26	2.0	4.0	3528169	71534	Og	SlsCcy			LG		30	70	1	41	0.3	14
ZM26	4.0	6.0	3528170	71534	Og	Sls	We		B		66	44	-1	29	0.31	17
ZM26	6.0	8.0	3528171	71534	Og	Sls	We		B		373	206	1	48	0.53	17
ZM26	8.0	10.0	3528172	71534	Og	Sls	We		B		842	209	-1	41	1.36	24
ZM26	10.0	12.0	3528173	71534	Og	Sls	We		B		746	33	-1	15	1.51	20
ZM26	12.0	14.0	3528174	71534	Og	Ccy			DG		539	77	-1	32	4.82	31
ZM26	14.0	16.0	3528175	71534	Og	SlsCcy			DG		66	27	-1	16	2.03	21
ZM26	16.0	18.0	3528176	71534	Og	SlsCcy			DG		191	24	-1	12	1.59	25
ZM26	18.0	20.0	3528177	71534	Og	SlsCcy			DG		480	53	-1	17	2.48	28
ZM26	20.0	22.0	3528178	71534	Og	SlsCcy			DG		239	72	-1	17	3.41	45

ZM26	22.0	24.0	3528179	71534	Og	Sls	De	Py			450	36	-1	15	2.02	27
ZM26	24.0	26.0	3528180	71534	Og	Sls	De	Py			161	37	-1	16	2.3	36
ZM26	26.0	28.0	3528181	71534	Og	Sls	De	Py			91	35	-1	17	2.56	64
ZM27	0.0	2.0	3528182	71534	Qha	Ccy			Y		60	27	-1	102	0.71	13
ZM27	2.0	4.0	3528183	71534	Og	Ccy			LG		45	74	-1	47	0.32	22
ZM27	4.0	6.0	3528184	71534	Og	Ccy			LG		30	58	-1	57	0.24	14
ZM27	6.0	8.0	3528185	71534	Og	Ccy			GV		433	206	-1	53	0.77	12
ZM27	8.0	10.0	3528186	71534	Og	Ccy			GV		396	113	-1	43	1.01	19
ZM27	10.0	12.0	3528187	71534	Og	Sls			DG		174	32	-1	16	1.56	37
ZM27	12.0	14.0	3528188	71534	Og	Sls	De	Py	DG		120	28	-1	19	2.05	38
ZM27	14.0	16.0	3528189	71534	Og	Sls			DG		41	22	-1	19	1.9	29
ZM27	16.0	18.0	3528190	71534	Og	Sls			DG		38	19	-1	15	1.6	24
ZM27	18.0	20.0	3528191	71534	Og	Sls			DG		47	25	-1	16	1.75	37
ZM27	20.0	22.0	3528192	71534	Og	Sls			DG		240	24	-1	18	1.74	34
ZM27	22.0	24.0	3528193	71534	Og	Sls			DG		113	44	-1	31	3.4	36
ZM27	24.0	25.2	3528194	71534	Og	SlsSah	De	Py	DG		75	30	-1	22	2.09	59
ZM28	0.0	2.0	3528195	71534	Qha	Ccy			OB		100	69	-1	9	1.09	35
ZM28	2.0	4.0	3528196	71534	Og	Ccy			YBLG		368	53	-1	17	2.14	33
ZM28	4.0	6.0	3528197	71534	Og	Ccy			YB		344	36	-1	18	2.52	50
ZM28	6.0	8.0	3528198	71534	Og	Ccy			LGOB		859	464	-1	29	7.49	90
ZM28	8.0	10.0	3528199	71534	Og	Ccy			OB		1420	1641	-1	39	4.9	53
ZM28	10.0	12.0	3528200	71534	Og	CcyCaf			Y	Ironstone frags	1740	1519	-1	36	12.5	77
ZM28	12.0	14.0	3528201	71534	Og	CcyCsf			Y	Ironstone frags	2440	1942	1	28	10	66
ZM28	14.0	16.0	3528202	71534	Og	Ccy			G		9600	355	-1	32	4.07	42
ZM28	16.0	18.0	3528203	71534	Og	Ccy			DGN		43200	168	-1	54	3.78	25
ZM28	18.0	18.7	3528204	71534	Og	Sls	Ma		DG		11500	122	-1	17	1.44	137
ZM29	0.0	2.0	3528205	71534	Qha	Ccy			YB		32	97	-1	6	0.35	16
ZM29	2.0	4.0	3528206	71534	Qha	Ccy			YB		33	41	-1	53	0.33	15
ZM29	4.0	6.0	3528207	71534	Og	Ccy			DG		1420	786	-1	89	1.69	29
ZM29	6.0	8.0	3528208	71534	Og	CcySls			B		3441	2226	-1	33	3.73	23
ZM29	8.0	10.0	3528209	71534	Og	CcySls			VG		3092	1303	-1	29	7.66	1208
ZM29	10.0	12.0	3528210	71534	Og	CcySls			VG		2820	1067	-1	20	9.45	1868
ZM29	12.0	14.0	3528211	71534	Og	CcySls	De	Py	G		2372	817	-1	16	10.6	2292
ZM29	14.0	16.0	3528212	71534	Og	Sls	De	Py	DG		7800	332	-1	40	12.7	734
ZM29	16.0	18.0	3528213	71534	Og	Sls	De	Py	DG		1160	194	-1	9	8.93	1810
ZM29	18.0	20.0	3528214	71534	Og	Sls	De	Py	DG		1680	250	-1	17	5.98	595
ZM29	20.0	21.5	3528215	71534	Og	CcySls	De	Sp	G		3707	620	-1	25	13.8	1914
ZM30	0.0	2.0	3528216	71534	Qha	CcyCg			B		12	708	-1	2	0.28	14
ZM30	2.0	4.0	3528217	71534	Og	Ccy			B		12	781	-1	11	0.32	22
ZM30	4.0	6.0	3528218	71534	Og	Ccy			LB		10	313	-1	14	0.27	13
ZM30	6.0	8.0	3528219	71534	Og	CcySls	We		B		25	832	-1	38	0.3	19
ZM30	8.0	10.0	3528220	71534	Og	Sls	We		B		718	1735	1	96	0.35	13
ZM30	10.0	12.0	3528221	71534	Og	Ccy			G		10700	1412	-1	50	1.65	35
ZM30	12.0	14.0	3528222	71534	Og	Ccy			DB		1555	1250	-1	48	1.7	22
ZM30	14.0	16.0	3528223	71534	Og	Ccy			DVG		2286	950	-1	42	2.55	20
ZM30	16.0	18.0	3528224	71534	Og	Ccy			N		1995	496	1	32	2.46	28
ZM30	18.0	20.0	3528225	71534	Og	Sls			DG		2152	153	-1	19	2.07	44
ZM30	20.0	22.0	3528226	71534	Og	Sls	We		DG		295	68	-1	27	1.99	55

ZM30	22.0	24.0	3528227	71534	Og	Slb	We		DG		77	28	-1	20	1.56	97
ZM30	24.0	26.0	3528228	71534	Og	Slb	We		DG		1169	57	-1	14	2.14	185
ZM30	26.0	26.5	3528229	71534	Og	Slb	Ma		DG		688	76	-1	9	1.51	178
ZM31	0.0	2.0	3528230	71534	Qha	Ccy			Y		62	1339	-1	37	2.17	14
ZM31	2.0	4.0	3528231	71534	Og	Ccy			LYG		48	449	-1	32	1.2	11
ZM31	4.0	6.0	3528232	71534	Og	Ccy			LYB		76	135	-1	36	2.09	15
ZM31	6.0	8.0	3528233	71534	Og	Ccy			LYB		32	59	-1	41	1.9	12
ZM31	8.0	10.0	3528234	71534	Og	Ccy			LYG		82	86	-1	47	2.04	16
ZM31	10.0	12.0	3528235	71534	Og	Ccy			Y		515	49	-1	26	2.34	34
ZM31	12.0	14.0	3528236	71534	Og	Ccy			LGN		728	160	-1	52	2.92	22
ZM31	14.0	16.0	3528237	71534	Og	Slb	We	Sd	DG		588	32	-1	16	1.52	23
ZM31	16.0	18.0	3528238	71534	Og	Slb	We		DG		415	38	-1	21	1.82	72
ZM31	18.0	19.6	3528239	71534	Og	Slb	We		DG		655	32	-1	18	1.65	99
ZM32	0.0	2.0	3528240	71534	Qha	Ccy			LYG		15	40	-1	23	1.79	14
ZM32	2.0	4.0	3528241	71534	Qha	Ccy			LYG		48	37	-1	22	1.15	16
ZM32	4.0	6.0	3528242	71534	Og	Ccy			LG		25	2945	-1	40	1.01	13
ZM32	6.0	8.0	3528243	71534	Og	Ccy			LGN		8700	1900	1	56	6.88	18
ZM32	8.0	10.0	3528244	71534	Og	Ccy			DGN		6000	2600	-1	74	2.25	15
ZM32	10.0	12.0	3528245	71534	Og	Ccy			N		6200	1000	1	33	3.11	30
ZM32	12.0	14.0	3528246	71534	Og	SlbCcy			N		9900	181	-1	16	7.74	117
ZM32	14.0	16.0	3528247	71534	Og	Slb			DG		2594	34	-1	7	2.33	136
ZM32	16.0	17.8	3528248	71534	Og	Slb			LGDG		675	13	-1	6	1	66
ZM33	0.0	2.0	3528249	71534	Qha	Ccy			LBDG		196	428	-1	41	1.51	20
ZM33	2.0	4.0	3528250	71534	Og	Ccy			G		1076	2256	1	29	2.07	51
ZM33	4.0	6.0	3528251	71534	Og	Ccy			G		3790	806	-1	23	2.31	39
ZM33	6.0	8.0	3528252	71534	Og	CcySlb			DG		2233	140	-1	21	1.71	30
ZM33	8.0	9.2	3528253	71534	Og	SlbCcy			LGDG		2479	127	-1	17	2.09	62
ZM34	0.0	2.0	3528254	71534	Qha	Ccy			LYG		84	87	-1	8	0.53	14
ZM34	2.0	4.0	3528255	71534	Qha	Ccy			LYG		41	67	-1	29	0.57	15
ZM34	4.0	6.0	3528256	71534	Og	CcySlb			LYG		65	90	-1	28	0.56	18
ZM34	6.0	8.0	3528257	71534	Og	Ccy			LYO		40	108	-1	37	1.55	16
ZM34	8.0	10.0	3528258	71534	Og	Ccy			LODG		1522	57	-1	33	1.81	25
ZM34	10.0	12.0	3528259	71534	Og	Ccy			DG		4190	41	-1	25	2.17	30
ZM34	12.0	13.0	3528260	71534	Og	Ccy			DG		3499	57	-1	22	2.29	33
ZM35	0.0	2.0	3528261	71534	Og	Ccy			G		97	109	-1	77	0.34	17
ZM35	2.0	4.0	3528262	71534	Og	Ccy			DG		24	184	-1	300	0.41	15
ZM35	4.0	6.0	3528263	71534	Og	Ccy			LGDG		77	236	-1	29	0.52	19
ZM35	6.0	8.0	3528264	71534	Og	Ccy			DG		412	68	-1	24	2.32	21
ZM35	8.0	10.0	3528265	71534	Og	Ccy			DG		613	86	-1	19	3.24	22
ZM35	10.0	12.0	3528266	71534	Og	CcySlb	Al	Sd	DG		3006	516	-1	117	2.33	21
ZM35	12.0	14.0	3528267	71534	Og	Slb	AlDs	SdSp	YG		4558	360	-1	73	2.04	19
ZM35	14.0	16.0	3528268	71534	Og	Slb	AlDs	SdSp	YG		6300	170	-1	35	2.43	18
ZM35	16.0	18.0	3528269	71534	Og	Slb	Al	Sd	G		7300	104	-1	19	2.12	41
ZM35	18.0	19.2	3528270	71534	Og	Slb			G		228	26	-1	-2	0.95	85
ZM36	0.0	2.0	3528271	71534	Qha	CcyCv			LGB		18	121	-1	8	0.27	16
ZM36	2.0	4.0	3528272	71534	Og	Ccy			WLG		72	346	-1	115	0.26	11
ZM36	4.0	6.0	3528273	71534	Og	Ccy			LG		263	501	-1	276	0.34	14
ZM36	6.0	8.0	3528274	71534	Og	Ccy			G		3192	424	-1	48	1.48	11

234140

ZM36	8.0	10.0	3528275	71534	Og	Ccy			G		3614	144	-1	30	1.86	16
ZM36	10.0	12.0	3528276	71534	Og	CcySlb	AIDa	SdSp	YG		2207	67	-1	16	5.49	236
ZM36	12.0	14.0	3528277	71534	Og	Ccy			G		642	39	-1	18	3.33	183
ZM36	14.0	15.3	3528278	71534	Og	Ccy			G		1315	58	-1	22	6.35	92
ZM37	0.0	2.0	3528279	71534	Og	Ccy			LYG		224	213	-1	33	2.06	50
ZM37	2.0	4.0	3528280	71534	Og	Ccy			WYG		646	186	-1	62	9.78	185
ZM37	4.0	6.0	3528281	71534	Og	Ccy			YB		1370	107	-1	31	9.87	230
ZM37	6.0	7.4	3528282	71534	Og	Slb			G		94	13	-1	4	1.71	204
ZM38	0.0	2.0	3528283	71534	Og	Ccy			LYG		48	70	-1	18	0.85	28
ZM38	2.0	4.0	3528284	71534	Og	Ccy			LG		69	67	-1	37	0.35	17
ZM38	4.0	6.0	3528285	71534	Og	Ccy			LG		55	109	-1	40	0.51	24
ZM38	6.0	8.0	3528286	71534	Og	Ccy			YB		160	249	-1	55	1.63	51
ZM38	8.0	10.0	3528287	71534	Og	Ccy			GYB		220	100	-1	44	1.21	31
ZM38	10.0	12.0	3528288	71534	Og	Ccy			DG		352	155	-1	30	1.47	27
ZM38	12.0	14.0	3528289	71534	Og	Ccy			DG		450	127	-1	27	1.6	34
ZM38	14.0	16.0	3528290	71534	Og	Ccy			LGDG		210	195	-1	36	1.33	36
ZM38	16.0	18.0	3528291	71534	Og	Ccy			DG		562	96	-1	27	1.5	35
ZM38	18.0	20.0	3528292	71534	Og	Ccy			G		293	63	-1	30	1.13	38
ZM38	20.0	22.0	3528293	71534	Og	Ccy			G		781	112	-1	39	2.15	37
ZM38	22.0	24.0	3528294	71534	Og	Ccy			LGDG		713	107	-1	41	2.13	71
ZM38	24.0	26.0	3528295	71534	Og	CcySlb			G		211	49	-1	17	2.27	246
ZM38	26.0	28.0	3528296	71534	Og	CcySlb			G		188	42	-1	19	1.84	207
ZM38	28.0	30.0	3528297	71534	Og	CcySlb			LGDG		392	64	-1	26	1.65	157
ZM38	30.0	32.0	3528298	71534	Og	CcySlb			LGDG		809	47	-1	23	2.07	155
ZM38	32.0	34.0	3528299	71534	Og	CcySlb			DG		350	41	-1	18	2.08	140
ZM38	34.0	34.6	3528300	71534	Og	Slb	Ma		DG		79	16	-1	11	1.69	349
ZM39	0.0	2.0	3528301	71534	Qha	CcyCv			WLG		26	10	-1	3	0.32	28
ZM39	2.0	4.0	3528302	71534	Og	Ccy			LYG		13	31	-1	22	0.93	15
ZM39	4.0	6.0	3528303	71534	Og	Ccy			W		30	137	-1	22	0.29	12
ZM39	6.0	8.0	3528304	71534	Og	Ccy			WLG		66	223	-1	45	0.26	13
ZM39	8.0	10.0	3528305	71534	Og	Ccy			LB		50	145	-1	58	0.2	12
ZM39	10.0	12.0	3528306	71534	Og	Ccy			LG		173	134	-1	67	0.74	17
ZM39	12.0	14.0	3528307	71534	Og	Ccy			N		1084	56	-1	32	1.97	16
ZM39	14.0	16.0	3528308	71534	Og	Ccy			DG		1720	60	-1	42	1.59	12
ZM39	16.0	18.0	3528309	71534	Og	Ccy			LGDG		470	51	-1	34	1.58	21
ZM39	18.0	20.0	3528310	71534	Og	Ccy			DG		455	632	-1	88	2.25	18
ZM39	20.0	21.2	3528311	71534	Og	CcySlb			DG		804	551	-1	30	2.12	73
ZM40	0.0	2.0	3528312	71534	Qha	CcyCv			LYG		70	132	-1	64	0.79	21
ZM40	2.0	4.0	3528313	71534	Og	Ccy			LGDG		1587	112	-1	36	2.48	20
ZM40	4.0	6.0	3528314	71534	Og	Ccy			DGN		1538	67	-1	32	3.54	30
ZM40	6.0	8.0	3528315	71534	Og	Ccy			DGN		799	155	-1	44	2.86	37
ZM40	8.0	10.0	3528316	71534	Og	Ccy			DGN		1095	236	-1	45	3.04	31
ZM40	10.0	10.8	3528317	71534	Og	Slb			G		33	23	-1	8	1.11	107
ZM41	0.0	2.0	3528318	71534	Qha	Ccy			LB		76	45	-1	40	0.36	22
ZM41	2.0	4.0	3528319	71534	Og	Ccy			LGB		216	150	-1	62	0.66	14
ZM41	4.0	6.0	3528320	71534	Og	Ccy			DG		706	98	-1	36	3.86	21
ZM41	6.0	8.0	3528321	71534	Og	Ccy			DGN		623	67	-1	34	3.2	23
ZM41	8.0	10.0	3528322	71534	Og	CcySlb			DGN		108	36	-1	26	2.34	76

ZM41	10.0	12.0	3528323	71534	Og	CcySlS			DG		870	70	-1	16	3.52	168
ZM41	12.0	14.0	3528324	71534	Og	SlS	Vn	Cc	G		23	11	-1	6	1.12	169
ZM41	14.0	16.0	3528325	71534	Og	SlS	Vn	Cc	G		16	10	-1	7	0.98	190
ZM42	0.0	2.0	3528326	71534	Qha	CcyCv			B		1979	114	-1	24	4.14	29
ZM42	2.0	4.0	3528327	71534	Og	Ccy			DG		976	76	-1	20	3.69	26
ZM42	4.0	6.0	3528328	71534	Og	Ccy			DG		490	57	-1	22	3.03	26
ZM42	6.0	7.3	3528329	71534	Og	SlS	Vn	Py	G		1517	83	-1	24	4.14	175
ZM43	0.0	2.0	3528330	71534	QhaOg	CcyCv			DG		1681	54	-1	16	3.66	58
ZM43	2.0	4.0	3528331	71534	Og	Ccy			DG		415	38	-1	11	3.47	294
ZM43	4.0	5.2	3528332	71534	Og	SlS			DG		295	59	-1	26	1.81	458
ZM44	0.0	2.0	3528333	71534	Qha	CcyCv			B		66	23	-1	14	0.96	46
ZM44	2.0	4.0	3528334	71534	Og	Ccy			GB		623	54	-1	28	2.45	26
ZM44	4.0	4.7	3528335	71534	Og	Ssh	Fi		DGN		312	41	-1	34	2.51	66
ZM45	0.0	2.0	3528336	71534	Qha	CcyCvCg			B		15	18	-1	18	0.49	41
ZM45	2.0	4.0	3528337	71534	QhaOg	CcyCv			BG		455	185	-1	53	2.4	25
ZM45	4.0	6.0	3528338	71534	Og	SlS			G		689	50	-1	27	2.29	20
ZM45	6.0	8.0	3528339	71534	Og	Ccy			DG		320	51	-1	26	6.3	20
ZM45	8.0	10.0	3528340	71534	Og	CcySlS			LBG		370	55	-1	25	3.05	30
ZM45	10.0	12.0	3528341	71534	Og	SlS	Vn	Cc	G		30	12	-1	7	1.45	214
ZM45	12.0	13.0	3528342	71534	Og	SlS	Vn	Cc	G		36	10	-1	8	1.52	233
ZM46	0.0	2.0	3528343	71534	Qha	CcyCvCg			B		17	14	-1	9	0.45	35
ZM46	2.0	4.0	3528344	71534	Og	SlS			G		43	41	-1	19	0.46	14
ZM46	4.0	6.0	3528345	71534	Og	Ccy			G		96	36	-1	28	2.02	25
ZM46	6.0	8.0	3528346	71534	Og	Ccy			G		120	34	-1	26	2.29	51
ZM46	8.0	10.0	3528347	71534	Og	CcySlS	Vn	Cc	G		46	15	-1	9	1.66	224
ZM46	10.0	12.0	3528348	71534	Og	SlS			G		25	7	-1	6	1.67	266
ZM46	12.0	14.0	3528349	71534	Og	SlS			G		20	11	-1	7	1.64	249
ZM46	14.0	16.0	3528350	71534	Og	SlS			G		29	11	-1	7	1.3	328
ZM46	16.0	18.0	3528351	71534	Og	SlS	Vn	Cc	G		18	11	-1	8	1.35	222
ZM47	0.0	2.0	3528352	71534	Qha	CcyCv			B		16	12	-1	9	0.37	31
ZM47	2.0	4.0	3528353	71534	QhaOg	CcySlS			B		630	178	-1	74	1.82	14
ZM47	4.0	6.0	3528354	71534	Og	SlS					1047	43	-1	24	4.4	25
ZM47	6.0	8.0	3528355	71534	Og	SlS					911	29	-1	21	4.32	23
ZM47	8.0	10.0	3528356	71534	Og	SlS			BG		694	21	-1	17	4.78	17
ZM47	10.0	12.0	3528357	71534	Og	SlS			BG		819	25	-1	19	7.45	20
ZM47	12.0	14.0	3528358	71534	Og	SlS			BG		644	24	-1	23	10.1	29
ZM47	14.0	16.0	3528359	71534	Og	Ccy			G		85	20	-1	18	2.47	29
ZM47	16.0	18.0	3528360	71534	Og	CcySlS			G		47	26	-1	20	2.23	30
ZM47	18.0	20.0	3528361	71534	Og	Ssh	Fi		DG		59	29	-1	27	2.13	24
ZM47	20.0	22.0	3528362	71534	Og	SlS			DG		51	28	-1	31	2	24
ZM47	22.0	24.0	3528363	71534	Og	SlS			DG		110	29	-1	26	3.22	31
ZM47	24.0	26.0	3528364	71534	Og	CcySlS			G		608	43	-1	37	1.78	27
ZM47	26.0	28.0	3528365	71534	Og	Ccy			G		110	42	-1	26	3.02	38
ZM47	28.0	28.2	3528366	71534	Og	SlS	Vn	Cc	G		51	9	-1	6	0.53	210
ZM48	0.0	2.0	3528367	71534	Qha	CcyCvCg			B		20	9	-1	8	0.58	44
ZM48	2.0	4.0	3528368	71534	QhaOg	Ccy			B		190	105	-1	33	1.84	36
ZM48	4.0	6.0	3528369	71534	Og	Ccy			BG		737	178	-1	32	6.42	35
ZM48	6.0	8.0	3528370	71534	Og	Ccy			BG		380	114	-1	36	4.53	25

ZM48	8.0	10.0	3528371	71534	Og	Ccy			BG		296	77	-1	29	4.99	32
ZM48	10.0	12.0	3528372	71534	Og	Ccy			BG		174	61	-1	31	4.88	39
ZM48	12.0	12.3	3528373	71534	Og	Slts			LG		62	13	-1	7	0.91	179
ZM49	0.0	2.0	3528374	71534	Qha	CcyCvCg			B		19	10	-1	5	0.41	35
ZM49	2.0	4.0	3528375	71534	Qha	CcyCg			GB		100	13	-1	9	0.43	34
ZM49	4.0	6.0	3528376	71534	Og	Ccy			GB		148	40	-1	25	1.96	44
ZM49	6.0	7.5	3528377	71534	Og	CcySlts			VB		93	28	-1	21	2.15	101
ZM50	0.0	2.0	3528378	71534	Qha	CcyCg			LB		33	13	-1	9	0.67	44
ZM50	2.0	4.0	3528379	71534	Qha	CcyCg			LB		13	5	-1	9	0.65	57
ZM50	4.0	5.3	3528380	71534	Og	SltsCcy					29	11	-1	11	1.11	59
ZM51	0.0	1.2	3528381	71534	QhaOg	CcyCvSlts			DG		106	19	-1	11	0.58	55
ZM52	0.0	2.0	3528382	71534	Qha	CcyCg			GB		38	18	-1	14	3.02	66
ZM52	2.0	4.0	3528383	71534	Og	SltsCcy			DG		20	10	-1	8	1.99	138
ZM52	4.0	6.0	3528384	71534	Og	Slts			DG		58	12	-1	9	1.83	161
ZM52	6.0	8.0	3528385	71534	Og	SltsCcy			DG		25	10	-1	7	1.13	117
ZM52	8.0	10.0	3528386	71534	Og	SltsCcy			DG		27	11	-1	9	1.61	124
ZM52	10.0	12.0	3528387	71534	Og	Slts	De	Py	DG		16	12	-1	9	1.78	212
ZM52	12.0	14.0	3528388	71534	Og	Slts	De	Py	DG		24	11	-1	8	1.6	175
ZM52	14.0	16.0	3528389	71534	Og	Slts	De	Py	DG		115	20	-1	10	2.46	245
ZM52	16.0	16.8	3528390	71534	Og	Slts			LG		17	11	-1	8	1.07	241
ZM53	0.0	2.0	3528391	71534	QhaOg	CcyCg			DG		238	34	-1	17	2.53	42
ZM53	2.0	4.0	3528392	71534	Og	SltsCcy			DG		78	33	-1	20	3.23	87
ZM53	4.0	6.0	3528393	71534	Og	SltsCcy			DG		36	16	-1	11	1.25	102
ZM53	6.0	8.0	3528394	71534	Og	SltsCcy			DG		24	13	-1	7	1.38	175
ZM53	8.0	10.0	3528395	71534	Og	Slts			LG		14	11	-1	7	1.14	156
ZM53	10.0	12.0	3528396	71534	Og	Slts			LG		25	13	-1	6	1.35	171
ZM53	12.0	13.8	3528397	71534	Og	Slts			LG		44	10	-1	7	0.91	125
ZM54	0.0	2.0	3528398	71535	Qha	Ccy			LGYB		110	411	-1	30	2.2	23
ZM54	2.0	4.0	3528399	71535	Og	Ccy			LGDG		7400	1300	-1	45	3.69	11
ZM54	4.0	5.7	3528400	71535	Og	Slts	Vn	Cc	LGDG		7500	900	-1	39	3.11	26
ZM55	0.0	2.0	3528401	71535	Qha	Ccy			LBV		29	49	-1	5	0.43	16
ZM55	2.0	4.0	3528402	71535	Qha	Ccy			LB		28	98	-1	10	0.21	14
ZM55	4.0	6.0	3528403	71535	Og	Ccy			DVG		1928	1655	1	575	0.53	14
ZM55	6.0	8.0	3528404	71535	Og	CcySlts	De	Py	DVG		35500	22700	1	734	3	18
ZM55	8.0	10.0	3528405	71535	Og	Ccy			DGV		31700	1200	-1	54	2.45	25
ZM55	10.0	12.0	3528406	71535	Og	Ccy			DGV		42000	2500	-1	38	2.09	22
ZM55	12.0	14.0	3528407	71535	Og	Ccy			G		47900	7500	1	48	2.07	30
ZM55	14.0	15.3	3528408	71535	Og	Slts	Vn	Cc	LGDG		11000	358	-1	28	1.95	178
ZM56	0.0	2.0	3528409	71535	Qha	Ccy			LBG		91	53	-1	22	0.34	18
ZM56	2.0	4.0	3528410	71535	Og	Ccy			GB		673	580	-1	29	1.91	36
ZM56	4.0	6.0	3528411	71535	Og	Ccy			GB		570	84	-1	17	2.41	32
ZM56	6.0	8.0	3528412	71535	Og	Slts			DG		911	40	-1	17	1.27	36
ZM56	8.0	10.0	3528413	71535	Og	Slts	Al	Sd			1249	24	-1	26	1.51	31
ZM56	10.0	12.0	3528414	71535	Og	SltsCcy			LV		1365	12	-1	15	3.51	26
ZM56	12.0	14.0	3528415	71535	Og	Ccy			DG		1549	23	-1	15	3.12	27
ZM56	14.0	16.0	3528416	71535	Og	Ccy			LG		2567	28	-1	14	1.27	20
ZM56	16.0	18.0	3528417	71535	Og	Ccy			G		1429	13	-1	9	1.09	21
ZM56	18.0	20.0	3528418	71535	Og	SshCcy			G		862	13	-1	14	0.9	24

234143

ZM56	20.0	22.0	3528419	71535	Og	SshCcy	Vn	Cc	G		2404	18	-1	17	1.52	32
ZM56	22.0	24.0	3528420	71535	Og	SshCcy	Vn	Cc	G		4410	24	-1	21	1.85	27
ZM56	24.0	26.0	3528421	71535	Og	CcySlis			G		3135	18	-1	29	1.7	24
ZM56	26.0	28.0	3528422	71535	Og	Slis	Vn	Cc	LG		882	12	-1	24	1.21	38
ZM56	28.0	30.0	3528423	71535	Og	SshCcy	Vn	Cc	LG		667	5	-1	12	0.94	29
ZM57	0.0	2.0	3528424	71535	QhaOg	Ccy			LVG		237	20	-1	16	2.36	27
ZM57	2.0	4.0	3528425	71535	Og	Ccy			LG		309	24	-1	19	4.39	27
ZM57	4.0	6.0	3528426	71535	Og	Ccy			LG		295	25	-1	23	3.21	35
ZM57	6.0	8.0	3528427	71535	Og	Ccy			LGV		328	35	-1	23	4.02	31
ZM57	8.0	10.0	3528428	71535	Og	Ccy			DG		447	49	-1	26	3.31	42
ZM57	10.0	12.0	3528429	71535	Og	Ccy			DG		509	52	-1	25	2.52	49
ZM57	12.0	14.0	3528430	71535	Og	CcySlis			DG		7100	607	-1	48	3.39	39
ZM57	14.0	16.0	3528431	71535	Og	Slis	AI	Sd?	DG		49600	2200	-1	96	6.24	32
ZM57	16.0	18.0	3528432	71535	Og	SlisCcy			DG		40200	800	-1	60	3.35	28
ZM57	18.0	20.0	3528433	71535	Og	SlisCcy			DG		32000	700	-1	55	3.84	38
ZM57	20.0	22.0	3528434	71535	Og	SlisCcy			DG		11400	900	-1	32	4.86	20
ZM57	22.0	24.0	3528435	71535	Og	SlisCcy			DG		8100	303	-1	26	4.83	26
ZM57	24.0	26.0	3528436	71535	Og	Slis			G		16300	248	-1	22	5.86	19
ZM57	26.0	28.0	3528437	71535	Og	Slis			G		9800	305	-1	87	3.29	35
ZM57	28.0	30.0	3528438	71535	Og	SlisCcy			DG		6600	136	-1	35	3.25	24
ZM57	30.0	32.0	3528439	71535	Og	SlisCcy			DG		7200	240	-1	31	3.73	57
ZM57	32.0	34.0	3528440	71535	Og	Slis			DG		4710	59	-1	12	3.3	333
ZM57	34.0	36.0	3528441	71535	Og	Slis	Ds	Sp	G		45400	244	-1	60	1.91	436
ZM57	36.0	37.4	3528442	71535	Og	Slis	Ds	Sp	G		14300	1000	-1	16	2.3	449
ZM58	0.0	2.0	3528443	71535	Og	Slis	Ds	Sp	YG		51100	410	2	367	2.1	17
ZM58	2.0	4.0	3528444	71535	Og	Slis	Ds	Sp	G		90600	315	5	648	2.1	25
ZM58	4.0	6.0	3528445	71535	Og	CcySlis			DG		13100	180	-1	57	3.09	29
ZM58	6.0	6.6	3528446	71535	Og	Slis			G		1492	22	-1	12	0.84	104
ZM59	0.0	2.0	3528447	71535	Qha	CcyCvCs			B		428	178	-1	16	0.29	19
ZM59	2.0	4.0	3528448	71535	Og	Ccy			G		2527	174	-1	10	1.18	19
ZM59	4.0	6.0	3528449	71535	Og	Ccy			DG		13100	1500	-1	22	3.07	29
ZM59	6.0	6.8	3528450	71535	Og	Ccy			G		9000	456	-1	16	3.47	78
ZM60	0.0	2.0	3528451	71535	Qha	CcyCv			DB		152	196	-1	63	0.63	47
ZM60	2.0	2.4	3528452	71535	Og	Ccy			G		425	2980	-1	89	1.37	65
ZM61	0.0	2.0	3528453	71535	Qha	CcyCv			B		67	223	-1	80	0.76	36
ZM62	0.0	0.5	3528454	71535	Og	Slis			G		27	8	-1	8	0.41	82
ZM63	0.0	0.2	3528455	71535	Og	Slis			G		13	5	-1	6	0.24	88

MYRTLE PROSPECT - MULTI-ELEMENT GEOCHEMISTRY FOR HIGH Zn SAMPLES																
Results in ppm except Fe-C-S (in %)				DPO #												
HOLE	DFROM	DTO	SAMPNO	Ag	Al	As	Au	Ba	Bi	C%	Ca	Cd	Co	Cr	Cu	Fe%
ZM1	4.0	6.0	3527995	23	53700	111	-0.008	244	-10	2.8	331	309	45	117	11	0.72
ZM1	6.0	8.0	3527996	7	69700	102	-0.008	45	-10	3.9	316	101	57	103	10	1.54
ZM1	8.0	10.0	3527997	3	122000	85	-0.008	48	10	3.7	481	51	68	96	10	2.14
ZM1	10.0	12.0	3527998	3	136000	70	-0.008	55	-10	3.75	927	54	63	98	10	1.81
ZM1	12.0	14.0	3527999	1	80400	273	-0.008	35	10	1.45	770	54	76	233	13	2.78
ZM3	12.0	14.0	3528012	3	125000	59	-0.008	53	-10	1.1	900	20	59	105	15	2.95
ZM3	14.0	14.5	3528013	3	38300	246	-0.008	28	15	1.35	1580	30	47	262	17	1.79
ZM13	16.0	18.0	3528054	3	34300	228	-0.008	35	11	2.05	11300	48	42	59	13	1.57
ZM13	18.0	20.0	3528055	7	157000	121	-0.008	79	-10	2.05	981	7	54	156	26	4.5
ZM13	20.0	22.0	3528056	13	27200	711	-0.008	40	-10	1.3	676	49	60	226	41	24.9
ZM13	24.0	26.0	3528058	50	22700	833	-0.008	47	-10	0.94	610	551	78	164	84	10.4
ZM13	26.0	28.0	3528059	11	46700	404	-0.008	28	-10	1.8	1550	106	69	161	40	2.77
ZM15	10.0	12.0	3528082	-1	143000	33	-0.008	154	-10	1.3	454	-5	43	129	17	1.65
ZM16	12.0	12.5	3528095	12	93900	46	-0.008	172	-10	1.3	605	95	15	88	139	0.95
ZM17	6.0	8.0	3528099	-1	63200	67	-0.008	66	-10	2.35	313	289	73	108	17	3.98
ZM17	10.0	12.0	3528101	-1	76400	62	-0.008	86	-10	1.9	309	57	37	116	18	2.51
ZM17	12.0	14.0	3528102	-1	103000	59	-0.008	89	-10	1.6	990	15	34	119	17	2.41
ZM17	18.0	20.0	3528105	2	73900	49	0.016	143	-10	1.3	2560	8	35	169	19	2.75
ZM18	0.0	2.0	3528108	18	28200	286	0.008	38	-10	2.85	13700	69	23	165	40	12.3
ZM18	4.0	6.0	3528110	23	33500	611	-0.008	47	-10	4.15	427	198	52	171	42	4.61
ZM18	6.0	8.0	3528111	35	38700	773	-0.008	43	-10	3.65	771	289	98	177	62	14.8
ZM18	8.0	10.0	3528112	7	71800	333	-0.008	56	-10	3.75	251	117	37	117	21	3.88
ZM18	10.0	12.0	3528113	-1	239000	292	-0.008	213	-10	5.8	320	10	26	91	8	0.89
ZM18	12.0	14.0	3528114	1	211000	382	-0.008	132	-10	6.6	780	22	69	123	7	2.2
ZM18	14.0	16.0	3528115	4	78600	255	-0.008	35	-10	3	1930	42	48	177	31	9.37
ZM18	16.0	18.0	3528116	1	95300	119	-0.008	45	-10	0.97	3470	32	43	111	19	4.65
ZM18	18.0	20.0	3528117	3	54500	284	-0.008	28	-10	0.74	2970	163	49	154	18	11.1
ZM18	20.0	22.0	3528118	3	75800	181	-0.008	38	-10	0.91	3130	217	35	123	17	6.53
ZM18	22.0	24.0	3528119	4	49800	261	-0.008	31	-10	0.89	2430	254	38	201	17	9.5
ZM18	24.0	26.0	3528120	6	40500	364	-0.008	29	-10	0.6	2310	250	41	230	23	13.2
ZM18	28.0	30.0	3528122	1	27600	181	-0.008	79	-10	4.7	83600	156	20	106	16	7.73
ZM18	30.0	32.0	3528123	2	50300	134	-0.008	84	-10	3.9	67800	76	18	96	19	5.73
ZM18	32.0	34.0	3528124	5	49100	332	-0.008	36	-10	2	36700	107	34	159	29	11.5
ZM18	34.0	36.0	3528125	5	50100	128	-0.008	51	-10	2.05	16600	43	29	142	38	6.5

234145

MYRTLE PROSPECT - MULTI-ELEMENT GEOCHEMISTRY FOR HIGH Zn SAMPLES																
Results in ppm except Fe-C-S (in %)																
					DP0	77107										
HOLE	DFROM	DTO	SAMPNO	K	Mg	Mn	Mo	Na	Ni	P	Pb	S%	Sb	Sn	V	Zn
ZM1	4.0	6.0	3527995	15700	2830	19	-10	849	113	693	2700	9.75	15	8	50	14000
ZM1	6.0	8.0	3527996	14300	3100	23	-10	754	189	832	1200	8.7	11	6	50	61000
ZM1	8.0	10.0	3527997	14600	3760	21	-10	765	288	1400	800	7.05	14	-3	56	37100
ZM1	10.0	12.0	3527998	15800	4260	23	-10	873	213	2630	679	6.2	13	-3	59	36300
ZM1	12.0	14.0	3527999	16600	1970	30	-10	639	244	3130	210	7.55	25	17	71	12800
ZM3	12.0	14.0	3528012	21800	6740	28	-10	1290	185	876	1200	14.8	11	5	69	15100
ZM3	14.0	14.5	3528013	13900	2540	30	-10	490	279	770	548	9.9	12	-3	40	28200
ZM13	16.0	18.0	3528054	16300	6240	34	-10	578	296	1020	93	3.85	8	6	44	20700
ZM13	18.0	20.0	3528055	29100	3850	33	-10	1050	148	3210	211	12.2	12	-3	95	28800
ZM13	20.0	22.0	3528056	5040	732	30	-10	145	310	1490	1100	37.5	12	16	30	21400
ZM13	24.0	26.0	3528058	4790	1090	34	-10	178	402	678	1800	33.2	38	-3	22	145000
ZM13	26.0	28.0	3528059	14500	3410	42	-10	521	224	625	2500	15.6	47	9	63	34100
ZM15	10.0	12.0	3528082	34300	6260	35	-10	1720	96	590	25	3.6	9	8	96	12000
ZM16	12.0	12.5	3528095	19700	2490	16	-10	507	58	2750	13600	2.4	48	8	58	19800
ZM17	6.0	8.0	3528099	22300	2960	22	-10	529	185	443	9100	6.9	13	3	70	12400
ZM17	10.0	12.0	3528101	19800	2560	24	-10	507	155	217	1800	4	9	5	65	11200
ZM17	12.0	14.0	3528102	19400	2960	25	-10	584	159	427	337	3.6	7	4	86	14200
ZM17	18.0	20.0	3528105	28500	4710	41	-10	996	92	1000	358	3.5	10	10	91	13800
ZM18	0.0	2.0	3528108	13100	2350	34	-10	416	139	219	6100	17.2	23	7	34	15400
ZM18	4.0	6.0	3528110	15900	2040	40	-10	489	180	520	6200	10.3	13	-3	76	55600
ZM18	6.0	8.0	3528111	10100	1370	58	-10	315	534	2720	13000	21.6	15	-3	66	88400
ZM18	8.0	10.0	3528112	10400	1250	18	-10	361	172	3060	2000	6.75	8	-3	58	35500
ZM18	10.0	12.0	3528113	6600	1000	9	-10	320	92	2420	187	2.75	-1	-3	95	24400
ZM18	12.0	14.0	3528114	4700	780	10	-10	270	243	1100	342	5.7	4	-3	94	38100
ZM18	14.0	16.0	3528115	14000	2150	29	-10	550	222	978	1500	12.3	9	-3	74	14100
ZM18	16.0	18.0	3528116	26300	3850	49	-10	980	137	1170	545	6.5	13	4	81	14400
ZM18	18.0	20.0	3528117	19500	2840	47	11	740	204	1090	4100	16.6	22	4	63	63600
ZM18	20.0	22.0	3528118	25700	3170	34	10	1020	166	1420	2000	9.9	5	3	75	55700
ZM18	22.0	24.0	3528119	21200	3560	31	12	810	209	1250	4000	16.7	8	4	71	62200
ZM18	24.0	26.0	3528120	12600	2840	40	13	500	234	803	5600	21.6	12	15	46	66400
ZM18	28.0	30.0	3528122	9200	41200	162	-10	350	100	544	5600	10.7	8	5	31	42000
ZM18	30.0	32.0	3528123	19200	33700	135	-10	800	86	542	3900	7.05	-1	3	49	19500
ZM18	32.0	34.0	3528124	17800	18000	78	-10	770	190	587	4100	15.7	9	7	52	32500
ZM18	34.0	36.0	3528125	21500	13100	65	-10	890	114	463	691	7.9	7	7	63	18500

HOLE	DFROM	DTO	SAMPNO	Ag	Al	As	Au	Ba	Bi	C%	Ca	Cd	Co	Cr	Cu	Fe%
ZM19	4.0	6.0	3528128	17	137000	240	-0.008	98	-10	2.1	1830	57	38	189	56	5.63
ZM19	2.0	4.0	3528147	2	63800	68	-0.008	106	-10	2.05	250	122	19	123	68	1.71
ZM19	4.0	6.0	3528148	1	43500	57	-0.008	249	-10	1.65	140	98	29	156	18	1.42
ZM19	6.0	8.0	3528149	1	100000	46	-0.008	182	-10	1.55	260	54	30	103	19	1.67
ZM19	8.0	10.0	3528150	1	39500	68	-0.008	50	-10	2.1	440	49	66	122	13	4.61
ZM19	10.0	12.0	3528151	1	62900	69	-0.008	85	-10	2.8	510	41	39	107	15	2.06
ZM19	14.0	16.0	3528153	3	48200	46	-0.008	230	-10	1.35	460	23	23	151	19	1.54
ZM19	16.0	18.0	3528154	1	39400	129	-0.008	81	-10	2.55	31300	9	43	128	23	7.43
ZM55	6.0	8.0	3528404	1	78700	90	-0.008	121	-10	3.75	2320	697	56	143	734	3
ZM55	8.0	10.0	3528405	-1	78800	60	-0.008	217	-10	2.6	2560	34	59	126	54	2.45
ZM55	10.0	12.0	3528406	-1	67500	47	-0.008	223	-10	2.1	2540	39	39	133	38	2.09
ZM55	12.0	14.0	3528407	1	28300	42	-0.008	201	-10	2.2	11200	64	27	133	48	2.07
ZM55	14.0	15.3	3528408	-1	52000	36	-0.008	223	-10	5.6	109000	24	9	64	28	1.95
ZM57	16.0	18.0	3528432	-1	38200	60	-0.008	175	-10	2.4	650	94	29	164	60	3.35
ZM57	18.0	20.0	3528433	-1	79700	65	-0.008	117	-10	2.3	1410	70	34	230	55	3.84
ZM57	20.0	22.0	3528434	-1	58800	129	-0.008	122	-10	3.4	1700	18	68	128	32	4.86
ZM57	24.0	26.0	3528436	-1	41600	196	-0.008	83	-10	2.4	1080	19	136	208	22	5.86
ZM57	34.0	36.0	3528441	-1	8400	-25	-0.008	42	-10	4.55	84000	95	8	86	60	1.91
ZM57	36.0	37.4	3528442	-1	9200	-25	-0.008	44	-10	7	135000	30	12	63	16	2.3
ZM58	0.0	2.0	3528443	2	46700	83	-0.008	53	-10	2.45	2010	116	24	141	367	2.1
ZM59	4.0	6.0	3528449	-1	63000	59	-0.008	222	-10	3.3	4780	17	55	214	22	3.07

HOLE	DFROM	DTO	SAMPNO	K	Mg	Mn	Mo	Na	Ni	P	Pb	S%	Sb	Sn	V	Zn
ZM19	4.0	6.0	3528128	25800	4480	26	-10	1030	92	938	511	3.5	5	10	89	20100
ZM19	2.0	4.0	3528147	23000	2700	23	-10	710	60	1270	6000	3.3	52	-3	92	24700
ZM19	4.0	6.0	3528148	13800	1520	24	-10	720	72	1070	1800	2.9	9	-3	56	27300
ZM19	6.0	8.0	3528149	24500	3100	33	-10	1240	80	831	1700	2.85	7	8	91	13400
ZM19	8.0	10.0	3528150	11600	1470	23	-10	440	207	755	1900	7.45	16	8	51	19200
ZM19	10.0	12.0	3528151	16200	2270	23	-10	470	104	1250	2200	3.9	14	6	60	19300
ZM19	14.0	16.0	3528153	12000	1720	28	-10	380	73	431	5300	2.65	5	4	39	10300
ZM19	16.0	18.0	3528154	14400	13200	81	-10	410	119	561	549	9.15	22	9	76	10000
ZM55	6.0	8.0	3528404	15200	3240	18	-10	300	136	1680	22700	6.7	47	4	82	35500
ZM55	8.0	10.0	3528405	24500	4870	25	-10	510	191	579	1200	5.25	12	8	115	31700
ZM55	10.0	12.0	3528406	23100	4470	22	-10	460	121	380	2500	5	10	10	103	42000
ZM55	12.0	14.0	3528407	20900	6450	30	11	470	81	422	7500	5.15	8	3	80	47900
ZM55	14.0	15.3	3528408	25300	38600	178	-10	470	33	711	358	2.7	-1	7	63	11000
ZM57	16.0	18.0	3528432	19200	3990	28	10	350	77	649	800	6.6	14	11	51	40200
ZM57	18.0	20.0	3528433	24400	5900	38	-10	420	88	909	700	7.1	13	-3	67	32000
ZM57	20.0	22.0	3528434	15200	3710	20	-10	280	166	1290	900	7.4	14	6	56	11400
ZM57	24.0	26.0	3528436	11400	2330	19	-10	250	307	1490	248	13.6	13	-3	46	16300
ZM57	34.0	36.0	3528441	3400	37300	436	-10	80	19	370	244	3.55	5	-3	11	45400
ZM57	36.0	37.4	3528442	3400	56600	449	-10	60	23	350	1000	2.6	3	9	14	14300
ZM58	0.0	2.0	3528443	4700	1280	17	11	170	55	535	410	4.55	126	6	32	51100
ZM59	4.0	6.0	3528449	24000	6040	29	-10	610	146	883	1500	5.4	4	4	119	13100

A. APPENDIX 3: Myrtle prospect. Drillhole collar database.

APPENDIX 3: MYRTLE PROSPECT. DRILLHOLE LOCATION DATABASE													
Hole	Full Name	EL	Company	Report	AMG E	AMG N	Local E	Local N	RL	Depth	Azlm AMG	Inclin.	DH surveys?
ZM1003	ZM1003	EL4/78	EZ	85-2440	364229	5352323	60320.4	50524.5	139.7	303.0	120	-55	YES
ZM1008	ZM1008	EL4/78	EZ	86-2547	364254	5352305	60345	50506		299.0	67	-59	YES
ZWM13	ZWM13	EL4/78	EZ	86-2547	364349	5352301	60440	50500		25.2	90	-80	
ZWM14	ZWM14	EL4/78	EZ	86-2547	364299	5352300	60390	50500		25.9	90	-80	
ZWM15	ZWM15	EL4/78	EZ	86-2547	364257	5352399	60350	50600		38.1	90	-80	
ZWM16	ZWM16	EL4/78	EZ	86-2547	364307	5352400	60400	50600		22.3	90	-70	
ZWM16a	ZWM16a	EL4/78	EZ	86-2547	364305	5352400	60398	50600		28.6	90	-80	
ZWM17	ZWM17	EL4/78	EZ	86-2547	363790	5351791	59872	50000		16.9	90	-80	
ZWM18	ZWM18	EL4/78	EZ	86-2547	363816	5351791	59898	50000		31.3	90	-80	
ZWM19	ZWM19	EL4/78	EZ	86-2547	363837	5351792	59919	50000		24.7	90	-80	
ZM1	AC93ZM1	EL28/88	CRAE	19284	364282	5352400	60375	50600		21.7	0	-90	
ZM2	AC93ZM2	EL28/88	CRAE	19284	364307	5352400	60400	50600		3.3	0	-90	
ZM3	AC93ZM3	EL28/88	CRAE	19284	364332	5352401	60425	50600		14.5	0	-90	
ZM4	AC93ZM4	EL28/88	CRAE	19284	364357	5352401	60450	50600		23.0	0	-90	
ZM5	AC93ZM5	EL28/88	CRAE	19284	364382	5352402	60475	50600		1.3	0	-90	
ZM6	AC93ZM6	EL28/88	CRAE	19284	364407	5352402	60500	50600		0.5	0	-90	
ZM7	AC93ZM7	EL28/88	CRAE	19284	364406	5352427	60500	50625		0.8	0	-90	
ZM8	AC93ZM8	EL28/88	CRAE	19284	364406	5352452	60500	50650		0.5	0	-90	
ZM9	AC93ZM9	EL28/88	CRAE	19284	364405	5352502	60500	50700		0.7	0	-90	
ZM10	AC93ZM10	EL28/88	CRAE	19284	364406	5352477	60500	50675		0.6	0	-90	
ZM11	AC93ZM11	EL28/88	CRAE	19284	364407	5352377	60500	50575		9.5	0	-90	
ZM12	AC93ZM12	EL28/88	CRAE	19284	364379	5352352	60470	50550		16.4	0	-90	
ZM13	AC93ZM13	EL28/88	CRAE	19284	364344	5352327	60435	50525		33.7	0	-90	
ZM14	AC93ZM14	EL28/88	CRAE	19284	364259	5352300	60350	50500		28.0	0	-90	
ZM15	AC93ZM15	EL28/88	CRAE	19284	364284	5352300	60375	50500		24.0	0	-90	
ZM16	AC93ZM16	EL28/88	CRAE	19284	364309	5352300	60400	50500		12.5	0	-90	
ZM17	AC93ZM17	EL28/88	CRAE	19284	364334	5352301	60425	50500		23.0	0	-90	
ZM18	AC93ZM18	EL28/88	CRAE	19284	364359	5352301	60450	50500		36.0	0	-90	
ZM19	AC93ZM19	EL28/88	CRAE	19284	364384	5352302	60475	50500		10.0	0	-90	
ZM20	AC93ZM20	EL28/88	CRAE	19284	364409	5352302	60500	50500		7.0	0	-90	
ZM21	AC93ZM21	EL28/88	CRAE	19284	364434	5352303	60525	50500		21.5	0	-90	
ZM22	AC93ZM22	EL28/88	CRAE	19284	364309	5352275	60400	50475		20.0	0	-90	

A. PENDIX 3 Myrtle prospect. Drillhole collar database

ZM23	AC93ZM23	EL28/88	CRAE	19284	364309	5352250	60400	50450	6.0	0	-90
ZM24	AC93ZM24	EL28/88	CRAE	19284	364309	5352225	60400	50425	6.6	0	-90
ZM25	AC93ZM25	EL28/88	CRAE	19284	364310	5352200	60400	50400	8.7	0	-90
ZM26	AC93ZM26	EL28/88	CRAE	19284	364310	5352175	60400	50375	28.0	0	-90
ZM27	AC93ZM27	EL28/88	CRAE	19284	364310	5352150	60400	50350	25.2	0	-90
ZM28	AC93ZM28	EL28/88	CRAE	19284	363987	5352095	60075	50300	18.7	0	-90
ZM29	AC93ZM29	EL28/88	CRAE	19284	364012	5352095	60100	50300	21.5	0	-90
ZM30	AC93ZM30	EL28/88	CRAE	19284	364037	5352096	60125	50300	26.5	0	-90
ZM31	AC93ZM31	EL28/88	CRAE	19284	364062	5352096	60150	50300	19.6	0	-90
ZM32	AC93ZM32	EL28/88	CRAE	19284	364087	5352097	60175	50300	17.8	0	-90
ZM33	AC93ZM33	EL28/88	CRAE	19284	364112	5352097	60200	50300	9.2	0	-90
ZM34	AC93ZM34	EL28/88	CRAE	19284	364137	5352097	60225	50300	13.0	0	-90
ZM35	AC93ZM35	EL28/88	CRAE	19284	364162	5352098	60250	50300	19.2	0	-90
ZM36	AC93ZM36	EL28/88	CRAE	19284	364187	5352098	60275	50300	15.3	0	-90
ZM37	AC93ZM37	EL28/88	CRAE	19284	364212	5352099	60300	50300	7.4	0	-90
ZM38	AC93ZM38	EL28/88	CRAE	19284	364237	5352099	60325	50300	34.6	0	-90
ZM39	AC93ZM39	EL28/88	CRAE	19284	364262	5352100	60350	50300	21.2	0	-90
ZM40	AC93ZM40	EL28/88	CRAE	19284	364292	5352100	60380	50300	10.8	0	-90
ZM41	AC93ZM41	EL28/88	CRAE	19284	364312	5352101	60400	50300	16.0	0	-90
ZM42	AC93ZM42	EL28/88	CRAE	19284	364337	5352140	60425	50340	7.3	0	-90
ZM43	AC93ZM43	EL28/88	CRAE	19284	364362	5352127	60450	50325	5.2	0	-90
ZM44	AC93ZM44	EL28/88	CRAE	19284	364412	5352102	60500	50300	4.7	0	-90
ZM45	AC93ZM45	EL28/88	CRAE	19284	364412	5352077	60500	50275	13.0	0	-90
ZM46	AC93ZM46	EL28/88	CRAE	19284	364413	5352052	60500	50250	18.0	0	-90
ZM47	AC93ZM47	EL28/88	CRAE	19284	364413	5352027	60500	50225	28.2	0	-90
ZM48	AC93ZM48	EL28/88	CRAE	19284	364414	5352002	60500	50200	12.3	0	-90
ZM49	AC93ZM49	EL28/88	CRAE	19284	364389	5352002	60475	50200	7.5	0	-90
ZM50	AC93ZM50	EL28/88	CRAE	19284	364364	5352001	60450	50200	5.3	0	-90
ZM51	AC93ZM51	EL28/88	CRAE	19284	364339	5352001	60425	50200	1.2	0	-90
ZM52	AC93ZM52	EL28/88	CRAE	19284	364314	5352001	60400	50200	16.8	0	-90
ZM53	AC93ZM53	EL28/88	CRAE	19284	364289	5352000	60375	50200	13.8	0	-90
ZM54	AC93ZM54	EL28/88	CRAE	19284	363843	5351792	59925	50000	5.7	0	-90
ZM55	AC93ZM55	EL28/88	CRAE	19284	363818	5351792	59900	50000	15.3	0	-90
ZM56	AC93ZM56	EL28/88	CRAE	19284	363793	5351791	59875	50000	30.0	0	-90
ZM57	AC93ZM57	EL28/88	CRAE	19284	363793	5351766	59875	49975	37.4	0	-90
ZM58	AC93ZM58	EL28/88	CRAE	19284	363793	5351741	59875	49950	6.6	0	-90

A. PENDIX 3: Myrtle prospect. Drillhole collar database

ZM59	AC93ZM59	EL28/88	CRAE	19284	363793	5351716	59875	49925		6.8	0	-90
ZM60	AC93ZM60	EL28/88	CRAE	19284	363793	5351691	59875	49900		2.4	0	-90
ZM61	AC93ZM61	EL28/88	CRAE	19284	363793	5351666	59875	49875		2.0	0	-90
ZM62	AC93ZM62	EL28/88	CRAE	19284	363793	5351641	59875	49850		0.5	0	-90
ZM63	AC93ZM63	EL28/88	CRAE	19284	363793	5351616	59875	49825		0.2	0	-90
ZM64	AC94ZM64	EL28/88	CRAE		364281	5352450	60375	50650		1.5	0	-90
ZM65	AC94ZM65	EL28/88	CRAE		364281	5352428	60375	50628		6.5	0	-90
ZM66	AC94ZM66	EL28/88	CRAE		364282	5352415	60375	50615		50.4	0	-90
ZM67	AC94ZM67	EL28/88	CRAE		364264	5352399	60357	50600		16.3	0	-90
ZM68	AC94ZM68	EL28/88	CRAE		364274	5352400	60367	50600		12.7	0	-90
ZM69	AC94ZM69	EL28/88	CRAE		364290	5352400	60383	50600		22.1	0	-90
ZM70	AC94ZM70	EL28/88	CRAE		364297	5352400	60390	50600		15.0	0	-90
ZM71	AC94ZM71	EL28/88	CRAE		364307	5352400	60400	50600		3.8	0	-90
ZM72	AC94ZM72	EL28/88	CRAE		364317	5352400	60410	50600		21.0	0	-90
ZM73	AC94ZM73	EL28/88	CRAE		364327	5352400	60420	50600		23.5	0	-90
ZM74	AC94ZM74	EL28/88	CRAE		364339	5352401	60432	50600		17.5	0	-90
ZM75	AC94ZM75	EL28/88	CRAE		364347	5352401	60440	50600		33.0	0	-90
ZM76	AC94ZM76	EL28/88	CRAE		364283	5352340	60375	50540		45.4	0	-90
ZM77	AC94ZM77	EL28/88	CRAE		364298	5352340	60390	50540		25.5	0	-90
ZM78	AC94ZM78	EL28/88	CRAE		364308	5352340	60400	50540		18.0	0	-90
ZM79	AC94ZM79	EL28/88	CRAE		364318	5352340	60410	50540		5.7	0	-90
ZM80	AC94ZM80	EL28/88	CRAE		364328	5352341	60420	50540		47.5	0	-90
ZM81	AC94ZM81	EL28/88	CRAE		364338	5352341	60430	50540		38.5	0	-90
ZM82	AC94ZM82	EL28/88	CRAE		364348	5352341	60440	50540		26.9	0	-90
ZM83	AC94ZM83	EL28/88	CRAE		364358	5352341	60450	50540		38.2	0	-90
ZM84	AC94ZM84	EL28/88	CRAE		364368	5352341	60460	50540		25.0	0	-90
ZM85	AC94ZM85	EL28/88	CRAE		364378	5352341	60470	50540		15.0	0	-90
ZM86	AC94ZM86	EL28/88	CRAE		364299	5352300	60390	50500		9.8	0	-90
ZM87	AC94ZM87	EL28/88	CRAE		364309	5352300	60400	50500		22.0	0	-90
ZM88	AC94ZM88	EL28/88	CRAE		364319	5352300	60410	50500		27.5	0	-90
ZM89	AC94ZM89	EL28/88	CRAE		364329	5352301	60420	50500		18.9	0	-90
ZM90	AC94ZM90	EL28/88	CRAE		364339	5352301	60430	50500		14.5	0	-90
ZM91	AC94ZM91	EL28/88	CRAE		364349	5352301	60440	50500		22.1	0	-90
ZM92	AC94ZM92	EL28/88	CRAE		364359	5352301	60450	50500		27.9	0	-90
ZM93	AC94ZM93	EL28/88	CRAE		364369	5352301	60460	50500		15.5		-90
ZM94	AC94ZM94	EL28/88	CRAE		364379	5352301	60470	50500		13.2		-90

A. PENDIX : Myrtle prospect. Drillhole collar database

ZM95	AC94ZM95	EL28/88	CRAE		364389	5352302	60480	50500		5.9	0	-90
ZM96	AC94ZM96	EL28/88	CRAE		364399	5352302	60490	50500		10.1	0	-90
ZM97	AC94ZM97	EL28/88	CRAE		364240	5352249	60330	50450		25.0	0	-90
ZM98	AC94ZM98	EL28/88	CRAE		364250	5352249	60340	50450		17.7	0	-90
ZM99	AC94ZM99	EL28/88	CRAE		364260	5352249	60350	50450		12.0	0	-90
ZM100	AC94ZM100	EL28/88	CRAE		364270	5352249	60360	50450		11.6	0	-90
ZM101	AC94ZM101	EL28/88	CRAE		364280	5352250	60370	50450		16.1	0	-90
ZM102	AC94ZM102	EL28/88	CRAE		364290	5352250	60380	50450		26.1	0	-90
ZM103	AC94ZM103	EL28/88	CRAE		364300	5352250	60390	50450		24.8	0	-90
ZM104	AC94ZM104	EL28/88	CRAE		364310	5352250	60400	50450		10.8	0	-90
ZM105	AC94ZM105	EL28/88	CRAE		364320	5352250	60410	50450		11.0	0	-90
ZM106	AC94ZM106	EL28/88	CRAE		364330	5352251	60420	50450		14.5	0	-90
ZM107	AC94ZM107	EL28/88	CRAE		364340	5352251	60430	50450		1.0	0	-90
ZM108	AC94ZM108	EL28/88	CRAE		364350	5352251	60440	50450		1.2	0	-90
ZM109	AC94ZM109	EL28/88	CRAE		364400	5352252	60490	50450		7.0	0	-90
ZM110	AC94ZM110	EL28/88	CRAE		364390	5352252	60480	50450		9.0	0	-90
ZM111	AC94ZM111	EL28/88	CRAE		364370	5352251	60460	50450		2.4	0	-90
ZM112	AC94ZM112	EL28/88	CRAE		364310	5352200	60400	50400		22.6	0	-90
ZM113	AC94ZM113	EL28/88	CRAE		364320	5352200	60410	50400		26.6	0	-90
ZM114	AC94ZM114	EL28/88	CRAE		364330	5352201	60420	50400		25.0	0	-90
ZM115	AC94ZM115	EL28/88	CRAE		364340	5352201	60430	50400		1.1	0	-90
ZM116	AC94ZM116	EL28/88	CRAE		364360	5352201	60450	50400		8.0	0	-90
ZM117	AC94ZM117	EL28/88	CRAE		364239	5352019	60325	50220		6.3	0	-90
ZM118	AC94ZM118	EL28/88	CRAE		364214	5351998	60300	50200		15.5	0	-90
ZM119	AC94ZM119	EL28/88	CRAE		364189	5351998	60275	50200		4.5	0	-90
ZM120	AC94ZM120	EL28/88	CRAE		364164	5351998	60250	50200		36.6	0	-90
ZM121	AC94ZM121	EL28/88	CRAE		364139	5351997	60225	50200		31.0	0	-90
ZM122	AC94ZM122	EL28/88	CRAE		364114	5351997	60200	50200		26.3	0	-90
ZM123	AC94ZM123	EL28/88	CRAE		364089	5351996	60175	50200		13.6	0	-90
ZM124	AC94ZM124	EL28/88	CRAE		364064	5351996	60150	50200		13.1	0	-90
ZM125	AC94ZM125	EL28/88	CRAE		364039	5351995	60125	50200		14.5	0	-90
ZM126	AC94ZM126	EL28/88	CRAE		364014	5351995	60100	50200		6.4	0	-90
ZM127	AC94ZM127	EL28/88	CRAE		363989	5351995	60075	50200		37.1	0	-90
ZM128	AC94ZM128	EL28/88	CRAE		363964	5351994	60050	50200		23.6	0	-90
ZM129	AC94ZM129	EL28/88	CRAE		363939	5351994	60025	50200		17.5	0	-85
ZM130	AC94ZM130	EL28/88	CRAE		363914	5351993	60000	50200		12.4	0	-90

A. PENDIX : Myrtle prospect. Drillhole collar database

ZM131	AC94ZM131	EL28/88	CRAE		363889	5351993	59975	50200		19.1	0	-90
ZM132	AC94ZM132	EL28/88	CRAE		363864	5351992	59950	50200		14.0	0	-90
ZM133	AC94ZM133	EL28/88	CRAE		363839	5351992	59925	50200		1.3	0	-90
ZM134	AC94ZM134	EL28/88	CRAE		363814	5351991	59900	50200		1.5	0	-90
ZM135	AC94ZM135	EL28/88	CRAE		363789	5351991	59875	50200		1.0	0	-90
ZM136	AC94ZM136	EL28/88	CRAE		363764	5351991	59850	50200		0.9	0	-90
ZM137	AC94ZM137	EL28/88	CRAE		363739	5351990	59825	50200		0.8	0	-90
ZM138	AC94ZM138	EL28/88	CRAE		363714	5351990	59800	50200		0.8	0	-90
ZM139	AC94ZM139	EL28/88	CRAE		363689	5351989	59775	50200		2.0	0	-90
ZM140	AC94ZM140	EL28/88	CRAE		363664	5351989	59750	50200		9.4	0	-90
ZM141	AC94ZM141	EL28/88	CRAE		363639	5351988	59725	50200		5.0	0	-90
ZM142	AC94ZM142	EL28/88	CRAE		363791	5351891	59875	50100		0.8	0	-90
ZM143	AC94ZM143	EL28/88	CRAE		363801	5351891	59885	50100		3.6	0	-90
ZM144	AC94ZM144	EL28/88	CRAE		363811	5351891	59895	50100		18.6	0	-90
ZM145	AC94ZM145	EL28/88	CRAE		363821	5351892	59905	50100		13.9	0	-90
ZM146	AC94ZM146	EL28/88	CRAE		363831	5351892	59915	50100		10.1	0	-90
ZM147	AC94ZM147	EL28/88	CRAE		363841	5351892	59925	50100		12.6	0	-90
ZM148	AC94ZM148	EL28/88	CRAE		363851	5351892	59935	50100		10.1	0	-90
ZM149	AC94ZM149	EL28/88	CRAE		363861	5351892	59945	50100		9.5	0	-90
ZM150	AC94ZM150	EL28/88	CRAE		363875	5351893	59959	50100		8.6	0	-90
ZM151	AC94ZM151	EL28/88	CRAE		363884	5351893	59968	50100		9.9	0	-90
ZM152	AC94ZM152	EL28/88	CRAE		363892	5351893	59976	50100		10.1	0	-90
ZM153	AC94ZM153	EL28/88	CRAE		363901	5351893	59985	50100		4.4	0	-90
ZM154	AC94ZM154	EL28/88	CRAE		363908	5351893	59992	50100		6.0	0	-90
ZM155	AC94ZM155	EL28/88	CRAE		363915	5351893	59999	50100		6.5	0	-90
ZM156	AC94ZM156	EL28/88	CRAE		363921	5351893	60005	50100		14.4	0	-90
ZM157	AC94ZM157	EL28/88	CRAE		363936	5351894	60020	50100		11.8	0	-90
ZM158	AC94ZM158	EL28/88	CRAE		363792	5351841	59875	50050		7.1	0	-90
ZM159	AC94ZM159	EL28/88	CRAE		363802	5351841	59885	50050		3.4	0	-90
ZM160	AC94ZM160	EL28/88	CRAE		363812	5351841	59895	50050		1.1	0	-90
ZM161	AC94ZM161	EL28/88	CRAE		363822	5351842	59905	50050		4.6	0	-90
ZM162	AC94ZM162	EL28/88	CRAE		363832	5351842	59915	50050		2.0	0	-90
ZM163	AC94ZM163	EL28/88	CRAE		363842	5351842	59925	50050		9.9	0	-90
ZM164	AC94ZM164	EL28/88	CRAE		363855	5351842	59938	50050		25.0	0	-90
ZM165	AC94ZM165	EL28/88	CRAE		363867	5351842	59950	50050		1.0	0	-90
ZM166	AC94ZM166	EL28/88	CRAE		363877	5351843	59960	50050		3.0	0	-90

... PENDIX : Myrtle prospect. Drillhole collar databa.

ZM167	AC94ZM167	EL28/88	CRAE		363887	5351843	59970	50050		2.9	0	-90	
ZM168	AC94ZM168	EL28/88	CRAE		363896	5351843	59979	50050		8.8	0	-90	
ZM169	AC94ZM169	EL28/88	CRAE		363793	5351791	59875	50000		15.0	0	-90	
ZM170	AC94ZM170	EL28/88	CRAE		363783	5351791	59865	50000		37.8	0	-90	
ZM171	AC94ZM171	EL28/88	CRAE		363773	5351791	59855	50000		44.8	0	-90	
ZM172	AC94ZM172	EL28/88	CRAE		363763	5351791	59845	50000		54.0	0	-90	
ZM173	AC94ZM173	EL28/88	CRAE		363753	5351790	59835	50000		45.0	0	-90	
ZM174	AC94ZM174	EL28/88	CRAE		363743	5351790	59825	50000		1.8	0	-90	
ZM175	AC94ZM175	EL28/88	CRAE		363805	5351791	59887.5	50000		38.0	0	-90	
ZM176	AC94ZM176	EL28/88	CRAE		363830	5351792	59912.5	50000		11.2	0	-90	
ZM177	AC94ZM177	EL28/88	CRAE		363789	5351706	59870	49915		3.9	0	-90	
ZM178	AC94ZM178	EL28/88	CRAE		363779	5351706	59860	49915		2.0	0	-90	
ZM179	AC94ZM179	EL28/88	CRAE		363769	5351706	59850	49915		8.7	0	-90	
ZM180	AC94ZM180	EL28/88	CRAE		363759	5351705	59840	49915		16.0	0	-90	
ZM181	AC94ZM181	EL28/88	CRAE		363749	5351705	59830	49915		28.1	0	-90	
ZM182	AC94ZM182	EL28/88	CRAE		363739	5351705	59820	49915		3.2	0	-90	
ZM183	AC94ZM183	EL28/88	CRAE		363729	5351705	59810	49915		30.1	0	-90	
ZM184	AC94ZM184	EL28/88	CRAE		363719	5351705	59800	49915		32.3	0	-90	
ZM185	DD94ZM185	EL28/88	CRAE		363743	5351786	59825	49996		137.0	118	-45	YES
ZM186	DD94ZM186	EL28/88	CRAE		364285	5352296	60377	50496		120.9	90	-45	YES
ZM187	DD94ZM187	EL28/88	CRAE		364419	5352296	60510	50494		103.5	269	-50	YES

## ROCKCHIP AND DRILLING CODES

22/2/1994

## BMR/LITH

Rock code as per published geological map  
For time designation use:-

Q Quaternary	M Permian	P Proterozoic
T Tertiary	C Carboniferous	A Archaean
	S Silurian	
K Cretaceous	D Devonian	
R Triassic	O Ordovician	
J Jurassic	E Cambrian	

## FIELD ID

Field term for rock type  
Broad groupings are:-

S Sedimentary	I Intrusive	C Surficial
M Metamorphic	E Extrusive	O Others

## SEDIMENTARY

Scg Conglomerate	Sls Limestone	Sw Wacke
Sss Sandstone	Sdt Dolomite	Sag Agglomerate/mixtite
si Siltstone		
Ssh Shale	Sch Chert	Sbx Breccia
Sbs Black shale	Sil BIF	

## METAMORPHIC

Msl Slate	Mq Quartzite	Mmg Migmatite
Mph Phyllite	Mm Marble	
Msc Schist	Ma Amphibolite	
Mbs Granitic schist	Mcs Calcilicite	Msk Skarn
Mgn Gneiss	Mh Hornfels	

## INTRUSIVE IGNEOUS

If Felsic undiff.	Ii Intermed undiff.	Iu Ultramafic
Ifp Felsic porphyry	Iip Intermed porph	Ius Serpentinite
Iap Aplite	Iim Mafic undiff.	
Igr Granite	Ild Dolente	Ipg Pegmatite
Igd Granodiorite	Igb Gabbro	

## EXTRUSIVE IGNEOUS

Ery Rhyolite	Ean Andesite	Et Tuff undiff
Edc Dacite	Eb Basalt	Eft Felsic tuff
		Emt Mafic tuff

## SURFICIAL (COVER) MATERIAL

Ca Alluvium	Clt Laterite	Csg Gossan
Cco Colluvium	Cso Pisolites	
Cs Sand	Cst Ironstone	Ccy Clay
Cbs Black soil	Csi Silcrete	
Cg Gravel	Ccl Calcrete	Cv Vegetation/peat

## OTHERS

Ovq Vein quartz	Omy Mylonite	Oms Massive sulphide
Ovc Vein carbonate	Obx Breccia	Oxc Contamination
Ovs Vein sulphide	Of Fault gouge	Ox Unknown

## TEXTURAL CODES

## WEATHERING/SURFICIAL FEATURES

We Weathered	Fe Ferruginous
Bf Bleached	Fo Fe ox in fract
Le Leached	

## MINERALISATION/ALTERATION FEATURES

Gs Gossanous	Vs Vein sulphide	Al Altered
Vn Veined	Cs Dissem sulph	Sl Silicified
Vc Vein carbonate	Fs Fracture sulph	
Vq Vein quartz	Bs Banded sulph	Di Disseminated

## GEOLOGICAL FEATURES

Bd Bedded	Fr Fractured	Po Porphyritic
Bn Banded	Ib Interbedded	Sc Schistose
Bx Brecciated	Lm Laminated	Sh Sheared
F Fissile (slatey)	Ma Massive	Vu Vuggy

## DIAGNOSTIC MINERALOGY

## PRIMARY MINERALISATION

Ga Galena	Py Pyrite	Ni Ni sulphides
Sp Sphalerite	Po Pyrrhotite	
Cp Chalcopyrite	Su Unknown sulph	

## SECONDARY MINERALISATION

Ls Lead secondaries	Cs Copper sec.	Ni Ni secondaries
Zs Zinc "	Us Uranium "	

## ALTERATION/DIAGNOSTIC MINERALS

Cy Clay	He Haematite	Gt Garnet
Ep Epidote	Mt Magnetite	Ky Kyanite
Cc Carbonate	Js Jarosite	To Tourmaline
Sd Siderite/Ankerite	Mn Manganese mins	Cl Chlorite
Di Dolomite		

## COLOUR CODES

L Light	A Banded	M Mottled
D Dark		
N Black	P Purple	V Green
G Grey	R Red	K Pink
B Brown	O Orange	E Blue
W White	Y Yellow	S Silver

A. ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

APPENDIX : Myrtle prospect. 1994 air-core drillhole logs and geochemistry.																
DPO 77146																
Hole	DFrom	DTo	Sampno	MRTLth	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM64	0.0	1.5	3917218	Og	Sls		Py	DG	trace of dissem. pyr.	-1	11	1.27	140	158		82
ZM65	0.0	3.0	3917219	Og	SlsCcy			DG		-1	8	2.44	138	120		2922
ZM65	3.0	6.0	3917220	Og	SlsOvc	Bx		G+LG		-1	7	2.39	158	313		2476
ZM65	6.0	6.5		Og	OvcOvc	VcVs	Ga	DG	quartz-calcite vein + galena.							
ZM66	0.0	3.0	3917221	Og	CcyCbs			LGB		1	27	1.59	12	182		109
ZM66	3.0	6.0	3917222	Og	Ccy			LGB		1	129	1.19	26	1213		667
ZM66	6.0	9.0	3917223	Og	Ccy			LG		-1	65	1.02	11	628		2041
ZM66	9.0	12.0	3917224	Og	CcySls			G		-1	15	0.52	12	132		637
ZM66	12.0	15.0	3917225	Og	Ccy			LG+DG		-1	15	1.57	20	76		1084
ZM66	15.0	18.0	3917226	Og	CcySls	We		LG		-1	16	0.97	12	69		750
ZM66	18.0	21.0	3917227	Og	Ccy			DG		-1	16	2.07	19	206		869
ZM66	21.0	24.0	3917228	Og	CcySls	Lm		DG		-1	21	2.23	31	128		1360
ZM66	24.0	27.0	3917229	Og	SlsCcyOvc			DG		-1	14	2.52	57	112		1329
ZM66	27.0	30.0	3917230	Og	Sls		Py	DG	trace pyr.	-1	5	1.19	139	26		235
ZM66	30.0	33.0	3917231	Og	Sls	VuWe		DG		-1	8	1.32	128	23		513
ZM66	33.0	36.0	3917232	Og	Sls		Sp	DG	trace of sphalerite fragments visible.	-1	10	1.71	147	79		3944
ZM66	36.0	39.0	3917233	Og	SlsOvc	BxFl		G+DG	abundant Ovc	-1	6	1.63	180	37		492
ZM66	39.0	42.0	3917234	Og	Sls		Py	DG	~1% dissem. pyr. present.	-1	9	2.17	227	45		773
ZM66	42.0	45.0	3917235	Og	Sls		Py	DG	trace pyr.	-1	7	1.78	240	26		616
ZM66	45.0	48.0	3917236	Og	Sls	Ma	Py	DG	trace pyr.	-1	7	1.62	212	22		193
ZM66	48.0	50.4	3917237	Og	SlsOvc			DG	abundant 0.5-1.0cm calcite veining.	-1	9	1.96	204	28		329
ZM67	0.0	3.0	3917238	Og	Sls		Py	DG	porous, graphitic and weakly pyritic shaley Sls	-1	27	3.58	57	38		3404
ZM67	3.0	6.0	3917239	Og	Sls	Fl		DG		-1	20	2.95	50	56		3828
ZM67	6.0	9.0	3917240	Og	Sls			DG	porous and graphitic	-1	21	2.15	54	626		5100
ZM67	9.0	12.0	3917241	Og	Sls		Py	DG	mod. pyritic and graphitic	-1	18	3.76	67	883		1596
ZM67	12.0	15.0	3917242	Og	Sls		Py	N	as above	-1	19	5.62	53	109		244
ZM67	15.0	16.3	3917243	Og	Sls		Py	DG	mod. pyr.	-1	12	3.51	163	60		130
ZM68	0.0	3.0	3917244	Og	CcySls			LG+WB		-1	13	0.77	18	99		313
ZM68	3.0	6.0	3917245	Og	Sls			DG+N		-1	77	4.96	41	1089		5500
ZM68	6.0	9.0	3917246	Og	Sls		Py	DG	mod. pyritic and graphitic, porous.	-1	15	8.47	20	256		3574
ZM68	9.0	12.0	3917247	Og	SlsOvcOvc		Py	DG	as above.	-1	19	2.52	41	98		1144
ZM68	12.0	12.7	3917248	Og	Sls	Fl	Py	DG	mod. pyritic and graphitic, sheared.	-1	17	2.75	64	93		882
ZM69	0.0	3.0	3917249	Og	CcyCbs			GB		2	22	0.46	20	300		96
ZM69	3.0	6.0	3917250	Og	Sls			N	graphitic and porous	19	142	0.96	14	1742	5.20	79200
ZM69	6.0	9.0	3917251	Og	Sls			DG	as above	1	26	1.90	21	536	2.80	12800
ZM69	9.0	12.0	3917252	Og	Sls			DG	as above	-1	16	3.26	23	127		9000
ZM69	12.0	15.0	3917253	Og	Sls		Py	DG	highly pyritic	-1	19	3.58	25	71		3328
ZM69	15.0	18.0	3917254	Og	Sls	Fl		DG		-1	21	1.71	23	90		1161
ZM69	18.0	21.0	3917255	Og	Sls	Fl		DG		-1	18	1.95	31	40		852
ZM69	21.0	22.1	3917256	Og	Sls	Fl		DG		-1	21	1.99	81	23		141

ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM70	0.0	3.0	3917257	Og	CcyCg			B+N		-1	38	0.45	13	84		90
ZM70	3.0	6.0	3917258	Og	Sls	Fi		G	shaley ls	-1	29	2.30	16	2033		5400
ZM70	6.0	9.0	3917259	Og	Sls			Gf		-1	17	1.86	15	1040		7000
ZM70	9.0	12.0	3917260	Og	Ccy			LG		-1	13	4.62	10	810		3488
ZM70	12.0	14.9	3917261	Og	Sls	La		G		-1	12	1.26	12	126		1031
ZM71	0.0	3.0	3917262	Og	Sls	La		LG+G		-1	7	0.37	8	41		20
ZM71	3.0	3.8	3917263	Og	Sls	La		LG+W	finely laminated ls	-1	10	0.71	10	149		144
ZM72	0.0	3.0	3917264	Og	Sls			G		-1	54	0.65	11	22		54
ZM72	3.0	6.0	3917265	Og	CcySls			LY+G		-1	51	0.47	9	61		133
ZM72	6.0	9.0	3917266	Og	Sls	La		LG	jasper fragments (minor).	-1	38	0.96	14	1285		6000
ZM72	9.0	12.0	3917267	Og	Sls			G		-1	24	2.74	29	284		3436
ZM72	12.0	15.0	3917268	Og	SlsCcy		Py	DG+N	moderately pyr.	-1	22	5.12	31	96		2985
ZM72	15.0	18.0	3917269	Og	Sls			DG		-1	21	3.35	30	103		984
ZM72	18.0	21.0	3917270	Og	Sls			DG		-1	16	2.06	108	71		420
ZM73	0.0	3.0	3917271	Og	Sls		Py	DG	trace pyr.	-1	22	0.52	13	350		895
ZM73	3.0	6.0	3917272	Og	Sls			G+DG		-1	30	2.03	25	294		3201
ZM73	6.0	9.0	3917273	Og	Ccy			DG		-1	21	3.43	29	448		1909
ZM73	9.0	12.0	3917274	Og	Ccy		Py	DG	pyr. aggregates to 2cm.	-1	20	4.20	24	252		1937
ZM73	12.0	15.0	3917275	Og	Sls		Py	DG	weakly pyr.	-1	14	19.70	18	1088		3671
ZM73	15.0	18.0	3917276	Og	Sls		Py	DG	mod. pyr.	-1	12	3.03	141	178		2020
ZM73	18.0	21.0	3917277	Og	SlsOvc		Py	DG	mod. pyr.	-1	11	4.19	174	200		1649
ZM73	21.0	23.5	3917278	Og	Sls			DG		-1	12	3.12	162	128		1487
ZM74	0.0	3.0	3917279	Og	SlsCcy	We		GV	white clay near top of interval.	-1	15	2.36	19	814	3.65	11600
ZM74	3.0	6.0	3917280	Og	Ccy			VG	minor W/B clay interbeds.	-1	21	3.62	20	412		9100
ZM74	6.0	9.0	3917281	Og	Ccy		Py	DG	minor dissem. pyr. present.	-1	21	5.85	23	126		9500
ZM74	9.0	12.0	3917282	Og	CcySlsOvc	We		DG		-1	20	6.74	22	271	7.95	13700
ZM74	12.0	15.0	3917283	Og	SlsOvc	La	Py	DG	weakly pyr.	-1	21	6.42	24	215		7800
ZM74	15.0	17.5	3917284	Og	Sls		Py	LGDG	"wispy" graphitic ls, 2-3mm pyrite clots.	-1	21	3.62	51	83		6600
ZM75	0.0	3.0	3917285	Og	Ccy	Fe		M	limonitic clay	-1	25	2.66	10	406		3203
ZM75	3.0	6.0	3917286	Og	Ccy			G		-1	19	4.27	18	125		7700
ZM75	6.0	9.0	3917287	Og	SlsCcy		Sp	DG	sphalerite 1-2%, minor light brown clay.	-1	12	3.26	13	73		8400
ZM75	9.0	12.0	3917288	Og	Sls		Sp	DG	trace of sphalerite.	-1	12	3.89	36	162		2700
ZM75	12.0	15.0	3917289	Og	Sls			DG		-1	5	0.92	120	14		79
ZM75	15.0	18.0	3917290	Og	Sls	Ma		DG		-1	5	1.09	128	19		420
ZM75	18.0	21.0	3917291	Og	Sls			DG	porous lime mud-siltstone.	-1	5	1.16	139	18		229
ZM75	21.0	24.0	3917292	Og	SlsOvc			DG		-1	14	5.23	87	56		1280
ZM75	24.0	27.0	3917293	Og	Sls			DG		-1	9	1.64	154	20		184
ZM75	27.0	30.0	3917294	Og	OvcSls			DG	coarse gr. milky calcite vein.	-1	10	6.77	145	16		404
ZM75	30.0	33.0	3917295	Og	SlsOvc			DG	abundant vein calcite present, 1mm-1cm.	-1	14	2.58	126	29		481

APPENDIX : Myrtle prospect. 1994 air-core drillhole logs and assays

Hole	DFrom	DTTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	%S	Zn ppm
ZM76	0.0	3.0	3917296	Og	CcySls			LG	sandy clay.	-1	4	0.28	13	33		27
ZM76	3.0	6.0	3917297	Og	Sls	Fe		G+DG	limonitic coatings.	-1	35	0.58	17	526		5400
ZM76	6.0	9.0	3917298	Og	Sls			G+V		-1	68	0.77	21	968		2953
ZM76	9.0	12.0	3917299	Og	SlsCcy			DG	minor limonitic clay.	-1	53	1.22	22	1421	2.20	14900
ZM76	12.0	15.0	3917300	Og	Sls		Sp	DG	trace of sphalerite	3	35	1.11	16	1309	5.30	91700
ZM76	15.0	18.0	3917301	Og	Ccy	Fe		LG	minor limonitic clay	3	36	1.18	18	937	5.05	74900
ZM76	18.0	21.0	3917302	Og	Ccy		Py	LG		-1	19	1.04	19	81		4608
ZM76	21.0	24.0	3917303	Og	Ssi	We		DG	porous	-1	15	1.13	24	43		3016
ZM76	24.0	27.0	3917304	Og	Ssi	We		DG	minor coral fragments	-1	21	1.97	34	33		5500
ZM76	27.0	30.0	3917305	Og	SshSls	We		DG	porous	-1	21	1.49	38	23		3026
ZM76	30.0	33.0	3917306	Og	SshSls	Fe		DG	minor limonite	-1	42	2.04	35	27		3951
ZM76	33.0	36.0	3917307	Og	SshSss			DG	minor limonitic quartz	-1	18	1.92	29	50		8100
ZM76	36.0	39.0	3917308	Og	Ssi		SpPy	G	2mm sized Sp grains	-1	24	1.33	19	37		1926
ZM76	39.0	42.0	3917309	Og	SshSss			LG		-1	19	1.18	12	83		979
ZM76	42.0	45.0	3917310	Og	SshSss			DG	minor pale grey clay	-1	16	1.38	24	21		660
ZM76	45.0	45.4	3917311	Og	SshSss			G	fine grained	-1	22	1.89	89	41		3647
ZM77	0.0	3.0	3917312	Og	Ccy			LG		-1	7	0.75	10	62		36
ZM77	3.0	6.0	3917313	Og	CcySls	We		LG+Y	graphitic sls	-1	18	1.21	8	140		32
ZM77	6.0	9.0	3917314	Og	CcySshels	We		MDG		-1	32	0.87	19	785		1519
ZM77	9.0	12.0	3917315	Og	Ccy			MY+W+B		-1	34	0.93	14	1199		1991
ZM77	12.0	15.0	3917316	Og	Ssi			DG	carbonaceous	-1	22	1.49	28	523		6300
ZM77	15.0	18.0	3917317	Og	SshSls			DG		-1	19	2.19	33	551		8200
ZM77	18.0	21.0	3917318	Og	Ssi			DG	carbonaceous, minor shell frags	-1	21	1.22	37	129		5100
ZM77	21.0	24.0	3917319	Og	Ssi			G	carbonaceous	-1	34	1.42	20	384	2.10	10100
ZM77	24.0	25.5	3917320	Og	Ssi			G	carbonaceous	-1	20	1.29	18	378		3297
ZM78	0.0	3.0	3917321	Og	Ccy			MGV		-1	4	0.82	10	152		44
ZM78	3.0	6.0	3917322	Og	Ssh			DG	graphitic	-1	13	0.51	13	509		204
ZM78	6.0	9.0	3917323	Og	CcySsh			DG	gritty	-1	18	1.12	27	1111		1409
ZM78	9.0	12.0	3917324	Og	CcySsh			DG		-1	20	1.50	35	85		1722
ZM78	12.0	15.0	3917325	Og	SshSsi		Py	LG	fine pyrite veins	-1	25	1.51	28	148		1986
ZM78	15.0	18.0	3917326	Og	Ssi		Py	G	fine pyrite veins	-1	24	1.06	12	477		2879
ZM79	0.0	3.0	3917327	Og	Ssi			MLGV		-1	5	0.62	7	37		24
ZM79	3.0	5.7	3917328	Og	Sls			G	shell fossils	-1	16	0.54	9	202		666

ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

Hole	DFrom	DTTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM80	0.0	3.0	3917329	Og	SsiSsh			GV	gritty	-1	4	0.25	7	15		18
ZM80	3.0	6.0	3917330	Og	SsiSsh			GV		-1	14	1.31	20	18		2705
ZM80	6.0	9.0	3917331	Og	Ssh			DG	carbonaceous	-1	10	1.28	21	14		1723
ZM80	9.0	12.0	3917332	Og	Ssh	DI	Py	DG	small Py chips	-1	14	1.37	23	15		1185
ZM80	12.0	15.0	3917333	Og	CcySsh			DG	carbonaceous	-1	21	2.26	27	31		939
ZM80	15.0	18.0	3917334	Og	CcySsh			DG	carbonaceous	-1	14	1.48	21	17		563
ZM80	18.0	21.0	3917335	Og	CcySsh			DG	carbonaceous	-1	18	1.78	18	38		612
ZM80	21.0	24.0	3917336	Og	Sshsls		Py	DG	small fossils, porous ls	-1	18	1.74	18	134		468
ZM80	24.0	27.0	3917337	Og	CcySsiSsh			DG	gritty	-1	13	2.30	178	36		1016
ZM80	27.0	30.0	3917338	Og	SsiSsh		Py	DG	minor Py	-1	14	1.88	161	40		843
ZM80	30.0	33.0	3917339	Og	CcySsiSlS			DG	fossils, sticky clay	5	23	3.42	152	314		7200
ZM80	33.0	36.0	3917340	Og	SsiSsh			DGN		4	17	2.44	209	9200		5500
ZM80	36.0	39.0	3917341	Og	Ssi			DG		1	10	2.24	302	110		5100
ZM80	39.0	42.0	3917342	Og	CcySsi			DG	gritty	1	12	2.37	288	221		2955
ZM80	42.0	45.0	3917343	Og	OvcCcy			DG	calcite veins	-1	8	1.53	289	80		603
ZM80	45.0	47.5	3917344	Og	SsiOvc		PyCp	DG		-1	8	1.72	250	117		851
ZM81	0.0	3.0	3917345	Og	Ccy			DGV	silty clay	-1	21	1.75	41	84		2281
ZM81	3.0	6.0	3917346	Og	CcySsh			DGV		-1	22	1.82	43	37		1248
ZM81	6.0	9.0	3917347	Og	SsiCcy			DG	carbonaceous	-1	26	1.58	24	21		962
ZM81	9.0	12.0	3917348	Og	CcySsiSsh			DG	carbonaceous	-1	22	1.82	35	22		1062
ZM81	12.0	15.0	3917349	Og	Ccy			DG	sticky clay	-1	21	3.06	27	39		1067
ZM81	15.0	18.0	3917350	Og	CcySsi			DG	sticky clay	-1	19	2.45	32	32		1321
ZM81	18.0	21.0	3917351	Og	CcySsi			DG	sticky clay	-1	21	3.08	20	45		1825
ZM81	21.0	24.0	3917352	Og	CcySsiSlS		Py	DG	porous ls	-1	19	3.05	97	120		2322
ZM81	24.0	27.0	3917353	Og	CcySsh	Vn	Py	DG		-1	20	2.74	29	1487		3285
ZM81	27.0	30.0	3917354	Og	CcySsi		Py	DG	minor Py, gritty clay	-1	11	2.27	103	117		882
ZM81	30.0	33.0	3917355	Og	Ssi		Py	DG	abundant Py	-1	8	1.35	166	50		410
ZM81	33.0	36.0	3917356	Og	Ssi		Py	DG	abundant Py	-1	7	1.20	159	66		662
ZM81	36.0	38.5	3917357	Og	SsiSlS		Py	DG	minor Py	-1	7	1.30	164	26		302
ZM82	0.0	3.0	3917358	Og	Ssh	We		GV		-1	46	1.68	18	177		2625
ZM82	3.0	6.0	3917359	Og	Ccy			GV	plastic gritty clay	-1	47	2.41	19	270		5300
ZM82	6.0	9.0	3917360	Og	Ccy			G	plastic gritty clay	-1	19	6.29	29	99		5800
ZM82	9.0	12.0	3917361	Og	CcySsa/SlS			VG	gritty, coarse sls/sss	-1	15	7.61	23	157		7900
ZM82	12.0	15.0	3917362	Og	CcySsi	Fe	Sp	VG		-1	19	10.40	25	152		9400
ZM82	15.0	18.0	3917363	Og	Ssi		PySp	DG	minor Sp	-1	20	9.84	16	129		6900
ZM82	18.0	21.0	3917364	Og	Ssi	Bs?	Py	DG		5	25	5.27	23	17900	6.65	12500
ZM82	21.0	24.0	3917365	Og	SsiSsh		Py	DG	graphitic shale	3	20	5.99	18	3712	6.90	12000
ZM82	24.0	26.9	3917366	Og	CcySlS			DG	gritty clay	1	11	2.42	82	521		2457

ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa,

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM83	0.0	3.0	3917367	Og	Cg	Fe		GB		-1	23	0.33	10	56		60
ZM83	3.0	6.0	3917368	Og	SaeCcy	Fe		G		3	52	2.00	20	1000		8900
ZM83	6.0	9.0	3917369	Og	CcySss/Sls			G	gritty clay	4	52	2.94	16	2146	4.50	16700
ZM83	9.0	12.0	3917370	Og	SlsOvc	Fe		DGV	sandy limestone	22	58	3.50	22	20900	7.15	56300
ZM83	12.0	15.0	3917371	Og	SlsCcy	Fe		DG	med-coarse grained	8	25	4.37	18	6400	6.30	23400
ZM83	15.0	18.0	3917372	Og	CcySls			DG	as above	3	16	4.82	23	170		9700
ZM83	18.0	21.0	3917373	Og	SsiCcy			DG	gritty	3	17	4.71	19	157		8200
ZM83	21.0	24.0	3917374	Og	Sls		Py	DG	calcite grains	1	13	6.00	27	119		9200
ZM83	24.0	27.0	3917375	Og	Ssi		Py	DG	fine grained	1	19	3.36	20	82		8600
ZM83	27.0	30.0	3917376	Og	SshSsi	Vc	Py	DG		1	38	4.63	41	103		1499
ZM83	30.0	33.0	3917377	Og	SshSsi	Vc	PySp	DG	coarse grained	-1	13	6.60	20	54		3331
ZM83	33.0	36.0	3917378	Og	SshSsi	Vc	PySp	DG	coarse grained	-1	14	2.00	31	59		2317
ZM83	36.0	38.2	3917379	Og	SshSsiOvc		Py	DG		-1	8	1.34	150	47		408
ZM84	0.0	3.0	3917380	Og	CvCcy		Sd	MLGV	om ankerite?	-1	31	1.74	15	1342		789
ZM84	3.0	6.0	3917381	Og	Ccy			DGN	carbonaceous	-1	16	3.27	16	586	4.45	10600
ZM84	6.0	9.0	3917382	Og	Ccy			DGN	slightly gritty, carbonaceous	1	19	6.36	22	139		6700
ZM84	9.0	12.0	3917383	Og	CcySsi			DG	carbonaceous	-1	16	3.26	19	283		9400
ZM84	12.0	15.0	3917384	Og	CcySsi			DG	carbonaceous, gritty	-1	13	5.32	21	292	6.75	11600
ZM84	15.0	18.0	3917385	Og	SlsSsiCcy			DG	gritty	1	15	3.08	30	76		3916
ZM84	18.0	21.0	3917386	Og	SsiSls	Fe		DG	minor limonite	-1	8	1.49	162	54		1862
ZM84	21.0	24.0	3917387	Og	Sls		Sd	DG	ankerite	19	25	1.43	30	65000	4.45	38600
ZM84	24.0	25.0	3917388	Og	SsiSls		Py	DG	minor Py	3	11	1.17	109	10000		7400
ZM85	0.0	3.0	3917389	Og	Ccy			MLGV	gritty clay	1	63	1.95	10	396		97
ZM85	3.0	6.0	3917390	Og	CcySls			LGV	as above	3	59	2.88	17	4151		2991
ZM85	6.0	9.0	3917391	Og	CcySls	Vc		LG	plastic clay	2	16	0.38	10	514		176
ZM85	9.0	12.0	3917392	Og	CcySls			DGN		2	26	2.91	22	983	4.65	22300
ZM85	12.0	15.0	3917393	Og	SlsOvcCcy	Vc		LG		1	22	1.54	15	470		4480
ZM86	0.0	3.0	3917394	Og	SshCcy			LGB	suboutcrop of shale adj.	-1	19	0.82	16	90		673
ZM86	3.0	6.0	3917395	Og	SsiCcy			GV		-1	21	1.07	23	68		3288
ZM86	6.0	9.0	3917396	Og	CcySsi			G	gritty	-1	19	1.83	30	59		3574
ZM86	9.0	9.8	3917397	Og	SsiSls	Fe		DGV		-1	56	1.38	19	458		3567
ZM87	0.0	3.0	3917398	Og	Ccy			MLGVO	gritty	-1	8	0.80	10	189		67
ZM87	3.0	6.0	3917399	Og	Ssi			DG		-1	74	1.17	25	1779		6800
ZM87	6.0	9.0	3917400	Og	Ssi	Fe		DGV	minor clay	-1	47	2.83	26	1649		6600
ZM87	9.0	12.0	3917401	Og	SlsCcy	Fe	Sp?	G		2	50	1.47	24	3500	2.40	13800
ZM87	12.0	15.0	3917402	Og	SlsOvc		PySp	DG+N	Py assoc. with calcite veins	9	117	1.68	17	19000	10.70	159000
ZM87	15.0	18.0	3917403	Og	CcySls	Vc	Sp	DG		3	54	2.09	15	6400	5.50	62900
ZM87	18.0	21.0	3917404	Og	SlsOvc		PySdSp	DG	fossils, Py on calcite veins	-1	22	2.25	43	424		9100
ZM87	21.0	22.0	3917405	Og	SlsSsiOvc	Vc	Sp	LG		-1	4	0.53	92	107		1053

ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

Hole	DFrom	DTO	Sampno	MRTLith	FleidID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	%	Zn ppm
ZM88	0.0	3.0	3917406	Og	SlsOvc			LB	silt no clay	3	8	0.21	8	1154		137
ZM88	3.0	6.0	3917407	Og	CcySls	FeVc		LB		3	25	0.81	7	904		4066
ZM88	6.0	9.0	3917408	Og	SshSls		PySp	DG		2	20	2.30	14	4000	4.00	19700
ZM88	9.0	12.0	3917409	Og	SshSls		PySp	DG		1	18	2.79	15	1644	4.35	16900
ZM88	12.0	15.0	3917410	Og	CcySlsOvc	Vc		DG		-1	20	2.44	14	812	3.40	10200
ZM88	15.0	18.0	3917411	Og	CcySsi			DG		-1	21	2.20	20	453	3.55	21100
ZM88	18.0	21.0	3917412	Og	Sls			LG+DG		1	23	1.91	13	3500	3.10	15000
ZM88	21.0	24.0	3917413	Og	Sls	Vc		DG		-1	7	1.27	140	121		1582
ZM88	24.0	27.0	3917414	Og	SlsOvc	Vc	Py	DG		-1	4	0.86	128	32		443
ZM88	27.0	27.5	3917415	Og	SlsSsiOvc	Vc		DG		-1	6	0.90	134	40		676
ZM89	0.0	3.0	3917416	Og	Ccy			MLGB	plastic	-1	3	0.26	12	1511		96
ZM89	3.0	6.0	3917417	Og	Ccy			MD+LG	gritty	1	10	1.39	11	2060		3002
ZM89	6.0	9.0	3917418	Og	CcySsi			DG		4	154	1.71	11	8700		5800
ZM89	9.0	12.0	3917419	Og	SlsCcy			DGV		2	50	3.64	17	3800		6500
ZM89	12.0	15.0	3917420	Og	SlsOvcSsh	Di	Py	DG	graphitic shale,	-1	17	2.34	15	312	3.75	12500
ZM89	15.0	18.0	3917421	Og	CcySls	Vc		DG		-1	17	2.13	21	143		7800
ZM89	18.0	18.9	3917422	Og	SlsOvc			DG	calcite vein (>20mm)	-1	11	1.56	95	159		9700
ZM90	0.0	3.0	3917423	Og	Ccy			MOYB	plastic, silty	-1	32	1.79	17	387		239
ZM90	3.0	6.0	3917424	Og	Ccy			MOBG		-1	23	3.25	17	1304		6200
ZM90	6.0	9.0	3917425	Og	CcySsh			N+DG	plastic, carbonaceous	-1	17	2.17	25	169		3156
ZM90	9.0	12.0	3917426	Og	CcySsh			N+DG	plastic, carbonaceous	-1	19	2.24	21	646		6300
ZM90	12.0	14.5	3917427	Og	SshSsiCcy			DG	sticky	-1	21	3.23	29	1212	4.10	10100
ZM91	0.0	3.0	3917428	Og	CvSsi			GB	5m S Py scree - o/c	84	386	0.31	14	1460		860
ZM91	3.0	6.0	3917429	Og	CcySai		Py	DGV	gritty soil	22	139	1.92	21	7100	3.70	19900
ZM91	6.0	9.0	3917430	Og	CcySsi		Py	DG	gritty, carbonaceous	4	49	2.54	31	1795		8500
ZM91	9.0	12.0	3917431	Og	CcySai			DGN	gritty, carbonaceous	3	46	2.92	34	1260		4988
ZM91	12.0	15.0	3917432	Og	CcySsi	Vc		DGN		2	30	2.56	27	621		6900
ZM91	15.0	18.0	3917433	Og	CcySlsOvc	Vc		L+DG		2	30	3.43	27	673		6900
ZM91	18.0	21.0	3917434	Og	SlsSsh			DG	minor clay	1	21	2.56	22	135		1757
ZM91	21.0	22.1	3917435	Og	SlsOvc	Vc	PySd	L+DG	ankerite	2	15	1.58	65	204		1148
ZM92	0.0	3.0	3917436	Og	Cv		Py	DG+N	costine	80	110	17.10	12	4000	29.60	96300
ZM92	3.0	6.0	3917437	Og	Ccy	Fe	Sp?	DVB	sticky	23	55	6.76	28	8100	11.80	81700
ZM92	6.0	9.0	3917438	Og	Sls		Py	VB	free Py	15	55	4.30	24	7200	9.40	76000
ZM92	9.0	12.0	3917439	Og	Ox		PySp?	O	FeCO3?, cryptoXine, banded, earthy jasper-like	4	21	3.94	15	521	6.80	30400
ZM92	12.0	15.0	3917440	Og	SsiOx			YO+G	as above	3	23	3.20	20	653	5.15	21500
ZM92	15.0	18.0	3917441	Og	Sls		Py	DG	free Py	3	30	14.70	32	4700	18.20	30500
ZM92	18.0	21.0	3917442	Og	Ccy		Py	DG	grit in clay is all Py	1	19	8.52	49	1012	10.50	21800
ZM92	21.0	24.0	3917443	Og	CcySsh		Py	DG		2	17	8.55	30	1244	11.13	31200
ZM92	24.0	27.0	3917444	Og	CcySsh	Vc	Py	DG		1	20	5.60	26	806	7.00	20800
ZM92	27.0	27.9	3917445	Og	SshOvc	Vc	Py	L+DG		5	28	8.53	52	1774	17.00	126000

ENDIX : Myrtle prospect. 1994 air-core drillhole logs and ass.

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM93	0.0	3.0	3917446	Og	CcySls	Vc		DGB		2	27	3.04	28	5200		7100
ZM93	3.0	6.0	3917447	Og	Ssi	FeDi	PySd?	DGV+O	orn Ox, chert looking	1	15	5.67	28	1550	8.00	28800
ZM93	6.0	9.0	3917448	Og	Sls		PySp?	DGV		1	14	4.46	54	1342	7.10	32300
ZM93	9.0	12.0	3917450	Og	Ssi	FeVc	Sp?	DGB		1	13	4.14	35	384	5.10	15900
ZM93	12.0	15.0	3917451	Og	CcySls	Vc	Py	G		2	24	4.69	34	418		9200
ZM93	15.0	15.5	3917452	Og	SlsSshOvc	Vc	PySp?	LG		2	20	2.82	39	123		4782
ZM94	0.0	3.0	3917453	Og	Ccy	Fe		MOBG		6	36	2.30	14	1455		1382
ZM94	3.0	6.0	3917454	Og	Ssi			GV		7	172	11.20	10	11800	13.80	13700
ZM94	6.0	9.0	3917455	Og	Ccy	Di	Py	GV	abund Py as grit in clay	3	70	12.30	12	10900	15.80	23500
ZM94	9.0	12.0	3917456	Og	Sls	VuVc	PySp?	LG+G		4	51	7.58	109	8600	9.90	34400
ZM94	12.0	13.2	3917457	Og	SlsOvc	Bn	Sd?	LG+O	ankerite?, calcite(>20 - <1mm)	2	8	2.01	139	239	3.05	13900
ZM95	0.0	3.0	3917458	Og	CvCcy	Fe		YOB	limonite, vege	10	66	3.55	16	1435		1481
ZM95	3.0	5.9	3917459	Og	SlsOvc	Vc		LG+G		5	53	3.91	20	3900		7300
ZM96	0.0	3.0	3917460	Og	Ccy			YOB	minor grit	5	30	1.92	21	1059		2376
ZM96	3.0	6.0	3917461	Og	CcySls	Di	Py	LG+DG		16	66	2.86	22	2511		2065
ZM96	6.0	9.0	3917462	Og	Ccy			DG	gritty, carbonaceous	5	36	3.75	28	1994		4390
ZM96	9.0	10.1	3917463	Og	SlsSsi	Vc	Py	DG		-1	5	0.83	111	495		578
ZM97	0.0	3.0	3917464	Og	CcySsi	Vc		DG		-1	30	1.46	22	851		2111
ZM97	3.0	6.0	3917465	Og	CcySsi			DG		-1	22	2.99	31	450		7300
ZM97	6.0	9.0	3917466	Og	CcySsi	Vc	Py	DG		-1	113	1.40	29	57		1715
ZM97	9.0	12.0	3917467	Og	Sls	Vc	Py	DG		-1	83	1.74	25	48		1548
ZM97	12.0	15.0	3917468	Og	SlsCcy			DG		-1	27	2.01	71	38		1601
ZM97	15.0	18.0	3917469	Og	SlsOvc			LG		-1	6	1.16	226	16		370
ZM97	18.0	21.0	3917470	Og	SlsOvc		Py	DG		-1	10	1.95	255	20		593
ZM97	21.0	24.0	3917471	Og	SlsOvc		Py	DG		-1	10	1.90	344	147		1330
ZM97	24.0	25.0	3917472	Og	SlsOvc	Fr	PySp	DG		1	19	1.71	247	263	2.80	30700
ZM98	0.0	3.0	3917473	Og	CcyCv	BIVc		LGV		-1	60	0.55	9	105		85
ZM98	3.0	6.0	3917474	Og	Ccy			LGW	plastic, minor grit	-1	27	0.36	8	40		87
ZM98	6.0	9.0	3917475	Og	SshCcy	Fe		LG	shale is altered -yellowish	-1	10	0.46	6	17		25
ZM98	9.0	12.0	3917476	Og	SlsOvcSsh	Fe		LG		-1	17	1.08	11	22		430
ZM98	12.0	15.0	3917477	Og	SlsSsh	Vc		G		-1	15	1.25	40	207		939
ZM98	15.0	17.7	3917478	Og	SlsOvc	Vc		DGW		-1	7	2.19	451	341		1908
ZM99	0.0	3.0	3917479	Og	Ccy			MG+YO	gritty	-1	19	1.19	23	461		420
ZM99	3.0	6.0	3917480	Og	CcySls			VG	shell fossils	-1	33	1.54	39	462		984
ZM99	6.0	9.0	3917481	Og	SlsOvc	Vc		G	hard compact	-1	5	0.54	147	81		471
ZM99	9.0	12.0	3917482	Og	SlsCcy	Vn		DG	carbonaceous clay, finely veined limestone	-1	17	2.91	370	255		1043
ZM100	0.0	3.0	3917483	Og	CvCcy			YG		-1	17	0.45	9	259		98
ZM100	3.0	6.0	3917484	Og	Ccy	Fe		OVB	sticky, limonite chips	1	27	4.03	37	948		1240
ZM100	6.0	9.0	3917485	Og	SlsCcy			DG	med-fine grained	1	21	2.63	39	1524		1594
ZM100	9.0	11.6	3917486	Og	SlsOvc		Sd?	G	ankerite?	-1	33	1.34	49	126		1589

ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Mln	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM101	0.0	3.0	3917487	Og	GvCcy			LG+O		-1	18	0.29	9	82		158
ZM101	3.0	6.0	3917488	Og	Ccy	Le		YVG		-1	22	1.19	17	897		551
ZM101	6.0	9.0	3917489	Og	Sls			DG	fossils	-1	17	2.00	79	109		2665
ZM101	9.0	12.0	3917490	Og	SlsCcy			DG	fossils	-1	16	2.51	100	126		1187
ZM101	12.0	15.0	3917491	Og	SlsCcy			DG	fossils	-1	8	1.67	90	28		546
ZM101	15.0	16.1	3917492	Og	Sls	Vc	Py	DG	free Py	-1	7	1.50	120	18		258
ZM102	0.0	3.0	3917493	Og	GvCcy			LBG		-1	25	0.35	9	2368		129
ZM102	3.0	6.0	3917494	Og	Ccy			DG+B	carbonaceous clay	2	81	0.54	10	1015		105
ZM102	6.0	9.0	3917495	Og	Ccy			DG+B	minor grit	1	29	1.20	15	261		891
ZM102	9.0	12.0	3917496	Og	SlsCcy	Vn	Py	DG	Py in limestone	1	24	0.96	14	157		1349
ZM102	12.0	15.0	3917497	Og	Sls	Fe	Sp?	DG		-1	10	1.39	22	27	2.50	16600
ZM102	15.0	18.0	3917498	Og	Sls	Vc	Sp?	DG		-1	12	1.85	23	25		2702
ZM102	18.0	21.0	3917499	Og	Sls		Sd?	DG+YO	ankerite?	-1	17	2.47	31	40		3479
ZM102	21.0	24.0	3917500	Og	Sls			DG		-1	6	1.57	192	15		434
ZM102	24.0	26.1	3983501	Og	SlsOvc		Py	LG+G	porous, Py on calcite veins	-1	9	1.07	139	10		203
ZM103	0.0	3.0	3983502	Og	Ccy	Fe		MOG		1	51	1.27	11	886		95
ZM103	3.0	6.0	3983503	Og	Ccy	Vc		DG+N	gritty	1	81	1.31	15	1022		3675
ZM103	6.0	9.0	3983504	Og	SlsCcy	Vc		DG+N		1	21	1.22	30	150		924
ZM103	9.0	12.0	3983505	Og	SlsCcy			DG		1	13	1.77	78	171		1332
ZM103	12.0	15.0	3983506	Og	SlsCcy			DG		-1	28	0.83	44	254		770
ZM103	15.0	18.0	3983507	Og	SlsOvc		Py	DG		1	22	3.15	57	94		4378
ZM103	18.0	21.0	3983508	Og	Sls		Py	DG		-1	18	3.01	73	199		7500
ZM103	21.0	24.0	3983509	Og	SlsSsi	Vc		DG		-1	16	1.63	158	29		392
ZM103	24.0	24.8	3983510	Og	SlsOvc	Vn	Py	LG		-1	13	2.29	133	49		481
ZM104	0.0	3.0	3983511	Og	Ccy			LG+O	minor Sls chips	3	147	1.86	17	4219		4574
ZM104	3.0	6.0	3983512	Og	CcySls			DG		1	86	1.44	18	2900		7400
ZM104	6.0	9.0	3983513	Og	Sls	VuVc	Sd?	DG	ankerite?	-1	46	1.32	20	1145		4592
ZM104	9.0	10.8	3983514	Og	Sls			LG	minor Fe carbonate	-1	12	1.21	70	49		887
ZM105	0.0	3.0	3983515	Og	CcySsh			LG+DG		-1	22	0.54	13	2581		1248
ZM105	3.0	6.0	3983516	Og	Ccy			DG	minor Sls	-1	19	1.97	24	741	2.70	11000
ZM105	6.0	9.0	3983517	Og	SlsOvc		Py	LG+G	Py on fracture surfaces	-1	8	1.21	78	184		1689
ZM105	9.0	11.0	3983518	Og	SlsOvc	Vc		LG		-1	3	0.56	83	44		309
ZM106	0.0	3.0	3983519	Og	GvCcy			GV		-1	65	1.54	21	1576		4936
ZM106	3.0	6.0	3983520	Og	SlsCcy	Fe		G		-1	25	2.71	23	389	4.60	31000
ZM106	6.0	9.0	3983521	Og	Sls	Fe	Py	G	Py in limestone	-1	23	3.65	16	346		4372
ZM106	9.0	12.0	3983522	Og	SsiSls	DiVn	Py	DG	fine Py veins <0.5mm	-1	15	1.86	62	120		1404
ZM106	12.0	14.5	3983523	Og	SlsOvc	Vc	Py	G	Py occurs with calcite veins	-1	4	0.83	88	32		687
ZM107	0.0	1.0	3983524	Og	Sls	Vc		DG	Air hammer sample	-1	7	0.60	36	108		725
ZM108	0.0	1.2	3983525	Og	Sls	Vc		DG		-1	7	0.44	30	96		382
ZM109	0.0	3.0	3983526	Og	Ccy			DG+B	gritty	1	10	0.63	30	319		326
ZM109	3.0	6.0	3983527	Og	CcySls			DG		1	18	4.21	30	610		2610
ZM109	6.0	7.0	3983528	Og	Sls	FeVc		DG	dense sls	-1	17	4.05	56	505		2224

Hole	DFrom	DTo	Sampno	MATLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM110	0.0	3.0	3983529	Og	Ccy			DGV		1	21	2.53	20	4961		4922
ZM110	3.0	6.0	3983530	Og	Slb		Py	DG		-1	16	4.06	48	800		7400
ZM110	6.0	9.0	3983531	Og	Slb			LG+G	porous	-1	10	1.75	92	43		277
ZM111	0.0	2.4	3983532	Og	CcySlb	DiVc	Py	DG		1	11	1.80	24	230		1988
ZM112	0.0	3.0	3983533	Og	CcySlb	WeFe		MGVO	gritty	-1	35	4.02	66	231		502
ZM112	3.0	6.0	3983534	Og	CcySlb			G		-1	24	4.19	29	93		3693
ZM112	6.0	9.0	3983535	Og	Ccy			G	gritty	-1	22	2.83	50	62		1018
ZM112	9.0	12.0	3983536	Og	Ccy			DG	gritty	-1	22	2.99	35	93		1208
ZM112	12.0	15.0	3983537	Og	SlbCcy			DG	coarse grained	-1	19	1.50	39	41		563
ZM112	15.0	18.0	3983538	Og	Ssh		Py	DG		-1	19	3.09	49	38		281
ZM112	18.0	21.0	3983539	Og	Ssh	Vc	Py	DG+B		-1	21	5.77	62	44		231
ZM112	21.0	22.6	3983540	Og	SlbSsh	Vc	Py	G		-1	12	11.50	93	58		730
ZM113	0.0	3.0	3983541	Og	CvCcy			LG+O		-1	30	5.49	42	129		1054
ZM113	3.0	6.0	3983542	Og	SlbCcy			GV		-1	98	1.73	16	1370		3550
ZM113	6.0	9.0	3983543	Og	Ccy			DG	minor grit	-1	26	3.27	39	125		1669
ZM113	9.0	12.0	3983544	Og	CcySlb			DG	minor graphite	-1	23	4.42	35	106		2023
ZM113	12.0	15.0	3983545	Og	Slb	Vc		DG		-1	25	3.12	40	102		264
ZM113	15.0	18.0	3983546	Og	Slb	Vc		DG		-1	21	3.33	57	55		861
ZM113	18.0	21.0	3983547	Og	SshCcy			DG		-1	23	5.98	43	114		543
ZM113	21.0	24.0	3983548	Og	Ssh	Vc	Py	DG+B		-1	32	4.39	14	62		1349
ZM113	24.0	26.6	3983549	Og	SsiSsh	DiVc	Py	DG		-1	13	2.19	125	23		401
AC9ZM1	0.0	3.0	3983550	Og	CvCcy			DGV		-1	29	0.71	27	59		92
AC9ZM1	3.0	6.0	3983551	Og	SlbCcy	We		DG		-1	75	1.52	30	1067		1734
AC9ZM1	6.0	9.0	3983552	Og	SlbCcy	We		DG		-1	24	2.54	45	84		543
AC9ZM1	9.0	12.0	3983553	Og	SsiSsh	Vn	Py	DG	carbonaceous	-1	23	2.26	54	78		202
AC9ZM1	12.0	15.0	3983554	Og	SsiSsh	Vc	PySd	DGV	ankerite?	-1	18	4.25	38	59		593
AC9ZM1	15.0	18.0	3983555	Og	SsiSsh	FeVq	Py	DG	minor clay	-1	22	3.60	63	92		1413
AC9ZM1	18.0	21.0	3983556	Og	Ssh		Py	DG+B		-1	24	5.93	62	136		1645
AC9ZM1	21.0	24.0	3983557	Og	Ssh	VcFe	Py	DG	vein Py with calcite	-1	34	4.63	13	60		692
AC9ZM1	24.0	25.0	3983558	Og	SlbSsh	DiVc	Py	DG	calcite veined, shale is Py host	-1	19	1.99	83	25		85
ZM115	0.0	1.1	3983559	Og	SlbCv	VuVc		DG	creamy mineral?	-1	15	1.10	92	24		138
ZM116	0.0	3.0	3983560	Og	CcyOvc	Vc		DG		-1	19	1.65	79	46		4268
ZM116	3.0	6.0	3983561	Og	Ccy			DG		-1	17	1.50	96	41		3838
ZM116	6.0	8.0	3983562	Og	SsiSsh			G	carbonaceous	-1	9	1.15	140	21		541
ZM117	0.0	3.0	3983563	Og	Ccy	Bl		MGW	gritty	-1	34	0.36	22	71		55
ZM117	3.0	6.3	3983564	Og	CcySlb	Fe		GV	med grained, limonite	-1	246	2.79	27	591		1069
ZM118	0.0	3.0	3983565	Og	Ccy			LG+B+DG		-1	28	1.53	17	835		2126
ZM118	3.0	6.0	3983566	Og	CcyOvc		Py	DG		1	26	5.54	76	195		3227
ZM118	6.0	9.0	3983567	Og	SlbOvc	Vc	Py	LG	white & sparry calcite	-1	9	1.53	206	20		165
ZM118	9.0	12.0	3983568	Og	SlbOvc	Vc	Py	LG	Py assoc. with calcite veining	-1	6	0.97	211	12		76
ZM118	12.0	15.0	3983569	Og	SlbOvc	Vc		DG	intense calcite veining	-1	10	1.50	201	17		163
ZM118	15.0	15.5	3983570	Og	SlbOvc	Bx	Py	D+LG+W	Py assoc. with darker CO3	-1	8	1.72	218	20		153
ZM119	0.0	3.0	3983571	Og	CvCcy			GV		-1	51	3.03	26	791		6900
ZM119	3.0	4.5	3983572	Og	SlbOvc	Vc		G	coarse grained	1	32	3.32	51	962		6300

Hole	DFrom	DTo	Sampno	MRTLth	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM120	0.0	3.0	3983573	Og	Ccy			DB		-1	5	0.29	19	9		18
ZM120	3.0	6.0	3983574	Og	Ccy			GV+B	silty	1	164	1.77	17	2015		3668
ZM120	6.0	9.0	3983575	Og	CcySls	Vc		GV		1	34	3.59	17	2290	4.50	12000
ZM120	9.0	12.0	3983576	Og	Ccy			DG+B	carbonaceous	-1	24	2.38	24	175		2377
ZM120	12.0	15.0	3983577	Og	CcySls	Vn	Py	GV		-1	16	4.60	17	153		3445
ZM120	15.0	18.0	3983578	Og	SlsSsh	Fe		GVB		-1	21	3.24	13	104		2324
ZM120	18.0	21.0	3983579	Og	SlsSsi	Fe	Py	GB		-1	19	6.29	19	80		4254
ZM120	21.0	24.0	3983580	Og	Sls	Fe	Py	GV		-1	23	7.67	28	1157		3068
ZM120	24.0	27.0	3983581	Og	Sls	Fe	Py	DG+V	Py slightly green	-1	18	11.30	18	1372		2926
ZM120	27.0	30.0	3983582	Og	CcySsi	Fe	Py	DG	med grained	-1	24	7.69	26	587		7700
ZM120	30.0	33.0	3983583	Og	Ccy			G	gritty, stiff, carbonaceous	-1	25	5.44	31	161	6.40	13800
ZM120	33.0	36.0	3983584	Og	SlsCcy	Vn	Py	DG	massive Py	-1	32	6.86	28	159	8.15	14800
ZM120	36.0	36.6	3983585	Og	SlsOvc		Py	DG		-1	26	3.45	55	83		2032
ZM121	0.0	3.0	3983586	Og	CcySlsCv			LBW		-1	6	0.37	16	21		59
ZM121	3.0	6.0	3983587	Og	CcyOvcSls			BW		-1	9	0.24	12	40		25
ZM121	6.0	9.0	3983588	Og	Ccy			LGV+DG	gritty	4	199	0.54	11	2226		126
ZM121	9.0	12.0	3983589	Og	Sls	Fe	Py	DG+B		2	114	1.84	13	8600		2400
ZM121	12.0	15.0	3983590	Og	Sls	Fe	Py	DG+B		-1	27	4.44	24	715		1807
ZM121	15.0	18.0	3983591	Og	CcyOvc			DG	carbonaceous	-1	23	4.82	28	72		927
ZM121	18.0	21.0	3983592	Og	Ccy	DiFe	PySp	DG		-1	22	5.42	22	84		989
ZM121	21.0	24.0	3983593	Og	Ccy			DG	carbonaceous	-1	26	4.42	30	68		2877
ZM121	24.0	27.0	3983594	Og	Ccy	Vc		DG		-1	40	4.64	31	853		4122
ZM121	27.0	30.0	3983595	Og	Sbs	Vn	Py	DG+B	carbonaceous	-1	19	4.39	41	77		615
ZM121	30.0	31.0	3983596	Og	Sbs	Vc	Py	DG+B		-1	17	4.56	101	32		434
ZM122	0.0	3.0	3983597	Og	CcySls			LB+W	buff sls	-1	6	0.35	24	11		17
ZM122	3.0	6.0	3983598	Og	Ccy	Bl		LG+W		-1	7	0.27	10	52		15
ZM122	6.0	9.0	3983599	Og	Ccy	Bl		LG+W	smooth, plastic	-1	11	0.25	10	61		10
ZM122	9.0	12.0	3983600	Og	CcySls			LG	minor sls	-1	27	0.23	9	41		10
ZM122	12.0	15.0	3983601	Og	Ccy			DGV+N	carbonaceous	-1	71	1.22	12	91		2413
ZM122	15.0	18.0	3983602	Og	CcyScg	Fe	Py	GV	rounded pebbles	-1	25	1.51	7	73		4333
ZM122	18.0	21.0	3983603	Og	CcySls	Fe	Sd?	GV	ankerite?	-1	19	1.96	10	122		1387
ZM122	21.0	24.0	3983604	Og	CcySls			DG+N	minor sls	-1	24	3.58	14	69		3945
ZM122	24.0	26.3	3983605	Og	CcySlsOvc		Py	DG+N		-1	27	3.24	40	65		4211
ZM123	0.0	3.0	3983606	Og	CgCcy	Fe		LB+W	rounded pebbles	-1	21	0.65	30	32		29
ZM123	3.0	6.0	3983607	Og	Ccy	Vq		G+W		-1	39	0.68	23	26		11
ZM123	6.0	9.0	3983608	Og	Ccy			MOBGLG	stiff plastic	-1	50	0.97	11	167		44
ZM123	9.0	12.0	3983609	Og	Ccy			DG+N	carbonaceous	-1	37	0.92	10	123		1104
ZM123	12.0	13.6	3983610	Og	SlsOvc	DiFe	Py	DG		-1	25	1.37	13	88		792
ZM124	0.0	3.0	3983611	Og	CcyCv			MOY		-1	63	9.68	6	358		48
ZM124	3.0	6.0	3983612	Og	CcySls	Fe		MLB		-1	38	3.15	24	192		292
ZM124	6.0	9.0	3983613	Og	CcySls	Vu		YB	skeletal sls	-1	50	3.78	44	78		521
ZM124	9.0	12.0	3983614	Og	SlsCcy			DG+O		1	56	1.94	26	69		473
ZM124	12.0	13.1	3983615	Og	CcySlsOvc		Py	LG+G	minor Py	1	47	0.96	17	62		474

A. ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa,

Hole	DFrom	DTto	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM125	0.0	3.0	3983616	Og	CcySls			LOY	plastic, stiff	-1	29	6.48	107	61		511
ZM125	3.0	6.0	3983617	Og	Ccy			O	plastic	-1	31	4.76	136	52		474
ZM125	6.0	9.0	3983618	Og	CcySls	We		O	black silicified sls?	-1	34	6.66	107	83		567
ZM125	9.0	12.0	3983619	Og	Ccy	Fe		DOW	claystone or FeCO3 chips	-1	38	15.03	122	81		1303
ZM125	12.0	14.5	3983620	Og	CcySlsOvc			DG+O	cream dolomite?	-1	27	4.27	45	65		769
ZM126	0.0	3.0	3983621	Og	CcySls			LGV		1	19	0.24	9	120		73
ZM126	3.0	6.0	3983622	Og	CcySls	Vc		DG+LG		1	59	0.80	12	107		1479
ZM126	6.0	6.4	3983623	Og	SlsOvc	Di	Py	G		-1	39	1.54	35	74		1818
ZM127	0.0	3.0	3983624	Og	Ccy			LG+BW		-1	8	0.68	8	48		92
ZM127	3.0	6.0	3983625	Og	CcySls			BW	minor sls	-1	30	0.34	12	23		63
ZM127	6.0	9.0	3983626	Og	CcySls			LG	gritty	-1	25	0.26	7	26		274
ZM127	9.0	12.0	3983627	Og	SlsCcy			LG	med-grained sls	-1	21	0.21	7	27		241
ZM127	12.0	15.0	3983628	Og	CcySls			LB+G		-1	33	6.42	91	1600		1567
ZM127	15.0	18.0	3983629	Og	CcySls			LB+G		1	28	3.63	54	2340		925
ZM127	18.0	21.0	3983630	Og	CcySlsOvc			MDG+LB		1	30	2.16	37	822		830
ZM127	21.0	24.0	3983631	Og	Sls	Vc	Py	DG		-1	22	2.08	166	373		1050
ZM127	24.0	27.0	3983632	Og	Sls	Di	Py	DG		-1	10	3.28	221	90		1297
ZM127	27.0	30.0	3983633	Og	Sls		Py	DG	Cavity hit, small sample	-1	21	3.31	227	42		7600
ZM127	30.0	33.0	3983634	Og	SlsOvc		Py	DG		-1	6	1.54	242	13		865
ZM127	33.0	36.0	3983635	Og	SlsOvc	Vc	Py	DG	sparry calcite	-1	5	1.63	254	17		712
ZM127	36.0	37.1	3983636	Og	SlsOvc	Vu	Py	DG		-1	5	1.33	172	10		420
ZM128	0.0	3.0	3983637	Og	Ccy			MLYW		-1	27	1.74	8	14		78
ZM128	3.0	6.0	3983638	Og	Ccy			MLB+Y	minor grit	-1	65	1.09	6	16		23
ZM128	6.0	9.0	3983639	Og	Ccy			MLB+O+G		1	80	1.05	6	33		33
ZM128	9.0	12.0	3983640	Og	Ccy			MGV+LB	minor grit	1	64	2.03	10	38		746
ZM128	12.0	15.0	3983641	Og	CcySls	Fe	Sd?	LYB+LO	ankerite	-1	32	1.26	8	38		125
ZM128	15.0	18.0	3983642	Og	CcySls	Fe		LG		-1	20	1.38	13	50		200
ZM128	18.0	21.0	3983643	Og	SlsCcy	Fe		GV	dolomite?	4	128	2.07	23	9700	1.05	15600
ZM128	21.0	23.6	3983644	Og	Sls	FeVu	SpSd?	DG	ankerite?	7	151	4.30	14	11500	11.70	121000
ZM129	0.0	3.0	3983645	Og	Ccy			LYO		-1	27	3.14	12	44		101
ZM129	3.0	6.0	3983646	Og	Ccy			MLY+G		-1	17	1.03	8	60		38
ZM129	6.0	9.0	3983647	Og	SlsCcy		Sd	LG	ankerite	-1	10	0.38	6	139		66
ZM129	9.0	12.0	3983648	Og	CcySsh	Fe		D+LG	chloritic looking shale	-1	20	3.22	14	240		1940
ZM129	12.0	15.0	3983649	Og	OxcCcySsl	FeVq	Sd	DG	carb. breccia,	-1	21	4.22	133	211	4.90	13700
ZM129	15.0	17.5	3983650	Og	SlsOvc		SpPySd	DG		-1	7	1.07	245	20		397
ZM130	0.0	3.0	3983651	Og	CvCcy	FeLe		MY+O+WB		-1	33	0.76	9	84		66
ZM130	3.0	6.0	3983652	Og	Ccy	Le		LG+W		1	47	1.73	7	352		126
ZM130	6.0	9.0	3983653	Og	Ccy			LBW+BO	grit	-1	27	0.49	9	1381		125
ZM130	9.0	12.0	3983654	Og	CcySls			DG+N	hard silicified? sls	1	42	1.11	15	271		4214
ZM130	12.0	12.4	3983655	Og	SlsOvc		SdSpPy	G	fossils	-1	17	1.71	96	108		4768

APPENDIX : Myrtle prospect. 1994 air-core drillhole logs and assays

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM131	0.0	3.0	3983656	Og	CcySls	Fe		LY+O		-1	44	2.60	10	32		79
ZM131	3.0	6.0	3983657	Og	Ccy			LY+O		-1	14	0.84	9	195		49
ZM131	6.0	9.0	3983658	Og	Ccy			MO+GV+LG	gritty	-1	31	1.76	8	159		134
ZM131	9.0	12.0	3983659	Og	CcySls			LY+LG		-1	24	2.14	18	144		276
ZM131	12.0	15.0	3983660	Og	CcyOvq			GV+N	hard silicified? sls	-1	32	1.83	16	199		470
ZM131	15.0	18.0	3983661	Og	Sls		Py	N		-1	17	1.73	68	51		940
ZM131	18.0	19.1	3983662	Og	SlsOvc		PySpSd	DG+N		-1	17	3.23	176	108		4244
ZM132	0.0	3.0	3983663	Og	CcySls	Fe		MLGV+O		-1	24	0.80	15	37		23
ZM132	3.0	6.0	3983664	Og	CcySls			LB+Y		-1	39	0.53	7	102		56
ZM132	6.0	9.0	3983665	Og	Sls		SdSp?	LGV		-1	47	0.98	13	314		103
ZM132	9.0	12.0	3983666	Og	CcySls			DGO		-1	46	2.37	27	543		490
ZM132	12.0	14.0	3983667	Og	Sls	Vu	Sd	DG+N		-1	42	1.91	63	309		516
ZM133	0.0	1.3	3983668	Og	CvCcySls			DG+LG	silicified sls	-1	19	0.44	21	158		79
ZM134	0.0	1.5	3983669	Og	SlsCv			DG		-1	41	0.82	38	580		800
ZM135	0.0	1.0	3983670	Og	CvSls	Vc		DG+W	creamy alteration?	-1	32	0.53	23	113		185
ZM136	0.0	0.9	3983671	Og	MqCv		Py	G	silicified	-1	18	1.78	48	158		315
ZM137	0.0	0.8	3983672	Og	CvMq/Sls		Py	B+G		-1	14	0.68	30	77		134
ZM138	0.0	0.8	3983673	Og	CvMq/Sls	Vq		B+G		-1	18	0.70	68	87		153
ZM139	0.0	2.0	3983674	Og	OvcCvSls			WY+K	swamp, cream calcite?	-1	12	0.44	38	62		251
ZM140	0.0	3.0	3983675	Og	CcyCv	Fe		DGV	Ferrug qtz pebbles- swamp	-1	24	1.35	26	438		2155
ZM140	3.0	6.0	3983676	Og	Ccy			DG		-1	21	2.61	25	306		9000
ZM140	6.0	9.0	3983677	Og	Sls	Vc		G		-1	9	1.55	215	28		1944
ZM140	9.0	9.4	3983678	Og	Sls	Vc	SdPy	DG		-1	19	1.69	333	30		1519
ZM141	0.0	3.0	3983679	Og	CvCcy			LBG	gritty	-1	23	0.26	14	141		112
ZM141	3.0	5.0	3983680	Og	SlsSsh	Vc	PySd	DG+O		-1	25	1.51	44	343		422
ZM142	0.0	0.8		Og	Ovq			W								
ZM143	0.0	3.0	3983681	Og	CvCcy			DB		-1	3	0.30	13	17		19
ZM143	3.0	3.6	3983682	Og	CgSls	FeVc		DG		-1	5	1.22	43	21		110
ZM144	0.0	3.0	3983683	Og	CvCcy			DB	gritty	-1	4	0.38	18	14		23
ZM144	3.0	6.0	3983684	Og	CcySls	FeVu		DBV		-1	12	0.56	21	53		53
ZM144	6.0	9.0	3983685	Og	SlsCcy	Fevc	Py	G+DG		-1	44	2.87	26	193		765
ZM144	9.0	12.0	3983686	Og	Ccy			DG		-1	21	3.26	27	60		273
ZM144	12.0	15.0	3983687	Og	CcySls			N+W	cream sls?	-1	13	3.58	25	33		374
ZM144	15.0	18.0	3983688	Og	CcyOvc			N+W	cream mins	-1	12	3.06	44	23		271
ZM144	18.0	18.6	3983689	Og	SlsOvcCcy		PySd	DG+W		-1	9	2.97	63	23		71
ZM145	0.0	3.0	3983690	Og	CvCcy			DG	carbonaceous	-1	10	1.85	25	54		177
ZM145	3.0	6.0	3983691	Og	CcySls		Py	DG+N	gritty	-1	15	2.68	24	43		255
ZM145	6.0	9.0	3983692	Og	CcySls			DG+N	cream sls	-1	27	2.56	30	134		206
ZM145	9.0	12.0	3983693	Og	Sls	Fe	Py	G+W	cream sls	-1	15	2.79	24	46		835
ZM145	12.0	13.9	3983694	Og	SlsSsh		PySd	DG+N		-1	12	2.08	20	42		1379
ZM146	0.0	3.0	3983695	Og	CcyOvq			GB		-1	127	0.41	8	384		243
ZM146	3.0	6.0	3983696	Og	Ccy			GV		-1	23	2.48	28	91		1042
ZM146	6.0	9.0	3983697	Og	CcySls	Vn	Py	DG+N		-1	14	5.64	24	68		259
ZM146	9.0	10.1	3983698	Og	SlsCcy	FeVc	PySd	DG+N	cream sls	-1	18	3.36	22	42		472

A. ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa,

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM147	0.0	3.0	3983699	Og	CvCcy	Vq		DBO	rounded qtz	-1	5	0.37	17	19		43
ZM147	3.0	6.0	3983700	Og	Ccy			DG	gritty	-1	23	5.50	22	70		714
ZM147	6.0	9.0	3983701	Og	CcySlc	Fe		DG	creamy sls	-1	40	5.99	24	62		745
ZM147	9.0	12.0	3983702	Og	CcySlc	Vc		DG	minor sls	-1	16	3.54	40	30		296
ZM147	12.0	12.6	3983703	Og	SlcOvc		SpSd	G		-1	18	3.81	40	45		650
ZM148	0.0	3.0	3983704	Og	CvSlcCcy		Py	DGV	creamy sls	-1	18	3.58	35	28		720
ZM148	3.0	6.0	3983705	Og	Ccy			DG+N	carbonaceous	-1	38	2.80	16	118		337
ZM148	6.0	9.0	3983706	Og	Ccy			DG	carbonaceous	-1	28	3.83	39	74		947
ZM148	9.0	10.1	3983707	Og	OvcSlc	Vc	PySd	DG		-1	21	2.49	49	125		978
ZM149	0.0	3.0	3983708	Og	CgCcy			VB		-1	110	1.44	21	239		579
ZM149	3.0	6.0	3983709	Og	Ccy			VB+G		-1	40	2.67	11	83		1810
ZM149	6.0	9.0	3983710	Og	CcySlc	Lm		DG	L/D wavy banding	-1	40	2.99	46	48		731
ZM149	9.0	9.5	3983711	Og	SlcOvc		Py	DG		-1	9	1.16	48	18		366
ZM150	0.0	3.0	3983712	Og	CvCcy	Fe		VG		-1	23	2.64	22	29		704
ZM150	3.0	6.0	3983713	Og	CcySsh			DVG	graphitic	-1	20	4.36	24	28		299
ZM150	6.0	8.6	3983714	Og	SlcOvcSsh		Py	DG		-1	18	3.13	48	42		281
ZM151	0.0	3.0	3983715	Og	CvCcy			DGV		-1	29	2.62	30	34		363
ZM151	3.0	6.0	3983716	Og	CcySlc		Py	DG	creamy mineral	-1	39	3.43	24	47		155
ZM151	6.0	9.0	3983717	Og	CcySlc			DG	creamy mineral	-1	24	2.10	20	34		246
ZM151	9.0	9.9	3983718	Og	SlcOvcCcy		PySd	G		-1	21	2.46	38	41		470
ZM152	0.0	3.0	3983719	Og	CvCcy			DG	carbonaceous	-1	23	3.77	28	48		666
ZM152	3.0	6.0	3983720	Og	CcySsi			DG+N	carbonaceous	-1	26	5.79	29	43		487
ZM152	6.0	9.0	3983721	Og	CcySsi			DG+N	carbonaceous	-1	34	3.74	27	45		365
ZM152	9.0	10.1	3983722	Og	Slc		Py	DG+N	graphitic	-1	30	3.27	44	37		280
ZM153	0.0	3.0	3983723	Og	Cv			DGV		-1	26	3.42	28	40		498
ZM153	3.0	4.4	3983724	Og	SshSlc	Vc	PySp	DG+N	graphitic	-1	21	2.65	37	29		309
ZM154	0.0	3.0	3983725	Og	CcySlc			DG		-1	22	3.65	23	28		615
ZM154	3.0	6.0	3983726	Og	SlcOvcCcy		Py	DG	gritty	-1	19	3.18	37	26		567
ZM155	0.0	3.0	3983727	Og	CvCcy			MVB+VY		-1	100	0.42	10	78		373
ZM155	3.0	6.0	3983728	Og	CcySlc			DG		-1	22	3.14	29	87		2010
ZM155	6.0	6.5	3983729	Og	SbsSlc		Sd	DG+N	fossils	-1	18	2.97	37	27		600
ZM156	0.0	3.0	3983730	Og	Ccy			MVG+LB		-1	59	0.37	18	77		125
ZM156	3.0	6.0	3983731	Og	Ccy	Fe		DG	gritty	-1	97	0.62	11	137		642
ZM156	6.0	9.0	3983732	Og	Ccy			DG+N	plastic	-1	49	3.94	29	56		609
ZM156	9.0	12.0	3983733	Og	CcySbs		Py	DG+N	plastic	-1	15	5.84	31	24		265
ZM156	12.0	14.4	3983734	Og	SlcOvc	Di	Py	DG	carbonaceous	-1	12	4.21	49	20		363
ZM157	0.0	2.0	3983735	Og	CvCcy			DG		-1	160	2.01	17	180		133
ZM157	2.0	4.0	3983736	Og	Ccy			DG		-1	80	1.42	36	75		341
ZM157	4.0	6.0	3983737	Og	Slc	Fe		DG		-1	44	1.33	26	45		676
ZM157	6.0	8.0	3983738	Og	Ccy			DG	gritty, carbonaceous	-1	28	2.21	36	36		960
ZM157	8.0	10.0	3983739	Og	CcyOvc			DG	carbonaceous	-1	29	1.89	33	33		310
ZM157	10.0	11.8	3983740	Og	Slc	Vc	Py	DG	graphitic	-1	19	1.76	39	29		298

A. ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

Hole	DFrom	DTo	Sampno	MRTLth	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM158	0.0	2.0	3983741	Og	CvCcy			DG		1	31	0.35	13	211		185
ZM158	2.0	4.0	3983742	Og	Sls			DGV		1	33	2.30	20	1733	4.25	22500
ZM158	4.0	6.0	3983743	Og	Ccy	Vc		DG	gritty	-1	30	1.97	16	679	3.15	17300
ZM158	6.0	7.1	3983744	Og	SshSls	Fe	SpPy	DG	fossils, some cave in	1	87	1.51	62	165	8.15	122000
ZM159	0.0	2.0	3983745	Og	CvCcy			GB		-1	8	0.42	18	54		212
ZM159	2.0	3.4	3983746	Og	CcyOvcSls		PySd?	VBG	sls bottom	-1	24	2.04	79	181		936
ZM160	0.0	1.1	3983747	Og	CvSls	Vn		B+G		-1	22	0.72	41	115		199
ZM161	0.0	2.0	3983748	Og	CvOvc	Vc		DG		-1	22	0.54	35	120		844
ZM161	2.0	4.0	3983749	Og	SlsOvc			DG		-1	12	1.43	44	88		1060
ZM161	4.0	4.6	3983750	Og	Sls		Py	LG+DG		-1	15	1.22	101	30		596
ZM162	0.0	2.0	3983751	Og	CcyCvSls			MB+G	graphitic chips	-1	8	0.38	36	32		70
ZM163	0.0	2.0	3983752	Og	CvCcy			VG		-1	28	0.23	15	149		42
ZM163	2.0	4.0	3983753	Og	Sls	Fe	PySp?	DG		-1	27	0.58	26	610		516
ZM163	4.0	6.0	3983754	Og	Sls	Fe	PySp	DG		-1	20	1.91	38	579		2804
ZM163	6.0	8.0	3983755	Og	Sls		Sp	DG	cream alteration?	-1	16	3.42	38	193		2694
ZM163	8.0	9.9	3983756	Og	SlsCcy	FeVc	PySp?	DG		-1	14	4.04	65	111		1380
ZM164	0.0	2.0	3983757	Og	CvSls	Fe	Sp	DV		-1	37	0.38	19	71		59
ZM164	2.0	4.0	3983758	Og	Ccy			DV	gritty	-1	32	0.90	25	107		121
ZM164	4.0	6.0	3983759	Og	Sls	Fe		DV		-1	15	5.83	40	42		548
ZM164	6.0	8.0	3983760	Og	SlsCcy	Fe		DG		-1	19	3.98	31	31		57
ZM164	8.0	10.0	3983761	Og	Sls			DG	graphitic	-1	24	2.25	23	23		92
ZM164	10.0	12.0	3983762	Og	SshSls	FeVc		DG+N	graphitic	-1	19	2.25	21	22		44
ZM164	12.0	14.0	3983763	Og	CcySsh(Sls)Fe			DG		-1	25	2.43	29	28		118
ZM164	14.0	16.0	3983764	Og	Ssh(Sls)Ccy	Fe	Sp	DG		-1	46	1.67	18	194		174
ZM164	16.0	18.0	3983765	Og	SlsCcy			DG	med-grained	-1	28	1.64	29	282		420
ZM164	18.0	20.0	3983766	Og	CcySls	FeVc	Sp	DG+B		-1	27	3.27	23	128		708
ZM164	20.0	22.0	3983767	Og	SlsOvc		Py	DG	graphitic	-1	5	1.13	123	16		148
ZM164	22.0	24.0	3983768	Og	SlsOvc		PySp	DG		-1	11	2.12	161	37		384
ZM164	24.0	25.0	3983769	Og	Sls	Vn	Py	LG+DG	graphitic	-1	12	2.01	67	29		55
ZM165	0.0	1.0	3983770	Og	CvMq			LG+W	hard silicified, steep hill	-1	2	0.14	17	4		36
ZM166	0.0	2.0	3983771	Og	Sls			LG	silicified sls	-1	2	0.12	8	4		12
ZM166	2.0	3.0	3983772	Og	Sls			LG	silty soil, silicified sls	-1	2	0.13	13	5		14
ZM167	0.0	2.0	3983773	Og	Cv			LB	silty soil	-1	-2	0.14	7	5		7
ZM167	2.0	2.9	3983774	Og	Mq			G		-1	2	0.14	10	9		11
ZM168	0.0	2.0	3983775	Og	CvSls	Vu		LB+DG		-1	-2	0.13	6	5		6
ZM168	2.0	4.0	3983776	Og	Sls	Fe	Sd	LB	silt, some alteration	-1	2	0.24	10	17		9
ZM168	4.0	6.0	3983777	Og	SlsOvcCcy	Fe	Sd?	OB+DG	creamy alteration?	-1	8	0.16	8	85		13
ZM168	6.0	8.0	3983778	Og	SlsOvc		Sp	DG		-1	54	2.12	21	850		1684
ZM168	8.0	8.8	3983779	Og	SlsOvc		SpPySd	DG	coarse-grained	-1	34	1.74	17	1344		1625

ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM169	0.0	2.0	3983780	Og	CvCcy			OY		-1	7	0.28	14	16		18
ZM169	2.0	4.0	3983781	Og	Ccy			LBV		-1	23	0.29	12	34		38
ZM169	4.0	6.0	3983782	Og	CcySlis	Fe		GV	terrug sls	-1	13	1.41	35	28		1318
ZM169	6.0	8.0	3983783	Og	Slis			G		-1	65	3.72	30	141		1896
ZM169	8.0	10.0	3983784	Og	Slis			DG		-1	20	2.06	37	24		2064
ZM169	10.0	12.0	3983785	Og	CcySlis			DG		-1	18	3.96	33	37		2358
ZM169	12.0	14.0	3983786	Og	Ccy			SG+LG		-1	23	2.13	33	52		1220
ZM169	14.0	15.0	3983787	Og	OvqSlis	FeVn	PySd	O+G		-1	18	2.27	27	69		4299
ZM170	0.0	2.0	3983788	Og	Ccy			LB		-1	10	0.26	14	15		33
ZM170	2.0	4.0	3983789	Og	CcySlis	Fe		VG		-1	11	1.44	21	91		144
ZM170	4.0	6.0	3983790	Og	CcySlis	Fe		VG		-1	15	2.07	31	61		278
ZM170	6.0	8.0	3983791	Og	CcySlis			DSG		-1	9	2.09	20	24		359
ZM170	8.0	10.0	3983792	Og	SlisSsh	Vc		DG	shaley sls	-1	9	2.43	23	25		386
ZM170	10.0	12.0	3983793	Og	Ssh			DG		-1	13	2.51	32	35		408
ZM170	12.0	14.0	3983794	Og	CcySlis			DG		-1	11	2.05	26	37		542
ZM170	14.0	16.0	3983795	Og	Ccy			DG+N	gritty, carbonaceous	-1	12	5.76	23	37		1071
ZM170	16.0	18.0	3983796	Og	Ccy			DG+N	gritty, carbonaceous	-1	19	2.31	29	26		902
ZM170	18.0	20.0	3983797	Og	SshCcy	Di	Py	LG		-1	16	1.86	23	13		661
ZM170	20.0	22.0	3983798	Og	SshCcy	DiVn	Py	LG		-1	14	1.89	19	11		421
ZM170	22.0	24.0	3983799	Og	SshCcy			DG	graphitic	-1	10	1.49	17	8		794
ZM170	24.0	26.0	3983800	Og	Ssh			DG	graphitic	-1	9	0.91	15	7		795
ZM170	26.0	28.0	3983901	Og	SshSlis	Vc		DG		-1	17	1.62	20	20		1000
ZM170	28.0	30.0	3983902	Og	OvcSlis	Vc	Py	G	Py on calcite veins	-1	13	1.26	21	8		830
ZM170	30.0	32.0	3983903	Og	SlisOvc	Vn	Py	G+W		-1	15	1.72	17	10		418
ZM170	32.0	34.0	3983904	Og	Slis	Vc	Py	DG	grn on calcite	-1	13	1.44	19	6		721
ZM170	34.0	36.0	3983905	Og	SshOvq	Vn	Py	DG		-1	14	1.29	16	4		495
ZM170	36.0	37.8	3983906	Og	SshOvq	Vn	PySd	DG		-1	18	1.36	22	9		609

A. ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa,

Hole	DFrom	DTo	Sampno	MRTLth	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM171	0.0	2.0	3983907	Og	Ccy			LG+B		-1	26	0.31	10	27		14
ZM171	2.0	4.0	3983908	Og	Ccy			LVG		-1	19	1.85	13	37		54
ZM171	4.0	6.0	3983909	Og	Ccy			LVG		-1	19	1.96	16	22		136
ZM171	6.0	8.0	3983910	Og	CvCcy			LG+B	some cave in	-1	12	1.99	11	13		82
ZM171	8.0	10.0	3983911	Og	CcySls			LG		-1	16	2.73	15	19		131
ZM171	10.0	12.0	3983912	Og	SlsCcy			LG		-1	16	2.31	12	11		175
ZM171	12.0	14.0	3983913	Og	SlsCcy		Py	DG+W	cream sls & grey	-1	8	2.99	16	13		243
ZM171	14.0	16.0	3983914	Og	SlsSsh		Py	LG		-1	7	1.74	14	11		167
ZM171	16.0	18.0	3983915	Og	Sls		Py	DG		-1	9	1.18	18	15		289
ZM171	18.0	20.0	3983916	Og	Sls		Py	DG		-1	9	1.44	22	25		437
ZM171	20.0	22.0	3983917	Og	SlsOvc			DG		-1	13	2.04	24	16		402
ZM171	22.0	24.0	3983918	Og	SlsCcy			DG		-1	11	2.59	25	19		618
ZM171	24.0	26.0	3983919	Og	SshSls	Vc	PySd	DG		-1	11	1.46	27	17		299
ZM171	26.0	28.0	3983920	Og	SshOvcCcy		Py	G		-1	13	2.04	28	21		532
ZM171	28.0	30.0	3983921	Og	CcySlsSsh			DG	carbonaceous	-1	15	2.19	28	27		720
ZM171	30.0	32.0	3983922	Og	SshCcy	Vn	Py	DG		-1	14	4.46	24	26		1283
ZM171	32.0	34.0	3983923	Og	SlsOvc		Py	DG		-1	18	1.99	25	24		915
ZM171	34.0	36.0	3983924	Og	Ssh		Py	DG	graphitic	-1	12	1.35	17	6		547
ZM171	36.0	38.0	3983925	Og	SshSsi	Vn	Py	DG	graphitic, abund Py	-1	13	1.98	22	11		341
ZM171	38.0	40.0	3983926	Og	OvcSlsSsh		PySd	DG+V		-1	14	1.87	17	12		231
ZM171	40.0	42.0	3983927	Og	OvcSsh	Vu	Py	DG		-1	13	1.69	18	13		264
ZM171	42.0	44.0	3983928	Og	SlsOvc		PySd	DG		-1	11	1.18	22	8		156
ZM171	44.0	44.8	3983929	Og	SshOvc		PySd	DG		-1	12	1.41	17	9		455
ZM172	0.0	2.0	3983930	Og	CvCcy			VB		-1	22	1.40	40	150		42
ZM172	2.0	4.0	3983931	Og	CcySls			GV		-1	47	1.94	32	128		114
ZM172	4.0	6.0	3983932	Og	Sls	Fe		GV		-1	49	2.13	29	88		169
ZM172	6.0	8.0	3983933	Og	Sls	Fe	PySd	DG		-1	28	1.98	31	50		325
ZM172	8.0	10.0	3983934	Og	Sls	Fe	PySd	DG		-1	17	1.37	44	30		709
ZM172	10.0	12.0	3983935	Og	Sls	Fe	PySd	DG		-1	14	1.37	33	22		856
ZM172	12.0	14.0	3983936	Og	Sls	Fe	Sp?	DG	limonite on fractures	-1	12	1.46	33	14		725
ZM172	14.0	16.0	3983937	Og	Sls	Fe	Sd	DG		-1	12	2.49	33	15		778
ZM172	16.0	18.0	3983938	Og	Sls	Fe	Py	DG+YG	cream alteration	-1	13	1.59	32	18		641
ZM172	18.0	20.0	3983939	Og	Sls	FeVq	Py	DG	Fe stained qtz	-1	18	2.40	25	26		259
ZM172	20.0	22.0	3983940	Og	SshSls	Fe	Py	G		-1	14	1.84	20	21		333
ZM172	22.0	24.0	3983941	Og	SshSls	Fe	Py	G		-1	11	1.35	16	14		393
ZM172	24.0	26.0	3983942	Og	SshSls	Fe	Py	DG	creamy sls & grey	-1	14	1.23	26	20		387
ZM172	26.0	28.0	3983943	Og	SshSsi		PySd	DG	graphitic	-1	13	1.22	20	19		255
ZM172	28.0	30.0	3983944	Og	Ssi	Fe	PySd	DG		-1	12	1.27	22	17		401
ZM172	30.0	32.0	3983945	Og	Sls			DG	coarse-grained	-1	10	1.26	23	14		205
ZM172	32.0	34.0	3983946	Og	Sls			DG	coarse-grained	-1	15	1.40	27	27		856
ZM172	34.0	36.0	3983947	Og	Sls	Vq	Py	DG		-1	14	2.56	38	25		1049
ZM172	36.0	38.0	3983948	Og	SshSsi		PySp?	DG	graphitic	-1	11	1.47	28	28		502
ZM172	38.0	40.0	3983949	Og	SshSsi		Py	DG	graphitic	-1	10	1.15	27	23		437
ZM172	40.0	42.0	3983950	Og	SshSlsOvc	Fe		DG	graphitic	-1	14	1.70	27	29		772

A. ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Att/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM172	42.0	44.0	3983951	Og	SlsOvq		Py	DG+LG		-1	14	2.96	29	77		2575
ZM172	44.0	46.0	3983952	Og	SshOvq			DG	graphitic	-1	15	1.69	33	26		680
ZM172	46.0	48.0	3983953	Og	SlsSshOvq			DG+LG		-1	14	1.49	26	22		516
ZM172	48.0	50.0	3983954	Og	SlsSshOvq		Py	DG		-1	15	1.69	32	30		507
ZM172	50.0	52.0	3983955	Og	SlsOvq		Py	ADG+LG		-1	13	1.01	26	14		264
ZM172	52.0	54.0	3983956	Og	SlsOvq			ADG+LG	Ran out of rods	-1	10	1.07	21	12		438
ZM173	0.0	2.0	3983957	Og	CvCcySls	Fe		GV		-1	14	2.87	41	46		528
ZM173	2.0	4.0	3983958	Og	Sls	Fe	Py	DG	limonite on fractures	-1	14	4.59	36	18		521
ZM173	4.0	6.0	3983959	Og	Sls	Fe	Py	DG+O	abund Fe	-1	14	3.89	41	18		631
ZM173	6.0	8.0	3983960	Og	SlsOvq	Fe	Py	DG		-1	13	3.92	31	16		786
ZM173	8.0	10.0	3983961	Og	SlsSsi	Fe		DG		-1	13	3.98	31	15		751
ZM173	10.0	12.0	3983962	Og	SlsSsi	Fe		DG		-1	19	3.05	42	20		440
ZM173	12.0	14.0	3983963	Og	SlsSsh	FeDi	Py	SDG		-1	13	1.42	42	17		172
ZM173	14.0	16.0	3983964	Og	SlsSshOvq			DG	graphitic	-1	18	1.49	43	17		1129
ZM173	16.0	18.0	3983965	Og	SshSls			DG	graphitic	-1	19	1.92	42	20		429
ZM173	18.0	20.0	3983966	Og	SshSls			DG	graphitic	-1	16	1.89	31	21		525
ZM173	20.0	22.0	3983967	Og	SshSls	Vq	Py	DG	graphitic	-1	18	2.39	44	18		902
ZM173	22.0	24.0	3983968	Og	SshSls	Vq	Py	DG	graphitic	-1	18	1.91	35	16		533
ZM173	24.0	26.0	3983969	Og	Ssh	Vq	Py	DG	graphitic	-1	14	1.44	42	17		764
ZM173	26.0	28.0	3983970	Og	Ssh	Vq	Py	DG	graphitic	-1	11	2.01	31	14		226
ZM173	28.0	30.0	3983971	Og	Ssh			DG	graphitic, minor clay	-1	11	1.27	18	12		210
ZM173	30.0	32.0	3983972	Og	SshSsi	Vq	Py	DG+LG	graphitic	-1	14	1.68	21	16		318
ZM173	32.0	34.0	3983973	Og	SshSsi			DG+LG	graphitic	-1	14	1.62	20	15		221
ZM173	34.0	36.0	3983974	Og	SshSsi			DG+LG	graphitic	-1	19	1.29	31	18		127
ZM173	36.0	38.0	3983975	Og	SsiSsh			G	graphitic	-1	17	1.22	29	15		92
ZM173	38.0	40.0	3983976	Og	SsiSsh			DG+G		-1	12	1.22	28	13		128
ZM173	40.0	42.0	3983977	Og	SsiSsh		Py	DG+G		-1	10	2.27	33	13		300
ZM173	42.0	44.0	3983978	Og	SshSsi	Vq	Py	G		-1	11	2.44	25	16		586
ZM173	44.0	45.0	3983979	Og	SshSsi	Vq	Py	G		-1	17	3.15	21	23		1224
ZM174	0.0	1.8	3983980	Og	CvOvqSsi	Fe	Sdi	VB	cream alteration, Ferrug qtz	-1	7	0.87	36	26		75
ZM175	0.0	2.0	3983981	Og	CcyCv			MG+B		-1	23	1.20	15	39		439
ZM175	2.0	4.0	3983982	Og	Ccy			DG	carbonaceous	-1	26	1.44	21	154		2987
ZM175	4.0	6.0	3983983	Og	CcySsi			DG		-1	20	1.97	24	342		3873
ZM175	6.0	8.0	3983984	Og	Ccy			DG	silty	-1	25	1.49	31	131		2859
ZM175	8.0	10.0	3983985	Og	CcySls			LG		-1	19	1.22	19	87		2656
ZM175	10.0	12.0	3983986	Og	CcySsi/Ssh			LG		-1	13	1.15	15	136		3600
ZM175	12.0	14.0	3983987	Og	SshSlsCcy			LG		-1	12	1.03	17	104		3305
ZM175	14.0	16.0	3983988	Og	Ccy			LG	minor grit	-1	12	1.05	13	64		3773
ZM175	16.0	18.0	3983989	Og	SshCcy			LG		-1	13	1.19	15	44		6100
ZM175	18.0	20.0	3983990	Og	SshCcy			G	graphitic	-1	16	1.02	17	8		1606
ZM175	20.0	22.0	3983991	Og	SshCcy			G	graphitic	-1	21	1.21	17	6		2761
ZM175	22.0	24.0	3983992	Og	CcySsh			LG+G		-1	20	1.85	18	12	2.20	13300
ZM175	24.0	26.0	3983993	Og	Ccy	Fe		SG		-1	20	1.76	29	29	2.50	13400
ZM175	26.0	28.0	3983994	Og	SshCcy			G		-1	19	1.94	40	28		9000

234172

A. ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM175	28.0	30.0	3983995	Og	Ssh		Py	G		-1	19	1.85	45	32		2253
ZM175	30.0	32.0	3983996	Og	SshOvq		Py	G		-1	22	1.87	45	43		1333
ZM175	32.0	34.0	3983997	Og	Ssh		Py	G		-1	21	2.41	33	114		3069
ZM175	34.0	36.0	3983998	Og	CcySsh			G	graphitic	-1	21	1.81	31	82		3057
ZM175	36.0	38.0	3983999	Og	SshSlc		PySd	DG+LG	cream alteration	-1	16	1.98	151	45		1436
ZM176	0.0	2.0	3984000	Og	Ccy			MO+B+G		-1	125	2.55	8	39		182
ZM176	2.0	4.0	3983801	Og	CcyCv			MO+G		-1	53	1.35	9	40		144
ZM176	4.0	6.0	3983802	Og	Ccy			DG+N	gritty	-1	50	5.22	16	3400	3.80	11200
ZM176	6.0	8.0	3983803	Og	CcySlc			DG+N	carbonaceous	-1	29	3.88	20	1340	5.75	26700
ZM176	8.0	10.0	3983804	Og	Ccy			DG+N	carbonaceous	-1	23	6.18	23	516	7.60	25400
ZM176	10.0	11.2	3983805	Og	CcySlc			LG+DG+B		-1	32	3.02	28	3100	5.00	19800
ZM177	0.0	2.0	3983806	Og	Cg	Vq		BG	abund qtz pebbles	-1	5	0.52	36	45		207
ZM177	2.0	3.9	3983807	Og	SlcCcy	Vq		DG		-1	14	2.51	27	838	4.55	20400
ZM178	0.0	2.0	3983808	Og	CvCcySlc		Sp	LGB		-1	14	0.76	32	142		671
ZM179	0.0	2.0	3983809	Og	CcyCv			B		-1	7	0.48	30	56		208
ZM179	2.0	4.0	3983810	Og	CcyOvq			GB	rounded pebbles	-1	27	2.20	25	211		374
ZM179	4.0	6.0	3983811	Og	CcySlc			DG+K	oolitic	3	24	1.98	24	347		845
ZM179	6.0	8.0	3983812	Og	CcySlc	Fe	Sp	DG		2	141	1.09	75	3900	1.40	13100
ZM179	8.0	8.7	3983813	Og	SlcSsi	VcVq	Sd	DG		-1	12	1.19	110	242		1140
ZM180	0.0	2.0	3983814	Og	CcyCv			BO		-1	23	0.49	17	706		93
ZM180	2.0	4.0	3983815	Og	Ccy			B		-1	14	0.50	16	484		350
ZM180	4.0	6.0	3983816	Og	Ccy	Vq		DG		-1	19	1.74	28	367		3537
ZM180	6.0	8.0	3983817	Og	Ccy			DG		-1	37	6.06	33	738	6.80	12400
ZM180	8.0	10.0	3983818	Og	SlcSsh	Vq		DG		-1	22	1.40	22	1167		2199
ZM180	10.0	12.0	3983819	Og	SshSlc	VqFe	Py	DG		1	44	4.15	23	2116		4192
ZM180	12.0	14.0	3983820	Og	SlcSsh	Vq	Py	DG		1	64	5.29	61	1263		1656
ZM180	14.0	16.0	3983821	Og	Slc	Vc	Py	DG		-1	7	1.85	285	141		390
ZM181	0.0	2.0	3983822	Og	CcyCv			LG+B		-1	9	0.40	16	15		16
ZM181	2.0	4.0	3983823	Og	Ccy			VB	gritty	-1	18	0.52	13	29		61
ZM181	4.0	6.0	3983824	Og	Ccy			DG	carbonaceous	-1	29	2.70	28	90		2606
ZM181	6.0	8.0	3983825	Og	SsiSsh	Fe		G		-1	22	2.14	35	61		2300
ZM181	8.0	10.0	3983826	Og	SshSsi	Fe		DG	limonite	-1	16	1.79	40	37		1819
ZM181	10.0	12.0	3983827	Og	SshSsi	Fe		DG	limonite	-1	10	2.49	33	25		2083
ZM181	12.0	14.0	3983828	Og	SshSsi	Fe		DG	limonite	-1	13	2.51	26	30		2853
ZM181	14.0	16.0	3983829	Og	SshSsi	Fe		DG	limonite	-1	15	3.96	25	49		4325
ZM181	16.0	18.0	3983830	Og	Ssh			DG	graphitic	-1	19	3.66	27	61		2413
ZM181	18.0	20.0	3983831	Og	SshCcy		Py	DG+G	graphitic	-1	21	1.73	37	83		595
ZM181	20.0	22.0	3983832	Og	SshCcy		Py	DG+G	graphitic	-1	29	2.35	55	297		1798
ZM181	22.0	24.0	3983833	Og	Ssh	FeVn	PySp	DG	>50% Py	1	31	14.80	34	217	18.90	67100
ZM181	24.0	26.0	3983834	Og	Ssh	FeVn	PySp	DG	>50% Py	-1	26	6.28	35	408	8.30	31600
ZM181	26.0	28.1	3983835	Og	Ssh	FeVqVn	PySp	DG	Fe on fractures	1	48	5.86	246	696	8.80	21300
ZM182	0.0	2.0	3983836	Og	CgCcy			GV		-1	37	1.22	17	36		193
ZM182	2.0	3.2	3983837	Og	Slc	Fe	Py	G	limonite on fracture's	-1	47	5.84	19	58		820

A. ENDIX : Myrtle prospect. 1994 air-core drillhole logs and assa.

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZM183	0.0	2.0	3983838	Og	CgCcy	Fe		LB	Fe on gravels	-1	13	1.02	15	17		200
ZM183	2.0	4.0	3983839	Og	SsiSls	Fe	Py	DG		-1	12	1.34	18	27		325
ZM183	4.0	6.0	3983840	Og	Sls	Fe		DG		-1	16	1.87	21	36		661
ZM183	6.0	8.0	3983841	Og	SsiSsh	VcFe	Py	DG		-1	16	4.41	23	33		622
ZM183	8.0	10.0	3983842	Og	Sbs	VcFe		DG+N	graphitic	-1	16	2.32	29	36		522
ZM183	10.0	12.0	3983843	Og	Sbs	VcFe		DG+N	graphitic	-1	16	1.61	26	30		289
ZM183	12.0	14.0	3983844	Og	SsiSsh		Py	DG		-1	12	1.49	34	27		159
ZM183	14.0	16.0	3983845	Og	SshSsi		Py	DG+N		-1	13	1.57	32	25		143
ZM183	16.0	18.0	3983846	Og	Sbs		Py	DG+N	abund Py	-1	12	1.72	37	23		569
ZM183	18.0	20.0	3983847	Og	Sbs		Py	DG+N	abund Py	-1	12	1.51	33	20		78
ZM183	20.0	22.0	3983848	Og	SbsCcy	Vc	Py	DG+N	abund Py	-1	16	1.80	35	22		398
ZM183	22.0	24.0	3983849	Og	SbsCcy	Vc	Py	DG+N	abund Py	-1	15	1.69	39	24		192
ZM183	24.0	26.0	3983850	Og	SshCcy		Py	DG		-1	18	1.77	45	27		239
ZM183	26.0	28.0	3983851	Og	SshCcy	Vc	Py	DG		-1	18	1.64	44	27		161
ZM183	28.0	30.1	3983852	Og	Ssh	Fe	Py	DG	graphitic	-1	17	1.78	48	27		228
ZM184	0.0	2.0	3983853	Og	CvCcy			MG+B		-1	9	0.28	12	7		19
ZM184	2.0	4.0	3983854	Og	Ccy	Vq		DG		-1	12	4.39	19	39		158
ZM184	4.0	6.0	3983855	Og	SshSsi	Fe		G	limonite	-1	16	2.16	26	35		675
ZM184	6.0	8.0	3983856	Og	SsiSsh	Fe		G+YB	limonite	-1	12	1.73	19	9		637
ZM184	8.0	10.0	3983857	Og	Ssh	Fe		G+YB	abund limonite	-1	13	2.41	16	14		668
ZM184	10.0	12.0	3983858	Og	Ssh	Fe		G+YB	limonite	-1	72	2.09	24	12		1304
ZM184	12.0	14.0	3983859	Og	Ssh	Fe		G+YB	limonite	-1	13	2.17	25	23		879
ZM184	14.0	16.0	3983860	Og	CcySls	Fe	Py	DG	carbonaceous	-1	17	2.67	30	39		844
ZM184	16.0	18.0	3983861	Og	SshCcy	Fe	Py	DG	graphitic	-1	17	3.37	28	39		1367
ZM184	18.0	20.0	3983862	Og	SshCcy	Fe	Py	DG	limonite	-1	17	1.61	37	36		70
ZM184	20.0	22.0	3983863	Og	Ssh		Py	DG	graphitic	-1	18	2.21	30	38		641
ZM184	22.0	24.0	3983864	Og	Ssh		Py	LG	graphitic	-1	18	2.56	31	49		2170
ZM184	24.0	26.0	3983865	Og	Ssh		Py	LG	graphitic	-1	13	1.24	25	15		431
ZM184	26.0	28.0	3983866	Og	Ssh	Vc	Py	G	graphitic	-1	13	0.99	25	9		92
ZM184	28.0	30.0	3983867	Og	Ssh	Vq	Py	LG+G	graphitic	-1	13	1.78	26	17		109
ZM184	30.0	32.0	3983868	Og	Sbs		Py	N	graphitic	-1	22	2.35	51	42		181
ZM184	32.0	32.3	3983869	Og	Sbs		PySpSd	N		-1	20	2.48	97	37		358

## ROCKCHIP AND DRILLING CODES

22/2/1994

## BMRLITH

Rock code as per published geological map  
For time designation use:-

Q Quaternary	M Permian	P Proterozoic
T Tertiary	C Carboniferous	A Archaean
	S Silurian	
K Cretaceous	D Devonian	
R Triassic	O Ordovician	
J Jurassic	E Cambrian	

## FIELD ID

Field term for rock type  
Broad groupings are:-

S Sedimentary	I Intrusive	C Surficial
M Metamorphic	E Extrusive	O Others

## SEDIMENTARY

Sog Conglomerate	Sls Limestone	Sw Wacke
Sas Sandstone	Sol Dolomite	Sag Agglomerate/mixite
Ssi Siltstone		
Sh Shale	Sch Chert	Sbx Breccia
Black shale	Sif BIF	

## METAMORPHIC

Msl Slate	Mq Quartzite	Mmg Migmatite
Mph Phyllite	Mm Marble	
Msc Schist	Ma Amphibolite	
Mbs Graphitic schist	Mca Calcisilicate	Msk Skarn
Mgn Gneiss	Mh Hornfels	

## INTRUSIVE IGNEOUS

If Felsic undiff.	li Intermed undiff.	lu Ultramafic
Ifc Felsic porphyry	lio Intermed porph	lus Serpentinite
Iap Andite	Im Mafic undiff.	
Igr Granite	Ido Dolerite	Ipg Pegmatite
Igd Granodiorite	Igb Gabbro	

## EXTRUSIVE IGNEOUS

Ey Rhyolite	Ean Andesite	Et Tuff undiff
Ede Dacite	Eb Basalt	Eft Felsic tuff
		Emt Mafic tuff

## SURFICIAL (COVER) MATERIAL

Ca Alluvium	Clt Laterite	Csg Gossan
Coo Colluvium	Csp Piscolites	
Cs Sand	Csf Ironstone	Ccy Clay
Cbs Black soil	Cs Silcrete	
Cg Gravel	Ccl Calcrete	Cv Vegetation/peat

## OTHERS

Ovq Vein quartz	Omy Mylonite	Oms Massive sulphide
Ovc Vein carbonate	Obx Breccia	Oxc Contamination
Ovs Vein sulphide	Of Fault gouge	Ox Unknown

## TEXTURAL CODES

## WEATHERING/SURFICIAL FEATURES

We Weathered	Fe Ferruginous
B Bleached	Fo Fe ox in fract
Le Leached	

## MINERALISATION/ALTERATION FEATURES

Gs Gossanous	Vs Vein sulphide	Al Altered
Vn Veined	Ds Dissem sulph	Sl Silicified
Vc Vein carbonate	Fs Fracture sulph	
Vq Vein quartz	Bs Banded sulph	Df Disseminated

## GEOLOGICAL FEATURES

Bd Bedded	Fr Fractured	Pp Porphyritic
Bn Banded	Ib Interbedded	Sc Schistose
Bx Brecciated	Lm Laminated	St Sheared
F Fissile (slaty)	Ma Massive	Vu Vuggy

## DIAGNOSTIC MINERALOGY

## PRIMARY MINERALISATION

Ga Galena	Py Pyrite	Ni Ni sulphides
Sp Sphalerite	Pp Pyrrhotite	
Cp Chalcopyrite	Su Unknown sulph	

## SECONDARY MINERALISATION

Ls Lead secondaries	Cs Copper sec.	Ni Ni secondaries
Zs Zinc "	Us Uranium "	

## ALTERATION/DIAGNOSTIC MINERALS

Cy Clay	He Haematite	Gt Garnet
Ep Epidote	Mt Magnetite	Ky Kyanite
Cc Carbonate	Js Jarosite	To Tourmaline
Sd Siderite/Ankerite	Mn Manganese mins	Cl Chlorite
Dl Dolomite		

## COLOUR CODES

L Light	A Banded	M Mottled
D Dark		
N Black	P Purple	V Green
G Grey	R Red	K Pink
B Brown	O Orange	E Blue
W White	Y Yellow	S Silver

APPENDIX 4: Myrtle prospect. Air-core EOH sample ledger.						
HOLE No	GSOLITH	FIELDID	TEXTURE	ALTMIN	COLOUR	COMMENTS
ZM 64	Og	Sls	Vn	Cc	DG	Crse. g. calc-siltite, weakly calcareous
ZM 65	Og	SlsOvc	Fr		MG-DG	40% calc-siltite, 60% white calcite vein
ZM 66	Og	Sls	BxVn	Cc	MG-DG	calc-siltite
ZM 67	Og	SclSls	MaFs	Py	G	V.f.g. dol-arenite-crse.g. siltite; tr. graphite on Fr
ZM 68	Og	SclSls	MaFs	Py	G	V.f.g. dol-arenite-crse.g. siltite; Cleavage 00 deg-C.A
ZM 69	Og	SclSls	Vn	Cc	GDG	vfg. dol/calc-arenite w Cc streaks; DG carbonaceous Sl
ZM 70	Og	Ses	Ma		G	Foliated arenite, cleavage 05-10deg to C.A.
ZM 71	Og	SesSei			G	Fr/Cleavage 05deg-C.A.; tr. black pyrobitumen? Fr
ZM 72	Og	SesSei	VnVs	QzPy	G-DG	
ZM 73	Og	Sls			G-DG	Calc-siltite and v.crse. calc-arenite/bioclastites
ZM 74	Og	SlsSei		Py	G-DG	DG graphitic Sl; G intraclastic? streaky limestone; tr.Py
ZM 75	Og	Sls	FrVn	Cc	DG	Calc-siltite-lutite; abundant Cc veinlets
ZM 76	Og	Sei	Ma		G-DG	foliated siltstone
ZM 77	Og	Sei	Ma		G	
ZM 78	Og	SlsSes	Ma		G	crse siltstone -vfg. sandstone
ZM 79	Og	Sei	We?		G	Soft-clayey siltstone-mudstone
ZM 80	Og	Sls	AlBxVnDs	CcScPySp	DG	Calc-siltite with calcite intraclasts, wk ankerite altn
ZM 81	Og	Sls			DG	Crse. calc-siltite-arenite; minor fossil (brachiopod) frag.
ZM 82	Og	SlsOvc	Vn?	Py	DG	Crse. calc-siltite-arenite; abundant fossil (brachiopod) frag.
ZM 83	Og	SlsOvc	Vn	CcPy	DG	Crse. calc-siltite-arenite; abundant fossil fragments
ZM 84	Og	SlsOvcOvc	Al	GaPySp	DG	Crse. calc-siltite-arenite; abundant fossil fragments; 1-2% Ga, trace Py, rare Sp; trace ankerite alteration.
ZM 85	Og	Sls			LG	Calc-lutite, abundant v.fine graphitic cleavages
ZM 86	Og	SeiSes	MaAlDs	Py	G	minor v.fine pervasive LB-Y ankerite altn.; B org. residue on some fractures with tr. v.fine fibrous ?cerussite
ZM 87	Og	Sls	FrVn	Cc	G	V.f.g. calc-arenite
ZM 88	Og	Sls	Vn	Cc	G-DG	Calc-siltite-v.f.g. arenite, ?brocken fossil debris
ZM 89	Og	SlsOvc		CcSp?	DG	Calc-siltite, minor v.crse calc-arenite; 30% Cc Vn; rare Sp?
ZM 90	Og	Sls			GDG	G calc-arenite, DG calc-siltite
ZM 91	Og	SlsScl	Vn	CcQz	GLG	Calc/dol-lutite; rare brachiopod fossils; minor Py, rare Sp
ZM 92	Og	SclOvcOvc	Al	PyGaSp	G	20% Py; 80% dol/non dolomitic-siltite; mod. pervasive v.fine ankeritic alteration; rare Sp,Ga
ZM 93	Og	SclOvcOvc	Al	SdPyGaSp	G	weak-non dolomitic-siltite (weak ankerite altered?); 30- 40% Ovc-q; 5% Py, rare Ga, ?Sp
ZM 94	Og	SlsSclOvc		PySp	LG	Stylolitic calc/dol-lutite; 20% crse. calcite; tr Py, RB Sp?
ZM 95	Og	Sls	Vn	Cc	LG	calc-arenite, tr. transparent calcite
ZM 96	Og	Sls	VnDs	CcPy	G	Calc-siltite-v.f.g. arenite; tr. Vn Cc; tr. Ds Py
ZM 97	Og	Scl	AlVnFsDs	SdPySp	G-DG	Dol-siltite; mod.-strong pervasive LB-LY ankerite altn. & Vn; abundant-1% dissem. red-brown transparent Sphalerite

HOLE No	GSOLITH	FIELDID	TEXTURE	ALTMIN	COLOUR	COMMENTS
ZM 98	Og	Sls			G	Calc-siltite; minor calcite chips.
ZM 99	Og	Sls			DGLG	80% DG calc-lutite-siltite; 40% LG calc-siltite; minor Cc,Sd
ZM 100	Og	Sls	Vn	Cc	MDGG	calc-siltite-v.f.g. arenite
ZM 101	Og	Sls	Fs	Py	DG	weakly calcareous crse.g. calc-siltite-(v.f.g. calc-arenite)
ZM 102	Og	Sls	Vn	Cc	GDG	G-LG calc-arenite; DG calc-siltite
ZM 103	Og	Sls		Py	LGDG	LG f.g. calc-arenite and calc-lutite; DGcalc-siltite
ZM 104	Og	Sls			LG	Calc-lutite (clayey in-part)
ZM 105	Og	Sls			LG	Calc-lutite (clayey in-part)
ZM 106	Og	Sls			LGDG	LG calc-arenite; DG crse.g. calc-siltite; possible coral fossil
ZM 107	Og	Sls	?AISl	Py	DG	Calc-siltite;v.weakly altered?-silicified in part
ZM 108	Og	Sdl			DG	Dol-siltite
ZM 109	Og	SlsSdl	Ds	Py	GDG	DG weakly dolomitic siltite-lutite; G crse.g. calc-siltite
ZM 110	Og	SdlSss			DG	Porous kerogenous/carbonaceous vfg.arenite, wk.dol-ss
ZM 111	Og	SlsSdl	Sr?		DG-G	DG calc/dol-lutite-siltite; G calc-siltite; coralite fragment?
ZM 112	Og	Sdl		Py	DGG	Mixed G dol-arenite-siltite & DG dol-siltite; wk. dolomitised
ZM 113	Og	Sdl	Al?Ma	Py	DG	Dol-siltite, weak pervasive recrystallisation/altn dol/ank?
ZM 114	Og	SlsSdl			DG	dolomitic/weakly calcareous siltite; carbonaceous
ZM 115	Og	Sls			DG	Calc-siltite; minor shell/coral fossil fragments
ZM 116	Og	SdlSls			DG-G	Calc-dol-siltite
ZM 117	Og	Sls			DG	Crse.g. calc-siltite; tr. G-LG calc-arenite
ZM 118	Og	SlsOvc			MG-DG	Calc-siltite; 50% white calcite/ankerite vein/breccia fill.
ZM 119	Og	Sls	Fr		G	Crse.g. calc-arenite; minor irregular graphitic fractures
ZM 120	Og	Sls			DG	F.g. calc-siltite; v.weakly mottled/alterd
ZM 121	Og	Ssh		Py	DG	Graphitic/carbonaceous Sh (local wk dolomitic); 10% Py
ZM 122	Og	Sls	Vn	Cc	D-DG	Crse.g. calc-siltite-v.f.g. arenitic in-part
ZM 123	Og	Sls	Fs	Py	D-DG	Crse.g. calc-siltite-v.f.g. arenitic in-part
ZM 124	Og	Sls	Vn	Cc	G-LG	Calc-lutite with minor crse. calcite sand grains
ZM 125	Og	Sls?		Py	DG	Decarbonated? siltite-lutite; abundant fossil fragments; tr. Py; minor unidentified nodular LY secondary mineral
ZM 126	Og	Sls	Vn	Cc	DG	Calc-siltite; patchy-weak recrystallised/alterd
ZM 127	Og	Sls	Vn	Cc	DGLG	Weakly calcareous irreg. interspersed LG-G calc-arenite & DG calc-siltite-arenite; minor white and colourless Cc Vn
ZM 128	Og	Sdl		QzSpGn	DG	Dol-siltite, 1 2cm piece of massive Sp-Ga, 1 piece Vn Qtz
ZM 129	Og	Sls	Vn	CcSdPy	DGG	Irreg interspersed DG calc-siltite & G grainy calc-lutite
ZM 130	Og	SlsSdl	Vn	QzCcSdSp	DGLG	As above; abund. sandy textured mod. altd. ?ankeritic- siltite; rare fossil fragments; minor crse. sphalerite
ZM 131	Og	Sdl	VnDs?	CcPy	DG	Porous-vughy sandy textured ankerite altered dol-siltite; minor colourless crse calcite Vn?
ZM 132	Og	Sdl			DG	Porous-vughy sandy textured ankerite altered dol-siltite
ZM 133	Og	Sls	Si		G-LG	Calc-lutite/micrite; weakly silicified?; strongly cleaved
ZM 134	Og	Sls			G	Calc-lutite-siltite with abundant poorly std. sand grains
ZM 135	Og	SlsOvcOvc	Vn	CoQzSd	G-LG	Calc-lutite-siltite

234177

HOLE No	GSOLITH	FIELDID	TEXTURE	ALTMIN	COLOUR	COMMENTS
ZM 136	Og	Sls			G	Calc-lutite-siltite
ZM 137	Og	Sls			G	Calc-lutite-siltite
ZM 138	Og	Sls	Vn	Qz	G	Calc-lutite-siltite; abundant Qtz Vn chips
ZM 139	Og	Sdl	Vn	Qz	DG	<70% dol-siltite; 30% Qtz+calcite ?Vn chips
ZM 140	Og	SdSls	Vn	CoQz	DG	Porous-vughy weakly calcareous-dolomitic siltite; minor fossil fragments (inc. colonial coral); patchy sandy ank Al
ZM 141	Og	Ssh		Py	G	Shaley-fissile lutite; minor Py chips
ZM 142	D?	Ovq				Coarse quartz
ZM 143	Og	Sls			G	Calc-lutite-siltite
ZM 144	Og	Sls	Fs	Py	DG	Graphitic calc-lutite-siltite
ZM 145	Og	Ssi			DG	Graphitic f.f.siltite; rare fossil frag (?solitary coralite)
ZM 146	Og	SsiSsh	?VuVn	Qz	N-DG	Graphitic siltstone-shale; abundant crusty Qtz; 1% Py
ZM 147	Og	Ssi	Da?	Py	N-DG	Graphitic siltstone; minor crse Qtz clasts; minor Py
ZM 148	Og	SsiOvc	Vn	CoQz	DG	5% DG graphitic siltst./dol-siltstone; 95% Calcite; minor Qtz
ZM 149	Og	Sls	BxVn	Cc	G	F.g. calc-arenite, ?soln Bx with abund. calcite fragments
ZM 150	Og	Sls			G	Crse. calc-siltite; abundant shell (brachipod) fragments
ZM 151	Og	Sls			DG	Calc-siltite
ZM 152	Og	Sls			DG	Calc-siltite; graphitic/carbonaceous
ZM 153	Og	Ssh	DsFs	PyQz	N-DG	Fissile graphitic shale; tr. Py
ZM 154	Og	Ssi			N-DG	Str. graphitic siltite, shaley in part; minor Py & Qtz
ZM 155	Og	Ssh			N-DG	Str. graphitic Sh; minor fossil fragments (coralite?), Py & Qtz
ZM 156	Og	Sls	Vn	Cc	G	Irreg. interspersed calc-siltite & bioclastic-calcarenite
ZM 157	Og	Sls			DG	Calc-siltite & v.crse. porous shell-coralite debris bioclastite
ZM 158	Og	Sls	AlVnDs	SdQzSpGa	G-DG	Mod. alt'd. dol/calc-siltite; abundant fossil fragments; 5% crse. Sp, rare Ga; tr. Sd-Qtz Vn; patchy ankerite altn.
ZM 159	Og	SlsSdl	Vn	SdQz	G	Calc-arenite & siltite; weak pervasive ankerite altn.
ZM 160	Og	Sls			G	Graphitic strongly cleaved/shaley calc-lutite
ZM 161	Og	Sls			LG-DG	Irreg. interspersed/slumped calc-lutite & calc-siltite
ZM 162	Og	SlsSes	Vn	PyQz	G	Porous calc-qtz-arenite & calc-siltite; rare Py; tr Qtz Vn
ZM 163	Og	Ssi			N-DG	Graphitic siltstone; rare fossil casts & fragments
ZM 164	Og	Sls			DG	Stylolitic calc-lutite-siltite
ZM 165	Og	Ssi			LG	Siliceous siltstone-quartzite
ZM 166	Og	SssSsi	Bx		LG	Sandy quartzite & cherty siliceous siltite; Bx in-part
ZM 167	Og	SOx			G-DG	Cherty silicified rock
ZM 168	Og	Ssi			DG-BG	Silicified cherty siltstone, Bx in-part; ropey dirty brown Qtz.; tr. Py; brown organic residue common.
ZM 169	Og	OvqSsi			W	Massive Qtz. Vn; minor G siltstone clasts
ZM 170	Og	SsiOvq	Ma		G	Massive siltstone; abundant qtz chips
ZM 171	Og	SsiOvq	Ma		G	Massive siltstone; 5-10% qtz chips
ZM 172	Og	SssSsi			G	Soft f.-m.g. sandstone & siltstone; minor Qtz chips
ZM 173	Og	SssSsi			G	F.g. sandstone-siltstone; minor fossil? fragments

234178

HOLE No	GSOLITH	FIELDID	TEXTURE	ALTMIN	COLOUR	COMMENTS
ZM 174	Og	Sd	AlVnDs	SdQzPy	DG	Dol-siltite + sandy textured pervasive mod-str. ankerite altered/replaced siltite; tr. Py; minor Qtz-Sd vein
ZM 175	Og	Sls	Ds?	Py	G	Calc-siltite & crse.g. calc-arenite (minor fossil frag.); tr. Py
ZM 176	Og	Sls	We?		GLG	Weakly weathered-clayey calc-lutite
ZM 177	Og	Sls	Vn	Cc	DG	Calc-siltite; tr. Cc Vn
ZM 178	Og	Sls			G	Calc-lutite
ZM 179	Og	SdSls	Vn	Qz	DG	F.g. calc-arenite-crse. siltite
ZM 180	Og	SdSls	AlVnDs	QzPy	DG	F.g. calc-arenite-crse. siltite; weakly altered; minor Py
ZM 181	Og	SaiSd	DsAlVs	PySp	G	50% shaley siltstone; 50% mod. altered. dol-siltite-arenite; abundant Ds Py; minor Sd-Cc-crse. Sp Vn
ZM 182	Og	Sd	WeAl?Ds	Py	DG-YG	Heavy weakly We siltstone; minor Py/FeOx clots; altered?
ZM 183	Og	Ssh	DsFs	Py	G	Graphitic shale; minor Py
ZM 184	Og	SaiSsh	DsFs?	Py	G	Graphitic siltstone; minor shale; minor fossil fragments

APPENDIX 4: Pyramid prospect. Air-core EOH sample ledger.						
HOLE No	GSOLTH	FIELDID	TEXTURE	ALTMIN	COLOUR	COMMENTS
ZP 1						not logged
ZP 2						not logged
ZP 3						not logged
ZP 4						not logged
ZP 5						not logged
ZP 6						not logged
ZP 7						not logged
ZP 8						not logged
ZP 9						not logged
ZP 10						not logged
ZP 11						not logged
ZP 12						not logged
ZP 13						not logged
ZP 14						not logged
ZP 15						not logged
ZP 16						not logged
ZP 17						not logged
ZP 18						not logged
ZP 19						not logged
ZP 20						not logged
ZP 21						not logged
ZP 22						not logged
ZP 23						not logged
ZP 24						not logged
ZP 25						not logged
ZP 26						not logged
ZP 27						not logged
ZP 28						not logged
ZP 29						not logged
ZP 30						not logged
ZP 31	Og	Sls	Ma		G-DG	Calc-siltite
ZP 32	Og	Sls			G-DG	DG calc-siltite; lesser G calc-siltite; abund. coralite frags.
ZP 33	Og	Sls			DG	Calc-siltite
ZP 34	Og	Sls				
ZP 35	Og	Sls			DGLG	DG calc-siltite & lesser LG calc-siltite
ZP 36	Og	Sls			LG	Styolitic calc-siltite
ZP 37	Og	Sls			G-DG	Calc-arenite-siltite
ZP 38	Og	Sls			G-DG	Calc-arenite-siltite

APPENDIX : Myrtle prospect. Multi-element geochemistry of air-core bottom-of-hole samples																	
DPO 77149																	
Lithology is calculated from analyses																	
		Siderite	>10% Fe														
		Limestone	>20% Ca	<4% Mg													
		Dolomite	>12% Ca	>4% Mg													
		Impure carb.	12 - 20% Ca	<4% Mg													
		Pelite	<12% Ca	>4% Al													
		Sandstone	<12% Ca	<4% Al													
Hole No.	Sample	east	north	Lithology	Ag	Al%	As	Ba	Ca%	Cu	Fe%	K%	Mg%	Mn	Pb	Zn	S%
ZM64	3984438	364281	5352450	dolomite	-5	1.67	-25	1110	21.40	19	0.94	0.72	8.13	142	-50	15	
ZM65	3984439	364281	5352428	limestone	-5	0.10	-25	14	35.90	26	0.16	0.05	0.83	110	-50	46	
ZM66	3984440	364282	5352415	dolomite	-5	3.83	-25	220	15.90	18	1.45	1.73	4.84	220	-50	112	
ZM67	3984441	364264	5352399	dolomite	-5	3.75	-25	276	14.70	18	1.37	1.45	5.16	249	-50	41	
ZM68	3984442	364274	5352400	pelites	-5	6.79	22	739	4.18	22	1.75	2.74	2.53	121	-50	179	
ZM69	3984443	364290	5352400	pelites	-5	7.63	-25	617	3.23	28	2.08	3.37	1.38	78	-50	114	
ZM70	3984444	364297	5352400	pelites	-5	7.99	-25	616	0.23	12	1.17	3.17	0.50	15	-50	97	
ZM71	3984445	364307	5352400	pelites	-5	8.78	-25	680	0.10	7	0.69	3.60	0.44	-15	76	12	
ZM72	3984446	364317	5352400	pelites	-5	7.11	52	233	3.53	26	2.34	3.26	1.70	105	78	900	
ZM73	3984447	364327	5352400	limestone	-5	1.03	-25	207	25.40	20	1.28	0.36	6.76	199	-50	319	
ZM74	3984448	364339	5352401	dolomite	-5	4.29	-25	1090	13.40	19	1.21	1.66	7.08	169	-50	1270	
ZM75	3984449	364347	5352401	limestone	-5	1.21	-25	70	32.60	32	0.96	0.54	0.63	131	-50	28	
ZM76	3984450	364283	5352340	pelites	-5	6.91	-25	688	3.27	21	1.96	3.03	1.73	153	-50	67	
ZM77	3984451	364298	5352340	pelites	-5	9.83	-25	749	0.10	13	1.21	3.10	0.39	17	-50	694	
ZM78	3984452	364308	5352340	pelites	-5	11.10	-25	943	0.05	12	1.27	3.59	0.41	15	-50	1050	
ZM79	3984453	364318	5352340	pelites	-5	12.10	-25	1150	0.02	16	0.86	3.58	0.36	-15	242	1790	
ZM80	3984454	364328	5352340	dolomite	-5	2.04	28	528	18.90	20	1.77	0.71	5.25	295	619	5990	1.50
ZM81	3984455	364338	5352341	dolomite	-5	0.79	-25	83	22.00	17	1.25	0.33	8.53	178	-50	167	
ZM82	3984456	364348	5352341	dolomite	-5	0.95	-25	94	22.20	17	0.69	0.35	6.57	137	-50	150	
ZM83	3984457	364358	5352341	dolomite	-5	2.09	25	566	15.00	15	1.04	0.86	6.62	171	-50	208	
ZM84	3984458	364368	5352341	impure carbonate	-5	1.41	21	831	13.40	22	0.89	0.53	3.28	138	30000	9970	1.65
ZM85	3984459	364378	5352341	limestone	-5	2.05	-25	184	27.70	25	0.46	0.74	0.75	96	-50	86	
ZM86	3984460	364299	5352300	pelites	-5	10.70	23	764	0.04	88	1.26	3.20	0.37	18	758	2940	
ZM87	3984461	364309	5352300	limestone	-5	0.59	-25	95	30.70	22	0.43	0.26	2.46	79	-50	56	
ZM88	3984462	364319	5352300	dolomite	-5	1.58	-25	114	20.40	17	0.86	0.70	7.41	136	-50	198	
ZM89	3984463	364329	5352300	dolomite	-5	0.98	-25	97	22.60	19	0.56	0.43	5.12	123	-50	1480	
ZM90	3984464	364339	5352301	limestone	-5	0.72	-25	76	32.80	25	0.49	0.29	0.56	87	-50	340	
ZM91	3984465	364349	5352301	pelites	-5	5.21	23	507	9.64	22	1.70	2.03	1.46	70	1110	1190	
ZM92	3984466	364359	5352301	siderite	-5	5.26	311	28	3.29	28	12.10	1.60	1.72	57	2670	70000	18.00
ZM93	3984467	364369	5352301	sandstones	-5	3.89	104	68	2.66	32	5.52	1.48	1.08	46	288	4630	
ZM94	3984468	364379	5352301	limestone	-5	0.55	-25	70	35.50	25	0.26	0.16	0.37	139	-50	671	
ZM95	3984469	364389	5352302	limestone	-5	0.51	-25	29	32.30	23	0.20	0.17	1.52	50	78	179	
ZM96	3984470	364399	5352302	limestone	-5	0.66	-25	29	25.40	14	0.71	0.22	6.72	134	100	176	
ZM97	3984471	364240	5352249	sandstones	-5	1.68	-25	423	11.20	24	1.43	0.62	2.38	259	161	16900	2.25

Hole No.	Sample	east	north	Lithology	Ag	Al%	As	Ba	Ca%	Cu	Fe%	K%	Mg%	Mn	Pb	Zn	S%
ZM98	3984472	364250	5352249	impure carbonate	-5	2.52	-25	772	15.70	53	1.29	0.91	3.56	227	329	2780	
ZM99	3984473	364260	5352249	limestone	-5	1.60	-25	340	27.80	20	1.67	0.63	0.85	338	-50	257	
ZM100	3984474	364270	5352249	limestone	-5	0.82	-25	74	28.90	18	0.78	0.31	4.20	143	-50	55	
ZM101	3984475	364280	5352250	dolomite	-5	1.74	-25	107	19.20	12	1.24	0.70	7.70	137	-50	156	
ZM102	3984476	364290	5352250	limestone	-5	0.90	21	51	32.10	28	1.19	0.36	1.51	97	-50	62	
ZM103	3984477	364300	5352250	limestone	-5	3.20	-25	172	22.90	27	1.53	1.23	1.46	117	-50	209	
ZM104	3984478	364310	5352250	limestone	-5	1.17	-25	82	32.40	23	0.14	0.44	0.31	72	-50	75	
ZM106	3984480	364330	5352250	limestone	-5	0.25	-25	24	32.70	22	0.29	0.06	3.08	94	-50	100	
ZM107	3984481	364340	5352251	limestone	-5	0.31	-25	18	32.60	31	0.36	0.08	3.59	95	-50	57	
ZM108	3984482	364350	5352251	dolomite	-5	0.48	-25	26	21.50	17	0.48	0.15	9.66	99	-50	59	
ZM109	3984483	364400	5352252	impure carbonate	-5	3.61	-25	220	19.90	20	1.11	1.58	3.98	130	-50	14	
ZM110	3984484	364390	5352252	dolomite	-5	3.91	-25	256	14.10	15	1.43	1.74	6.26	164	-50	23	
ZM111	3984485	364370	5352251	sandstones	-5	1.59	-25	93	9.06	10	0.73	0.55	2.62	56	-50	175	
ZM112	3984486	364310	5352200	limestone	-5	1.79	-25	93	26.00	24	2.84	0.81	2.13	160	-50	29	
ZM113	3984487	364320	5352200	impure carbonate	-5	3.92	-25	170	13.90	22	2.15	1.68	3.66	161	-50	64	
ZM114	3984488	364330	5352200	impure carbonate	-5	3.80	-25	168	15.20	26	2.22	1.62	2.79	135	-50	32	
ZM115	3984489	364340	5352201	sandstones	-5	1.98	-25	106	5.00	15	0.52	0.82	0.72	46	-50	87	
ZM116	3984490	364360	5352201	impure carbonate	-5	2.99	-25	139	17.90	21	1.56	1.27	3.53	198	-50	374	
ZM117	3984491	364239	5352019	dolomite	-5	5.05	101	203	14.40	128	2.15	1.54	4.73	183	227	386	
ZM118	3984492	364214	5351998	dolomite	-5	2.77	59	123	20.90	23	2.81	1.12	4.18	253	-50	56	
ZM119	3984493	364189	5351998	limestone	-5	1.27	-25	75	33.20	29	0.59	0.58	0.57	112	-50	16	
ZM120	3984494	364164	5351998	pelites	-5	7.55	82	380	2.67	34	3.74	3.57	1.21	46	209	1380	
ZM121	3984495	364139	5351997	siderite	-5	7.74	514	154	4.35	18	11.10	3.18	1.40	77	-50	220	
ZM122	3984496	364114	5351997	dolomite	-5	0.97	-25	43	22.80	21	1.37	0.43	6.66	286	-50	74	
ZM123	3984497	364089	5351996	limestone	-5	0.10	-25	7	43.80	29	0.13	-0.05	0.59	45	-50	14	
ZM124	3984498	364064	5351996	limestone	-5	0.77	-25	41	33.10	30	0.27	0.33	0.39	87	-50	12	
ZM125	3984499	364039	5351995	sandstones	-5	2.68	21	137	0.49	16	1.36	1.11	0.28	17	-50	311	
ZM126	3984500	364014	5351995	limestone	-5	0.35	-25	20	34.30	26	0.20	0.16	1.05	62	-50	49	
ZM127	3984287	363989	5351994	limestone	-5	1.07	-25	51	27.40	17	0.82	0.48	5.76	176	-50	59	
ZM128	3984288	363964	5351994	limestone	-5	1.00	-25	52	30.00	26	0.74	0.42	1.12	82	447	2010	
ZM129	3984289	363939	5351994	limestone	-5	1.13	-25	54	30.20	20	0.81	0.52	2.92	244	-50	169	
ZM130	3984290	363914	5351993	limestone	-5	1.75	-25	77	24.50	22	0.96	0.71	3.57	105	56	2960	
ZM131	3984291	363889	5351993	dolomite	-5	3.18	29	144	13.50	28	3.10	1.41	6.10	185	199	3560	
ZM132	3984292	363864	5351992	dolomite	-5	2.75	-25	128	16.70	17	1.34	1.23	7.90	143	-50	268	
ZM133	3984293	363839	5351992	limestone	-5	2.73	-25	104	27.60	27	0.45	1.14	0.54	65	-50	26	
ZM134	3984294	363814	5351991	impure carbonate	-5	3.38	55	87	19.30	39	1.04	0.86	3.40	79	340	889	
ZM135	3984295	363789	5351991	limestone	-5	0.42	-25	19	23.50	17	0.24	0.16	0.33	75	-50	24	
ZM136	3984296	363764	5351991	limestone	-5	1.14	-25	46	31.10	25	0.54	0.49	1.16	88	-50	27	
ZM137	3984297	363739	5351990	limestone	-5	0.63	-25	27	31.70	23	0.24	0.24	0.82	72	-50	28	
ZM138	3984298	363714	5351990	limestone	-5	0.89	-25	44	26.90	42	0.28	0.40	0.44	70	-50	39	
ZM139	3984299	363689	5351989	sandstones	-5	1.56	21	61	6.14	23	0.83	0.63	0.65	78	-50	2590	
ZM140	3984300	363664	5351989	dolomite	-5	1.37	-25	58	18.20	18	1.75	0.64	8.08	400	-50	1530	
ZM141	3984351	363639	5351988	pelites	-5	10.60	-25	500	3.23	31	2.10	4.69	1.79	45	287	245	
ZM142	3984352	363791	5351891	sandstones	-5	0.11	-25	9	1.07	18	0.33	0.05	0.10	19	-50	22	
ZM143	3984353	363801	5351891	dolomite	-5	2.32	-25	103	21.50	23	1.07	1.06	4.59	106	-50	18	

APPEN. 4 Myrtle prospect. Multi-element geochemistry of air-core EOT samples.

Hole No.	Sample	east	north	Lithology	Ag	Al%	As	Ba	Ca%	Cu	Fe%	K%	Mg%	Mn	Pb	Zn	g%
ZM144	3984354	363811	5351891	limestone	-5	1.50	-25	66	31.60	25	0.66	0.70	1.08	76	-50	13	
ZM145	3984355	363821	5351892	sandstones	-5	1.33	-25	96	0.07	9	0.63	0.56	0.09	-15	-50	13	
ZM146	3984356	363831	5351892	sandstones	-5	2.83	35	136	0.40	11	6.08	1.04	0.21	-15	-50	126	
ZM147	3984357	363841	5351892	pelites	-5	5.11	-25	254	8.42	35	1.79	2.21	3.96	72	115	2460	
ZM148	3984358	363851	5351892	limestone	-5	0.33	-25	18	31.00	22	0.33	0.13	0.29	68	-50	284	
ZM149	3984359	363861	5351892	limestone	-5	0.70	-25	38	22.90	17	0.60	0.31	2.13	62	-50	229	
ZM150	3984360	363875	5351892	limestone	-5	0.73	-25	43	32.80	23	0.49	0.31	2.13	63	-50	10	
ZM151	3984361	363884	5351893	limestone	-5	0.48	-25	32	35.60	26	0.28	0.19	0.85	52	-50	63	
ZM152	3984362	363892	5351893	limestone	-5	1.05	-25	72	35.20	26	0.48	0.45	1.03	72	-50	44	
ZM153	3984363	363901	5351893	pelites	-5	5.77	51	321	4.13	20	3.02	2.45	0.85	25	-50	1070	
ZM154	3984364	363908	5351893	limestone	-5	1.59	36	102	26.60	25	2.37	0.62	0.87	34	-50	13500	3.70
ZM155	3984365	363915	5351893	pelites	-5	5.50	63	219	4.99	20	5.15	2.03	0.76	33	-50	784	
ZM156	3984366	363921	5351893	limestone	-5	0.68	-25	46	35.30	25	0.38	0.29	0.90	99	-50	19	
ZM157	3984367	363936	5351894	limestone	-5	1.75	-25	86	23.40	19	0.68	0.67	2.83	64	-50	15	
ZM158	3984368	363792	5351841		-5	2.22	49	75	2.18	146	1.35	0.84	0.97	52	201	182000	9.80
ZM159	3984369	363802	5351841	impure carbonate	-5	1.61	29	60	16.80	21	9.22	0.67	2.27	722	-50	889	
ZM160	3984370	363812	5351841	limestone	-5	1.08	-25	43	33.70	25	0.39	0.53	0.55	79	-50	66	
ZM161	3984371	363822	5351842	impure carbonate	-5	2.52	-25	96	17.80	16	0.55	1.15	1.21	79	-50	54	
ZM162	3984372	363832	5351842	dolomite	-5	0.99	-25	38	14.50	18	0.88	0.38	4.41	86	-50	101	
ZM163	3984373	363842	5351842	pelites	-5	8.26	24	469	3.52	18	2.17	4.10	1.63	84	-50	317	
ZM164	3984374	363855	5351842	limestone	-5	2.87	-25	130	24.90	23	0.96	1.37	0.76	120	-50	18	
ZM165	3984375	363867	5351842	sandstones	-5	1.95	-25	140	0.26	-5	0.09	0.94	0.16	-15	-50	7	
ZM166	3984376	363877	5351843	sandstones	-5	2.89	-25	170	0.06	-5	0.13	1.24	0.22	-15	-50	14	
ZM167	3984377	363887	5351843	sandstones	-5	2.33	-25	150	0.08	7	0.17	1.07	0.17	-15	-50	10	
ZM168	3984378	363896	5351843	sandstones	-5	1.27	50	79	0.11	35	1.63	0.45	0.08	24	1060	2010	
ZM169	3984379	363792	5351791	sandstones	-5	0.97	20	42	0.01	8	1.43	0.34	0.08	-15	57	1940	
ZM170	3984380	363782	5351791	pelites	-5	7.80	-25	500	2.36	16	1.78	3.91	1.42	115	-50	196	
ZM171	3984381	363772	5351791	pelites	-5	4.37	-25	289	0.17	8	0.96	2.29	0.47	17	-50	203	
ZM172	3984382	363762	5351791	pelites	-5	9.30	-25	472	0.39	12	1.12	3.89	0.65	23	-50	586	
ZM173	3984383	363752	5351790	pelites	-5	7.70	20	383	0.36	17	1.81	3.03	0.53	20	-50	390	
ZM174	3984384	363742	5351790	dolomite	-5	2.33	-25	111	22.30	21	1.49	1.04	5.72	271	-50	763	
ZM175	3984385	363805	5351791	pelites	-5	8.15	-25	483	7.50	31	2.32	3.96	2.62	134	-50	271	
ZM176	3984386	363830	5351792	limestone	-5	2.30	-25	126	28.50	32	0.62	1.07	0.94	127	-50	353	
ZM177	3984387	363789	5351706	pelites	-5	6.45	-25	270	7.32	22	2.86	2.49	3.18	46	1670	7860	3.50
ZM178	3984388	363779	5351706	dolomite	-5	5.11	-25	674	13.30	28	1.22	2.11	4.50	106	316	963	
ZM179	3984389	363769	5351706	dolomite	-5	0.76	-25	38	15.20	27	0.87	0.32	6.50	87	-50	1010	
ZM180	3984390	363759	5351705	dolomite	-5	0.31	-25	15	22.70	20	1.43	0.14	10.50	313	-50	353	
ZM181	3984391	363749	5351705	pelites	-5	6.24	192	192	7.09	68	8.82	2.93	3.03	269	732	15900	9.60
ZM182	3984392	363739	5351705	pelites	-5	11.20	-25	529	0.05	15	1.60	4.02	0.74	25	-50	650	
ZM183	3984393	363729	5351705	pelites	-5	11.70	34	502	1.37	22	2.15	4.69	0.88	51	-50	434	
ZM184	3984394	363719	5351705	pelites	-5	6.54	41	308	3.87	19	2.38	2.68	1.71	76	-50	214	

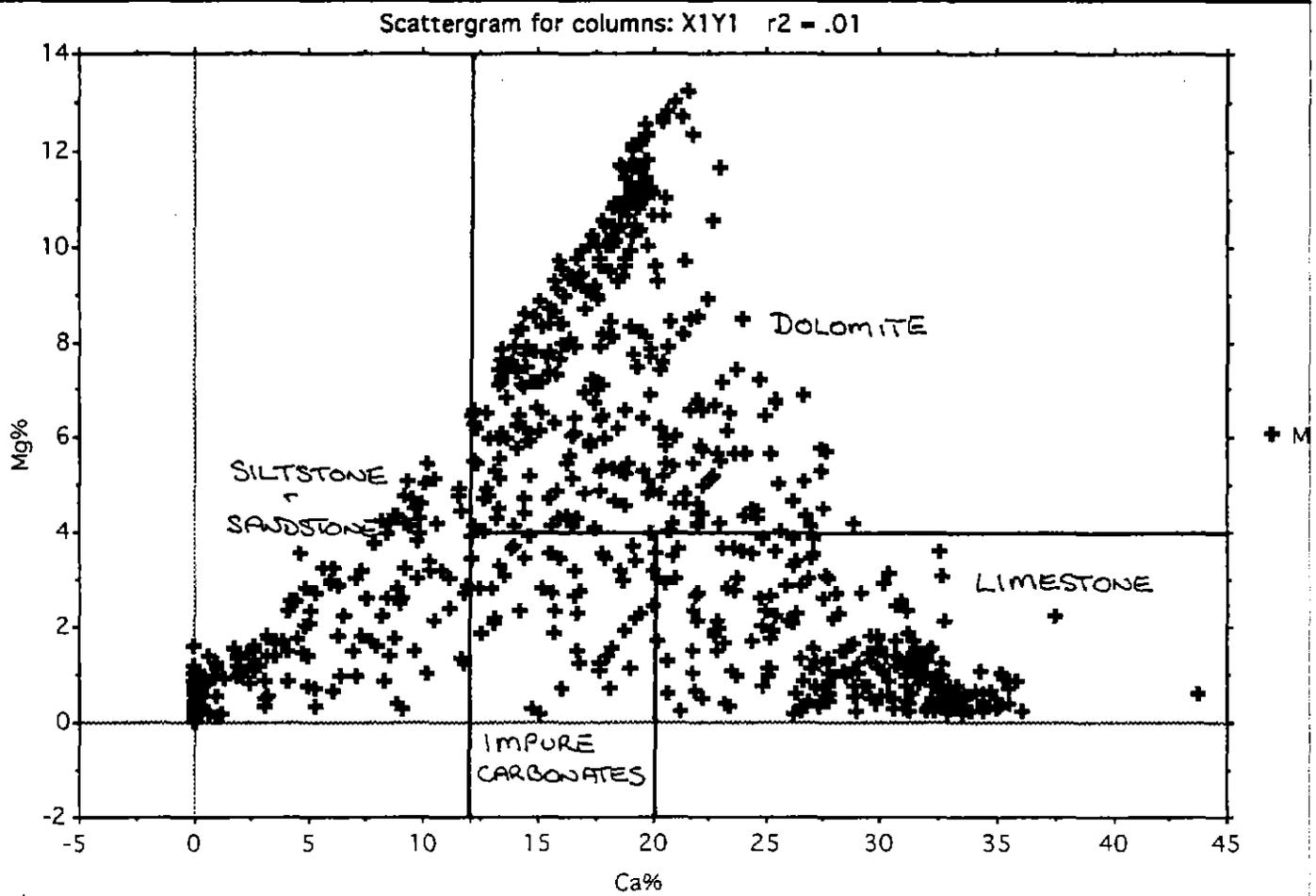
APPENDIX : Pyramid prospect. Multi-element geochemistry of air-core bottom-of-hole samples																	
DPO 77659																	
Lithology is calculated from analyses																	
	Siderite	>10% Fe															
	Limestone	>20% Ca	<4% Mg														
	Dolomite	>12% Ca	>4% Mg														
	Impure carb.	12 - 20% Ca	<4% Mg														
	Pelite	<12% Ca	>4% Al														
	Sandstone	<12% Ca	<4% Al														
Hole No.	Sample	east	north	Lithology	Ag	Al%	As	Ba	Ca%	Cu	Fe%	K%	Mg%	Mn	Pb	Zn	S%
ZP31	3986062	364282.9	5356324.8	dolomite	-5	4.43	-25	230	13.20	19	2.12	2.14	4.30	232	-50	18	
ZP32	3986063	364269.9	5356301.2	dolomite	-5	2.02	-25	93	22.00	21	1.72	0.99	4.12	275	-50	26	
ZP33	3986064	364266.8	5356276.4	dolomite	-5	1.16	-25	51	20.70	15	1.53	0.52	7.85	397	-50	29	
ZP35	3986065	364260.7	5356226.8	pelites	-5	5.98	-25	286	6.52	60	2.87	3.01	2.22	138	-50	29	
ZP36	3986066	364262.6	5356241.7	limestone	-5	1.70	-25	93	25.20	11	4.77	0.88	1.73	179	-50	66	
ZP37	3986067	364258.3	5356206.9	dolomite	-5	1.49	-25	71	16.50	13	1.60	0.60	5.14	263	-50	55	
ZP38	3986068	364255.9	5356187.1	dolomite	-5	1.11	-25	58	23.50	16	1.45	0.53	6.49	390	-50	-5	
ZP41	3986069	364354.5	5356169.9	limestone	-5	0.42	-25	37	33.20	23	0.19	0.20	0.25	277	-50	96	
ZP42	3986070	364350.9	5356140.1	dolomite	-5	2.48	-25	138	17.90	16	2.02	1.21	5.41	599	328	1220	
ZP43	3986071	364347.8	5356115.3	siderite	-5	1.06	-25	69	2.14	-5	42.20	0.49	0.13	17000	167	2450	
ZP44	3986072	364185.9	5356437.5	limestone	-5	1.19	-25	68	30.70	22	0.96	0.65	1.36	371	-50	-5	
ZP45	3986073	364182.8	5356412.6	pelites	-5	5.35	-25	292	4.48	18	2.36	3.03	2.55	225	86	124	
ZP46	3986074	364179.8	5356387.8	dolomite	-5	4.18	-25	222	12.80	18	2.56	1.97	4.93	206	-50	10	
ZP47	3986075	364176.7	5356363.0	limestone	-5	1.11	-25	54	29.60	20	0.64	0.58	1.28	196	-50	-5	
ZP48	3986076	364173.3	5356335.2	dolomite	-5	1.93	-25	79	20.10	17	2.29	0.99	4.84	233	72	6	
ZP49	3986077	364170.6	5356313.4	limestone	-5	0.87	-25	41	23.80	17	0.83	0.44	3.01	181	-50	119	
ZP50	3986078	364167.6	5356288.6	limestone	-5	2.48	-25	113	23.60	17	0.75	1.26	1.05	120	-50	-5	
ZP51	3986079	364164.5	5356263.8	impure carbonate	-5	2.69	-25	94	18.70	11	3.19	0.99	2.94	279	-50	130	
ZP52	3986080	364161.5	5356239.0	limestone	-5	0.69	-25	38	31.40	20	0.76	0.33	1.32	93	-50	23	
ZP53	3986081	364092.7	5356499.3	dolomite	-5	3.58	-25	234	13.50	14	1.00	1.86	7.62	266	94	100	
ZP54	3986082	364089.7	5356474.5	impure carbonate	-5	3.42	-25	174	18.60	19	1.25	1.84	3.15	201	-50	-5	
ZP55	3986083	364086.6	5356449.6	dolomite	-5	2.45	-25	104	17.80	17	1.64	1.24	5.30	364	67	329	
ZP56	3986084	364083.6	5356424.8	limestone	-5	1.40	-25	55	23.00	17	1.50	0.57	1.94	98	-50	40	
ZP57	3986085	364080.5	5356400.0	limestone	-5	2.13	-25	108	24.90	20	1.18	1.06	2.03	152	-50	11	
ZP58	3986086	364077.5	5356375.2	sandstones	-5	0.77	-25	38	7.27	8	1.14	0.36	1.82	104	1240	257	
ZP59	3986087	364074.4	5356350.4	limestone	-5	0.86	-25	42	27.70	20	1.17	0.42	3.03	242	-50	27	
ZP60	3986088	364071.4	5356325.6	limestone	-5	0.73	-25	46	33.70	22	0.31	0.40	0.50	101	-50	-5	
ZP61	3986089	364068.3	5356300.8	limestone	-5	0.45	-25	33	31.90	20	1.47	0.22	1.29	764	88	955	
ZP62	3986090	364064.7	5356271.0	limestone	-5	1.43	-25	81	27.10	20	1.25	0.68	1.53	195	116	739	

234184

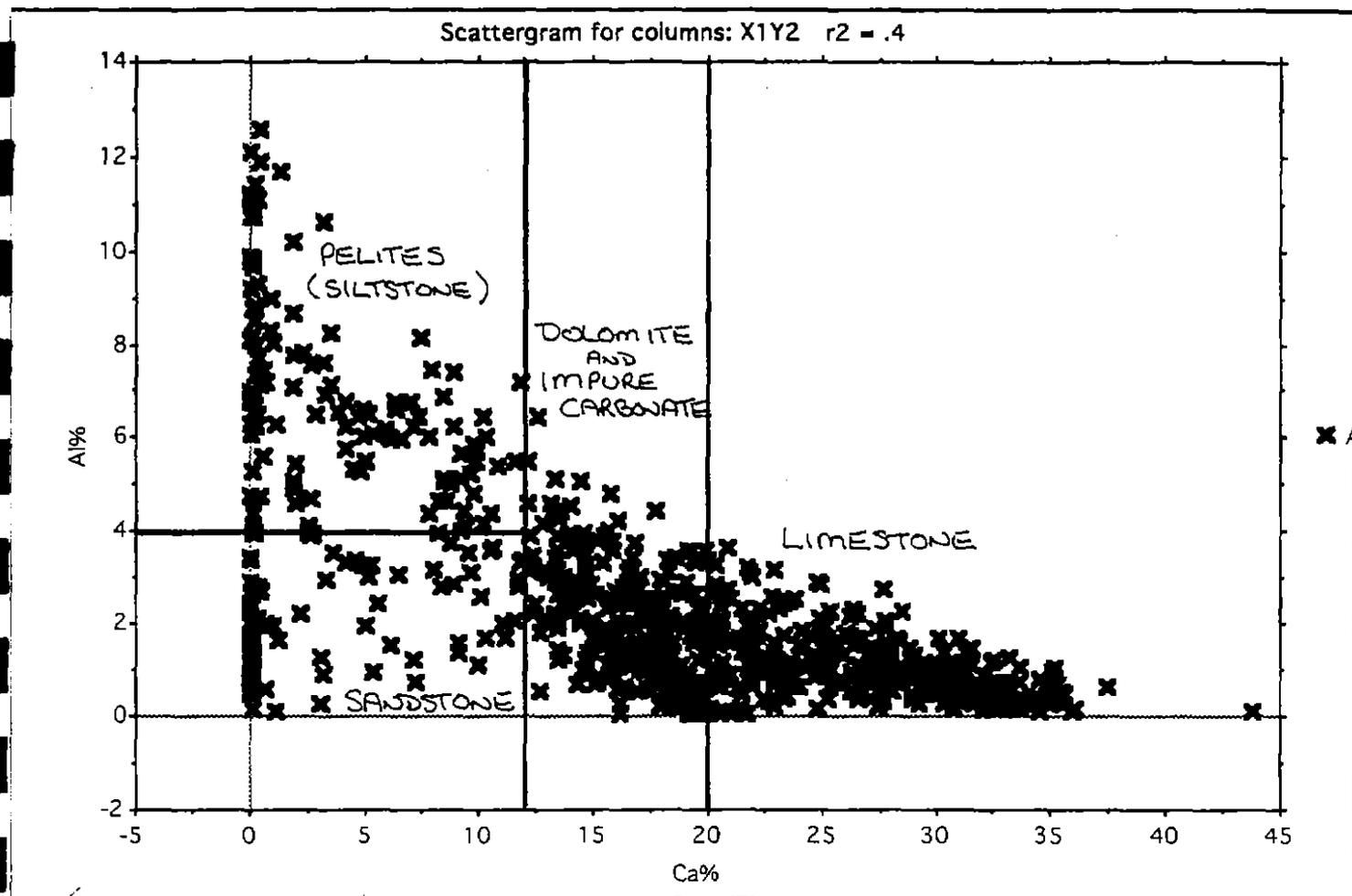
## AIR-CORE END OF HOLE SAMPLES GEOCHEMICAL CHARACTERISTICS

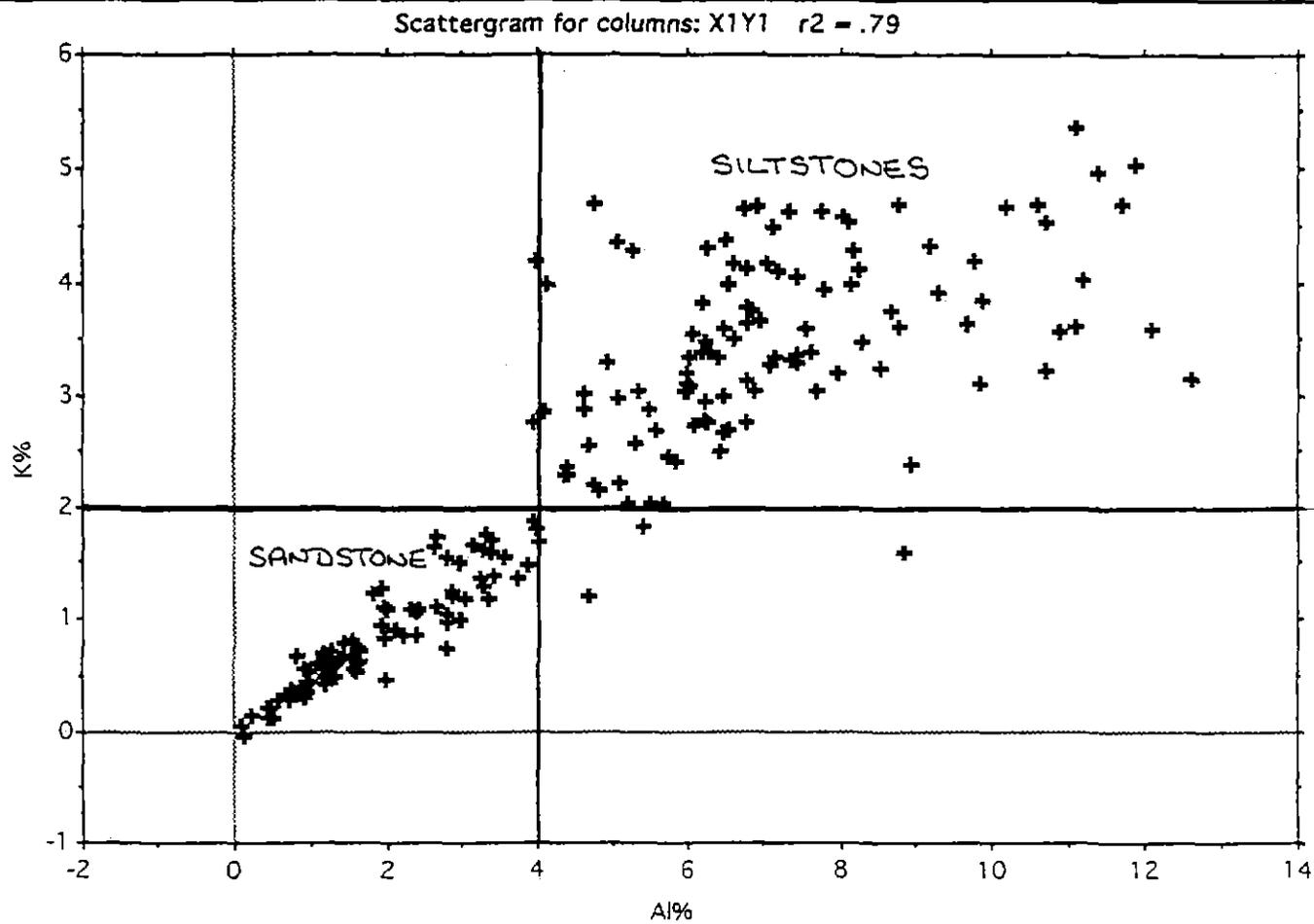
	Percentile	Ca%	Mg%	Fe%	Mn ppm	Al%	K%	Pb ppm	Zn ppm	Ba ppm	number
<b>SIDERITE</b> (>10% Fe)	90%	13.20	5.60	40.70	21640	3.13	1.11	1876	49000	134	69
	median	3.29	1.06	30.00	10900	1.17	0.47	67	2050	59	
	10%	0.64	0.16	0.13	1856	0.28	0.07	-50	72	8	
<b>LIMESTONE</b> (>20% Ca) (<4% Mg)	90%	33.70	30.60	1.50	419	2.14	1.06	70	552	117	241
	median	28.90	1.21	0.64	123	0.86	0.23	-50	57	46	
	10%	23.00	0.32	0.22	68	0.35	0.14	-50	-8	17	
<b>DOLOMITE</b> (>12% Ca) (>4% Mg)	90%	22.00	11.20	4.15	1925	3.13	1.57	715	2832	186	284
	median	18.30	7.47	1.60	338	1.55	0.74	-50	206	88	
	10%	13.70	4.59	0.72	123	0.24	0.08	-50	23	13	
<b>IMPURE CARBONATES</b> (12-20% Ca) (<4% Mg)	90%	19.20	3.69	2.51	363	4.54	2.44	340	889	306	45
	median	16.00	2.73	1.39	146	3.34	1.58	-50	71	164	
	10%	13.00	1.04	0.78	79	1.39	0.53	-50	16	60	
<b>PELITIC SILTSTONES</b> (<12% Ca) (>4% Al)	90%	8.86	3.02	3.90	224	10.64	4.61	553	1930	605	111
	median	1.91	1.15	1.97	59	6.78	3.36	-50	214	380	
	10%	0.05	0.46	1.18	18	4.77	2.28	-50	39	227	
<b>SANDSTONES</b> (<12% Ca) (<4% Al)	90%	8.80	1.87	3.29	167	3.40	1.61	1092	2230	212	93
	median	0.15	0.19	0.76	30	1.63	0.69	57	122	96	
	10%	0.02	0.06	0.29	-15	0.73	0.29	-50	15	39	

ZEEHAN PROJECT  
AIR-CORE EOH SAMPLES  
Ca% vs Mg%



ZEEHAN PROJECT  
AIR-CORE END-OF-HOLE SAMPLES  
Ca% vs Al%





**Appendix 6**

**Aircore Drilling and Geochemistry  
Pyramid Prospect**

**C R A EXPLORATION PTY. LIMITED**

ACN 000 057 125

UNIT 1, 23 BELL STREET, PRESTON, VICTORIA 3072, AUSTRALIA

P.O. BOX 8093  
NORTHLAND CENTRE 3072  
TELEPHONE: 480 1866  
FAX: (03) 484 1375

28th September 1994

MEMOTO: R.G. PARKINSON

FROM: L. VESKA

**PYRAMID PROSPECT - AIR-CORE DRILLING 1993/94**

Aircore drilling at the Pyramid prospect during the 1993/1994 field season totalled 32 holes, and was concentrated in the extreme southwest of the Gordon Limestone at this locality, the Henty Road forming the northern margin of the area under investigation. The topographically-high outcrop of the Mt. Zeehan conglomerate, Moina Sandstone and associated talus slopes formed the southern extent of accessible drillpad locations. Accumulations of surface gravels hindered, and in some cases, caused the abandonment of neighbouring drillholes. This resulted in a wider spacing of drillholes than desired in areas overlain by thick and extensive sheets of gravel.

Drillhole ZP43 intersected the only significant zone, a 15m interval containing elevated zinc (0.1-0.5% Zn) with associated intense, pervasive siderite alteration. Intense Fe-alteration produced a highly indurated, dense grey-green limestone, preventing further drill penetration. As a result, this zone was not fully tested by the drillhole in question, which is even more significant given the proximity to the prospective lower contact of the Gordon Limestone.

APPENDIX 8: Pyramid prospect. Drillhole collar database

APPENDIX 8: PYRAMID PROSPECT. DRILLHOLE LOCATION DATABASE													
Hole	Full Name	EL	Company	Report	AMG E	AMG N	Local E	Local N	RL	Depth	Azim AMG	Inclin.	
ZWP27	ZWP27	EL4/78	EZ	86-2547	364291	5356475	1600	1100	145	10.1	0	-90	
ZWP28	ZWP28	EL4/78	EZ	86-2547	364292	5356478	1603.5	1100	145	8.0	0	-90	
ZWP29	ZWP29	EL4/78	EZ	86-2547	364397	5356512	1650	1000	145	16.7	0	-90	
ZWP30	ZWP30	EL4/78	EZ	86-2547	364391	5356463	1600	1000	145	18.6	0	-90	
ZWP31	ZWP31	EL4/78	EZ	86-2547	364378	5356364	1500	1000	144	11.6	0	-90	
ZWP32	ZWP32	EL4/78	EZ	86-2547	364198	5356537	1650	1200	151	27.4	0	-90	
ZWP33	ZWP33	EL4/78	EZ	86-2547	364195	5356512	1625	1200		13.0	0	-90	
ZP1	AC93ZP1	EL28/88	CRAE	19284	364366	5356264	1400	1000		3.7	0	-90	
ZP2	AC93ZP2	EL28/88	CRAE	19284	364369	5356289	1425	1000		11.0	0	-90	
ZP3	AC93ZP3	EL28/88	CRAE	19284	364372	5356314	1450	1000		7.5	0	-90	
ZP4	AC93ZP4	EL28/88	CRAE	19284	364375	5356339	1475	1000		4.0	0	-90	
ZP5	AC93ZP5	EL28/88	CRAE	19284	364378	5356364	1500	1000		6.7	0	-90	
ZP6	AC93ZP6	EL28/88	CRAE	19284	364381	5356388	1525	1000		8.5	0	-90	
ZP7	AC93ZP7	EL28/88	CRAE	19284	364384	5356413	1550	1000		4.9	0	-90	
ZP8	AC93ZP8	EL28/88	CRAE	19284	364387	5356438	1575	1000		7.3	0	-90	
ZP9	AC93ZP9	EL28/88	CRAE	19284	364391	5356463	1600	1000		14.6	0	-90	
ZP10	AC93ZP10	EL28/88	CRAE	19284	364394	5356488	1625	1000		7.6	0	-90	
ZP11	AC93ZP11	EL28/88	CRAE	19284	364397	5356512	1650	1000		2.8	0	-90	
ZP12	AC93ZP12	EL28/88	CRAE	19284	364400	5356537	1675	1000		29.2	0	-90	
ZP13	AC93ZP13	EL28/88	CRAE	19284	364403	5356562	1700	1000		12.0	0	-90	
ZP14	AC93ZP14	EL28/88	CRAE	19284	364406	5356587	1725	1000		15.0	0	-90	
ZP15	AC93ZP15	EL28/88	CRAE	19284	364279	5356376	1500	1100		8.5	0	-90	
ZP16	AC93ZP16	EL28/88	CRAE	19284	364282	5356401	1525	1100		15.1	0	-90	
ZP17	AC93ZP17	EL28/88	CRAE	19284	364285	5356425	1550	1100		4.5	0	-90	
ZP18	AC93ZP18	EL28/88	CRAE	19284	364288	5356450	1575	1100		6.3	0	-90	
ZP19	AC93ZP19	EL28/88	CRAE	19284	364291	5356475	1600	1100		12.5	0	-90	
ZP20	AC93ZP20	EL28/88	CRAE	19284	364294	5356500	1625	1100		13.6	0	-90	
ZP21	AC93ZP21	EL28/88	CRAE	19284	364297	5356525	1650	1100		18.0	0	-90	
ZP22	AC93ZP22	EL28/88	CRAE	19284	364300	5356549	1675	1100		12.0	0	-90	
ZP23	AC93ZP23	EL28/88	CRAE	19284	364303	5356574	1700	1100		8.0	0	-90	
ZP24	AC93ZP24	EL28/88	CRAE	19284	364306	5356599	1725	1100		10.0	0	-90	
ZP25	AC93ZP25	EL28/88	CRAE	19284	364310	5356624	1750	1100		10.0	0	-90	
ZP26	AC93ZP26	EL28/88	CRAE	19284	364207	5356485	1600	1185		9.0	0	-90	

234191

APPENDIX 8 Pyramid prospect. Drillhole collar data

ZP27	AC93ZP27	EL28/88	CRAE	19284	364210	5356510	1625	1185	5.5	0	-90
ZP28	AC93ZP28	EL28/88	CRAE	19284	364213	5356535	1650	1185	21.0	0	-90
ZP29	AC93ZP29	EL28/88	CRAE	19284	364216	5356560	1675	1185	33.6	0	-90
ZP30	AC93ZP30	EL28/88	CRAE	19284	364219	5356585	1700	1185	10.0	0	-90
ZP31	AC94ZP31	EL28/88	CRAE		364283	5356325	1450	1090	5.5	0	-90
ZP32	AC94ZP32	EL28/88	CRAE		364270	5356301	1425	1100	7.1	0	-90
ZP33	AC94ZP33	EL28/88	CRAE		364267	5356276	1400	1100	14.7	0	-90
ZP34	AC94ZP34	EL28/88	CRAE		364264	5356252	1375	1100	4.0	0	-90
ZP35	AC94ZP35	EL28/88	CRAE		364261	5356227	1350	1100	12.0	0	-90
ZP36	AC94ZP36	EL28/88	CRAE		364263	5356242	1365	1100	16.5	0	-90
ZP37	AC94ZP37	EL28/88	CRAE		364258	5356207	1330	1100	8.8	0	-90
ZP38	AC94ZP38	EL28/88	CRAE		364256	5356187	1310	1100	17.0	0	-90
ZP39	AC94ZP39	EL28/88	CRAE		364358	5356199	1334	1000	4.8	0	-90
ZP40	AC94ZP40	EL28/88	CRAE		364357	5356190	1325	1000	5.1	0	-90
ZP41	AC94ZP41	EL28/88	CRAE		364355	5356170	1305	1000	11.7	0	-90
ZP42	AC94ZP42	EL28/88	CRAE		364351	5356140	1275	1000	11.7	0	-90
ZP43	AC94ZP43	EL28/88	CRAE		364348	5356115	1250	1000	25.8	0	-90
ZP44	AC94ZP44	EL28/88	CRAE		364186	5356438	1550	1200	6.1	0	-90
ZP45	AC94ZP45	EL28/88	CRAE		364183	5356413	1525	1200	9.3	0	-90
ZP46	AC94ZP46	EL28/88	CRAE		364180	5356388	1500	1200	6.9	0	-90
ZP47	AC94ZP47	EL28/88	CRAE		364177	5356363	1475	1200	11.0	0	-90
ZP48	AC94ZP48	EL28/88	CRAE		364173	5356335	1447	1200	10.6	0	-90
ZP49	AC94ZP49	EL28/88	CRAE		364171	5356313	1425	1200	17.0	0	-90
ZP50	AC94ZP50	EL28/88	CRAE		364168	5356289	1400	1200	5.7	0	-90
ZP51	AC94ZP51	EL28/88	CRAE		364165	5356264	1375	1200	3.6	0	-90
ZP52	AC94ZP52	EL28/88	CRAE		364162	5356239	1350	1200	9.5	0	-90
ZP53	AC94ZP53	EL28/88	CRAE		364093	5356499	1600	1300	2.8	0	-90
ZP54	AC94ZP54	EL28/88	CRAE		364090	5356475	1575	1300	8.3	0	-90
ZP55	AC94ZP55	EL28/88	CRAE		364087	5356450	1550	1300	9.1	0	-90
ZP56	AC94ZP56	EL28/88	CRAE		364084	5356425	1525	1300	9.9	0	-90
ZP57	AC94ZP57	EL28/88	CRAE		364081	5356400	1500	1300	10.0	0	-90
ZP58	AC94ZP58	EL28/88	CRAE		364078	5356375	1475	1300	35.5	0	-90
ZP59	AC94ZP59	EL28/88	CRAE		364074	5356350	1450	1300	11.1	0	-90
ZP60	AC94ZP60	EL28/88	CRAE		364071	5356326	1425	1300	3.7	0	-90
ZP61	AC94ZP61	EL28/88	CRAE		364068	5356301	1400	1300	7.5	0	-90
ZP62	AC94ZP62	EL28/88	CRAE		364065	5356271	1370	1300	25.4	0	-90

## ROCKCHIP AND DRILLING CODES

22/2/1994

-----  
BMLLITHRock code as per published geological map  
For time designation use:-

Q	Quaternary	M	Permian	P	Proterozoic
T	Tertiary	C	Carboniferous	A	Archaean
		S	Silurian		
K	Cretaceous	D	Devonian		
R	Triassic	O	Ordovician		
J	Jurassic	E	Cambrian		

## FIELD ID

Field term for rock type  
Broad groupings are:-

S	Sedimentary	I	Intrusive	C	Surficial
M	Metamorphic	E	Extrusive	O	Others

## SEDIMENTARY

Scg	Conglomerate	Sls	Limestone	Sw	Wacke
Sss	Sandstone	Sdl	Dolomite	Sag	Agglomerate/mixtite
Ssi	Siltstone	Sch	Chert	Sbx	Breccia
Ssh	Shale	Sif	BIF		
Sbs	Black shale				

## METAMORPHIC

Msl	Slate	Mq	Quartzite	Mmg	Migmatite
Mph	Phyllite	Mm	Marble		
Msc	Schist	Ma	Amphibolite	Msk	Skarn
Mbs	Graphitic schist	Mcs	Calcsilicate		
Mgn	Gneiss	Mh	Hornfels		

## INTRUSIVE IGNEOUS

If	Felsic undiff.	ii	Intermed undiff.	Iu	Ultramafic
Ifp	Felsic porphyry	lip	Intermed porph	Ius	Serpentinite
Iap	Aplite	Im	Mafic undiff.	Iog	Pegmatite
Igr	Granite	Igo	Dolerite		
Igd	Granodiorite	Igb	Gabbro		

## EXTRUSIVE IGNEOUS

Ery	Rhyolite	Ean	Andesite	Et	Tuff undiff
Edc	Dacite	Eb	Basalt	Eft	Felsic tuff
				Emt	Mafic tuff

## SURFICIAL (COVER) MATERIAL

Ca	Alluvium	Clt	Laterite	Csg	Gossan
Coo	Colluvium	Cap	Placitas	Ccy	Clay
Cs	Sand	Cst	Ironstone	Cv	Vegetation/peat
Cbs	Black soil	Csl	Silcrete		
Cg	Gravel	Ccl	Calcrete		

## OTHERS

Ovq	Vein quartz	Omy	Mylonite	Oms	Massive sulphide
Ovc	Vein carbonate	Obx	Breccia	Oxc	Contamination
Ovs	Vein sulphide	Of	Fault gouge	Ox	Unknown

## TEXTURAL CODES

## WEATHERING/SURFICIAL FEATURES

We	Weathered	Fe	Ferruginous
Bl	Bleached	Fo	Fe ox in fract
Le	Leached		

## MINERALISATION/ALTERATION FEATURES

Ga	Gossanous	Vs	Vein sulphide	Al	Altered
Vn	Veined	Da	Dissem sulph	Sl	Silicified
Vc	Vein carbonate	Fs	Fracture sulph		
Vq	Vein quartz	Bs	Banded sulph	Di	Disseminated

## GEOLOGICAL FEATURES

Bd	Bedded	Fr	Fractured	Po	Porphyritic
Br	Banded	Ib	Interbedded	Sc	Schistose
Bx	Brecciated	Lm	Laminated	Sh	Sheared
F	Fissile (slaty)	Ma	Massive	Vu	Vuggy

## DIAGNOSTIC MINERALOGY

## PRIMARY MINERALISATION

Ga	Galena	Py	Pyrite	Ni	Ni sulphides
Sp	Sphalerite	Po	Pyrrhotite		
Cp	Chalcopyrite	Su	Unknown sulph		

## SECONDARY MINERALISATION

Ls	Lead secondaries	Os	Copper sec.	Ni	Ni secondaries
Zs	Zinc "	Us	Uranium "		

## ALTERATION/DIAGNOSTIC MINERALS

Cy	Clay	He	Haematite	Gt	Garnet
Ep	Epidote	Mt	Magnetite	Ky	Kyanite
Cc	Carbonate	Js	Jarosite	To	Tourmaline
Sd	Siderite/Ankerite	Mn	Manganese mins	Cl	Chlorite
Di	Dolomite				

## COLOUR CODES

L	Light	A	Banded	M	Mottled
D	Dark				
N	Black	P	Purple	V	Green
G	Grey	R	Red	K	Pink
B	Brown	O	Orange	E	Blue
W	White	Y	Yellow	S	Silver

PENDIX 9 Pyramid prospect. 1994 air-core drill logs and assay.

APPENDIX : Pyramid prospect. 1994 air-core drill logs and assays																
DPO 77654																
Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	5%	Zn ppm
ZP31	0.0	3.0	3985369	OgQha	CcyObs			DVG		13	4	0.20	9	12		16
ZP31	3.0	5.5	3985370	Og	Sls			DG		-1	19	1.57	100	66		131
ZP32	0.0	3.0	3985371	OgQha	CcyObs			DG		1	17	0.41	28	83		57
ZP32	3.0	6.0	3985372	Og	SlsOvc			G		-1	9	1.52	242	44		53
ZP32	6.0	7.1	3985373	Og	SlsOvc			DG+G		-1	8	1.82	327	19		42
ZP33	0.0	3.0	3985374	OgQha	CcyObs			DB+N		-1	18	0.51	15	89		101
ZP33	3.0	6.0	3985375	Og	Sls			LG+G	"wispy" laminated Sls	-1	6	1.14	291	24		60
ZP33	6.0	9.0	3985376	Og	SlsOvc			LG+G		-1	7	1.26	347	19		78
ZP33	9.0	12.0	3985377	Og	Sls			G		-1	7	3.76	996	16		30
ZP33	12.0	14.7	3985378	Og	Sls		PySp	G	mod. pyr., trace sphalerite	-1	4	1.43	360	16		103
ZP34	0.0	3.0		Qha	CgObs											
ZP34	3.0	4.5		OgQha	CbsCg				hole abandoned -could not penetrate gravels.							
ZP34	0.0	4.0	3985379	Qha	CgObs				hole abandoned, could not penetrate gravels.	-1	6	0.33	21	44		36
ZP35	0.0	3.0		Qha	Cg											
ZP35	3.0	6.0	3985380	OgQha	CcyCg			DB+N	minor We DG Sls	-1	16	1.99	43	89		55
ZP35	6.0	9.0	3985381	Og	CcySls	We		LGB		-1	12	3.68	19	69		177
ZP35	9.0	12.0	3985382	Og	SlsOvc		Sp	DG+G	1-2% sphalerite, could not drill further.	-1	43	3.22	169	49		48
ZP36	0.0	3.0		Qha	CgObs											
ZP36	3.0	6.0	3985383	QhaOg	CgCcy			G		-1	28	3.02	31	79		190
ZP36	6.0	9.0	3985384	Og	CcySls	We		G		-1	22	6.04	69	134		548
ZP36	9.0	12.0	3985385	Og	SlsOvcCcy			W+LG	marbled, graphitic Sls.	-1	11	3.15	242	53		296
ZP36	12.0	15.0	3985386	Og	SlsOvc			W+LG	marbled, graphitic Sls.	-1	4	1.62	209	21		125
ZP36	15.0	16.5	3985387	Og	SlsOvc			W+G	as above	-1	4	4.92	199	33		119
ZP37	0.0	3.0		Qha	Cg											
ZP37	3.0	6.0	3985388	Og	Ccy			DB+N		-1	23	1.82	27	153		399
ZP37	6.0	8.8	3985389	Og	SlsOvc			DG+G	marbled graphitic Sls	-1	17	2.53	96	112		225
ZP38	0.0	1.2		Qha	Cg				hole abandoned, could not penetrate gravel.							
ZP38	0.0	3.0		Qha	Cg				ZP38 re-drill.							
ZP38	3.0	6.0	3985390	Og	Sls	We				-1	16	4.80	42	638		406
ZP38	6.0	9.0	3985391	Og	Sls			DG+G		-1	4	2.20	269	86		117
ZP38	9.0	12.0	3985392	Og	Sls			DG+G		-1	5	2.04	217	22		28
ZP38	12.0	15.0	3985393	Og	SlsOvc			G		-1	7	1.22	345	12		28
ZP38	15.0	17.0	3985394	Og	Sls			DG		-1	4	1.57	252	59		64
ZP39	0.0	3.8		Qha	Cg				hole abandoned, could not penetrate gravel.							
ZP39	0.0	4.8		Qha	Cg				hole abandoned, could not penetrate gravel.							
ZP40	0.0	3.0		Qha	Cg											
ZP40	3.0	5.1	3985395	QhaOg	CgCcy			DB	hole abd, could not penetrate gravel, no EOH sample	-1	8	0.73	47	42		43
ZP41	0.0	3.0		Qha	Cg											
ZP41	3.0	6.0	3985396	OgQha	CcyCg			LG		-1	12	1.80	24	148		1080
ZP41	6.0	9.0	3985397	Og	SlsOvcCcy	Al	Sd	LG	ankerite altered, patchy, weak.	-1	6	1.35	710	173		769
ZP41	9.0	11.7	3985398	Og	SlsOvc	Al	Sd	W+LG	ankerite altered -minor, patchy, weakly graphitic.	-1	7	0.62	418	107		405

234194

PENDIX 8 Pyramid prospect. 1994 air-core drill logs and assay.

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZP42	0.0	3.0		QhaOg	CgCbsCcy			DB+G								
ZP42	3.0	6.0	3985399	OgQha	CcyCg		Py	DM	minor pyrite fragments.	1	29	6.76	215	821		3310
ZP42	6.0	9.0	3985400	Og	SlsOvc			DG		-1	6	3.36	567	152		598
ZP42	9.0	11.7	3985401	Og	Sls			DG		-1	8	3.84	893	271		1224
ZP43	0.0	3.0	3985402	QhaOg	CgCcy			DB		-1	17	0.55	36	67		97
ZP43	3.0	6.0	3985403	OgQha	CcyCg			DM		1	20	4.98	769	674		2725
ZP43	6.0	9.0	3985404	Og	SlsCcy	VuAl	Sd	DG	minor patchy ank. altn.	-1	6	10.50	3648	215		941
ZP43	9.0	12.0	3985405	Og	SlsOvc	Al	Sd	G+LG	weak pervasive ank. alteration.	-1	4	12.10	4754	193		778
ZP43	12.0	15.0	3985406	Og	Sls	Al	Sd	DG+YG	mod - strong patchy ankerite altn.	-1	5	19.00	9900	132		1112
ZP43	15.0	18.0	3985407	Og	Sls	Al	Sd	DG	minor ank. frags.	1	8	19.80	8800	380		2045
ZP43	18.0	21.0	3985408	Og	Sls			DG+LG		2	15	15.20	5700	377		4464
ZP43	21.0	24.0	3985409	Og	SlsCcy	Al	Sd	YG+G	strong pervasive ankerite altn & veining, dense.	1	9	34.60	14500	746		4081
ZP43	24.0	25.8	3985410	Og	Sls	Al	Sd	DG+YG	moderate, patchy ank. altn.	1	6	39.40	15700	234		2689
ZP44	0.0	3.0	3985411	OgQha	CbsCgCcy			DB		-1	4	0.48	90	44		42
ZP44	3.0	6.0	3985412	Og	CcySls			DB+N		-1	14	2.19	157	60		388
ZP44	6.0	6.1		Og	Sls			DG+G	"wispy" graphitic lams.							
ZP45	0.0	3.0		Qha	Cg											
ZP45	3.0	6.0	3985413	OgQha	SlsCgCcy	We		DG		-1	15	1.18	32	161		387
ZP45	6.0	9.3	3985414	Og	Sls			DG		-1	13	1.40	25	68		215
ZP46	0.0	3.0		Qha	Cg											
ZP46	3.0	6.0	3985415	Og	Ccy			LB+W		-1	10	0.58	21	47		76
ZP46	6.0	6.9	3985416	Og	Sls		Py	DG	granular Sls, weakly pyritic.	-1	19	4.61	74	89		164
ZP47	0.0	3.0		QhaOg	CgCcy											
ZP47	3.0	6.0	3985417	QhaOg	CgSls	We		DG		-1	9	0.35	20	46		43
ZP47	6.0	9.0	3985418	QhaOg	CgSls			DG		-1	14	1.32	95	45		67
ZP47	9.0	11.0	3985419	Og	OvcSls			LG+DG	"wispy" graphitic lams.	-1	6	0.87	220	17		55
ZP48	0.0	3.0	3985420	OgQha	CcyCg			DG		1	33	0.38	13	135		43
ZP48	3.0	6.0	3985421	Og	Ccy			DB+N		-1	23	0.42	21	130		6300
ZP48	6.0	9.0	3985422	Og	SlsOvcCcy	We		DG+G		-1	11	1.75	145	80		338
ZP48	9.0	10.6	3985423	Og	SlsOvc			G		-1	7	1.99	225	100		50
ZP49	0.0	3.0	3985424	Og	Ccy			M		-1	3	0.57	43	17		32
ZP49	3.0	6.0	3985425	Og	Ccy			DM		1	25	1.58	31	189		54
ZP49	6.0	9.0	3985426	Og	Ccy			DM		-1	13	2.05	22	107		144
ZP49	9.0	12.0	3985427	Og	Ccy			LB+DB		-1	9	1.55	28	41		62
ZP49	12.0	15.0	3985428	Og	Ccy			B	brown slurry.	-1	10	1.95	31	31		67
ZP49	15.0	17.0	3985429	Og	SlsOvc	Bx		DG+G	"wispy" graphitic lams, some brecc textures.	-1	7	1.53	200	32		139
ZP50	0.0	3.0	3985430	OgQha	CbsCcy			DB		-1	22	0.53	16	68		65
ZP50	3.0	5.7	3985431	Og	SlsOvc	Lm		W+LG	"wispy" graphitic lams, abundant calcite stringers.	-1	4	0.59	94	9		27
ZP51	0.0	3.0	3985432	OgQha	CbsCcy			DB		-1	13	0.44	29	76		56
ZP51	3.0	3.6	3985433	Og	SlsOvc			LG+W	graphitic lams.	-1	12	2.39	54	45		1411
ZP52	0.0	3.0		Og	Ses		He	KW								
ZP52	3.0	6.0	3985434	Og	Ccy			DM		-1	20	3.44	21	262		489
ZP52	6.0	9.0	3985435	Og	Ccy		Py	DVG	weakly pyritic clay.	-1	15	4.01	38	122		386
ZP52	9.0	9.5	3985436	Og	Sls			G+LG	"wispy" graphitic Sls.	-1	11	3.29	59	87		260

234195

PENDIX 8 Pyramid prospect. 1994 air-core drill logs and assay.

Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	%	Zn ppm
ZP53	0.0	2.6	3985437	Og	Ccy			LB+G		1	10	0.42	26	117		49
ZP53	2.6	2.8		Og	Sls			G+DG								
ZP54	0.0	3.0		Qha	Cg											
ZP54	3.0	6.0	3985438	Og	Ccy			G		-1	14	1.79	31	41		106
ZP54	6.0	8.3	3985439	Og	Sls			DG		-1	8	2.32	620	14		31
ZP55	0.0	3.0	3985440	Og	Ccy			DM		-1	12	0.46	39	42		85
ZP55	3.0	6.0	3985441	Og	Ccy			DB+NM		-1	21	5.00	35	248		2022
ZP55	6.0	9.0	3985442	Og	Ccy			DM		-1	15	6.79	125	198		1173
ZP55	9.0	9.1		Og	Sls			DG								
ZP56	0.0	3.0	3985443	OgQha	CcyCbs			LB		-1	3	0.37	17	13		32
ZP56	3.0	6.0	3985444	Og	Ccy			DB+N		1	33	2.51	30	254		262
ZP56	6.0	9.0	3985445	Og	Ccy			DG		-1	20	3.75	39	42		260
ZP56	9.0	9.9	3985446	Og	Sls			G	*wispy" graphitic lamæ.	-1	6	1.82	111	24		54
ZP57	0.0	3.0	3985447	OgQha	CcyCg			LM		-1	8	0.32	15	11		17
ZP57	3.0	6.0	3985448	Og	Ccy			G		-1	20	4.35	24	34		63
ZP57	6.0	9.0	3985449	Og	Ccy			G		-1	25	4.90	51	57		112
ZP57	9.0	10.0	3985450	Og	SlsOvc	Bx		G	abundant vein calcite, brecciation evident.	-1	10	1.65	168	35		69
ZP58	0.0	3.0	3985451	OgQha	CcyCg			LB+DB		-1	8	0.31	14	24		18
ZP58	3.0	6.0	3985452	Og	Ccy			DBN		-1	20	3.89	15	73		76
ZP58	6.0	9.0	3985453	Og	Ccy			DBN		-1	15	1.49	15	43		79
ZP58	9.0	12.0	3985454	Og	Ccy			M		-1	19	1.80	16	48		126
ZP58	12.0	15.0	3985455	Og	Ccy			M		-1	20	2.27	54	76		293
ZP58	15.0	18.0	3985456	Og	Ccy			GB		1	19	2.37	33	87		196
ZP58	18.0	21.0	3985457	Og	Ccy			DM		1	21	2.59	35	128		248
ZP58	21.0	24.0	3985458	Og	Ccy			DM		1	19	4.12	54	112		259
ZP58	24.0	27.0	3985459	Og	SlsCcy			DG		1	14	2.29	164	79		197
ZP58	27.0	30.0	3985460	Og	CcySls			BG+DG		-1	16	3.26	163	103		155
ZP58	30.0	33.0	3985461	Og	SlsCcy			DG		-1	10	1.99	334	34		36
ZP58	33.0	35.5	3985462	OgQha	SlsCg			LG+DG	*wispy" graphitic lamæ, abundant rdd qtzite pebbles	-1	16	2.93	57	142		427
ZP59	0.0	3.0	3985463	Og	Ccy			DG		1	37	0.75	20	249		108
ZP59	3.0	6.0	3985464	Og	Ccy			DV+G		-1	20	3.84	21	135		385
ZP59	6.0	9.0	3985465	Og	CcySls	We		DM		1	21	4.66	28	304		350
ZP59	9.0	11.0	3985466	Og	Ccy			G		-1	19	6.48	69	180		245
ZP59	11.0	11.1		Og	Sls	Lm		DG+G	graphitic lamæ							
ZP60	0.0	3.0	3985467	OgQha	CbsCcy			DB		-1	8	0.54	20	63		175
ZP60	3.0	3.7	3985468	Og	SlsOvc	Al		G	highly indurated, silicified?Sls	-1	3	0.36	119	8		25
ZP61	0.0	3.0	3985469	Og	SlsOvc			LG	minor Ovc and calcite blebs.	-1	4	0.55	98	22		90
ZP61	3.0	6.0	3985470	Og	Sls	Lm		LG+W	minor graphitic lam.	-1	4	0.88	100	29		65
ZP61	6.0	7.5	3985471	Og	Sls	Al	Sd	LG+W	patchy weak ank. altn, minor graphitic lamæ.	-1	4	1.14	532	73		659

234196

APPENDIX 8 Pyramid prospect. 1994 air-core drill logs and assay

Hole	DFrom	DTto	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZP62	0.0	3.0	3985472	Og	Ccy			DG		-1	17	4.95	45	94		627
ZP62	3.0	6.0	3985473	Og	Ccy			DB+N		-1	18	4.90	89	102		237
ZP62	6.0	9.0	3985474	Og	CcySts			GW	minor GY-WH graphitic Sts.	-1	15	5.89	149	86		270
ZP62	9.0	12.0	3985475	Og	StsOvc	Lm	Py	LG+W	graphite banded, pyrite blebs.	-1	5	0.94	169	9		42
ZP62	12.0	15.0	3985476	Og	StsOvc	Lm		LG+G	graphite lam., fossiliferous (brachiopods).	-1	5	0.86	162	10		71
ZP62	15.0	18.0	3985477	Og	StsOvc	Lm		G+LG	graphite laminated.	-1	6	1.16	245	11		38
ZP62	18.0	21.0	3985478	Og	StsOvc	Lm		G+LG	as above, trace dissem. py, gal.	-1	5	1.48	149	24		79
ZP62	21.0	24.0	3985479	Og	StsOvc			G+DG		-1	8	4.24	152	165		781
ZP62	24.0	25.4	3985480	Og	StsOvc	We		G+DG	abundant vein calcite.	-1	6	1.60	213	155		859

APPENDIX 8: Pyramid prospect. EZ "winkie" diamond drill logs and assays.

APPENDIX : Pyramid prospect. EZ "winkie" diamond drill logs and assays																
Hole	DFrom	DTo	Sampno	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	S%	Zn ppm
ZWP27	0.0	5.7							Precollar, no core.							
ZWP27	5.7	8.2	65268	Og	Sls	Le		G	Dolomitised?		15	1.01	670	170		1250
ZWP27	8.2	9.1	65269	Og	Sls	Le		G	Dolomitised?		10	1.56	1100	210		1300
ZWP27	9.1	9.5	65270	Og	Sls	Ds?	GaSp		Silty limestone rubble	28	145	1.76	1400	49900		52000
ZWP27	9.5	10.1	65271	Og	Sls				Silty limestone rubble		15	1.71	1200	1885		11500
ZWP28	0.0	5.8							Precollar, no core.							
ZWP28	5.8	8.0		Og	Sls			LG	Silty limestone rubble		15	1.01	670	170		1250
ZWP29	0.0	3.8							Precollar, no core.							
ZWP29	3.8	4.4		Sa?	Ses	Sl		G								
ZWP29	4.4	9.6		Sa?	SsiSes			G								
ZWP29	9.6	12.6	65272	Sa?	SsiSes			G			20	1.31	45	125		770
ZWP29	12.6	14.8		Sa?	SsiSes			G								
ZWP29	14.8	16.7		Sa?	Ses	We		B								
ZWP30	0.0	6.4							Precollar, no core.							
ZWP30	14.4	17.6	65273	Og	Sls	WeLe		DG			10	0.96	505	75		195
ZWP30	17.6	18.2			Ox				No recovery							
ZWP30	18.2	18.6	65274	Og	Sls	Le		GDG			10	1.61	710	35		110
ZWP31	0.0	8.2							Precollar, no core.							
ZWP31	8.2	11.6		Og	Sls											
ZWP32	0.0	5.3							Precollar, no core.							
ZWP32	5.3	10.5		SaSc?	Ssi	We										
ZWP32	10.5	24.9		SaSc?	Ssi			G								
ZWP32	24.9	27.4		SaSc?	SsiCcy											
ZWP33	0.0	7.6							Precollar, no core.							
ZWP33	7.6	10.1	65275	Og	Sdl	Vu		G	Recrystallised Dolomite		10	1.96	1500	195		405
ZWP33	10.1	10.5		Og	Sdl	Vc	DISd	G								
ZWP33	10.5	13.0	65276	Og	Sdl	Vu		G	Recrystallised Dolomite		10	1.76	1350	80		545

PYRAMID PROSPECT AIR-CORE DRILLHOLE COLLAR DATA							
Hole prefix AC93—							
HOLE	LOCALE	LOCALN	AMGE	AMGN	TOTAL DEPTH	AZUMITH	DIP
ZP1	1400	1000	364366	5356263	3.7	0	-90
ZP2	1425	1000	364369	5356288	11.0	0	-90
ZP3	1450	1000	364372	5356313	7.5	0	-90
ZP4	1475	1000	364375	5356338	4.0	0	-90
ZP5	1500	1000	364378	5356363	6.7	0	-90
ZP6	1525	1000	364381	5356387	8.5	0	-90
ZP7	1550	1000	364384	5356412	4.9	0	-90
ZP8	1575	1000	364387	5356437	7.3	0	-90
ZP9	1600	1000	364390	5356462	14.6	0	-90
ZP10	1625	1000	364394	5356487	7.6	0	-90
ZP11	1650	1000	364397	5356511	2.8	0	-90
ZP12	1675	1000	364400	5356536	29.2	0	-90
ZP13	1700	1000	364403	5356561	12.0	0	-90
ZP14	1725	1000	364406	5356585	15.0	0	-90
ZP15	1500	1100	364279	5356375	8.5	0	-90
ZP16	1525	1100	364282	5356400	15.1	0	-90
ZP17	1550	1100	364285	5356424	4.5	0	-90
ZP18	1575	1100	364288	5356449	6.3	0	-90
ZP19	1600	1100	364291	5356474	12.5	0	-90
ZP20	1625	1100	364294	5356499	13.6	0	-90
ZP21	1650	1100	364297	5356524	18.0	0	-90
ZP22	1675	1100	364300	5356548	12.0	0	-90
ZP23	1700	1100	364303	5356573	8.0	0	-90
ZP24	1725	1100	364306	5356598	10.0	0	-90
ZP25	1750	1100	364309	5356623	10.0	0	-90
ZP26	1600	1185	364192	5356471	9.0	0	-90
ZP27	1625	1185	364195	5356496	5.5	0	-90
ZP28	1650	1185	364198	5356521	21.0	0	-90
ZP29	1675	1185	364201	5356545	33.6	0	-90
ZP30	1700	1185	364204	5356570	10.0	0	-90

## ROCKCHIP AND DRILLING CODES

17/2/93

## BMRLITH

Rock code as per published geological map  
For time designation use:-

Q	Quaternary	M	Permian	P	Proterozoic
T	Tertiary	C	Carboniferous	A	Archaean
X	Cretaceous	S	Silurian		
R	Triassic	D	Devonian		
J	Jurassic	O	Ordovician		
		E	Cambrian		

## FIELD ID

Field term for rock type  
Broad groupings are:-

S	Sedimentary	I	Intrusive	C	Surficial
M	Metamorphic	E	Extrusive	O	Others

## SEDIMENTARY

Scg	Conglomerate	Sls	Limestone
Sss	Sandstone	Sch	Chert
Ssi	Siltstone	Sif	BIF
Ssh	Shale		
Sbs	Black shale	Sbx	Breccia

## METAMORPHIC

Msl	Slate	Mq	Quartzite
Mph	Phyllite	Mm	Marble
Msc	Schist	Ma	Amphibolite
Mbs	Graphitic schist	Mcs	Calcsilicate
Mgn	Gneiss	Mh	Hornfels

## INTRUSIVE IGNEOUS

If	Felsic undiff.	Ii	Intermed undiff.	Iu	Ultramafic
Ifp	Felsic porphyry	Iip	Intermed porph	Ius	Serpentinite
Iap	Aplite	Im	Mafic undiff.	Ipg	Pegmatite
Igr	Granite	Ide	Dolerite		
Igd	Granodiorite	Igb	Gabbro		

## EXTRUSIVE IGNEOUS

Ery	Rhyolite	Ean	Andesite	Et	Tuff undiff
Edc	Ocrite	Eb	Basalt	Eft	Felsic tuff
				Emt	Mafic tuff

## SURFICIAL (COVER) MATERIAL

Ca	Alluvium	Clt	Laterite	Csg	Gossan
Cco	Colluvium	Csp	Pisolites	Ccy	Clay
Cs	Sand	Cst	Ironstone	Cv	Vegetation/beat
Cbs	Black soil	Csl	Silcrete		
Cg	Gravel	Ccl	Calcrete		

## OTHERS

Ovq	Vein quartz	Omy	Mylonite	Oms	Massive sulphide
Ovc	Vein carbonate	Obx	Breccia	Ox	Unknown
Ovs	Vein sulphide	Of	Fault gouge		

## TEXTURAL CODES

## WEATHERING/SURFICIAL FEATURES

We	Weathered	Fs	Ferruginous
Bl	Bleached	Fo	Fe ox in fract
Le	Leached		

## MINERALISATION/ALTERATION FEATURES

Gs	Gossanous	Vs	Vein sulphide	Al	Altered
Vn	Veined	Cs	Dissem sulph	Sl	Silicified
Di	Disseminated	Fs	Fracture sulph		
		Bs	Banded sulph		

## GEOLOGICAL FEATURES

Bd	Bedded	Fr	Fractured	Po	Porphyritic
Bn	Banded	Ib	Interbedded	Sc	Schistose
Bx	Brecciated	Lm	Laminated	Sh	Sheared
Fi	Fissile (slaty)	Ma	Massive	Vu	Vuggy

## DIAGNOSTIC MINERALOGY

## PRIMARY MINERALISATION

Ga	Galena	Py	Pyrite	Ni	Ni sulphides
Sp	Sphalerite	Po	Pyrrhotite		
Cp	Chalcopyrite	Su	Unknown sulph		

## SECONDARY MINERALISATION

Ls	Lead secondaries	Cs	Copper sec.	Ni	Ni secondaries
Zs	Zinc	Us	Uranium		

## ALTERATION/DIAGNOSTIC MINERALS

Cy	Clay	He	Haematite	Gt	Garnet
Ep	Epidote	Mt	Magnetite	Ky	Kyanite
Cc	Carbonate	Js	Jarosite	To	Tourmaline
Sd	Siderite	Mh	Manganese mins		

## COLOUR CODES

L	Light	A	Banded	M	Mottled
D	Dark				
N	Black	P	Purple	V	Green
G	Gray	R	Red	X	Pink
B	Brown	O	Orange	E	Blue
W	White	Y	Yellow	S	Silver

PYRAMID AIR-CORE DRILLING DATABASE - DRILLING LOGS AND ASSAYS															
Database last updated 7/6/93															
Results in ppm (Fe in %)															
HOLE	DFROM	DTO	SAMPNO	DPO	BMLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	Cu	Pb	Zn	Ag	Fe%	Mn
ZP1	0.0	2.0	3523850	71532	QhaOg	CgCcy			LB	9	34	54	-1	0.84	42
ZP1	2.0	3.7	3523851	71532	Og	CcySls			BN	14	47	89	-1	1.09	39
ZP2	0.0	2.0	3523852	71532	Qha	CgCcy			LB	6	42	24	-1	0.68	44
ZP2	2.0	4.0	3523853	71532	Qha	Cg				7	55	51	-1	0.99	59
ZP2	4.0	6.0	3523854	71532	Qha	Cg				9	74	62	-1	1.06	72
ZP2	6.0	8.0	3523855	71532	QhaOg	CgCcy			G	22	269	6800	-1	1.75	131
ZP2	8.0	10.0	3523856	71532	Og	SlsCcy			G	21	188	1991	-1	2.53	106
ZP2	10.0	11.0	3523857	71532	Og	SlsCcy			G	9	32	123	-1	1.54	254
ZP3	0.0	2.0	3523858	71532	Qha	CgCcy			B	10	39	46	1	0.54	54
ZP3	2.0	4.0	3523859	71532	Og	SlsCcy			NGB	25	159	340	2	0.62	41
ZP3	4.0	6.0	3523860	71532	Og	SlsCcy			NVB	13	90	368	-1	2.95	338
ZP3	6.0	7.5	3523861	71532	Og	SlsCcy			GN	6	84	385	-1	1.27	346
ZP4	0.0	2.0	3523862	71532	Qha	CvCgCcy				10	59	137	-1	0.92	59
ZP4	2.0	4.0	3523863	71532	Og	SlsCcy			NGB	8	404	1094	1	1.33	485
ZP5	0.0	2.0	3523864	71532	QhaOg	CgCcy			G	6	78	176	-1	0.82	95
ZP5	2.0	4.0	3523865	71532	QhaOg	CgCcy			GN	12	110	250	-1	1.3	88
ZP5	4.0	6.0	3523866	71532	Og	Ccy			GN	14	121	330	-1	1.64	115
ZP5	6.0	6.7	3523867	71532	Og	SlsCcy			GN	5	79	895	-1	0.74	359
ZP6	0.0	2.0	3523868	71532	Qha	CvCcy			B	13	99	109	-1	0.71	110
ZP6	2.0	4.0	3523869	71532	QhaOg	CgCcy			GB	11	359	1631	1	2.55	556
ZP6	4.0	6.0	3523870	71532	Og	SlsCcy			VB	5	262	1162	1	0.92	451
ZP6	6.0	8.0	3523871	71532	Og	SlsCcy			VB	15	482	7400	3	2.67	1313
ZP6	8.0	8.5	3523872	71532	Og	SlsCcy			VN	7	285	2297	1	1.46	618
ZP7	0.0	2.0	3523873	71532	Qha	CvCcy			B	5	113	264	-1	0.7	72
ZP7	2.0	4.0	3523874	71532	QhaOg	CgCcy			VB	11	117	685	-1	1.63	101
ZP7	4.0	4.9	3523875	71532	QhaOg	CgSls			GN	10	362	1849	-1	1.89	119
ZP8	0.0	2.0	3523876	71532	Qha	CvCg				8	42	55	-1	0.95	65
ZP8	2.0	4.0	3523877	71532	QhaOg	CgCcy			GB	23	700	4353	1	2.49	75
ZP8	4.0	6.0	3523878	71532	Og	SlsCcy			GN	10	275	1260	-1	3.06	552
ZP8	6.0	7.3	3523879	71532	Og	SlsCcy			GN	7	295	1769	-1	1.75	716

HOLE	DFROM	DTO	SAMPNO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	Cu	Pb	Zn	Ag	Fe%	Mn
ZP9	0.0	2.0	3523880	71532	Qha	Ccy			LB	7	52	37	-1	0.52	34
ZP9	2.0	4.0	3523881	71532	Qha	Cg				9	52	86	-1	1.05	66
ZP9	4.0	6.0	3523882	71532	Og	SlsCcy			GN	21	332	1175	-1	2.27	48
ZP9	6.0	8.0	3523883	71532	Og	SlsCcy			GN	22	117	561	-1	2.32	55
ZP9	8.0	10.0	3523884	71532	Og	SlsCcy			GN	22	227	739	-1	2.61	297
ZP9	10.0	12.0	3523885	71532	Og	SlsCcy			GN	23	296	944	-1	2.59	197
ZP9	12.0	14.0	3523886	71532	Og	Sls				5	187	564	-1	1.75	553
ZP9	14.0	14.6	3523887	71532	Og	Sls				5	297	982	-1	1.23	398
ZP10	0.0	2.0	3523888	71532	Qha	Ccy			LB	7	53	58	-1	0.65	43
ZP10	2.0	4.0	3523889	71532	Qha	Cg				9	86	57	-1	1.12	72
ZP10	4.0	6.0	3523890	71532	Sa?	SlsCcy			GB	16	76	299	-1	1.3	54
ZP10	6.0	7.6	3523891	71532	Sa?	SlsCcy			GN	19	90	810	-1	1.62	34
ZP11	0.0	2.0	3523892	71532	QhaSa?	CgCcy			YB	14	77	90	-1	1.58	65
ZP11	2.0	2.8	3523893	71532	Sa?	Sls			G	10	74	63	-1	1.24	68
ZP12	0.0	2.0	3523894	71532	Qha	CvCg				10	27	35	-1	0.49	37
ZP12	2.0	4.0	3523895	71532	Sa?	SlsCcy			G	27	76	238	-1	3.02	86
ZP12	4.0	6.0	3523896	71532	QhaSa?	CgSls				16	63	96	-1	0.98	56
ZP12	6.0	8.0	3523897	71532	Sa?	SlsCcy			GN	23	45	170	-1	2.81	82
ZP12	8.0	10.0	3523898	71532	Sa?	SlsCcy			G	25	44	157	-1	2.5	74
ZP12	10.0	12.0	3523899	71532	Sa?	SlsCcy			G	37	17	131	-1	1.2	29
ZP12	12.0	14.0	3523900	71532	Sa?	SlsCcy			G	34	10	65	-1	1.31	31
ZP12	14.0	16.0	3523901	71532	Sa?	SlsCcy			G	26	15	94	-1	1.16	30
ZP12	16.0	18.0	3523902	71532	Sa?	SlsCcy			G	21	15	127	-1	1.16	33
ZP12	18.0	20.0	3523903	71532	Sa?	SlsCcy			G	22	16	117	-1	1.81	151
ZP12	20.0	22.0	3523904	71532	Sa?	SlsCcySsh			G	22	28	122	-1	2.23	247
ZP12	22.0	24.0	3523905	71532	Sa?	SlsCcySsh			G	20	33	125	-1	4.05	1128
ZP12	24.0	26.0	3523906	71532	Sa?	SlsCcySsh			G	29	23	96	-1	1.8	177
ZP12	26.0	28.0	3523907	71532	Sa?	SlsCcySsh			G	55	83	303	-1	2.06	281
ZP12	28.0	29.2	3523908	71532	Sa?	SlsCcy	Vn	Cc	G	15	48	137	-1	2.18	399
ZP13	0.0	2.0	3523909	71532	Qha	CgCv				14	142	105	-1	1.36	101
ZP13	2.0	4.0	3523910	71532	QhaSa?	CgSlsCcy				23	54	134	-1	3.14	133
ZP13	4.0	6.0	3523911	71532	Sa?	Sls			G	30	28	155	-1	3.98	124
ZP13	6.0	8.0	3523912	71532	Sa?	Sls			G	35	29	166	-1	3.98	110
ZP13	8.0	10.0	3523913	71532	Sa?	Sls			G	24	32	210	-1	4.15	104
ZP13	10.0	12.0	3523914	71532	Sa?	Sls			G	19	54	187	-1	3.75	94

HOLE	DFROM	DTO	SAMPNO	DPO	BMLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	Cu	Pb	Zn	Ag	Fe%	Mn
ZP14	4.0	6.0	3523917	71532	Sa	Ssh	We		V	24	12	152	-1	3.8	147
ZP14	6.0	8.0	3523918	71532	Sa	Ssh	We		V	24	16	127	-1	3.58	117
ZP14	8.0	10.0	3523919	71532	Sa	Ssh	We		V	32	44	203	-1	3.38	151
ZP14	10.0	12.0	3523920	71532	Sa	Ssh	We		V	26	64	254	-1	3.27	65
ZP14	12.0	14.0	3523921	71532	Sa	Ssh	We		V	20	63	226	-1	3.62	170
ZP14	14.0	15.0	3523922	71532	Sa	Ssh	WeVn		V	24	25	153	-1	3.06	95
ZP15	0.0	2.0	3523923	71532	Qha	CgCv				10	42	116	-1	1.83	99
ZP15	2.0	4.0	3523924	71532	QhaOg	CgCcy			VB	28	273	880	-1	1.49	59
ZP15	4.0	6.0	3523925	71532	Og	SlsCcy			NVB	13	346	2542	-1	3.05	234
ZP15	6.0	8.0	3523926	71532	Og	SlsCcy			NVB	15	345	2126	-1	1.89	210
ZP15	8.0	8.5	3523927	71532	Og	SlsCcy			N	4	50	330	-1	0.96	162
ZP16	0.0	2.0	3523928	71532	Qha	CgCv				5	47	104	-1	0.76	62
ZP16	2.0	4.0	3523929	71532	QhaOg	CgCcy			VB	24	752	1117	1	1.28	37
ZP16	4.0	6.0	3523930	71532	Og	Ccy			VB	24	4400	7300	4	2.45	54
ZP16	6.0	8.0	3523931	71532	Og	Ccy			VB	18	678	2921	1	3.11	186
ZP16	8.0	10.0	3523932	71532	Og	CcySls			VB	19	2400	6500	3	2.67	55
ZP16	10.0	12.0	3523933	71532	Og	CcySss			VB	11	297	1044	1	0.95	42
ZP16	12.0	14.0	3523934	71532	Og	CcySss			VB	19	554	1320	1	1.77	38
ZP16	14.0	15.1	3523935	71532	Og	CcySls			VB	10	103	744	-1	1.96	288
ZP17	0.0	2.0	3523936	71532	Qha	CgCvCcy			LB	6	78	161	-1	0.41	20
ZP17	2.0	4.0	3523937	71532	Og	SlsCcy			NGB	10	51	227	-1	1.59	301
ZP17	4.0	4.5	3523938	71532	Og	SlsCcy			NGB	8	14	76	-1	1.4	390
ZP18	0.0	2.0	3523939	71532	Qha	CgCvCcy			LB	9	45	80	-1	0.89	95
ZP18	2.0	4.0	3523940	71532	Qha	Cg				6	49	159	-1	0.97	77
ZP18	4.0	6.0	3523941	71532	Og	SlsCcy			G	7	73	123	-1	1.07	293
ZP18	6.0	6.3	3523942	71532	Og	Sls			G	5	111	435	-1	0.79	319
ZP19	0.0	2.0	3523943	71532	Qha	CvCcy			LB	6	41	65	-1	0.42	68
ZP19	2.0	4.0	3523944	71532	Og	Ccy			VB	12	246	306	-1	0.64	53
ZP19	4.0	6.0	3523945	71532	Og	SlsCcy			GB	54	9900	41200	8	1.98	1099
ZP19	6.0	8.0	3523946	71532	Og	Sls			GN	15	878	4852	2	1.84	581
ZP19	8.0	10.0	3523947	71532	Og	Sls			GN	10	794	2641	1	1.66	556
ZP19	10.0	12.0	3523948	71532	Og	SlsSsi				7	364	2238	-1	1.81	560
ZP19	12.0	12.5	3523949	71532	Og	SlsSsi				6	136	1088	-1	1.15	358
ZP20	0.0	2.0	3523950	71532	Qha	CgCcy			Y	19	33	82	-1	1	31
ZP20	2.0	4.0	3523951	71532	Og	SlsCcy			G	17	87	516	-1	1.31	27
ZP20	4.0	6.0	3523952	71532	Og	SlsSsh			GN	17	331	754	-1	2.12	32
ZP20	6.0	8.0	3523953	71532	Og	SlsSsh			GN	22	347	1190	1	2.36	39
ZP20	8.0	10.0	3523954	71532	Og	SlsSsh			GN	25	524	2360	2	2.22	45
ZP20	10.0	12.0	3523955	71532	Og	SlsSshCcy			VB	99	3400	8400	7	4.62	37
ZP20	12.0	13.6	3523956	71532	Og	Sls			GN	14	388	1023	-1	1.86	405

HOLE	DFROM	DTO	SAMPNO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	Cu	Pb	Zn	Ag	Fe%	Mn
ZP21	4.0	6.0	3523959	71532	QhaSa?	CgCcy			VB	9	450	840	1	2.52	34
ZP21	6.0	8.0	3523960	71532	Sa?	Sls				14	116	294	-1	1.89	31
ZP21	8.0	10.0	3523961	71532	Sa?	Sls				12	101	322	-1	1.45	24
ZP21	10.0	12.0	3523962	71532	Sa?	SlsSsh				13	45	321	-1	9.49	2428
ZP21	12.0	14.0	3523963	71532	Sa?	SlsSsh				16	57	455	-1	2.15	83
ZP21	14.0	16.0	3523964	71532	Sa?	SlsSsh				20	82	463	-1	1.71	49
ZP21	16.0	18.0	3523965	71532	Sa?	SlsSsh				16	32	288	-1	3.2	646
ZP22	0.0	2.0	3523966	71532	Qha	CgCv				12	43	48	-1	0.76	51
ZP22	2.0	4.0	3523967	71532	QhaSa?	CgSlsSsh				15	42	88	-1	2.62	71
ZP22	4.0	6.0	3523968	71532	Sa?	SlsSsh				25	38	91	-1	2.96	85
ZP22	6.0	8.0	3523969	71532	Sa?	SlsSsh				30	46	159	-1	3.48	73
ZP22	8.0	10.0	3523970	71532	Sa?	SlsSsh				28	22	137	-1	3.24	73
ZP22	10.0	12.0	3523971	71532	Sa?	SlsSsh				27	25	162	-1	3.51	75
ZP23	0.0	2.0	3523972	71532	QhaSa?	CgCcy			LB	13	100	80	-1	0.74	37
ZP23	2.0	4.0	3523973	71532	QhaSa?	CgSlsSsh			GN	18	66	161	-1	2.37	62
ZP23	4.0	6.0	3523974	71532	Sa?	SlsSsh			GN	34	30	210	-1	3.21	79
ZP23	6.0	8.0	3523975	71532	Sa?	SlsSsh			GN	27	30	238	-1	3.42	86
ZP24	0.0	2.0	3523976	71532	Qha	CgCvCcy			LB	14	101	104	-1	1.07	53
ZP24	2.0	4.0	3523977	71532	QhaSa?	CgSlsSsh				24	59	142	-1	2.59	79
ZP24	4.0	6.0	3523978	71532	Sa?	SlsSsh				17	14	116	-1	3.67	90
ZP24	6.0	8.0	3523979	71532	Sa?	SlsSsh				21	16	133	-1	3.64	108
ZP24	8.0	10.0	3523980	71532	Sa?	SlsSsh				26	17	130	-1	3.93	110
ZP25	0.0	2.0	3523981	71532	Qha	CgCcy			LB	12	87	44	1	0.55	28
ZP25	2.0	4.0	3523982	71532	Qha	Cg				12	107	85	-1	1.47	89
ZP25	4.0	6.0	3523983	71532	Sa?	SlsSsh				42	72	391	-1	2.91	68
ZP25	6.0	8.0	3523984	71532	Sa?	SlsSsh				22	25	171	-1	2.84	75
ZP25	8.0	10.0	3523985	71532	Sa?	SlsSsh				22	35	183	-1	2.9	62
ZP26	0.0	2.0	3523986	71532	Qha	CgCv				12	80	59	-1	0.77	38
ZP26	2.0	4.0	3523987	71532	Og	Ccy			VB	29	505	1202	2	1.07	16
ZP26	4.0	6.0	3523988	71532	Og	CcySls			VBN	33	652	2986	3	2.38	284
ZP26	6.0	8.0	3523989	71532	Og	SlsSsh				9	123	517	1	1.6	561
ZP26	8.0	9.0	3523990	71532	Og	SlsSsh				6	121	701	-1	1.64	558
ZP27	0.0	2.0	3523991	71532	Qha	Cg				15	66	82	-1	1.14	74
ZP27	2.0	4.0	3523992	71532	QhaOg	CgCcy			GB	23	927	876	3	1.48	54
ZP27	4.0	5.5	3523993	71532	Og	Sls				9	270	775	1	1.05	489

HOLE	DFROM	DTO	SAMPNO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	Cu	Pb	Zn	Ag	Fe%	Mn
ZP28	4.0	6.0	3523995	71532	QhaOg	CgCcy			LB	24	30	52	-1	0.68	13
ZP28	6.0	8.0	3523996	71532	QhaOg	CgSlsSsh			LB	20	21	54	1	0.56	12
ZP28	8.0	10.0	3523997	71532	Og	SlsSsh			GN	20	123	307	-1	1.22	20
ZP28	10.0	12.0	3523998	71532	Og	SlsSsh				19	59	616	-1	1.78	16
ZP28	12.0	14.0	3523999	71532	Og	SlsSsh				21	57	373	-1	1.38	24
ZP28	14.0	16.0	3524000	71532	Og	SlsSsh				16	27	334	-1	1.17	14
ZP28	16.0	18.0	3527601	71532	Og	SlsSsh				17	25	253	-1	1.39	17
ZP28	18.0	21.0	3527602	71532	Og	SlsSsh				16	44	184	-1	1.42	18
ZP29	0.0	2.0	3527603	71532	Qha	Cg				12	37	51	-1	0.68	17
ZP29	2.0	4.0	3527604	71532	QhaOg	CgSlsSsh				27	541	921	1	1.44	42
ZP29	4.0	6.0	3527605	71532	Og	SlsSsh				25	179	348	1	1.66	25
ZP29	6.0	8.0	3527606	71532	Og	SlsSsh				26	263	660	1	1.55	29
ZP29	8.0	10.0	3527607	71532	Og	SlsSsh				21	138	236	1	1.93	31
ZP29	10.0	12.0	3527608	71532	Og	SlsSsh				26	529	1380	1	1.9	40
ZP29	12.0	14.0	3527609	71532	Og	SlsSsh				16	103	187	-1	1.5	24
ZP29	14.0	16.0	3527610	71532	Og	SlsCcy				24	197	206	1	1.8	43
ZP29	16.0	18.0	3527611	71532	Og	SlsCcy				23	225	594	1	2.34	44
ZP29	18.0	20.0	3527612	71532	Og	CcySlsSsh			GB	49	318	1482	2	2.84	28
ZP29	20.0	22.0	3527613	71532	Og	CcySlsSsh			GB	30	375	2550	2	2.68	30
ZP29	22.0	24.0	3527614	71532	Og	CcySlsSsh			GB	22	314	1834	2	1.98	38
ZP29	24.0	26.0	3527615	71532	Og	SlsSsh				18	213	516	-1	1.15	38
ZP29	26.0	28.0	3527616	71532	Og	SlsSsh				22	319	1605	1	1.64	40
ZP29	28.0	30.0	3527617	71532	Og	SlsSsh				21	195	773	1	1.63	47
ZP29	30.0	32.0	3527618	71532	Og	SlsSsh				21	64	281	-1	1.54	46
ZP29	32.0	33.6	3527619	71532	Og	SlsSsh				18	50	618	-1	1.44	41
ZP30	0.0	2.0	3527620	71532	Qha	CgCs				14	82	68	-1	2	71
ZP30	2.0	4.0	3527621	71532	QhaSa?	CgSlsSsh				15	81	139	-1	1.75	67
ZP30	4.0	6.0	3527622	71532	Sa?	SlsSsh				14	55	143	-1	2.59	192
ZP30	6.0	8.0	3527623	71532	Sa?	SlsSsh				15	106	171	-1	2.93	265
ZP30	8.0	10.0	3527624	71532	Sa?	SlsSsh				28	58	179	-1	3.9	554

PYRAMID PROSPECT - MULTI-ELEMENT GEOCHEMISTRY FOR HIGH ZINC SAMPLES														
Results in ppm except C-Fe-S (in %)				DPO 77107										
HOLE	DFROM	DTO	SAMPNO	Ag	Al	As	Au	Ba	Bi	C%	Ca	Cd	Co	Cr
ZP19	4.0	6.0	3523945	8	21100	30	-0.008	125	-10	8.1	130000	210	16	95
				Cu	Fe%	K	Mg	Mn	Mo	Na	Ni	P	Pb	S%
				54	1.98	8070	63700	1099	-10	154	44	178	9900	3.25
				Sb	Sn	V	Zn							
				28	7	30	41200							

APPENDIX 11:  
FIREWOOD SIDING PROSPECT WACKER SAMPLING LEDGERS AND  
GEOCHEMISTRY.

APPENDIX 11. FIREWOOD SIDING PROSPECT. WACKER SAMPLING LEDGER AND GEOCHEMISTRY

FIREWOOD SIDING (NORTH). WACKER SAMPLING LEDGER																			
Results in ppm except Fe (in %).																	DPO 71545		
SAMPNO	LOCALE	LOCALN	AMGE	AMGN	DEPTH	BEDROCK?	BMLRUTH	FIELDID	TEXTURE	ALT/MIN	COLOUR	Ag	As	Cu	Fe%	Pb	Zn	COMMENTS	
3528566	59500	44800	361067	5350503	5.5	Y	Sc	Mq			LG	-1	3	5	0.42	7	16	Logged by Mike.	
3528567	59500	44775	361042	5350499	4.5	N	Q	Ccy			LB	-1	2	5	0.65	22	30	Logged by Mike.	
3528568	59500	44750	361017	5350496	0.7	Y	Sc	Mq			LG	-1	2	4	0.19	-3	11	Logged by Mike.	
3528569	59500	44725	360993	5350492	5	Y	OgSc?	SisMq?			DB	-1	26	23	1.1	593	617	Logged by Mike.	
3528570	59500	44700	360968	5350489	2.5	Y	OgSc?	SisMq?			DB	-1	2	4	0.2	18	9	Logged by Mike.	
3528571	59500	44675	360943	5350485	11.5	N	Q	Ccy			DG	-1	3	6	2.1	379	302	Logged by Mike.	
3528572	59500	44650	360918	5350482	3.5	?	Sc	Mq			WLB	-1	1	8	0.58	30	29	Logged by Mike.	
3528573	59500	44625	360894	5350478	2.5	Y	Sc	Mq			WLB	-1	1	6	0.33	20	12	Logged by Mike.	
3528574	59500	44600	360869	5350475	11.5	Y	Sc	Mq			G	-1	250	27	1.66	2724	4833	Logged by Mike.	
3528575	59500	44575	360844	5350471	8	Y	Sc	Mq			LGB	-1	130	17	2.05	1017	35	Logged by Mike.	
3528576	59500	44550	360819	5350468	2	Y	Sc	Mq			WLB	-1	2	5	0.33	11	17	Logged by Mike.	
3528577	59600	44800	361081	5350404	7.5	?	Og?	SshCcy	Ds	Py	DBN	-1	240	1043	1.62	23400	1239	Logged by Mike.	
3528578	59600	44775	361058	5350400	6	?	Og?	Sis?			LGB	-1	2	10	0.49	122	24	Logged by Mike.	
3528579	59600	44750	361031	5350397	5.5	?	Og?	SshCcy			WKR	-1	5	10	0.98	263	593	Logged by Mike.	
3528580	59600	44725	361007	5350393	5	Y	Og	Sis			G	-1	4	3	0.49	52	122	Logged by Mike.	
3528581	59600	44700	360982	5350390	10	Y	Og	Sis			WLB	-1	6	2	0.22	330	254	Logged by Mike.	
3528582	59600	44675	360957	5350386	9	N	Q	Ccy			BN	-1	33	13	1.31	346	552	Logged by Mike.	
3528583	59600	44650	360932	5350383	6.3	?	Og?	SisCcy	Ds	Py	DG	-1	38	24	2.4	345	1119	Logged by Mike.	
3528584	59600	44625	360908	5350379	8.5	Y	Og	Sis			B	-1	5	13	0.53	50	18	Logged by Mike.	
3528585	59600	44600	360883	5350376	8.5	?	Og?	SisCcy	Ds	Py	DBN	-1	400	67	1.93	8100	5700	Logged by Mike.	
3528586	59600	44575	360858	5350372	3.5	?	Sc?	MqCcy			DBLG	-1	1	5	0.43	19	13	Logged by Mike.	
3528587	59600	44550	360833	5350369	3.5	?	Og?	Sis?			ABDB	-1	30	21	0.76	1409	1789	Logged by Mike.	
3528588	59600	44525	360809	5350365	2.5	?	Og?	Sis?			ABDB	-1	4	5	0.51	38	30	Logged by Mike.	
3528589	59600	44500	360784	5350362	5.5	?	Og?	Sis?			ABDB	-1	11	116	0.57	2554	880	Logged by Mike.	
3528590	59800	44800	361109	5350206	15	N	Q	Ccy			G	-1	7	15	0.72	267	150	Logged by Mike.	
3528591	59800	44775	361084	5350202	1	Y	Og	Sis			WLG	-1	2	4	0.59	40	20	Subcrop?	
3528592	59800	44750	361059	5350199	6.8	Y	Og	Sis			WG	-1	2	-2	0.4	7	12	Logged by Mike.	
3528593	59800	44725	361034	5350195	2	Y	Dg	Sis			DG	-1	4	4	1.12	37	76	Logged by Mike.	
3528594	59800	44700	361010	5350192	5.2	Y	Og	Sis			G	-1	5	7	1.27	19	70	Logged by Mike.	
3528595	59800	44675	360985	5350188	6.2	Y	Og	Sis			DG	-1	3	2	0.58	8	28	Logged by Mike.	
3528596	59800	44650	360960	5350185	2.8	Y	Og	Sis			G	-1	4	5	0.97	21	102	Logged by Mike.	
3528597	59800	44625	360935	5350181	4.5	?	Og?	SisCcy			DGB	-1	3	12	0.68	352	238	Logged by Mike.	
3528598	59800	44600	360911	5350178	7.8	Y	Og	Sis			LBG	-1	7	7	0.26	321	558	Logged by Mike.	
3528599	59800	44575	360886	5350174	14	Y	Og	Sis			G	-1	7	3	0.97	176	175	Logged by Mike.	
3528600	59800	44375	360688	5350146	11.2	N	Q	Ccy			LGLB	-1	6	28	0.43	350	39	Logged by Mike.	
3529912	59800	44550	360861	5350171	13	N	Q	Ccy			DG	-1	24	59	1.65	482	778	Logged by Mike.	
3529913	59800	44525	360836	5350167	11	Y	Og	Sis			DG	-1	8	7	1.07	147	349	Logged by Mike.	
3529914	59800	44500	360812	5350164	20.5	Y	Og	Sis			DG	-1	6	3	0.9	1013	1308	Logged by Mike.	
3529915	59800	44475	360787	5350160	1.5	N	Q	Cg			LG	-1	-1	4	0.34	5	10	Logged by Mike.	
3529916	59800	44450	360762	5350157	7.8	?	Og?	SisCcy			DBDG	-1	480	31	2.43	1103	4980	Logged by Mike.	
3529917	59800	44425	360737	5350153	7.8	N	Q	Ccy			DG	-1	2	5	0.51	21	53	Logged by Mike.	
3529918	59800	44400	360713	5350150	9	N	Q	Ccy			LBG	-1	430	92	2.17	5600	6900	Logged by Mike.	
3529919	60000	44800	361137	5350007	2.5	N	Q	Ccy			LBG	-1	11	5	0.44	139	395	Logged by Mike.	
3529920	60000	44775	361112	5350004	3	Y	Og	Sis	Vn	Cc	DG	-1	2	3	0.63	123	149	Logged by Mike.	
3529921	60000	44750	361087	5350000	19.2	Y	Og	Sis	Vn	Cc	G	-1	15	2	0.95	9	32	Logged by Mike.	

**Appendix 7**

**Rockchip and Wacker Sampling Ledgers and Geochemistry  
Myrtle Prospect**

APPENDIX 7: Myrtle prospect. Rockchip and wacker bedrock sampling ledger and geochemistry.													
DPO 77120 are ROCK samples													
DPO 77673 are WACKER samples													
Sampno	DPO	LocalE	LocalN	AMGE	AMGN	Depth	Bedrock?	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
3908219	77120			364660	5352040			Og	Ccy			DGN	Road cutting
3908220	77120			364685	5352036			Og	Ccy			DGN	Road cutting
3908221	77120			364709	5352031			Og	Ccy			DGN	Road cutting
3908222	77120			364734	5352027			Og	Ccy			DGN	Road cutting
3908223	77120			364758	5352022			Og	Ccy			DGN	Road cutting
3908224	77120			364783	5352018			Og	Ccy			DGN	Road cutting
3908225	77120			364807	5352013			Og	Ccy			DGN	Road cutting
3908226	77120			364832	5352009			Og	Ccy			DGN	Road cutting
3908227	77120			364856	5352004			Og	Ccy			DGN	Road cutting
3908228	77120			364881	5352000			Og	Ccy			DGN	Road cutting

APPENDIX 7: Myrtle prospect. Rockchip and wacker bedrock sampling ledger and geochemistry.										
DPO 77120 are ROCK samples										
DPO 77673 are WACKER samples										
Sampno	AMGE	AMGN	FieldID	Ag ppm	As ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	Zn ppm
3908219	364660	5352040	Coy	-1		130	1.20	25	69	18
3908220	364685	5352038	Coy	-1		27	0.98	31	97	22
3908221	364709	5352031	Coy	-1		54	1.08	42	33	34
3908222	364734	5352027	Coy	-1		53	1.85	78	22	29
3908223	364758	5352022	Coy	-1		9	1.13	18	128	17
3908224	364783	5352018	Coy	1		9	1.63	44	59	798
3908225	364807	5352013	Coy	-1		20	2.56	23	136	74
3908226	364832	5352009	Coy	-1		3	0.75	19	55	15
3908227	364856	5352004	Coy	-1		10	1.65	21	100	21
3908228	364881	5352000	Coy	-1		17	2.16	26	55	30

Sampno	DPO	LocalE	LocalN	AMGE	AMGN	Depth	Bedrock?	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
3989271	77673	60750	49250	364681	5351056	3.5	Y	Og	CcyOvq			DG	Very hard basement, Ccy sample possible only.
3989272	77673	60777	49245	364708	5351052	3.0	Y	Og	Sls	We		DB/N	Peaty Sls, lesser sandy bands, former oolite-rich co3?
3989273	77673	60800	49250	364731	5351057	11.5	N	Og	Ccy			DG	Plastic clay, very hard basement.
3989274	77673	60825	49250	364758	5351058	1.9	Y	Og	Sls	Fe		RBDB/N	Ferrug Sls containing fine gr. sand. Former oolitic co3?
3989275	77673	60850	49250	364781	5351058	1.3	Y	Om	Sss			W	Medium-grained quartzarenite.
3989276	77673	60650	49400	364578	5351204	5.7	Y	Og	Sls	Lm		DB/DG	Fine lam calcilutite, minor graphitic surfaces.
3989277	77673	60675	49400	364603	5351205	10.0	Y	Og	CcySls	We		DG/N	Peaty, carbonaceous clay, str-We Sls.
3989278	77673	60700	49400	364628	5351205	8.3	N	Og	CcyCg			DB/N	Cavity? encountered, contained Sss gravels.
3989279	77673	60725	49400	364653	5351206	7.3	Y	Og	SlsOvc			LG/W	Unaltered limestone, minor calcite veining.
3989280	77673	60750	49400	364678	5351206	2.9	Y	Og	Sls	Al	Hm	LK/W	Moderate, pervasive hematite altered oolitic carbonate.
3989281	77673	60775	49400	364703	5351207	1.1	Y?	Og	CcySls			DG	Hard basement 1m below swampy ground=> poor sample.
3989282	77673	60800	49400	364728	5351207	2.2	Y	Og	SlsOvc	We		DG/W	Minor oolite sand content.
3989283	77673	60825	49400	364753	5351208	2.0	Y?	Og	CcySls			DG	Minor indurated Sls frags present, very hard basement.
3989284	77673	60850	49400	364778	5351208	5.5	Y	Og	Sls	WeAl	Sd	DG/GB	Weak patchy sid altd Sls.
3989285	77673	60875	49400	364803	5351208	5.0	Y	Og	Sls	Lm		DG/LG	Laminated, friable Sls.
3989286	77673	60900	49400	364828	5351209	1.5	Y	Om	Sss	Fe		DB	Ferruginous quartzarenite.
3989287	77673	60825	49600	364750	5351408	4.5	Y	Og	Sls	Fe		DB/N	Carbonaceous, peaty Sls with sand grains: former oolites?
3989288	77673	60850	49600	364775	5351408	5.0	Y	Og	SlsSss	Lm		DG/LB	Lesser sandy interbeds: gradational contact with Moina Sss
3989289	77673	60875	49606	364800	5351414	4.4	Y	Og	SlsSss			DB/DG	Lesser sandy interbeds, minor graphitic shear surfaces
3989290	77673	60900	49608	364824	5351417	1.5	Y	Og	SlsCcy	Bn		DG/LB	Lesser black peaty We Sls.
3989291	77673	60925	49600	364850	5351409	1.0	Y	Om	SssCcy			DB/LB	Sandy Ccy, weathered product of Sss near surface.
3989292	77673	60625	49800	364546	5351604	5.7	Y	Og	Sls	LmFe		DB/LB/N	Weakly ferrug. Sls.
3989293	77673	60650	49800	364571	5351604	6.6	Y	Og	Sls		He	LM	Weakly hematitic recrystallised dolomitic-oolitic? CO3.
3989294	77673	60675	49800	364596	5351605	1.5	N	Og	CcySss			DB/LB	Sandy Ccy, lesser black Ccy, near grad. contact with Om.
3989295	77673	60700	49800	364621	5351605	2.5	Y	Om	Sss			W	Medium gr. quartzarenite.
3989296	77673	60725	49800	364646	5351606	1.3	Y	Om	Sss	Fe		LB/W	Weakly ferrug. quartzarenite.
3989297	77673	60600	50000	364518	5351804	2.5	Y	Og	Sls			DG/MG	Unaltered carbonaceous calcilutite.
3989298	77673	60625	50000	364543	5351804	6.5	Y	Og	SlsCcy		Py	DG/B/W	Weakly mottled Sls and clay, trace f.gr. pyrite.
3989299	77673	60650	50000	364568	5351804	12.2	Y	Om	Sss	We		DB/LB/W	Strongly We quartzarenite, trace DG Ccy.
3989300	77673	60675	50000	364593	5351805	6.5	N	Og	Ccy			DGM	Compacted clay containing white kaolin specks.
3992437	77673	60700	50000	364618	5351805	5.5	Y	Og	Sls	WeFe		DG/N	Carbonaceous 'peaty' Sls.
3992438	77673	60725	50000	364643	5351806	4.2	Y	Og	Sls	Al	Sd	DG	Trace of weak patchy ank. alt.
3992439	77673	60758	49992	364676	5351798	2.0	Y	Om	Sss	We		LB/W	Medium gr. quartzarenite.
3992440	77673	60750	50192	364664	5351998	2.1	Y	Om	CcySssSog			LB/W	Clay with lesser weathered sandstone and conglomerate.
3992441	77673	60725	50200	364639	5352006	7.3	N	Og	Ccy			LGY	Compacted clay (hand-held wacker).
3992442	77673	60700	50200	364614	5352005	12.0	N	Og	Ccy			LGBM	As above.
3992443	77673	60675	50200	364589	5352005	4.5	N	Og	CcyCg			M	Compacted clay containing imbedded rounded Sss pebbles.
3992444	77673	60650	50200	364564	5352004	2.0	N	Og	SssSogCcy	Fe		DB	Ferrug pebbly sand, minor DB Ccy, very thick cover
3992445	77673	60625	50210	364539	5352014	6.1	Y	Og	Sls	AlFe	Sd	DG/YG	Weak, patchy siderite altered Sls, ferruginous fractures.
3992446	77673	60600	50203	364514	5352006	12.0	N	Og	Ccy			DG/DBM	Compacted clay, last hole on 50200N, highway cuts line.

Sampno	AMGE	AMGN	FieldID	Ag ppm	As ppm	Cu ppm	Fe%	Mn ppm	Pb ppm	Zn ppm
3989271	364881	5351056	CcyOvq	-1	24	-2	1.76	526	33	51
3989272	364708	5351052	SlS	-1	130	12	6.70	28	94	336
3989273	364731	5351057	Ccy	-1	60	27	2.21	57	470	1054
3989274	364756	5351058	SlS	-1	65	6	2.54	26	87	310
3989275	364781	5351058	Ses	-1	1.5	-2	0.30	13	8	35
3989276	364578	5351204	SlS	-1	45	20	2.19	33	51	67
3989277	364603	5351205	CcySlS	-1	38.5	15	1.99	21	48	70
3989278	364628	5351205	CcyCg	-1	24	-2	1.17	24	22	91
3989279	364653	5351206	SlS'Ovc	-1	11	-2	0.39	185	37	39
3989280	364678	5351206	SlS	-1	6.5	8	2.69	331	59	136
3989281	364703	5351207	CcySlS	-1	6.5	7	0.94	190	96	277
3989282	364728	5351207	SlS'Ovc	-1	20.5	21	2.20	529	55	176
3989283	364753	5351208	CcySlS	-1	12	14	0.84	85	61	141
3989284	364778	5351208	SlS	-1	250	20	7.80	21	181	1765
3989285	364803	5351208	SlS	-1	50	9	1.75	18	41	85
3989286	364828	5351209	Ses	-1	6	-2	0.33	14	6	42
3989287	364750	5351408	SlS	-1	5	8	0.30	16	28	37
3989288	364775	5351408	SlS'Ses	-1	66	50	1.80	24	58	115
3989289	364800	5351414	SlS'Ses	-1	4	3	0.44	17	17	43
3989290	364824	5351417	SlS'Ccy	-1	8.5	14	0.57	19	24	38
3989291	364850	5351409	Ses'Ccy	-1	2.5	-2	0.29	17	21	37
3989292	364546	5351604	SlS	-1	21	-2	5.00	35	30	66
3989293	364571	5351604	SlS	-1	7.5	-2	1.04	45	19	83
3989294	364596	5351605	Ccy'Ses	-1	5	-2	0.47	17	13	34
3989295	364621	5351605	Ses	-1	2	-2	0.37	20	7	33
3989296	364646	5351606	Ses	-1	1.5	-2	0.47	20	15	37
3989297	364518	5351804	SlS	-1	530	10	4.01	25	32	106
3989298	364543	5351804	SlS'Ccy	-1	10	5	1.15	17	23	71
3989299	364568	5351804	Ses	-1	8.5	17	0.63	20	22	118
3989300	364593	5351805	Ccy	-1	38.5	20	4.73	35	29	82
3992437	364618	5351805	SlS	-1	210	13	6.80	22	67	171
3992438	364643	5351806	SlS	-1	200	13	2.52	34	55	309
3992439	364676	5351798	Ses	-1	32	-2	0.43	15	17	38
3992440	364664	5351998	Ccy'Ses'Scg	-1	8	92	0.68	66	20	51
3992441	364639	5352006	Ccy	-1	12	100	1.33	78	20	202
3992442	364614	5352005	Ccy	-1	11	41	1.99	75	89	88
3992443	364589	5352005	Ccy'Cg	-1	34	23	1.42	30	18	104
3992444	364564	5352004	Ses'Scg'Ccy	-1	2.5	-2	0.43	20	8	43
3992445	364539	5352014	SlS	-1	27	114	0.16	7	126	40
3992446	364514	5352006	Ccy	-1	41.5	17	2.05	32	48	68

**Appendix 8**

**Wacker Sampling Ledgers and Geochemistry  
Pyramid Prospect**

Sample	DPO	Prospect	EI	LocalE	LocalN	AMGE	AMGN	SampType	Depth	Bedrock?	MRTLth	FieldID	Texture	AM/Min	Colour	Comments	82153	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
5852439	82156	PYRAMID	28/88	25		364983	5355190	WACKER	1.8 Y		Sc	Sss	Sand	LI	WO	Sugary looking slightly ferruginous sandstone	5852439	5.6	1.85	29	244	0.05	46	3.08	0.51	0.18	4240	985	1240
5852440	82156	PYRAMID	28/88	0		364961	5355179	WACKER	5 Y		Sc	Sss	Sandy clay		DB	Fine sandy siltstone w/with shale	5852440	-0.5	5.44	55	167	-0.05	67	1.13	2.3	0.34	22	143	1780
5852441	82156	PYRAMID	28/88	0		364641	5355607	WACKER	1.2 Y		Om	Sss	Sand		K	Pink sugary sandstone	5852441	-0.5	0.06	-5	10	-0.05	-5	0.16	-0.05	-0.01	18	-10	10
5852442	82156	PYRAMID	28/88	25		364658	5355626	WACKER	2.5 Y		Qha	Cg	Sandy clay		DBLG	?Peaty gravels	5852442	-0.5	4.38	-5	267	-0.05	-5	0.65	1.77	0.3	35	36	23
5852468	82156	PYRAMID	28/88	525		364973	5355982	WACKER	4.1 Y		Ogul	Sls	Sand		G	Fine grained calcarenite	5852468	-0.5	1.54	-5	65	27.9	-5	0.92	0.83	3.49	114	20	46
5852469	82156	PYRAMID	28/88	500		364957	5355963	WACKER	7.4 Y		Ogul	Sls	Sandy clay		G	Fine grained calcarenite	5852469	-0.5	2.16	-5	111	25.1	-5	1.59	1.12	3.3	406	17	33
5852470	82156	PYRAMID	28/88	475		364940	5355944	WACKER	4.3 Y		Ogul	Sls	Sand		G	?Micritic limestone with argillite partings	5852470	-0.5	2.35	-5	94	28.8	-5	0.92	1.29	1.08	129	28	86
5852471	82156	PYRAMID	28/88	450		364924	5355926	WACKER	6.3 Y		Ogul	Sls	Sand		G	Fine grained bioclastic calcarenite	5852471	-0.5	2.76	-5	145	19.1	-5	1.52	1.56	3.37	295	-10	19
5852472	82156	PYRAMID	28/88	425		364907	5355907	WACKER	4.1 Y		Ogul	Sls	Sand		G	A couple of large odd dolomitic/sandstone fragments	5852472	-0.5	1.61	-5	58	24.3	8	1.06	0.66	1.66	304	30	59
5852473	82156	PYRAMID	28/88	375		364890	5355888	WACKER	8.6 Y		Ogdl	Sdl	Sand		G	Fine grained calcarenite/dolomitic	5852473	-0.5	0.91	-5	47	26	-5	3.46	0.48	5.99	1670	124	638
5852474	82156	PYRAMID	28/88	350		364874	5355869	WACKER	15.4 Y		Ogdl	Sdl	Sand		LGG	Bioclastic? micritic/dolomitic	5852474	0.7	1.46	-5	66	24.1	-5	0.82	0.77	4.63	185	48	176
5852475	82156	PYRAMID	28/88	325		364857	5355850	WACKER	17.7 Y		Qha	Cg	Clay		LGG	Mixed micaceous sst and limestone	5852475	-0.5	5.87	19	347	0.48	23	4.35	2.68	0.72	1030	264	582
5852476	82156	PYRAMID	28/88	300		364841	5355832	WACKER	11.5 Y		Ogul	Sls	Sandy clay		G	Fine grained calcarenite	5852476	1	0.83	-5	32	27	-5	0.57	0.35	2.54	182	35	177
5852477	82156	PYRAMID	28/88	275		364824	5355813	WACKER	9.3 Y		Ogul	Sls	Sand		G	Fine grained calcarenite and argillite	5852477	-0.5	2.02	-5	87	25.2	-5	1.83	1.05	0.83	580	40	160
5852478	82156	PYRAMID	28/88	225		364791	5355776	WACKER	10.7 Y		Ogdl	Sdl	Sand		GLG	Large non calcareous fragments in calcareous fine sand	5852478	1.4	2.33	-5	166	23.1	-5	1.43	1.12	2.29	535	245	1450
5852479	82156	PYRAMID	28/88	200		364774	5355757	WACKER	3 Y		Ogul	Sls	Sand		LG	Poss. dolomite or sst fragments	5852479	-0.5	2.89	-7	152	4.13	5	2.12	0.94	0.77	239	34	57
5852480	82156	PYRAMID	28/88	175		364758	5355739	WACKER	3.4 Y		Ogul	Sls	Sand		LG	Poss. dolomite or sst fragments	5852480	-0.5	1.85	-5	105	20.2	6	1.13	0.73	0.85	129	86	101
5852481	82156	PYRAMID	28/88	150		364741	5355720	WACKER	2.3 Y		Qha	Cg	Sand		LGGRB	Mixed fragments poss dol + some calcareous material	5852481	-0.5	2.02	-5	118	6.52	5	0.55	0.91	0.25	156	11	8
5852482	82156	PYRAMID	28/88	125		364725	5355701	WACKER	3 Y		Ogdl	Sdl	Sand		DG	Probable dolomite	5852482	-0.5	4.89	-5	240	11.8	10	2.59	2.25	4.3	319	106	540
5852483	82156	PYRAMID	28/88	100		364708	5355682	WACKER	3.2 Y		Ogul	Sls	Sand		LGG	Fine slightly micritic calcarenite	5852483	0.6	2.81	-5	135	27	5	1.4	1.21	1.69	489	214	1180
5852484	82156	PYRAMID	28/88	75		364692	5355664	WACKER	0.8 N		Om	Cg	Sand		WK	??Bedrock	5852484	-0.5	1.15	-5	89	0.21	-5	0.41	0.51	0.09	33	-10	18
5852485	82156	PYRAMID	28/88	50		364675	5355645	WACKER	3.1 Y		Ogul	Sss	Sand		WKB	Moist sandstone	5852485	-0.5	1.4	-5	77	0.09	9	0.41	0.52	0.14	31	29	43

**Appendix 9**

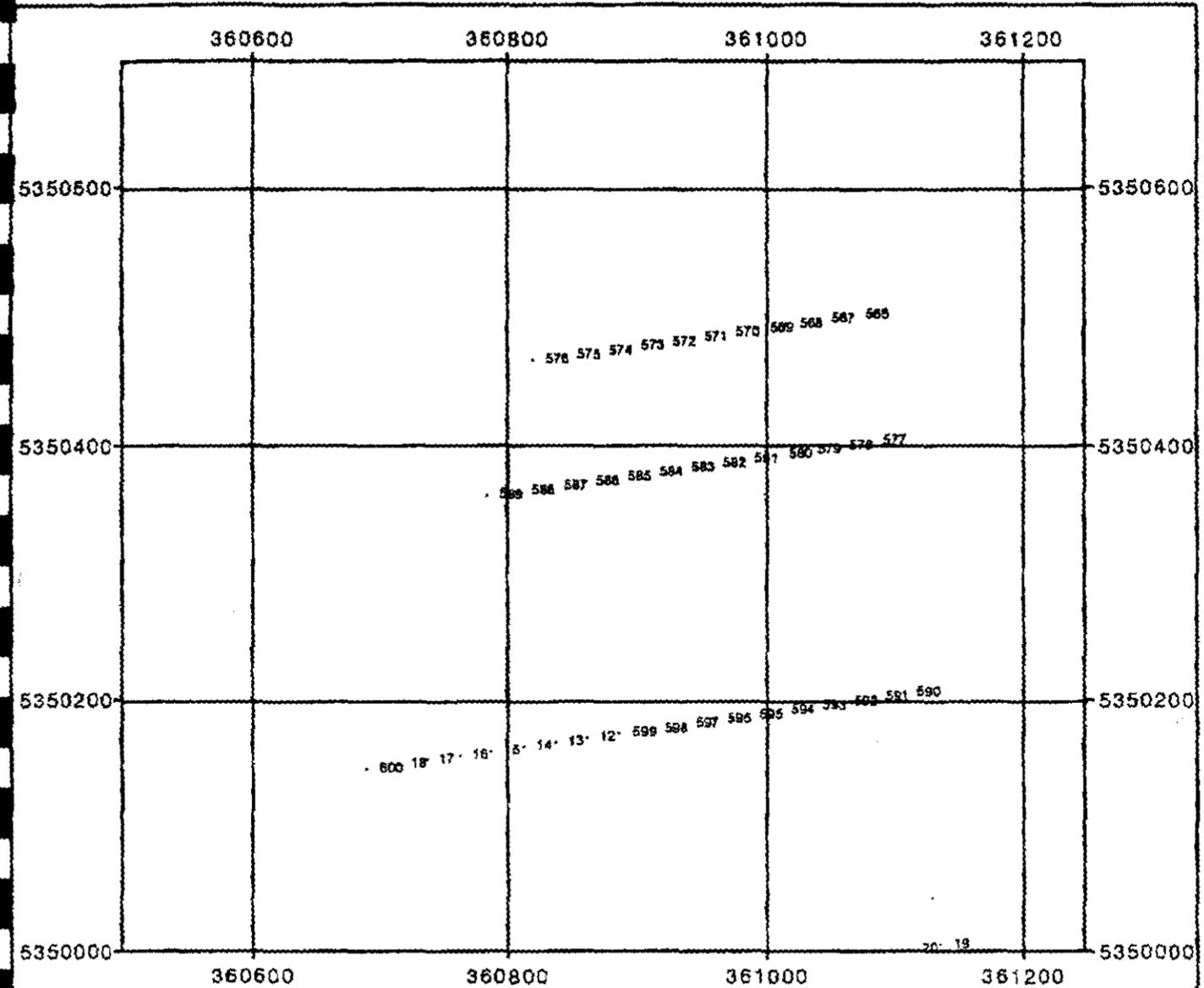
**Wacker Sampling Ledgers and Geochemistry  
Firewood Siding Prospect**

APPENDIX 11: FIREWOOD SIDING PROSPECT, WACKER SAMPLING LEDGER AND GEOCHEMISTRY

FIREWOOD SIDING (NORTH), WACKER SAMPLING LEDGER																			
Results in ppm except Fe (in %)																	DPO 71545		
SAMPNO	LOCALE	LOCALN	AMGE	AMGN	DEPTH	BEDROCK?	BMRLUTH	FIELDID	TEXTURE	ALT/MIN	COLOUR	Ag	As	Cu	Fe%	Pb	Zn	COMMENTS	
3528566	59500	44800	361067	5350503	5.5	Y	Sc	Mq			LG	-1	3	5	0.42	7	16	Logged by Mike.	
3528567	59500	44775	361042	5350499	4.5	N	Q	Ccy			LB	-1	2	5	0.65	22	30	Logged by Mike.	
3528568	59500	44750	361017	5350496	0.7	Y	Sc	Mq			LG	-1	2	4	0.19	-3	11	Logged by Mike.	
3528569	59500	44725	360993	5350492	5	Y	OgSc?	SlsMq?			DB	-1	26	23	1.1	693	617	Logged by Mike.	
3528570	59500	44700	360968	5350489	2.5	Y	OgSc?	SlsMq?			DB	-1	2	4	0.2	18	9	Logged by Mike.	
3528571	59500	44675	360943	5350485	11.5	N	Q	Ccy			DG	-1	3	6	2.1	379	302	Logged by Mike.	
3528572	59500	44650	360918	5350482	3.5	?	Sc	Mq			WLB	-1	1	8	0.58	30	29	Logged by Mike.	
3528573	59500	44625	360894	5350478	2.5	Y	Sc	Mq			WLB	-1	1	6	0.33	20	12	Logged by Mike.	
3528574	59500	44600	360869	5350475	11.5	Y	Sc	Mq			G	1	250	27	1.66	2724	4833	Logged by Mike.	
3528575	59500	44575	360844	5350471	8	Y	Sc	Mq			LGB	-1	130	17	2.05	1017	35	Logged by Mike.	
3528576	59500	44550	360819	5350468	2	Y	Sc	Mq			WLB	-1	2	5	0.33	11	17	Logged by Mike.	
3528577	59600	44800	361081	5350404	7.5	?	Og?	SshCcy	Da	Fy	DBN	-1	1	240	1.62	23400	1239	Logged by Mike.	
3528578	59600	44775	361066	5350400	6	?	Og?	Sls?			LGDB	-1	2	10	0.49	122	24	Logged by Mike.	
3528579	59600	44750	361031	5350397	5.5	?	Og?	SshCcy			WKR	-1	5	10	0.98	263	593	Logged by Mike.	
3528580	59600	44725	361007	5350393	5	Y	Og	Sls			G	-1	4	3	0.49	52	122	Logged by Mike.	
3528581	59600	44700	360982	5350390	10	Y	Og	Sls			WLB	-1	5	2	0.22	330	254	Logged by Mike.	
3528582	59600	44675	360957	5350386	9	N	Q	Ccy			BN	-1	33	13	1.31	346	552	Logged by Mike.	
3528583	59600	44650	360932	5350383	6.3	?	Og?	SlsCcy	Da	Fy	DG	-1	38	24	2.4	345	1119	Logged by Mike.	
3528584	59600	44625	360908	5350379	8.5	Y	Og	Sls			B	-1	5	13	0.53	50	18	Logged by Mike.	
3528585	59600	44600	360883	5350376	8.5	?	Og?	SlsCcy	Da	Fy	DBN	-1	2	400	67	1.93	8100	5700	Logged by Mike.
3528586	59600	44575	360858	5350372	3.5	?	Sc?	MqCcy			DBLG	-1	1	5	0.43	19	13	Logged by Mike.	
3528587	59600	44550	360833	5350369	3.5	?	Og?	Sls?			ABDB	-1	30	21	0.76	1409	1789	Logged by Mike.	
3528588	59600	44525	360809	5350365	2.5	?	Og?	Sls?			ABDB	-1	4	5	0.51	38	30	Logged by Mike.	
3528589	59600	44500	360784	5350362	5.5	?	Og?	Sls?			ABDB	1	11	116	0.57	2554	880	Logged by Mike.	
3528590	59800	44800	361109	5350206	15	N	Q	Ccy			G	-1	7	15	0.72	267	150	Logged by Mike.	
3528591	59800	44775	361084	5350202	1	Y	Og	Sls			WLG	-1	2	4	0.69	40	20	Subcrop?	
3528592	59800	44750	361059	5350199	6.8	Y	Og	Sls			WG	-1	2	-2	0.4	7	12	Logged by Mike.	
3528593	59800	44725	361034	5350195	2	Y	Og	Sls			DG	-1	4	4	1.12	37	76	Logged by Mike.	
3528594	59800	44700	361010	5350192	5.2	Y	Og	Sls			G	-1	5	7	1.27	19	70	Logged by Mike.	
3528595	59800	44675	360985	5350188	6.2	Y	Og	Sls			DG	-1	3	2	0.58	8	28	Logged by Mike.	
3528596	59800	44650	360960	5350185	2.8	Y	Og	Sls			G	-1	4	5	0.97	21	102	Logged by Mike.	
3528597	59800	44625	360935	5350181	4.5	?	Og?	SlsCcy			DGB	-1	3	12	0.68	352	238	Logged by Mike.	
3528598	59800	44600	360911	5350178	7.8	Y	Og	Sls			LBG	-1	7	7	0.26	321	558	Logged by Mike.	
3528599	59800	44575	360886	5350174	14	Y	Og	Sls			G	-1	7	3	0.97	176	175	Logged by Mike.	
3528600	59800	44375	360688	5350146	11.2	N	Q	Ccy			LGLB	2	6	28	0.43	350	39	Logged by Mike.	
3529912	59800	44550	360861	5350171	13	N	Q	Ccy			DG	1	24	59	1.65	482	778	Logged by Mike.	
3529913	59800	44525	360836	5350167	11	Y	Og	Sls			DG	-1	8	7	1.07	147	349	Logged by Mike.	
3529914	59800	44500	360812	5350164	20.5	Y	Og	Sls			DG	-1	6	3	0.9	1013	1308	Logged by Mike.	
3529915	59800	44475	360787	5350160	1.5	N	Q	Cg			LG	-1	-1	4	0.34	5	10	Logged by Mike.	
3529916	59800	44450	360762	5350157	7.8	?	Og?	SlsCcy			DBDG	2	480	31	2.43	1103	4980	Logged by Mike.	
3529917	59800	44425	360737	5350153	7.8	N	Q	Ccy			DG	-1	2	5	0.51	21	53	Logged by Mike.	
3529918	59800	44400	360713	5350150	9	N	Q	Ccy			LBG	1	430	92	2.17	5600	6900	Logged by Mike.	
3529919	60000	44800	361137	5350007	2.5	N	Q	Ccy			LBG	-1	11	5	0.44	139	395	Logged by Mike.	
3529920	60000	44775	361112	5350004	3	Y	Og	Sls	Vn	Oc	DG	-1	2	3	0.63	123	149	Logged by Mike.	
3529921	60000	44750	361087	5350000	19.2	Y	Og	Sls	Vn	Oc	G	-1	15	2	0.95	9	32	Logged by Mike.	

234217

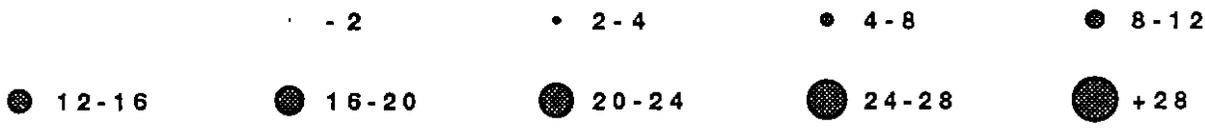
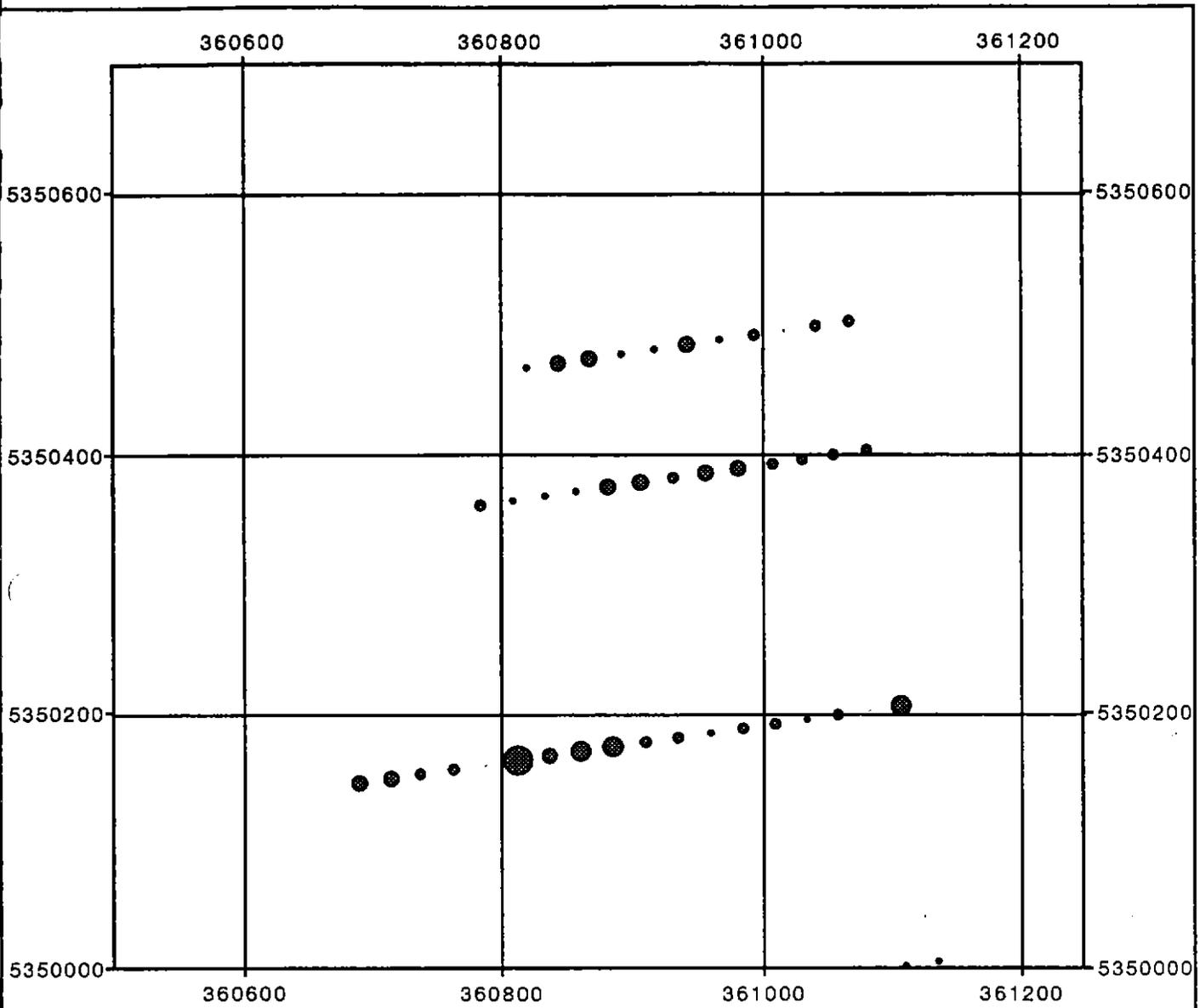
234218



Sample prefix 3528-- for 566-600  
 35299-- " 12- 20

jmap

CRA Exploration Pty Limited		
ZEEHAN EL28/88 - FIREWOOD SIDING (NTW)		
WACKER SAMPLE LOCATIONS		
Geol: RGP	Scale: 1:5000	Report: 19284
Drawn: RGP	Date: 18/10/1998	Plan: Tv 620

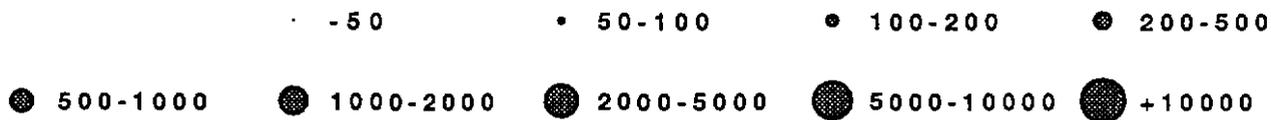
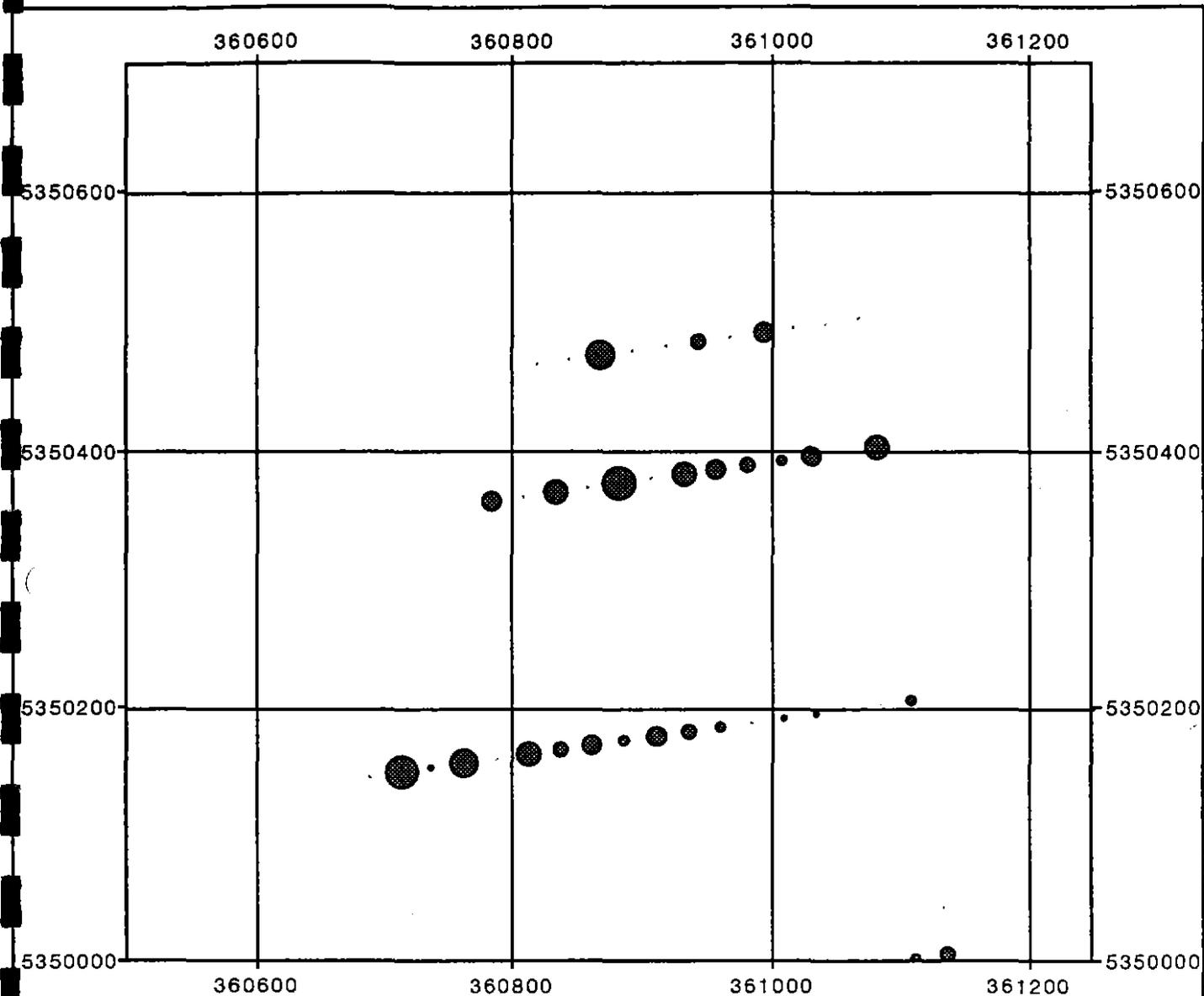


Depth in metres

jmap



CRA Exploration Pty Limited		
ZEEHAN EL28/88 - FIREWOOD SIDING(NTH)		
<b>WACKER GEOCHEMISTRY - DEPTH</b>		
Geol: RGP	Scale: 1:5000	Report: 19284
Drawn: RGP	Date: 18/10/1993	Plan: Tv 621

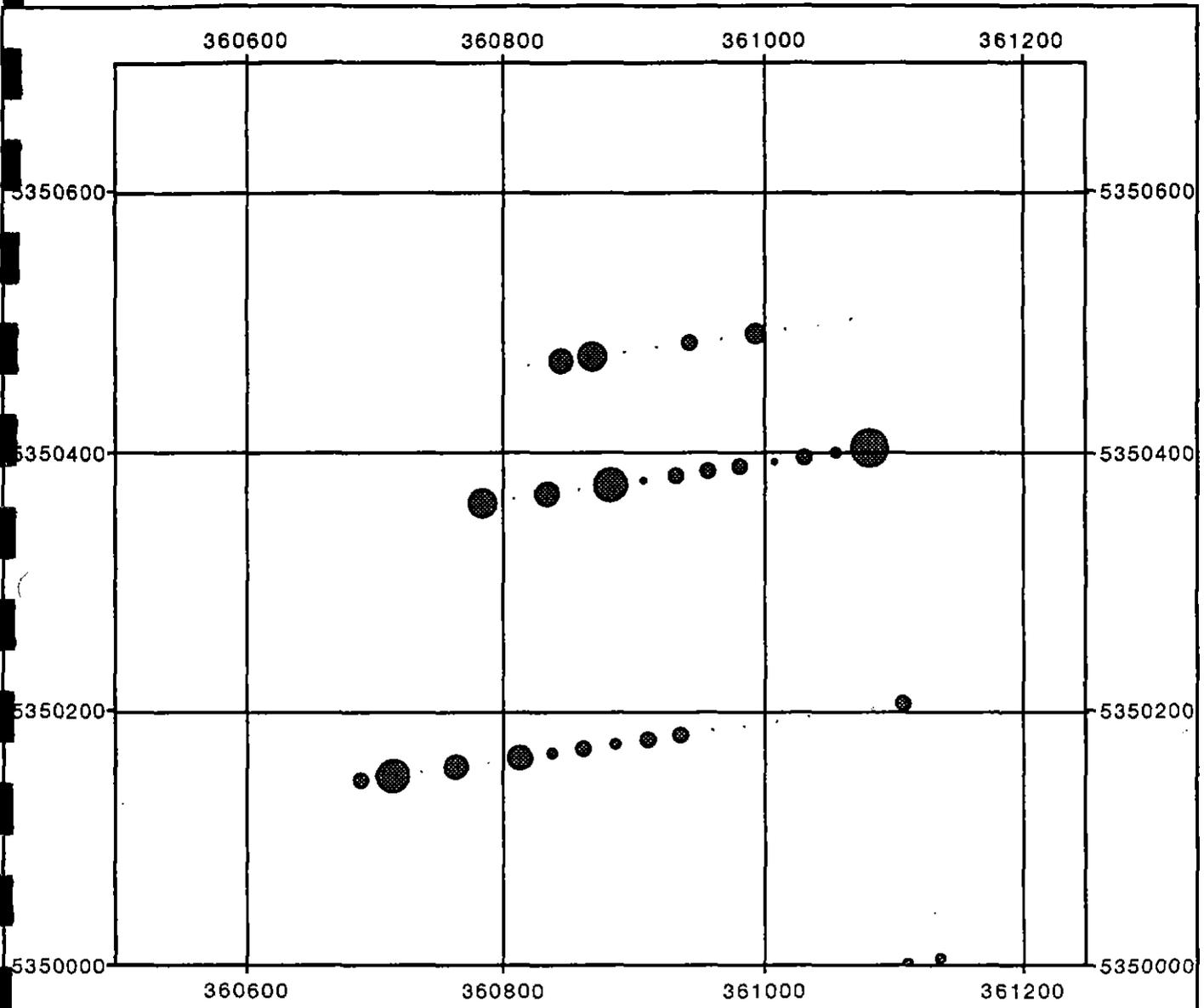


CRA Exploration Pty Limited		
ZEEHAN EL28/88 - FIREWOOD SIDING (NTH)		
<b>WACKER GEOCHEMISTRY - ZINC</b>		
Geol: RGP	Scale: 1:5000	Report: 19284
Drawn: RGP	Date: 18/10/1993	Plan: Tv 622

Results in ppm

jmap

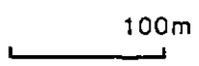




- - 50
- 50-100
- 100-200
- 200-500
- 500-1000
- 1000-2000
- 2000-5000
- 5000-10000
- +10000

Results in ppm

jmap



CRA Exploration Pty Limited		
ZEEHAN EL28/88 - FIREWOOD SIDING (NTH)		
<b>WACKER GEOCHEMISTRY - LEAD</b>		
Geol: RGP	Scale: 1:5000	Report: 19284
Drawn: RGP	Date: 18/10/1998	Plan: Tv 623

**Appendix 10**

**Wacker Sampling Ledgers and Geochemistry  
Sassafras Prospect**

SASSAFRAS WACKER

Sample No	AMGE	AMGN	DPO No	Sample Type	Prospect	EL No	Local E	Local N	Depth	Bedrock	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
4144258	364700	5365000	77382	WACKER	SASSAFRAS	EL28/88	6400	65000	2.1 Y	Ed	Ssh		Sandy clay	Q	G	Chloritic shale
4144259	364678	5364987	77382	WACKER	SASSAFRAS	EL28/88	6375	65000	5.2 Y	Ed	Ssh		Sandy clay	Q	G	Chloritic shale
4144260	364657	5364975	77382	WACKER	SASSAFRAS	EL28/88	6350	65000	3.8 Y	Ed	Ssh		Sandy clay	Q	G	Chloritic shale
4144261	364635	5364962	77382	WACKER	SASSAFRAS	EL28/88	6325	65000	6 Y	Ed	Ssh		clay	Q	GV	Chloritic shale
4144262	364613	5364950	77382	WACKER	SASSAFRAS	EL28/88	6300	65000	7 Y	Ed	Ssh		clay	Q	GV	Chloritic shale
4144263	364592	5364937	77382	WACKER	SASSAFRAS	EL28/88	6275	65000	6 Y	Om	Sss		sand		DGG	Non-calcareous
4144264	364570	5364925	77382	WACKER	SASSAFRAS	EL28/88	6250	65000	8 Y	Om	Ssh		clay	HeCl	DGRV	Non-calcareous
4144265	364548	5364912	77382	WACKER	SASSAFRAS	EL28/88	6225	65000	18.6 Y	Ogdl	Sdl		Sandy clay	Di	DG	Weakly calcareous - brown dolomite
4144266	364527	5364900	77382	WACKER	SASSAFRAS	EL28/88	6200	65000	18.9 Y	Ogul	Sdl		Sandy clay	Di	DGG	Weakly calcareous dk grey crystalline calcisiltite
4144267	364505	5364887	77382	WACKER	SASSAFRAS	EL28/88	6175	65000	15 Y	Ogul	Sls		Sandy clay		LG	?Micrite
4144268	364483	5364875	77382	WACKER	SASSAFRAS	EL28/88	6150	65000	3 N	Qha	Ccg		gritty clay		BOBO	?Bedrock; ?dolomite frags
4144269	364462	5364862	77382	WACKER	SASSAFRAS	EL28/88	6125	65000	5.1 Y	Ogul	Sls		gritty clay		DG	Dark grey micrite frags
4144270	364440	5364850	77382	WACKER	SASSAFRAS	EL28/88	6100	65000	4 Y	Ogdl	Sdl		gritty clay		DG	Weakly calcareous; ?qtzite frags
4144271	364419	5364837	77382	WACKER	SASSAFRAS	EL28/88	6075	65000	4.7 Y	Ogul	Sls		Sandy clay	Vc	LGW	Highly calcareous
4144272	364397	5364825	77382	WACKER	SASSAFRAS	EL28/88	6050	65000	5 Y	Ogul	Sls		Sandy clay		DGG	Highly calcareous
4144273	364375	5364812	77382	WACKER	SASSAFRAS	EL28/88	6025	65000	3 Y	Ogul	Sls		Sandy clay		LG	Highly calcareous
4144274	364354	5364800	77382	WACKER	SASSAFRAS	EL28/88	6000	65000	7.5 N	Qha	Ccy		clay		DB	Not bedrock
4144275	364332	5364787	77382	WACKER	SASSAFRAS	EL28/88	5975	65000	5 Y	Ogul	Ccy		Sandy clay		DGNG	Epidote frags; calcareous
4144276	364310	5364775	77382	WACKER	SASSAFRAS	EL28/88	5950	65000	4.2 Y	Ogul	Sls		clay		LG	Micrite (clean limestone)
4144277	364289	5364762	77382	WACKER	SASSAFRAS	EL28/88	5925	65000	10.1 Y	Ogul	Sls		Sandy clay		LGG	Micrite (clean limestone)
4144278	364267	5364750	77382	WACKER	SASSAFRAS	EL28/88	5900	65000	4.3 N	Qha	Ccy		clay		DBN	Not bedrock
4144279	364245	5364737	77382	WACKER	SASSAFRAS	EL28/88	5875	65000	9.5 Y	Ogul	Sls		sand	Vc	LGWDG	Highly calcareous
4144280	364224	5364725	77382	WACKER	SASSAFRAS	EL28/88	5850	65000	20 Y	Ogul	Sls		Sandy clay		G	Highly calcareous
4144281	364202	5364712	77382	WACKER	SASSAFRAS	EL28/88	5825	65000	18.5 Y	Ogul	Sls		Sandy clay		NDGG	V. argillaceous unit; micaceous
4144282	364180	5364700	77382	WACKER	SASSAFRAS	EL28/88	5800	65000	3.5 Y	Ogul	Sls		Sandy clay		G	V. fine grained calcarenite/micrite
4144283	364159	5364687	77382	WACKER	SASSAFRAS	EL28/88	5775	65000	12.5 Y	Ogul	Sls		Sandy clay		NDG	Weakly calcareous argillite
4144284	364146	5364680	77382	WACKER	SASSAFRAS	EL28/88	5760	65000	3 Y	Sc	Sss		sand		LGW	
4144285	363959	5365034	77382	WACKER	SASSAFRAS	EL28/88	5775	65400	3 Y	Sc	Sss		sand		BLGW	
4144286	363980	5365046	77382	WACKER	SASSAFRAS	EL28/88	5800	65400	5.2 Y	Sc	Ssh		clay		BO	
4144287	364002	5365059	77382	WACKER	SASSAFRAS	EL28/88	5825	65400	4 Y	Sc	Sss		sand		DBBO	
4144288	364024	5365071	77382	WACKER	SASSAFRAS	EL28/88	5850	65400	3 Y	Ogdc	Ccy		clay		DGN	Non-calcareous
4144289	364045	5365084	77382	WACKER	SASSAFRAS	EL28/88	5875	65400	17.5 Y	Ogul	Sls		Sandy clay	Vc	DGGLG	
4144290	364067	5365096	77382	WACKER	SASSAFRAS	EL28/88	5900	65400	14.5 Y	Ogul	Sls		Sandy clay	Vc	DGG	Dk grey ?argillaceous calcisiltite
4144291	364089	5365109	77382	WACKER	SASSAFRAS	EL28/88	5925	65400	2.5 Y	Ogul	Sls		Sandy clay	Vc	LGDG	Possible micrite
4144292	364110	5365121	77382	WACKER	SASSAFRAS	EL28/88	5950	65400	3 Y	Ogul	Sls		Sandy clay		DGG	
4144293	364132	5365134	77382	WACKER	SASSAFRAS	EL28/88	5975	65400	3.5 Y	Ogul	Sls		Sandy clay		G	
4144294	364154	5365146	77382	WACKER	SASSAFRAS	EL28/88	6000	65400	2.5 Y	Ogul	Sls		Sandy clay	Vc	LGG	Possible micrite
4144295	364175	5365159	77382	WACKER	SASSAFRAS	EL28/88	6025	65400	4.5 Y	Ogul	Sls		Sandy clay		DG	
4144296	364197	5365171	77382	WACKER	SASSAFRAS	EL28/88	6050	65400	3 Y	Ogul	Sls		Sandy clay		LG	
4144297	364219	5365184	77382	WACKER	SASSAFRAS	EL28/88	6075	65400	11.2							No sample
4144298	364240	5365196	77382	WACKER	SASSAFRAS	EL28/88	6100	65400	2 Y	Ogul	Sls		Sandy clay	Vc	GOG	
4144299	364262	5365209	77382	WACKER	SASSAFRAS	EL28/88	6125	65400	11 Y	Ogul	Sls		Sandy clay		G	
4144300	364283	5365221	77382	WACKER	SASSAFRAS	EL28/88	6150	65400	4.2 Y	Ogul	Sls		Sandy clay		QLG	
5466301	364305	5365234	77382	WACKER	SASSAFRAS	EL28/88	6175	65400	3 Y	Ogul	Sls		Sandy clay		G	

SASSAFRAS WACKER

Sample No	AMGE	AMGN	DPO No	Sample Type	Prospect	EL No	Local E	Local N	Depth	Bedrock	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
5466302	364327	5365246	77382	WACKER	SASSAFRAS	EL28/88	6200	65400	1.5	Y	Ogul	Sls	Sandy clay		LGG	
5466303	364348	5365259	77382	WACKER	SASSAFRAS	EL28/88	6225	65400	2.5	Y	Ogul	Sls	Sandy clay	Vc	LG	Possible micrite
5466304	364370	5365271	77382	WACKER	SASSAFRAS	EL28/88	6250	65400	6.5	Y	Ogul	Sls	Sandy clay	Vc	G	Grey calcarenite
5466305	364392	5365284	77382	WACKER	SASSAFRAS	EL28/88	6275	65400	17.8	Y	Ogul	Sls	Sandy clay		LGG	Grey calcarenite
5466306	364413	5365296	77382	WACKER	SASSAFRAS	EL28/88	6300	65400	10.2	Y	Ed	Ssh	clay		FD	Red shale with non-calcareous limonitic bands
5466307	364435	5365309	77382	WACKER	SASSAFRAS	EL28/88	6325	65400	2.2	Y	Om	Ssh	clay		LB	Buff/cream shale
5466308	364457	5365321	77382	WACKER	SASSAFRAS	EL28/88	6350	65400	2	Y	Ed	Ssh	Sandy clay		VG	Chloritic shale possible tuff
5466309	364478	5365334	77382	WACKER	SASSAFRAS	EL28/88	6375	65400	5	Y	Ed	Ssh	clay		VG	Chloritic tuff
5466310	364500	5365346	77382	WACKER	SASSAFRAS	EL28/88	6400	65400	5.3	Y	Ed	Ssh	clay		VG	Chloritic sand - ?tuff
5466311	364300	5365693	77382	WACKER	SASSAFRAS	EL28/88	6400	65800	4	Y	Om	Ssh	clay		O	Limonitic shale
5466312	364278	5365680	77382	WACKER	SASSAFRAS	EL28/88	6375	65800	2.2	Y	Om	Sss	Sandy clay		OB	Limonitic line sandstone
5466313	364257	5365668	77382	WACKER	SASSAFRAS	EL28/88	6350	65800	5.5	Y	Om	Sss	Sandy clay		OB	Limonitic line sandstone
5466314	364235	5365655	77382	WACKER	SASSAFRAS	EL28/88	6325	65800	5.3	Y	Ed	Ssh	clay		LGVR	Maroon shale
5466315	364213	5365643	77382	WACKER	SASSAFRAS	EL28/88	6300	65800	2.8	Y	Ed	Ssh	clay		BP	Maroon shale
5466316	364192	5365630	77382	WACKER	SASSAFRAS	EL28/88	6275	65800	1.5	Y	Ed	Sss	sand		LBBG	Weathered sst/greywacke
5466317	364170	5365618	77382	WACKER	SASSAFRAS	EL28/88	6250	65800	12	Y	Ogdc	Ccy	clay		DG	Non-calcareous
5466318	364148	5365605	77382	WACKER	SASSAFRAS	EL28/88	6225	65800	11.3	Y	Ogdc	Ccy	clay		DG	Non-calcareous
5466319	364127	5365593	77382	WACKER	SASSAFRAS	EL28/88	6200	65800	16.3	Y	Ogul	Sls	Sandy clay	Vc	LGW	Micrite
5466320	364105	5365580	77382	WACKER	SASSAFRAS	EL28/88	6175	65800	14.2	Y	Ogul	Sls	Sandy clay		G	Calcarenites
5466321	364083	5365568	77382	WACKER	SASSAFRAS	EL28/88	6150	65800	2	Y	Ogul	Sls	Sandy clay		LGG	Light grey calcarenite
5466322	364062	5365555	77382	WACKER	SASSAFRAS	EL28/88	6125	65800	1.5	Y	Ogul	Sls	Sandy clay	Vc	LGG	
5466323	364040	5365543	77382	WACKER	SASSAFRAS	EL28/88	6100	65800	2	Y	Ogul	Sls	Sandy clay	Vc	LG	
5466324	364019	5365530	77382	WACKER	SASSAFRAS	EL28/88	6075	65800	2.5	Y	Ogul	Sls	Sandy clay	Vc	LG	Possible laminated micrite
5466325	363997	5365518	77382	WACKER	SASSAFRAS	EL28/88	6050	65800	2	Y	Ogul	Sls	Sandy clay		GLG	Fine grained calcarenite
5466326	363975	5365505	77382	WACKER	SASSAFRAS	EL28/88	6025	65800	6.3	Y	Ogul	Sls	sand		LGG	
5466327	363954	5365493	77382	WACKER	SASSAFRAS	EL28/88	6000	65800	2	N	Qha	Ccg	Sandy clay		B	?Bedrock - quartzite frags
5466328	363932	5365480	77382	WACKER	SASSAFRAS	EL28/88	5975	65800	9.4	Y	Ogul	Sls	sand		LGG	
5466329	363910	5365468	77382	WACKER	SASSAFRAS	EL28/88	5950	65800	12	Y	Ogul	Sls	Sandy clay		DG	Argillaceous calcarenite/calcsiltite
5466330	363889	5365455	77382	WACKER	SASSAFRAS	EL28/88	5925	65800	17	Y	Ogul	Sls	Sandy clay		DG	Argillaceous calcarenite
5466331	363867	5365443	77382	WACKER	SASSAFRAS	EL28/88	5900	65800	2.5	Y	Ogul	Sls	Sandy clay		LGG	Crystalline calcarenite
5466332	363845	5365430	77382	WACKER	SASSAFRAS	EL28/88	5875	65800	2.3	Y	Ogsi	Sls	Sandy clay		DGG	Argillaceous calcarenite; weakly calcareous
5466333	363824	5365418	77382	WACKER	SASSAFRAS	EL28/88	5850	65800	24.2	Y	Ogul	Sls	Sandy clay	Vc	DGLG	?Argillaceous
5466334	363802	5365405	77382	WACKER	SASSAFRAS	EL28/88	5825	65800	11.8	Y	Ogdl	Sll	sand		LGDG	Non-calcareous - ?limestone
5466335	363780	5365393	77382	WACKER	SASSAFRAS	EL28/88	5800	65800	2.8	Y	Sc	Sss	sand		WLG	Friable sandstone
5466336	363537	5365714	77382	WACKER	SASSAFRAS	EL28/88	5750	66200	1.5	Y	Sc	Sss	sand		WLG	Friable sandstone
5466337	363559	5365727	77382	WACKER	SASSAFRAS	EL28/88	5775	66200	1.5	Y	Sc	Sss	sand		W	Poorly cemented med grained sst
5466338	363580	5365739	77382	WACKER	SASSAFRAS	EL28/88	5800	66200	1.8	Y	Ogul	Sls	sand		LGG	Sandstone frags - ?bedrock
5466339	363602	5365752	77382	WACKER	SASSAFRAS	EL28/88	5825	66200	2.5	Y	Ogul	Sls	Sandy clay		GLG	Crystalline calcarenite
5466340	363624	5365764	77382	WACKER	SASSAFRAS	EL28/88	5850	66200	2.5	Y	Ogsi	Sls	Sandy clay		DGG	Weakly calcareous argillaceous calcsiltite
5466341	363645	5365777	77382	WACKER	SASSAFRAS	EL28/88	5875	66200	2.2	Y	Ogsi	Sls	Sandy clay		DGG	Calcareous argillaceous calcsiltite
5466342	363667	5365789	77382	WACKER	SASSAFRAS	EL28/88	5900	66200	2.2	Y	Ogul	Sls	Sandy clay		G	Fine grained lt grey calcarenite
5466343	363689	5365802	77382	WACKER	SASSAFRAS	EL28/88	5925	66200	2.5	Y	Ogul	Sls	Sandy clay		DGG	Weakly calcareous argillaceous calcsiltite
5466344	363710	5365814	77382	WACKER	SASSAFRAS	EL28/88	5950	66200	2	Y	Ogul	Sls	Sandy clay		DGG	Weakly calcareous argillaceous calcsiltite
5466345	363732	5365827	77382	WACKER	SASSAFRAS	EL28/88	5975	66200	3.2	Y	Ogul	Sls	Sandy clay	Vc	LG	Fine grained calcarenite

234224

SASSAFRAS WACKER

Sample No	AMGE	AMGN	DPO No	Sample Type	Prospect	EL No	Local E	Local N	Depth	Bedrock	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
5466346	363754	5365839	77382	WACKER	SASSAFRAS	EL28/88	6000	66200	3.3 Y	Ogdl	Sdl		Sandy clay		LG	Sucrosic dolomite
5466347	363775	5365852	77382	WACKER	SASSAFRAS	EL28/88	6025	66200	3.1 Y	Ogdl	Sdl		Sandy clay		LG	V. weakly calcareous
5466348	363797	5365864	77382	WACKER	SASSAFRAS	EL28/88	6050	66200	6.2 Y	Ogul	Sls		Sandy clay		LG	Fine grained calcarenite
5466349	363819	5365877	77382	WACKER	SASSAFRAS	EL28/88	6075	66200	1.5 Y	Ogul	Sdl		Sandy clay	Vd	LG	Calcareous despite dolomite frags
5466350	363840	5365889	77382	WACKER	SASSAFRAS	EL28/88	6100	66200	1.5 Y	Ogul	Sdl		Sandy clay	Vd	LG	Calcareous sand with dolomite frags
5466351	363862	5365902	77382	WACKER	SASSAFRAS	EL28/88	6125	66200	2 Y	Ogul	Sls		Sandy clay		LG	
5466352	363883	5365914	77382	WACKER	SASSAFRAS	EL28/88	6150	66200	19.8 Y	Ogul	Sls		clay		DGNLG	Calcareous grey clay with non-calc black clay
5466353	363905	5365927	77382	WACKER	SASSAFRAS	EL28/88	6175	66200	13.8 Y	Ogdc	Ccy		clay	Py	DGN	V. minor pyrite dissem
5466354	363927	5365939	77382	WACKER	SASSAFRAS	EL28/88	6200	66200	1.5 Y	Om	Sss		sand		WLG	Friable sandstone
5466355	363948	5365952	77382	WACKER	SASSAFRAS	EL28/88	6225	66200	7.2 Y	Ed	Ssh		clay	Fe/Cl	VGO	Chloritic shale/tuff
5466356	363970	5365964	77382	WACKER	SASSAFRAS	EL28/88	6250	66200	7.8 Y	Ed	Ssh		clay		G	Laminated sands, silts and shales; greywacke?
5466357	363992	5365977	77382	WACKER	SASSAFRAS	EL28/88	6275	66200	4.5 Y	Ed	Ssh		clay	Fe	FO	Red shale
5466358	364013	5365989	77382	WACKER	SASSAFRAS	EL28/88	6300	66200	2.4 Y	Ed	Sss		Sandy clay	Fe	ROB	Limonitic fine sandstone
5466359	364035	5366002	77382	WACKER	SASSAFRAS	EL28/88	6325	66200	1.6 Y	Ed	Sss		Sandy clay	Fe	ROB	Limonitic fine sandstone
5466360	364057	5366014	77382	WACKER	SASSAFRAS	EL28/88	6350	66200	1.5 Y	Ed	Ssh		Sandy clay	Fe	LBO	Limonitic and ?sercitic siltstone/shale
5466361	364078	5366027	77382	WACKER	SASSAFRAS	EL28/88	6375	66200	2 Y	Ed	Sss		Sandy clay	Fe	ROB	Limonitic fine sandstone
5466362	364100	5366039	77382	WACKER	SASSAFRAS	EL28/88	6400	66200	1.7 Y	Ed	Ssh		Sandy clay	Fe	OB	Limonitic and ?sercitic siltstone/shale
5466363	363900	5366386	77382	WACKER	SASSAFRAS	EL28/88	6400	66600	4.8 Y	Ed	Ssh		Sandy clay	Cl	VG	Chloritic shale
5466364	363878	5366373	77382	WACKER	SASSAFRAS	EL28/88	6375	66600	8.2 Y	Ed	Sss		Sandy clay	Cl/Se	VG	Chloritic sandstone - ?tuff
5466365	363857	5366361	77382	WACKER	SASSAFRAS	EL28/88	6350	66600	5.8 Y	Ed	Ssh		Sandy clay	Py	G	Laminated shales and silts
5466366	363835	5366348	77382	WACKER	SASSAFRAS	EL28/88	6325	66600	5 Y	Ed	Sss		Sandy clay	Cl	DVG	Chloritic sandstone - ?tuff
5466367	363813	5366336	77382	WACKER	SASSAFRAS	EL28/88	6300	66600	3.1 Y	Ed	Ssh		Sandy clay		G	?Laminated shales and silts
5466368	363792	5366323	77382	WACKER	SASSAFRAS	EL28/88	6275	66600	2 Y	Ed	Ssh		Sandy clay	Se/Cl	GDG	Laminated sands, silts and shales
5466369	363770	5366311	77382	WACKER	SASSAFRAS	EL28/88	6250	66600	10.2 Y	Ed	Sss		Sandy clay	Cl	GV	Chloritic sandstone - ?tuff
5466370	363748	5366298	77382	WACKER	SASSAFRAS	EL28/88	6225	66600	6.1 Y	Ogdc	Ccy		Sandy clay		DGN	
5466371	363727	5366286	77382	WACKER	SASSAFRAS	EL28/88	6200	66600	17.6 Y	Ogdc	Ccy		Sandy clay		N	
5466372	363705	5366273	77382	WACKER	SASSAFRAS	EL28/88	6175	66600	10.2 Y	Ogul	Sls		sand		G	V. friable
5466373	363683	5366261	77382	WACKER	SASSAFRAS	EL28/88	6150	66600	6.9 Y	Ogul	Sls		Sandy clay		GDG	
5466374	363662	5366248	77382	WACKER	SASSAFRAS	EL28/88	6125	66600	10.6 Y	Ogul	Sls		Sandy clay	Vc	DGG	Argillaceous calcsiltite
5466375	363640	5366236	77382	WACKER	SASSAFRAS	EL28/88	6100	66600	2.1 Y	Ogul	Sls		Sandy clay		G	Mixed argillite and lt grey calcarenite
5466376	363619	5366223	77382	WACKER	SASSAFRAS	EL28/88	6075	66600	2 Y	Ogul	Sls		Sandy clay		GLG	Possible light grey calcarenite
5466377	363597	5366211	77382	WACKER	SASSAFRAS	EL28/88	6050	66600	3 N	Oha	Ccy		clay		DB	?Bedrock
5466378	363575	5366198	77382	WACKER	SASSAFRAS	EL28/88	6025	66600	3 N	Oha	Ccy		clay		B	?Bedrock - various frags
5466379	363554	5366186	77382	WACKER	SASSAFRAS	EL28/88	6000	66600	3 Y	Ogul	Sls		Sandy clay		DGNLG	
5466380	363532	5366173	77382	WACKER	SASSAFRAS	EL28/88	5975	66600	3 Y	Ogul	Sls		clay		LG	?micrite frags
5466381	363510	5366161	77382	WACKER	SASSAFRAS	EL28/88	5950	66600	5 Y	Ogul	Sls		Sandy clay	Vc	LGDG	
5466382	363489	5366148	77382	WACKER	SASSAFRAS	EL28/88	5925	66600	4.5 Y	Ogul	Sls		clay		DGN	?Argillaceous calcsiltite
5466383	363467	5366136	77382	WACKER	SASSAFRAS	EL28/88	5900	66600	3 Y	Ogul	Sls		Sandy clay		DGN	Argillaceous calcsiltite; v. calcareous
5466384	363445	5366123	77382	WACKER	SASSAFRAS	EL28/88	5875	66600	1.1 Y	Ogul	Sls		Sandy clay	Vc	LG	?Altered med grained calcarenite
5466385	363424	5366111	77382	WACKER	SASSAFRAS	EL28/88	5850	66600	2.3 Y	Ogul	Sls		Sandy clay		LGGDG	
5466386	363402	5366098	77382	WACKER	SASSAFRAS	EL28/88	5825	66600	1.1 Y	Ogul	Sls		Sandy clay		DG	?Argillaceous fine calcarenite
5466387	363380	5366086	77382	WACKER	SASSAFRAS	EL28/88	5800	66600	2.3 Y	Sc	Sss		sand		LGLB	Slightly friable sandstone

234225

SASSAFRAS WACKER

Sample No	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
4144258	-0.5	8.52	26	313	0.19	91	8.25	2.26	2.43	207	22	230
4144259	-0.5	7.7	36	373	0.09	42	6.2	2.74	1.55	74	22	201
4144260	-0.5	8.22	30	350	0.28	51	6.73	2.51	2.04	234	22	156
4144261	-0.5	8.42	20	404	0.13	117	5.24	2.91	1.52	131	27	126
4144262	-0.5	8.74	37	334	0.2	86	7.31	2.7	2.21	234	24	171
4144263	-0.5	2.97	30	103	0.11	34	3.06	1.01	0.51	118	27	137
4144264	-0.5	5.75	44	275	7.96	30	4.03	2.81	4.71	901	68	227
4144265	-0.5	1.44	-5	45	7.69	6	2.6	0.75	3.98	733	41	71
4144266	-0.5	2.15	-5	80	18.9	-5	4.96	1.26	5.04	1510	18	33
4144267	-0.5	0.72	-5	27	33.8	-5	0.49	0.43	0.73	157	13	10
4144268	-0.5	6.1	14	169	0.58	56	8.46	1.01	1.68	479	39	267
4144269	-0.5	3.61	-5	134	15.3	7	5.87	2.01	5.79	2590	29	9
4144270	1.1	1.61	27	58	7.32	6	3.61	0.86	3.9	730	33	339
4144271	-0.5	2.17	-5	72	24.3	-5	1.75	1.25	1.86	359	17	32
4144272	-0.5	2.19	-5	68	18.4	7	10.2	1.17	1.38	7050	26	155
4144273	-0.5	0.94	-5	38	29.6	-5	0.96	0.45	0.89	189	14	19
4144274	-0.5	6.13	16	162	0.73	47	5.62	0.7	1.16	296	59	158
4144275	-0.5	4.14	-5	75	17.2	10	3.23	1.21	1.09	365	21	61
4144276	-0.5	2.81	-5	48	22.7	5	4.37	0.89	1.3	576	16	10
4144277	-0.5	2.22	-5	96	23.5	-5	1.69	1.4	1.39	387	12	9
4144278	-0.5	5.85	23	214	0.32	56	8.75	1.25	0.64	1710	31	172
4144279	-0.5	1.9	-5	57	25.3	-5	1.14	0.99	4.72	163	12	-5
4144280	-0.5	1.05	-5	50	33.7	-5	0.96	0.61	0.7	243	21	-5
4144281	-0.5	4.63	-5	231	19.1	6	2.27	2.4	2.18	271	19	27
4144282	-0.5	2.41	-5	110	25.4	-5	1.06	1.31	1.75	228	14	5
4144283	-0.5	3.47	16	166	14.1	-5	1.95	1.99	4.25	385	19	102
4144284	-0.5	0.07	-5	10	-0.05	-5	0.15	-0.05	0.01	10	-10	-5
4144285	-0.5	2.33	7	149	-0.05	-5	0.38	1.17	0.16	15	-10	6
4144286	-0.5	6.86	8	381	-0.05	8	0.98	3.46	0.55	19	10	10
4144287	-0.5	0.23	-5	13	-0.05	-5	0.13	0.07	0.02	-10	-10	-5
4144288	-0.5	8.47	25	567	-0.05	12	0.97	4.31	0.79	22	35	62
4144289	-0.5	3.49	-5	170	23.6	-5	1.41	1.97	2.37	148	27	17
4144290	-0.5	1.71	-5	64	28.3	-5	2.79	0.8	2.83	391	29	539
4144291	-0.5	1.5	-5	47	25.3	-5	0.69	0.86	1.25	88	15	22
4144292	-0.5	1.64	-5	54	30.1	-5	1.13	0.88	2.02	484	24	380
4144293	-0.5	4.21	7	166	12.8	-5	2.28	2.57	6.1	247	12	18
4144294	-0.5	2.11	-5	75	18.7	10	5.98	0.95	2.44	2100	12	31
4144295	-0.5	1.58	-5	50	14	9	1.45	0.71	0.53	122	13	62
4144296	-0.5	1.04	-5	33	29.5	-5	3.66	0.51	0.76	456	23	115
4144297												
4144298	-0.5	1.83	-5	68	21.5	-5	0.83	1.04	0.77	115	14	28
4144299	-0.5	2.13	-5	60	24.6	-5	1.49	1.26	3.01	281	24	74
4144300	-0.5	4.01	-5	153	16.1	10	1.96	2.24	2.13	221	13	56
5466301	-0.5	1.67	-5	65	19.8	-5	2.02	0.93	3.99	321	31	16

SASSAFRAS WACKER

Sample No	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
5466302	-0.5	0.99	-5	33	32.1	-5	0.73	0.6	2.25	143	14	42
5466303	-0.5	0.87	-5	24	30.8	-5	1.64	0.6	2.32	492	-10	11
5466304	-0.5	2.95	8	97	14.1	-5	6.85	1.8	7.28	1900	13	95
5466305	-0.5	3.3	-5	96	15.7	16	1.25	1.79	0.72	343	264	655
5466306	-0.5	7.84	27	389	0.05	16	4.45	4.45	1.16	178	128	231
5466307	-0.5	3.89	-5	162	-0.05	237	0.42	1.77	0.33	-10	60	13
5466308	-0.5	7.44	31	272	-0.05	24	8.7	1.51	2.73	423	11	228
5466309	-0.5	8.34	34	271	-0.05	71	7.91	1.23	2.69	308	27	371
5466310	-0.5	8.79	36	351	0.05	78	8.25	1.49	2.6	260	43	276
5466311	-0.5	11.5	37	317	-0.05	85	7.79	1.86	0.4	52	72	98
5466312	-0.5	8.51	34	176	-0.05	177	12.7	0.92	0.23	43	61	142
5466313	-0.5	11.1	36	239	-0.05	176	11.2	0.26	0.88	272	20	113
5466314	-0.5	9.37	23	474	-0.05	62	8.21	3.47	2.01	288	32	117
5466315	-0.5	7.87	11	261	-0.05	14	8.63	2.47	2.99	549	29	193
5466316	-0.5	3.03	17	147	-0.05	125	1.09	1.36	0.41	27	13	100
5466317	-0.5	3.8	15	126	0.66	17	15.3	1.93	0.68	5790	89	511
5466318	-0.5	3.69	11	126	7.72	14	13.5	2.24	4.48	3670	44	2590
5466319	-0.5	0.99	-5	32	32.2	-5	1.02	0.67	2.52	228	11	172
5466320	-0.5	1.82	-5	74	26.8	7	1.26	1.19	2.5	201	13	10
5466321	-0.5	3.28	-5	152	18.1	6	1.44	2.09	2.52	174	14	16
5466322	-0.5	4.37	-5	132	17.1	9	1.19	2.5	1.31	113	16	42
5466323	-0.5	2.52	-5	64	18.4	8	0.78	0.91	0.69	191	20	43
5466324	-0.5	0.74	-5	23	32.6	-5	4.8	0.44	1.01	513	-10	16
5466325	-0.5	3.63	9	139	15.9	8	3.39	2.39	3.06	309	14	10
5466326	-0.5	1.21	-5	59	30.4	-5	0.84	0.76	0.91	174	15	-5
5466327	-0.5	6.4	15	133	0.11	73	9.86	0.75	0.83	532	20	169
5466328	-0.5	0.94	-5	27	27.7	-5	0.95	0.57	1.63	142	-10	-5
5466329	-0.5	2.74	-5	125	25	-5	1.48	1.46	2.33	174	12	182
5466330	-0.5	1.48	-5	72	25	-5	1.1	0.83	4.19	137	-10	9
5466331	-0.5	0.72	-5	32	30.8	-5	0.42	0.43	2.54	115	11	208
5466332	-0.5	3.7	7	171	12.1	-5	1.45	2.07	3.45	207	11	14
5466333	-0.5	2.34	-5	74	26.3	-5	0.78	1.31	1.7	128	12	21
5466334	-0.5	0.96	-5	44	19.4	-5	1.64	0.51	11.5	665	50	244
5466335	-0.5	0.03	-5	-5	-0.05	-5	0.14	-0.05	0.01	-10	-10	-5
5466336	-0.5	1.14	-5	62	-0.05	-5	0.23	0.57	0.09	-10	-10	7
5466337	-0.5	0.12	-5	-5	-0.05	6	0.14	-0.05	0.01	-10	-10	5
5466338	-0.5	0.96	-5	49	11.8	5	2.81	0.48	1.34	191	-10	59
5466339	-0.5	1.66	15	65	20.6	-5	3.67	0.83	6.16	1360	-10	114
5466340	-0.5	2.9	16	116	20.2	-5	1.05	1.6	4.63	200	15	33
5466341	-0.5	1.38	-5	54	30.7	-5	0.6	0.79	1.65	86	12	6
5466342	-0.5	0.95	-5	29	31.8	-5	0.33	0.4	1.05	79	58	91
5466343	-0.5	2.35	-5	110	20.8	-5	2.35	1.29	3.7	491	11	17
5466344	-0.5	2.65	-5	103	18.2	-5	1.17	1.41	2.48	176	23	111
5466345	-0.5	1.23	-5	28	28.7	12	1.16	0.34	0.64	295	17	53

## SASSAFRAS WACKER

Sample No	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
5466346	-0.5	0.53	-5	15	19.6	-5	4.52	0.24	9.49	1930	-10	38
5466347	-0.5	4.27	27	284	12.2	-5	3.15	2.48	4.25	476	11	26
5466348	-0.5	2.17	-5	64	19.5	-5	2.29	1.11	1.51	457	15	34
5466349	-0.5	0.92	14	35	15.6	-5	3.51	0.51	7.28	1370	348	724
5466350	-0.5	1	-5	31	17.8	12	3.39	0.33	8.83	1240	87	35
5466351	-0.5	1.65	-5	71	24.8	7	1.89	0.93	1.35	383	65	226
5466352	-0.5	6.98	24	313	6.22	13	4.4	3.35	3.06	708	37	413
5466353	-0.5	1.97	116	890	0.25	18	4.91	2.18	0.57	57	145	1290
5466354	-0.5	0.06	-5	6	-0.05	-5	0.13	-0.05	0.01	-10	-10	6
5466355	-0.5	8.49	39	239	0.06	24	7.6	1.76	1.67	243	25	306
5466356	-0.5	10.9	32	407	0.06	440	2.35	2.85	0.66	75	46	38
5466357	-0.5	10.8	35	587	0.06	43	3.44	3.75	0.66	69	23	37
5466358	-0.5	8.6	27	281	0.06	108	11.9	1.11	0.26	349	87	186
5466359	-0.5	7.68	9	185	-0.05	117	20.7	0.83	0.24	154	25	101
5466360	-0.5	8.56	46	558	-0.05	73	10.9	3.69	0.5	106	27	93
5466361	-0.5	10.1	85	250	-0.05	201	17.7	1.47	0.23	68	24	46
5466362	-0.5	9.14	25	482	0.05	94	14.3	3.15	0.44	83	21	75
5466363	-0.5	9.04	26	309	0.11	91	9.66	1.81	3.06	1090	15	155
5466364	-0.5	11.4	53	1090	0.16	63	6.68	1.38	4.49	821	-10	352
5466365	-0.5	9.91	41	257	0.11	127	12.8	0.25	4.1	923	24	522
5466366	-0.5	6.89	28	233	0.13	95	7.77	0.78	7.97	941	10	388
5466367	-0.5	7.96	17	374	0.43	67	9.94	1.79	2.69	810	12	302
5466368	-0.5	8.51	9	281	0.36	79	11.4	1.69	2.73	909	25	318
5466369	-0.5	8.44	31	437	0.13	95	9.4	2.05	2.3	485	37	268
5466370	-0.5	8.4	35	365	0.16	105	9.71	2.1	2.51	524	47	391
5466371	-0.5	3.8	19	157	-0.05	11	5.22	2.27	0.44	30	81	401
5466372	-0.5	2.17	21	90	16.9	16	1.85	1.43	6.84	585	12	14
5466373	-0.5	0.95	-5	37	27.4	-5	0.93	0.65	1.92	147	15	459
5466374	-0.5	2.08	-5	59	25.8	5	1.02	1.25	2.15	1060	441	1220
5466375	-0.5	1.59	-5	58	26.1	-5	0.94	1.03	1.33	173	19	196
5466376	-0.5	2.83	-5	128	23.7	6	1.34	1.83	0.99	210	17	21
5466377	-0.5	6.92	33	300	0.4	36	5.15	1.35	0.38	462	41	180
5466378	-0.5	3.57	13	92	2.46	31	3.17	1.05	1.08	120	11	55
5466379	-0.5	4.1	17	119	19.3	10	1.44	2.45	0.94	90	17	282
5466380	-0.5	2.69	-5	72	20.3	-5	0.9	1.6	0.93	151	30	19
5466381	-0.5	4.1	11	121	16.2	-5	1.01	2.39	1.06	141	25	32
5466382	-0.5	4.16	19	196	12.5	-5	1.8	2.44	4.06	253	22	108
5466383	-0.5	3.1	-5	112	19.7	5	1.49	1.85	3.58	151	23	112
5466384	-0.5	1	-5	39	27.6	-5	0.67	0.61	0.72	102	-10	-5
5466385	-0.5	2.62	7	73	13.5	-5	0.83	1.35	1.52	77	16	65
5466386	-0.5	6.32	28	406	7.84	8	2.13	3.55	1.7	150	33	128
5466387	-0.5	0.17	8	13	-0.05	-5	0.23	0.07	0.01	13	-10	9

**Appendix 11**

**Mineralogical Reports  
Myrtle Prospect**

234230

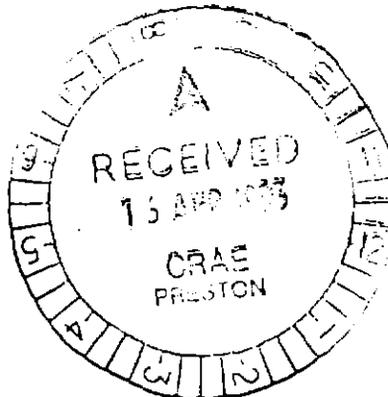


## Central Mineralogical Services

8 Bradshaw Avenue, Crafers, S.A. 5152  
 Telephone (08) 370 9779 Fax (08) 370 9788  
 International: Telephone + 618 370 9779 Fax + 618 370 9788

13 April 1993

Mr R. Parkinson  
 CRA Exploration Pty Ltd  
 P O Box 8093  
 NORTHLAND CENTRE  
 PRESTON VIC 3072



### REPORT CMS 93/3/12

YOUR REFERENCE: DPO 71544  
DATE RECEIVED: 29 March 1993  
SAMPLE NO'S: 3314188 - 200  
SUBMITTED BY: R. Parkinson  
WORK REQUESTED: Mineralogy

*H.W. Fander*  
H.W. Fander, M.Sc.

### COPIES TO:

CRA Exploration Pty Ltd  
 PO Box 8093  
 Northland Centre  
 PRESTON VIC 3072  
ATTENTION: Craig Hayward

CRA Exploration Pty Ltd  
 P O Box 3709  
 MANUKA ACT 2603  
ATTENTION: CRAE Information Systems

REPORT CMS 93/3/12PANNED CONCENTRATES 3314188 - 3314200

Thirteen panned concentrates were received for mineralogical examination and identification. Each sample was examined under the stereobinocular microscope, augmented by optical mineralogy and stain tests. The results are given in the attached table. Because the samples were unsized and showed a very wide range of sizes from 50 $\mu$  or less to 10mm, it was not possible to quantify the results.

As far as could be determined, sphalerite was the only significant Zn mineral present, occurring as well-crystallised, often very coarse material, ranging from colourless through amber to pale reddish brown, sometimes colour-zoned; its Fe content is believed to be low, very probably <5%, perhaps <3% in some cases, suggesting epithermal formation.

The sphalerite is accompanied by variable amounts of galena, and by pyrite which occurs partly as well-formed crystals, as fine encrustations and aggregates, and as framboids. The assemblage is typical of Mississippi Valley -style deposits.

Little information on ore genesis could be gleaned from these concentrates, and will have to await studies on core material. Sphalerite percentages will be able to be calculated from Zn assays.

SAMPLE NO.	ZN MINERALS	OTHERS	234232
3314 188	Sphalerite; much is coarse (up to 7mm). Pale, zoned; Fe content probably <5%.	Pyrite, galena (some as veinlets in carbonate). Minor ankerite.	Zm19 4-6 4.1% Zn
3314193	Pale, cloudy sphalerite (Fe <5%), as inconspicuous aggregates.	Rock fragments (micaceous); carbonates; galena, quartz.	Zm1 4-6 14% Zn
194	Pale, cloudy inconspicuous sphalerite (Fe <5%).	Dominant pyrite; quartz; carbonate. Dark, carbonaceous rock fragments. ?No galena.	Zm13 22-24 15.5%
195	Abundant but inconspicuous pale sphalerite as cloudy grains; Fe probably <5%.	Dominant pyrite; minor galena; very minor quartz.	Zm18 6-8 6.8%
196	Pale amber translucent sphalerite (Fe <5%).	Dominant pyrite; minor galena; very minor quartz.	Zm18 26-28 6.6%
197	Abundant, often coarsely-crystalline, pale, colour-zoned (yellow to brown) sphalerite (Fe <5%?).	Shale/carbonaceous shale fragments; minor pyrite; minor quartz; earthy limonite.	Zm28 16-18 4.3%
3314 198	Amber to brown sphalerite (Fe = 5 - 7%?)	Carbonaceous rock fragments; quartz; ankeritic carbonate; pyrite; very minor galena; calcite.	Zm55 12-14 4.8%
199	Abundant, often coarsely-crystalline, yellow/amber/pale brown sphalerite (Fe <5%?)	Dominant pyrite as fine-grained aggregates. Very minor galena, quartz, carbonate.	Zm57 14-16 5.0%
200	Sample is dominantly sphalerite, as coarsely-crystalline (up to 5mm crystals) masses, pale to reddish-brown (Fe <5%?).	Minor pyrite, quartz, carbonate; very minor galena.	Zm58 2-4 9.1% Zn

**CRA**  
**ADVANCED TECHNICAL DEVELOPMENT**

Melbourne

---

**THE MINERALOGY OF A FURTHER SIX SAMPLES  
FROM A TASMANIAN RESOURCE**

---

**PROJECT REPORT PR93/A857A**

Author: C Halsall/R Walker

Copies to: T Dickson (CRAE)  
R Parkinson (CRAE)  
M Lavery (R&PD)  
J Box  
S Roden/ minfile  
B Kelley/P O'Neill/file

Date: 18 June 1993

Ref: A857A/639ch  
DPO 77101

234234

## PROJECT SUMMARY

---

### FOCUS

CRAE commissioned ATD to identify the minerals present in a further six samples from a Tasmanian resource. The focus of the work was to determine if the zinc was present as sphalerite or as a zinc silicate species such as fraipontite.

### FINDINGS

- The major Zn-bearing mineral in these samples is sphalerite.
- This sphalerite is a low Fe variety.

234235

---

## PROJECT DETAILS

---

### BACKGROUND

CRAE commissioned ATD to identify the minerals present in a further six samples from a Tasmanian resource. The focus of the work was to determine if the zinc was present as sphalerite or as the mineral fraipontite which had been detected previously.

The techniques used to define the mineralogy were X-ray diffraction (XRD), and scanning electron microscopy (SEM) together with energy dispersive X-ray analysis (EDX). Chemical assays were supplied with the samples.

### RESULTS

234236

**Sample 3528057** Zm 13

XRD and SEM/EDX identified the main sulphide minerals as sphalerite and pyrite. In addition, small amounts of galena were observed by SEM (see Table 3). The gangue minerals are quartz and muscovite (sericite). Initial XRD analysis also identified some illite. EDX analysis of three grains of sphalerite gave Fe values ranging from 0.8 to 1.2 wt%.

Assay	Cu 66ppm, Pb 1200ppm, Zn 155000ppm, Ag 29ppm, Fe 4.76%, Mn 34ppm
XRD	Quartz (major); Sphalerite (minor); Pyrite (minor); Muscovite (trace)
SEM	Confirms XRD. Galena was also observed.

Table 3. Assay, XRD and SEM results for sample 2538057

234237

**Sample 3528109** Zm18

XRD and SEM/EDX identified the main sulphide minerals as sphalerite and pyrite. In addition, small amounts of galena were observed by SEM (see Table 4). The main gangue mineral is quartz. Small amounts of muscovite (sericite) were also detected by SEM. EDX analysis of three grains of sphalerite gave Fe values ranging from 0.8 to 1.2 wt%.

Assay	Cu 90ppm, Pb 8800ppm, Zn 82900ppm, Ag 46ppm, Fe 11.5%, Mn 27ppm
XRD	Quartz (major); Sphalerite (minor); Pyrite (minor)
SEM	Confirms XRD. Small amounts of galena and muscovite were also observed.

Table 4. Assay, XRD and SEM results for sample 3528109

**Sample 3528121** Zm18

XRD and SEM/EDX identified the main sulphide minerals as pyrite and sphalerite. In addition, small amounts of galena were observed by SEM. The main gangue minerals are quartz and muscovite (sericite). Small amounts of carbonate (calcite) were also observed by SEM. EDX analysis of four grains of sphalerite gave Fe values ranging from 1.1 to 1.8 wt%.

Assay	Cu 24ppm, Pb 6500ppm, Zn 65800ppm, Ag 5ppm, Fe 15.1%, Mn 56ppm.
XRD	Quartz (major); Pyrite (minor); Sphalerite (minor); Muscovite (trace)
SEM	Confirms XRD. Small amounts of galena and carbonate were also observed.

Table 5. Assay, XRD and SEM results for sample 3528121

234238

**Sample 3528431      Zm57**

XRD and SEM/EDX identified the main sulphide minerals as sphalerite, pyrite and galena (see Table 6). The main gangue minerals are quartz and muscovite. EDX analysis of three grains of sphalerite gave Fe values ranging from 0.6 to 1.2 wt%.

Assay	Cu 96ppm, Pb 2200ppm, Zn 49600, Ag -1ppm, Fe 6.24%, Mn 32ppm
XRD	Quartz (major); Muscovite (minor); Sphalerite (minor); Pyrite (trace); Galena (trace)
SEM	Confirms XRD. No other mineral observed.

Table 6. Assay, XRD and SEM results for sample 3528431

**NEXT STEPS**

- Conduct a comprehensive size by grade chemical and mineralogical investigation to establish more accurately the nature and distribution of Zn minerals, galena and chalcopyrite.

Summary/Conclusion:

In order of abundance-

G1886			
33-1161	Quartz	SiO <sub>2</sub>	50-100%
5-0566	Sphalerite	ZnS	5-50%
26-080	Pyrite	FeS <sub>2</sub>	5-50%
7-0042	Muscovite-3T	(K,Na)(Al,Mg,Fe) <sub>2</sub> (Si <sub>3.1</sub> Al <sub>0.9</sub> )O <sub>10</sub> (OH) <sub>2</sub>	~5%
G1887			
33-1161	Quartz	SiO <sub>2</sub>	50-100%
5-0566	Sphalerite	ZnS	5-50%
26-080	Pyrite	FeS <sub>2</sub>	5-50%
G1888			
33-1161	Quartz	SiO <sub>2</sub>	50-100%
26-080	Pyrite	FeS <sub>2</sub>	5-50%
5-0566	Sphalerite	ZnS	5-50%
7-0042	Muscovite-3T	(K,Na)(Al,Mg,Fe) <sub>2</sub> (Si <sub>3.1</sub> Al <sub>0.9</sub> )O <sub>10</sub> (OH) <sub>2</sub>	~5%
G1889			
33-1161	Quartz	SiO <sub>2</sub>	50-100%
7-0025	Muscovite-1M	KAl <sub>2</sub> Si <sub>3</sub> AlO <sub>10</sub> (OH) <sub>2</sub>	5-50%
5-0566	Sphalerite	ZnS	5-50%
26-080	Pyrite	FeS <sub>2</sub>	~5%
5-0592	Galena	PbS	~5%

For all of the samples, the first four minerals listed account for about 95% of the intensity. After CRA personnel had checked the preliminary report it was suggested that dolomite, rutile, apatites and serpentines may be present. Although some of these minerals were possibilities in some of the samples, identification was not definite.

CRA-ATD powdered samples for bulk  
qualitative XRD phase analysis

La Trobe University-Geology: final XRD report

Date: 28/5/93

CRA-ATD officer: Carol Halsall  
Sample identification: G1884 to G1889  
Date sample received: 17/05/93

*Sample information supplied:*  
Material type: Zinc minerals

Approximate composition: not given

Possible phases: Dolomite, sphalerite and quartz.

Sample preparation:

The pulverised powder was poured into the XRD sample holder and flattened. A straight glass edge was dragged over the surface of the powdered material before presentation to the XRD.

XRD information attached:

uDPSM search/match report with graphical representation.

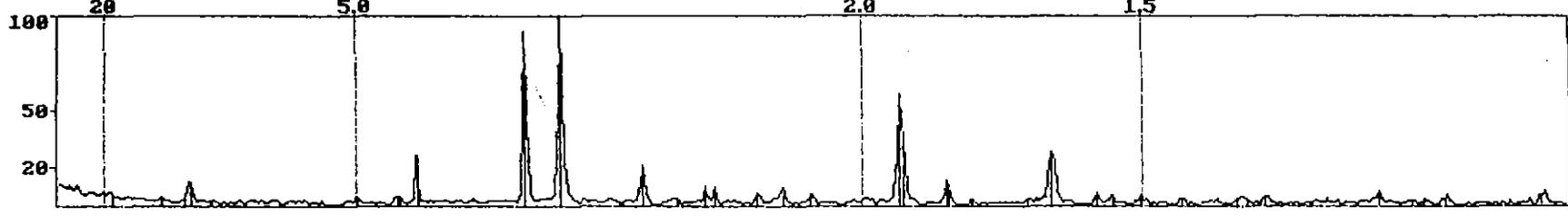
Preliminary report submitted: 21/5/93

G1886  
3528057

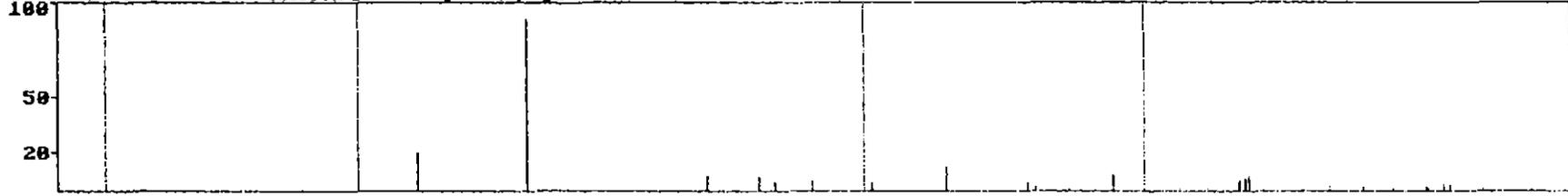
IDENTIFIED PHASES

Intensities: Linear

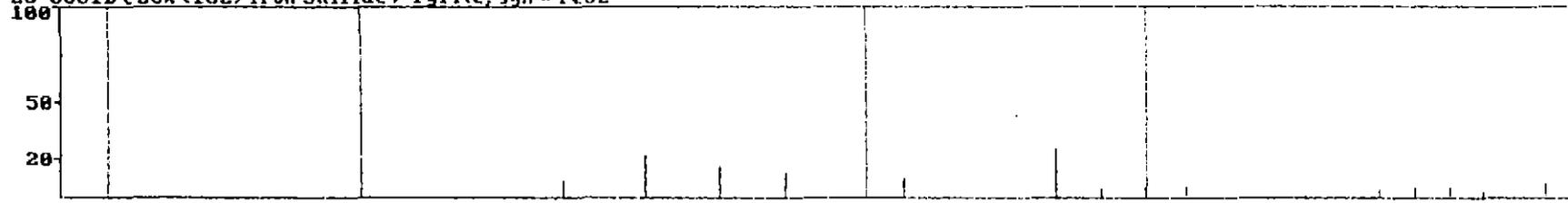
33-1161 26-8801 5-8566 7-8842



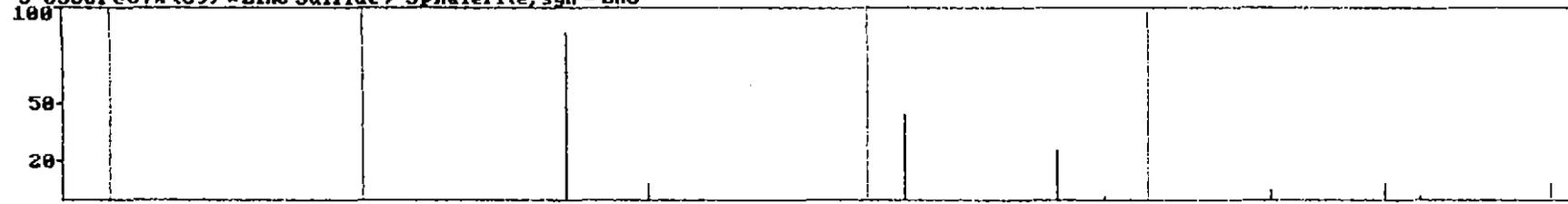
33-1161 \* 091x (193) \* Silicon Oxide / Quartz,  $syn = SiO_2$



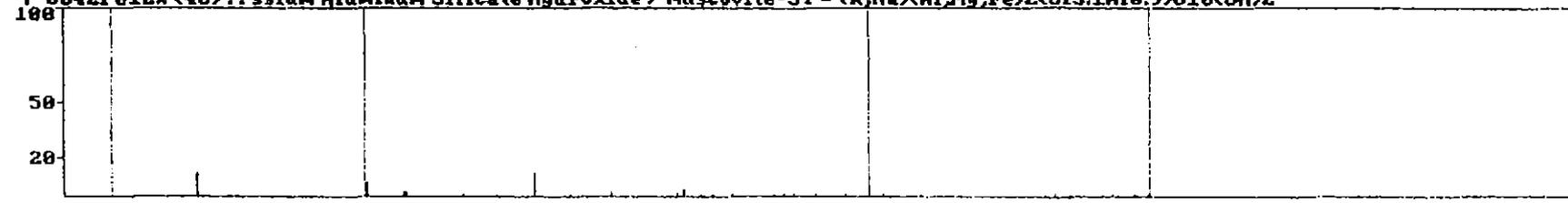
26-8801D 026x (152) Iron Sulfide / Pyrite,  $syn = FeS_2$



5-8566I 087x (69) \* Zinc Sulfide / Sphalerite,  $syn = ZnS$



7-8842I 012x (46) .. ssium Aluminum Silicate Hydroxide / Muscovite-3T =  $(K,Na)(Al,Mg,Fe)_2(Si_3.1Al_0.9)O_{10}(OH)_2$

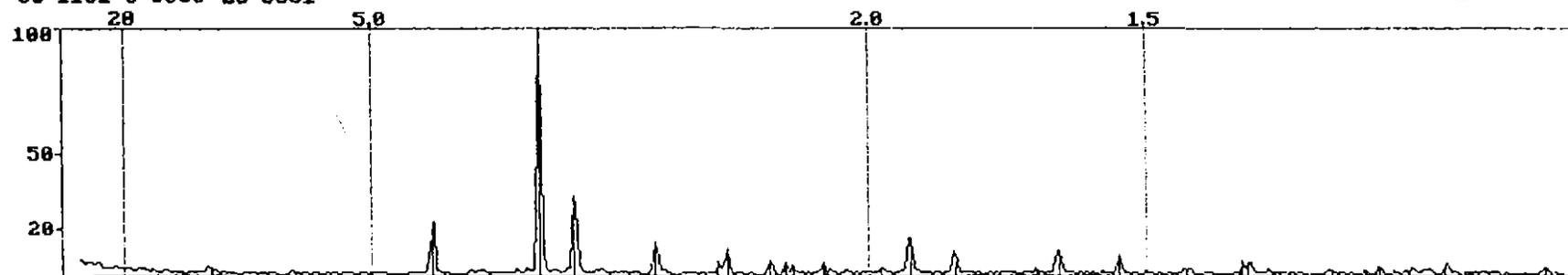


234241

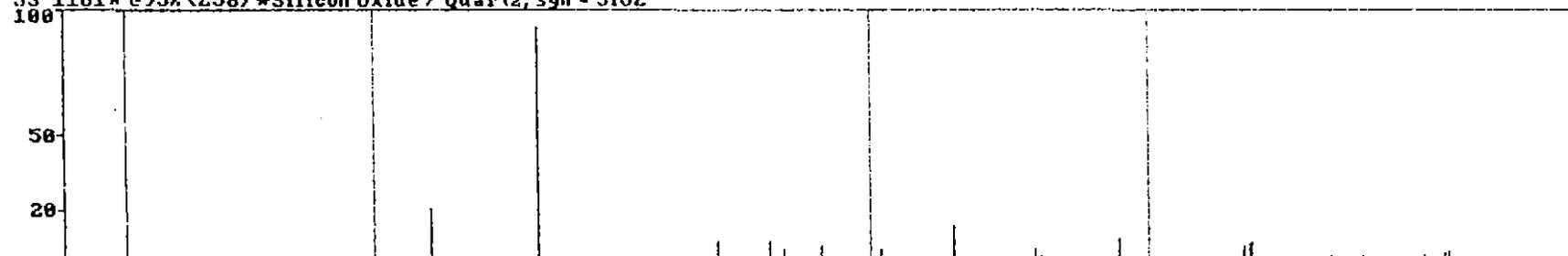
G1887  
3528109

IDENTIFIED PHASES  
33-1161 5-0566 26-0801

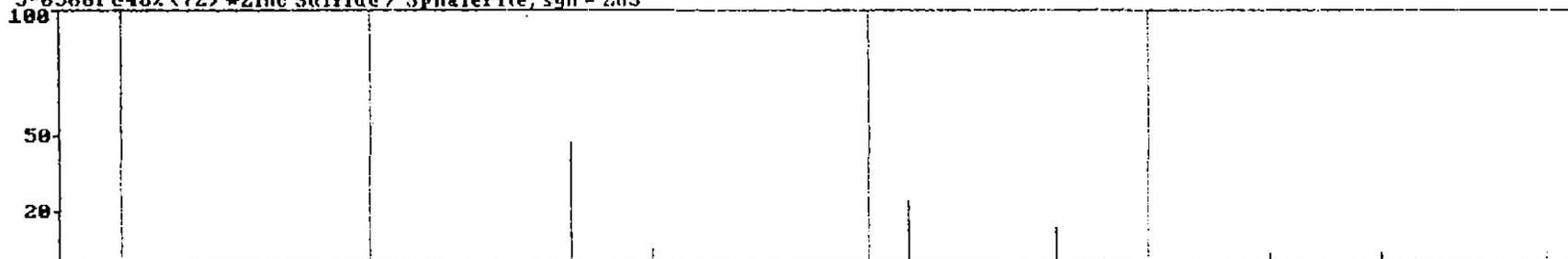
Intensities: Linear



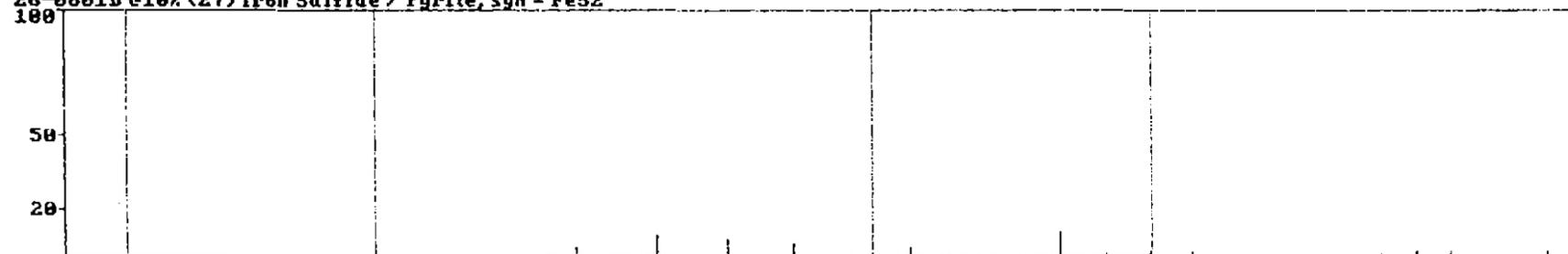
33-1161\* @93% (258) \*Silicon Oxide / Quartz, syn = SiO2



5-0566I @48% (72) \*Zinc Sulfide / Sphalerite, syn = ZnS



26-0801D @10% (27) \*Iron Sulfide / Pyrite, syn = FeS2



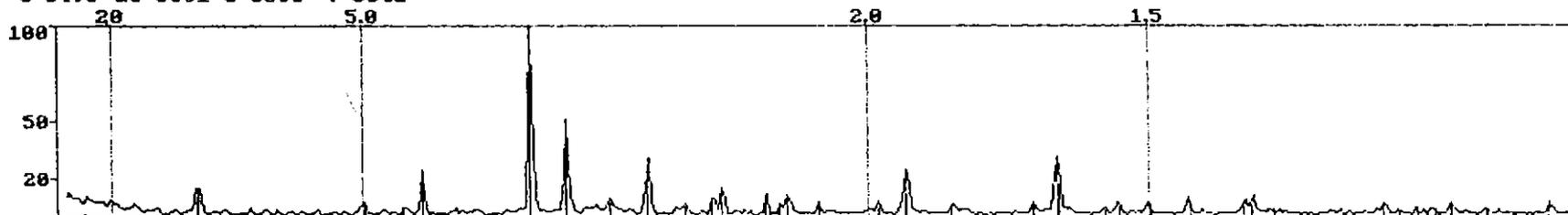
234242

G1888  
3528121

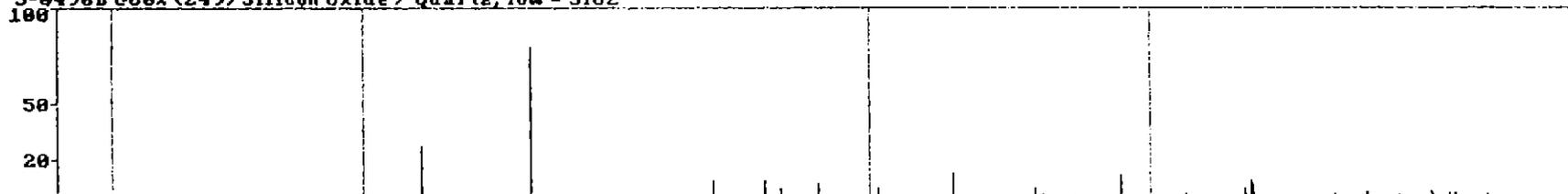
IDENTIFIED PHASES

5-0490 26-0801 5-0566 7-0042

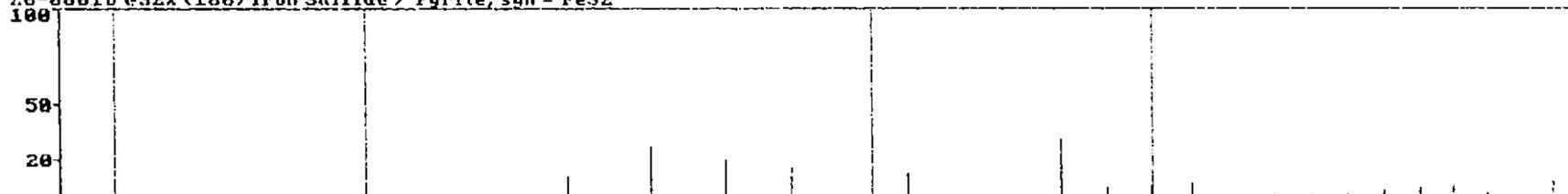
Intensities: Linear



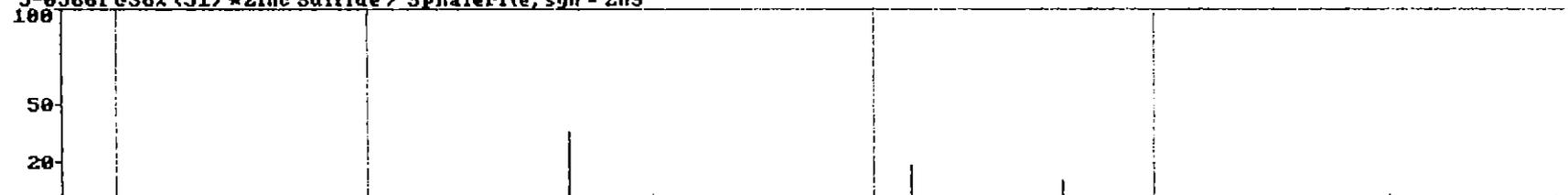
5-0490D 080x (249) Silicon Oxide / Quartz, low = SiO2



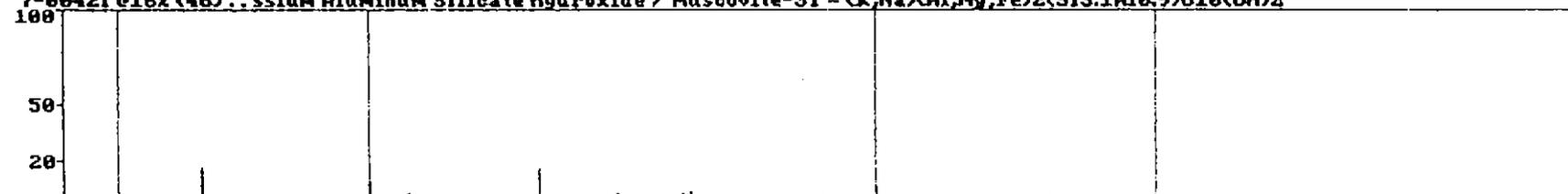
26-0801D 032x (186) Iron Sulfide / Pyrite, sun = FeS2



5-0566I 036x (51) \*Zinc Sulfide / Sphalerite, sun = ZnS



7-0042I 016x (46) . . ssium Aluminum Silicate Hydroxide / Muscovite-3T = (K,Na)(Al,Mg,Fe)2(Si3.1Al0.9)O10(OH)2



234243

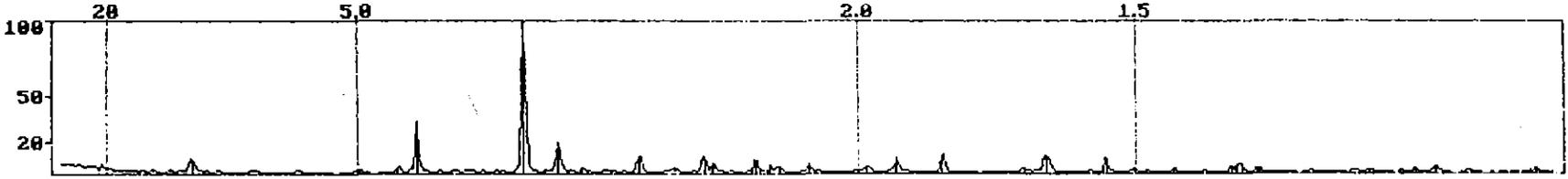
G1889

352843

IDENTIFIED PHASES

Intensities: Linear

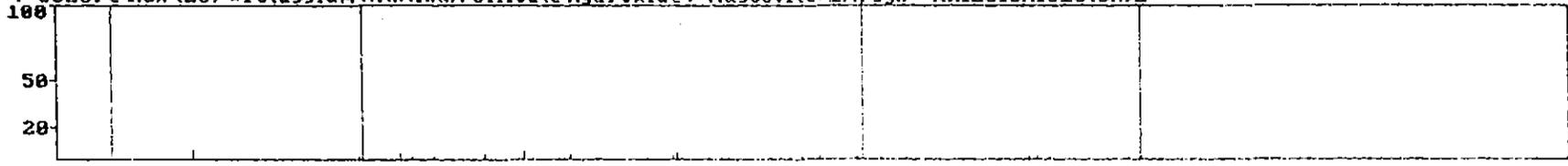
33-1161 7-0025 5-0566 26-0801 5-0592



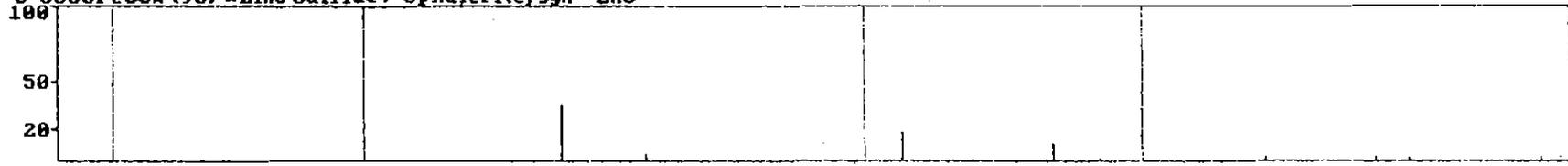
33-1161 \* 0106x (244) \* Silicon Oxide / Quartz,  $syn = SiO_2$



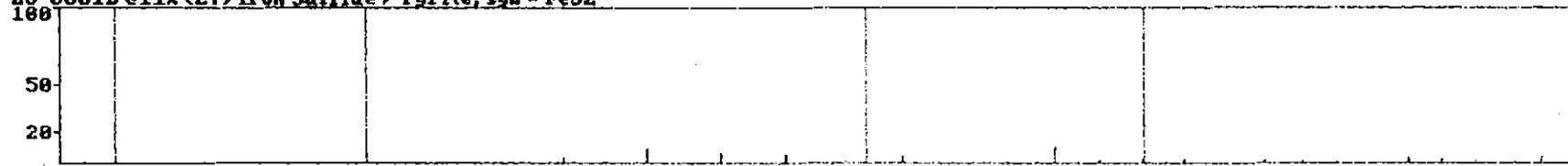
7-0025I 04.6x (28) \* Potassium Aluminum Silicate Hydroxide / Muscovite-1M,  $syn = KAl_2Si_3AlO_{10}(OH)_2$



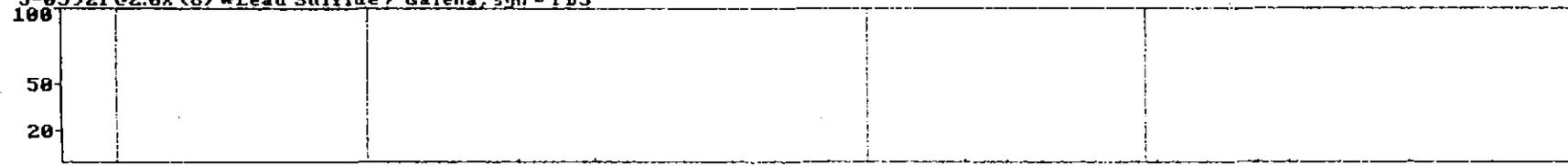
5-0566I 035x (93) \* Zinc Sulfide / Sphalerite,  $syn = ZnS$



26-0801D 011x (27) Iron Sulfide / Pyrite,  $syn = FeS_2$



5-0592I 02.0x (8) \* Lead Sulfide / Galena,  $syn = PbS$



234244



**CRA EXPLORATION PTY. LIMITED**

(INC. IN N.S.W.)

29 BELL STREET PRESTON VICTORIA 3072. AUSTRALIA.

P.O. BOX 8093 234245

NORTHLAND CENTRE

PHONE : (03) 4801866

FAX : (03) 4841375

A.C.N. 000 057 125.

28th June 1993

Mr R. Walker,  
Advanced Technical Development,  
1 Research Ave,  
BUNDOORA VIC.

**SAMPLES SUBMITTED FOR DETAILED SIZE-BY-GRADE ANALYSIS**

Dear Rob,

Please find enclosed two composite air-core samples from CRAE's Tasmanian zinc prospects for detailed chemical and mineralogical characterisation by size fractions as per our agreed quotation.

Sample 3753498 (hole ZM13, 16-28m) is a pyrite-rich sample from another prospect 3km from the first sample. The interval assayed 6.7% Zn and 0.1% Pb. Sample pulp 3528057 came from this interval, and samples 3528109 and 3528121 were from an adjacent hole with similar geological characteristics (ATD ref A857A/639ch).

Can you please retain any excess sample for future reference, including geochemical sample pulps in case further assays are required.

Thankyou for your help.

Yours sincerely,

**ROBERT PARKINSON**  
(Project Geologist - Tasmania)



Advanced Technical Development  
Melbourne

234246

A Report prepared for  
CRAE, Preston

# Chemical and Mineralogical Characteristics of a Tasmanian Resource

**CONFIDENTIAL**

1 October 1993

## Chemical and Mineralogical Characteristics of a Tasmanian Resource

**CONFIDENTIAL**

This Report contains proprietary and confidential information of Technological Resources Pty Limited and its distribution is restricted to the persons named herein. This Report may not be copied or reproduced in any way whatsoever nor provided to any other person without the express permission in writing of Technological Resources Pty Limited.

Author: C E Halsall

Contributors: R Walker

Copy to: R Parkinson (CRAE, Preston)  
T Dickson (CRAE, Preston)  
M Lavery (R&PD)  
J Box  
S Roden/P Dudzinski/minfile  
B C Kelley/P A O'Neill/File

Date: 1 October 1993

Ref: A857A/756ms



# SUMMARY

## Project Focus

CRAE commissioned ATD to conduct a comprehensive size by grade chemical and mineralogical characterisation of two air-core composite samples from a Tasmanian zinc prospect. The aim of this characterisation was to establish more accurately the nature and distribution of valuable minerals in two contrasting samples.

*What are the main chemical and mineralogical features of the two samples?*

## Research Conducted

Samples were sized at ATD. All of the size fractions were submitted for chemical analysis at ATD. Selected size fractions were sent to Genalysis (Perth) for trace element determinations. Five size fractions of each sample were selected for the mineralogical study. Their mineralogy was characterised using a combination of optical microscopy, X-ray diffraction (XRD) and scanning electron microscopy with energy dispersive X-ray capabilities (SEM/EDX).

## Findings

- The size distribution of the two samples is very different

[REDACTED]

Sample 3753498 contains more sulphide with >30% of its mass reporting in the +2mm size fraction.

[REDACTED]

[REDACTED]

[REDACTED]

- Sample 3753498 MYRTLE ZM13 16-28m

The mineralogy of this sample is dominated by pyrite, sphalerite, sericite, and quartz.

- Implications

[REDACTED]



# CONTENTS

	Page
<b>Project Focus</b>	1
<b>Research Conducted</b>	1
<b>Findings</b>	1
<b>Implications</b>	7
<b>Appendix 1</b>	<b>Results of Chemical Analysis - major and trace elements.</b>
<b>Appendix 2</b>	<b>SEM Photomicrographs.</b>
<b>Appendix 3</b>	<b>Summary of Mineralogical Information and XRD Reports from La Trobe University and AMDEL.</b>

## Project Focus

---

CRAE commissioned ATD to undertake a comprehensive size by grade chemical and mineralogical characterisation of two contrasting air-core composite samples from a Tasmanian zinc prospect. The aim of the characterisation was to establish more accurately the nature and distribution of the valuable minerals. Some work had been done previously on samples from this prospect (see reports by R Walker: A857A/603ms, and C Halsall/R Walker: A857A639ch). The focus of the previous work had been to try and determine whether the main zinc bearing mineral was sphalerite, a Zn-aluminosilicate, or smithsonite (Zn carbonate). The results suggested that both sphalerite and a Zn-aluminosilicate (possibly fraipontite) were present in varying amounts.

## Research Conducted

---

### *Sizing*

Samples were sized at ATD. Sample preparation was achieved by splitting the sample in half by cone and quartering and then wet screening at 38 $\mu$ m. Prior to wet screening the samples were disagglomerated to ensure a natural size distribution would be obtained. Following wet screening the +38 $\mu$ m size fraction was sized to 2mm by dry screening. The -38 $\mu$ m size fraction of the clay rich sample (3753497) was further sized in a cyclosizer down to 10 $\mu$ m.

### *Chemical and mineralogical analysis*

All of the size fractions were submitted for chemical analysis at ATD. Selected size fractions were sent to Genalysis (Perth) for trace element determinations. Five size fractions of each sample were selected for the mineralogical study. Their mineralogy was characterised using a combination of optical microscopy, X-ray diffraction (XRD), and scanning electron microscopy with energy dispersive X-ray capabilities (SEM/EDX). SEM/EDX analysis was carried out at ATD. XRD analysis was carried out at La Trobe University with selected samples also sent to AMDEL in South Australia for more detailed XRD analysis of clay minerals.

## Findings

---

- The size distribution of the two samples is very different

Sample 3753498 contains more sulphide. Its size distribution is in sharp contrast to that of 3753497 with 36.1% reporting to the +2mm size fraction. Agglomeration is much less of a problem in sample 3753498.

Table 1. Percentage size distribution by weight for each sample

	3753498
+2mm	36.1
-2+1mm	11.5
-1+0.5mm	10.3
-500+212um	12.3
-212+106um	8.2
-106+63um	4.7
-63+38um	4.2
-38um	12.7
-38+20um	
-20+10um	
-10um	

overlooked.

Mineralogical information for sample 3753497 is summarised in Appendix 3. Figure 1 (Appendix 2) is a SEM photomicrograph of this sample showing the main minerals of interest.

- **Sample 3753498**

***Zn assays remain relatively constant through the size fractions***

Results of chemical analysis of sample 3753498 are shown in Appendix 1 (Table A1.1). The mean values for Zn and Pb are 10.15 wt% and 0.11 wt%. Zinc values range from 3.5 wt% to 15.6wt% but there is no consistent variation through the size fractions. The lowest zinc assay corresponds to the finest size fraction (-38 $\mu$ m). The highest zinc assay corresponds to the -212+106 $\mu$ m size fraction.

A visual estimate of mineral abundances in this sample suggests an average modal composition (by volume) of 50% pyrite, 20% sphalerite, 20% fine grained aluminosilicates (mainly sericite), and 10% quartz. Variations in Zn assay can be directly related to sphalerite content as there do not appear to be any other Zn-bearing phases present. The proportion of pyrite remains fairly constant throughout the size fractions. Attempts at image analysis and optical point counting were again unsuccessful in the coarser size fractions due to the presence of relatively fine grained sphalerite in agglomerates.

***Pyrite is dominant sulphide***

Pyrite is the most common sulphide in all of the size fractions and is much more abundant in this sample than in sample 3753497. This is reflected in the Fe and S assays for the two samples (Appendix 1, Table A1.1). The majority of the pyrite grains are clean although some contain <10 $\mu$ m inclusions of galena (Figure 5, Appendix 2). Some very fine grained aggregates of pyrite (framboids?) were also observed.

***Sphalerite contains <1wt% Fe***

Sphalerite is common in all of the size fractions. Most of the sphalerite is clean although many of the grains have a thin surface coating of agglomerated material. There are occasional complex intergrowths between sphalerite and other sulphides or silicates (Figure 6, Appendix 2). "Microbreccia" textures were observed in some sulphide fragments. A number of grains of sphalerite were analysed by microprobe at the University of Melbourne. Sphalerite compositions are quite uniform with an average Fe content of <1wt% (Table 4).

***Sericite is dominant K-aluminosilicate***

A fine grained K-aluminosilicate is present in all of the size fractions. It usually occurs in fine grained aggregates which resemble rock fragments. XRD analysis by AMDEL suggests that this phase is muscovite (sericite). The grain size of the sericite is generally <10 $\mu$ m and individual grains often display preferred orientation within the aggregates. Some relatively coarse grained muscovite was observed in the +212 $\mu$ m size fractions.

A minor amount of chlorite was observed associated with pyrite in the -1000+500 $\mu$ m size fraction.

Discrete grains of quartz are present in all of the size fractions.

Table 4. Results of microprobe analysis of sphalerite (sample 3753498)

3753498 (-500+212um)					
(wt%)					
Zn	66.946	66.94	67.243	66.813	66.746
Fe	0.372	0.863	0.343	0.743	0.243
Mn	0	0.005	0.012	0.002	0.02
S	33.03	33.062	32.938	33.148	33.039
Total	100.348	100.87	100.536	100.706	100.048
3753498 (-63+38um)					
(wt%)					
Zn	66.476	65.983	65.849	65.821	66.797
Fe	0.705	1.347	1	0.958	0.662
Mn	0	0	0.006	0.05	0.019
S	32.902	32.66	32.873	33.215	32.872
Total	100.083	99.99	99.728	100.044	100.35

ave 66.5  
ave 0.72%  
ave 0.02%

*No carbonate was observed*

Average values for Ca, Mg, and C in this sample are 0.02 wt%, 0.12 wt%, and 1.49 wt% respectively (Appendix 1, Table A1.1) suggesting that the sample contains very little carbonate. No carbonate was observed in the mineralogical study.

The results of trace element analysis of selected size fractions are shown in Appendix 1 (Table A1.2). Values for Ni and As are both higher in this sample than in sample 3753497 (Table 5), suggesting that Ni and As are associated with sulphides.

Mineralogical information for this sample is summarised in Appendix 3. Figure 4 (Appendix 2) is an SEM photomicrograph of this sample showing the main minerals of interest.

## Implications

The physical characteristics and mineralogy of the sulphide sample 3753498, suggest that it will behave normally during processing.

## APPENDIX 1

Results of chemical analysis -  
major and trace elements

Table A1.1 Results of major element analysis for all size fractions (wt%).

	Ca	Si	Al	K	Mg	C	S	Pb	Zn	Fe
<b>3753498</b>										
+2mm	0.03	10.60	3.49	0.83	0.07	0.87	32.20	0.11	8.87	23.80
-2mm+1mm	<0.01	10.90	3.78	0.92	0.08	1.18	29.40	0.11	8.25	26.80
-1000+500um	0.03	10.80	3.75	0.93	0.10	1.30	28.50	0.09	12.20	19.80
-500+212um	<0.01	9.35	3.08	0.71	0.09	1.24	30.40	0.12	15.40	20.90
-212+106um	<0.01	11.70	4.11	1.00	0.09	1.35	27.40	0.11	15.60	21.90
-106+63um	0.01	13.10	4.99	1.14	0.12	1.44	25.90	0.12	6.62	20.70
-63+38um	<0.01	13.90	4.50	1.16	0.09	1.74	22.40	0.13	10.80	18.10
-38um	<0.01	17.50	6.71	1.58	0.29	2.80	14.10	0.10	3.50	11.40
Mean	0.02	12.23	4.30	1.03	0.12	1.49	26.29	0.11	10.16	20.43

Table A1.2 Results of trace element analysis of selected size fractions

	Mn	Ni	Cu	As	Ag	Cd	Bi
<b>3753498</b>							
-1000+500um	16	190	74	400	13	360	0.5
-212+106um	20	215	62	400	13	270	0.5
-63+38um	18	225	78	580	9	160	0.5

**APPENDIX 2**

**SEM Photomicrographs**

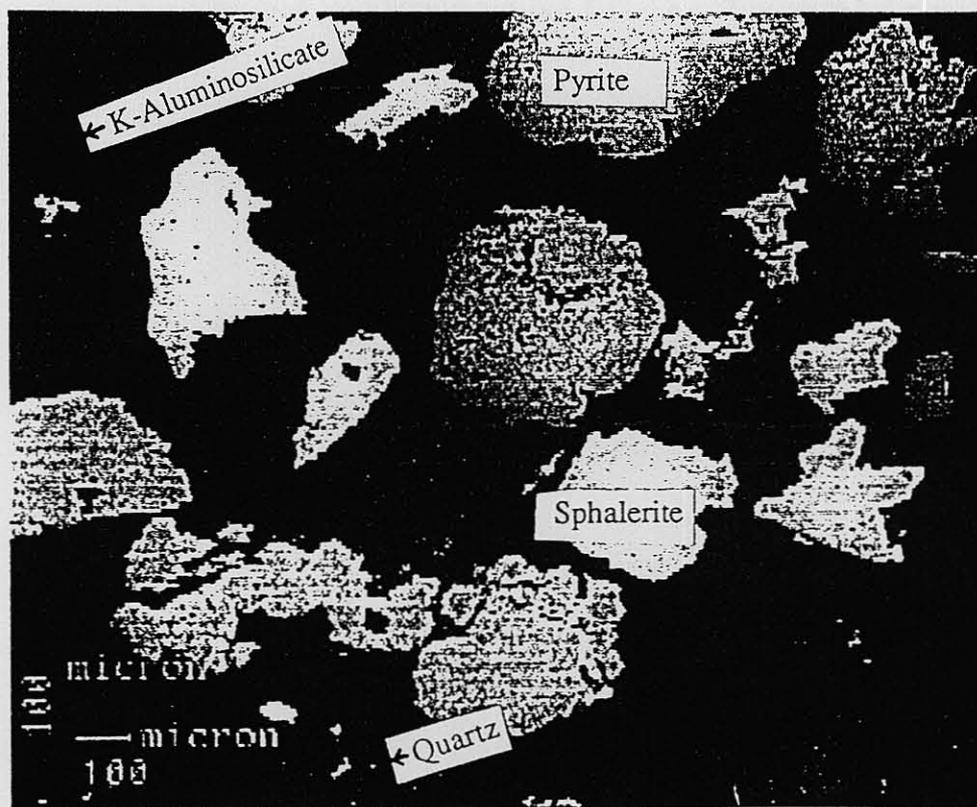


Figure 4: Sample 3753498. A representative field of view showing the main minerals present.

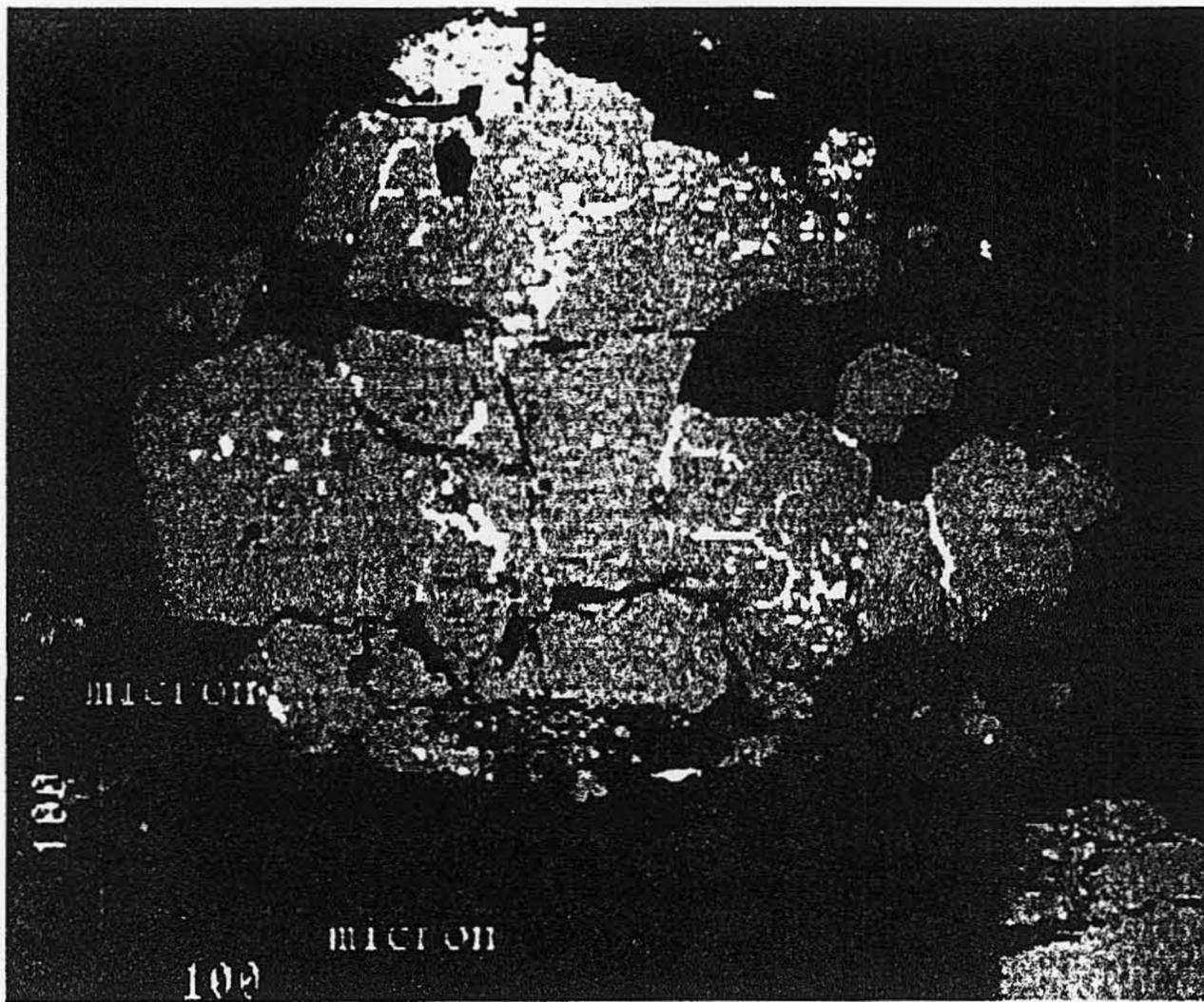


Figure 5: Sample 3753498. Galena inclusions (white) in pyrite.



Figure 6: Sample 3753498. A complex intergrowth of sphalerite (brightest phase), pyrite (grey) and silicate (darkest phase).

## **APPENDIX 3**

**Summary of mineralogical information  
and XRD reports from La Trobe University  
and AMDEL**

3753498

-1000+500 $\mu$ m (Assay: 12.2%Zn, 0.09%Pb, 19.8%Fe, 28.5%S)
--

XRD quartz, sphalerite, pyrite, muscovite/sericite
--

SEM K-aluminosilicate, quartz, pyrite, sphalerite, chlorite
---

-500+212 $\mu$ m (Assay 15.4%Zn, 0.12%Pb, 20.9%Fe, 30.4%S)
--

XRD quartz, sphalerite, pyrite, muscovite/sericite
--

SEM K-aluminosilicate, quartz, sphalerite, pyrite, galena, muscovite
--

-212+106 $\mu$ m (Assay: 15.6%Zn, 0.11%Pb, 21.9%Fe, 27.4%S)
---

XRD quartz, sphalerite, pyrite, muscovite/sericite
--

SEM K-aluminosilicate, quartz, pyrite, sphalerite, galena, phosphate?
---

-106+63 $\mu$ m (Assay: 6.62%Zn, 0.12%Pb, 20.7%Fe, 25.9%S)
--

XRD quartz, sphalerite, pyrite, muscovite/sericite
--

SEM K-aluminosilicate, quartz, pyrite, sphalerite, galena
---

-63+38 $\mu$ m (Assay: 10.8%Zn, 0.13%Pb, 18.1%Fe, 22.4%S)
---

XRD quartz, sphalerite, pyrite, muscovite/sericite
--

SEM K-aluminosilicate, quartz, pyrite, sphalerite, galena
---