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Seventh Annual Report
For The Period Ending 9/11/95
EL 28/88 Zeehan No. 1, Tasmania

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ZEEHAN NO.1 - CRA - TEAR SJ

Abstract

Exploration for carbonate hosted base metal deposits within the Gordon Limestone, West Tasmania continued on EL 28/88 (Zeehan 1). In addition further encouraging work on base metal shale-hosted targets in the Late Proterozoic Oonah Formation was completed.

Work undertaken in the period 9/11/94 to 9/11/95 consisted of deep overburden sampling (wacker and aircore; 293 holes totalling 1566m and 27 holes totalling 503m respectively), detailed helimag survey (2400 line km) and diamond drilling (6 holes totalling 1976.9m) at Myrtle, Pyramid, Firewood Siding (Gordon Limestone) and Stonehenge (Oonah Formation). A new Gordon Limestone prospect at Sassafras was also explored.

Re-interpretation of all data was completed with the production of new geological maps. Key features of the new maps include drilling interpretations and increased geological complexity.

Diamond drilling at Stonehenge DD95ZS31, following up an aircore geochemical anomaly, yielded 6.5m @ 6.3% Zn, 2.9% Pb, 41 g/t Ag from 34m. Sphalerite/galena mineralisation is hosted in black shales at the contact with an underlying mixed package of siltstone, dolomitic limestone and sandstone. Bedrock (wacker) sampling has provided approximately 400m of strike length associated with this mineralisation which is open to the west. Potential may exist for an open-pittable resource and further drilling is recommended.

Diamond drilling of targets within Gordon Limestone failed to intersect significant base metal mineralisation either at the lower sandstone/limestone contact (Myrtle and Pyramid) or the upper sandstone/limestone contact (Myrtle and Firewood Siding). However substantial geological knowledge was acquired, with the major significance being the development of an important limestone sub-basin in the Myrtle area, proximal to the Professor Range Fault.

Reconnaissance wacker drilling at Sassafras confirmed relatively simple geology with 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.

A detailed helimag survey was flown over the Gordon Limestone in order to:-

- a) locate zones of major siderite alteration, which may help to focus on sulphide targets, and
- b) provide more detail of the Avebury 'skarn' magnetic anomaly.

In order to maintain perpendicularity of flight lines to the limestone, strike-variable flight path orientations were needed. This has resulted in complex data processing, and hence final results are not available at the time of writing.

Recommendations for further work include diamond drilling and structural mapping of the Stonehenge area with the aim of outlining a resource. It is necessary to process the helimag data further and drill test, on merit, resulting targets either as carbonate hosted base metal deposits or skarn-type targets. It is also recommended that further drilling is undertaken at Myrtle, possibly targeting beneath the Siltstone Unit.

Environmental rehabilitation consisted of ripping compacted ground around drillsites and removal of rubbish and cuttings. Care has been taken to avoid unnecessary damage to vegetation etc..

Expenditure for the year amounted to \$712,272 making a total for the EL of \$1,091,954.

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Tv 1008 ✓	EL 28/88 Zeehan 1 Zeehan Carbonate, Myrtle Prospect DD95ZM188: Section 50139N	1:1,000
Tv 1065 ✓	EL 28/88 Zeehan 1 Raw Bouguer Gravity	1:25,000
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Tv 1013 ✓	EL 28/88 Zeehan 1 Zeehan Carbonate, Myrtle Prospect Cross Section DD95ZM189	1:1,000
Tv 1007 ✓	EL 28/88 Zeehan 1 Zeehan Carbonate, Myrtle Prospect DD95ZM190: Section 4995N	1:1,000
Tv 1018 ✓	EL 28/88 Zeehan 1 Carbonate Pyramid Prospect, Geology and Drillhole Location Plan	1:2,500
Tv 992 ✓	EL 28/88 Zeehan 1 Pyramid Prospect, DD95ZP63 Section: 1476E	1:1,000
Tv 711 ✓	EL 34/88 Zeehan 2 Firewood Siding Prospect Drillhole Location Plan	1:2,500
Tv 996 ✓	EL 28/88 Zeehan 1 Zeehan Carbonate, Firewood Siding Prospect DD95ZF37: Section 59792N	1:1,000
Tv 1017 ✓	EL 28/88 Zeehan 1 Zeehan Carbonate, Sassafras Prospect, Geology and Deep Overburden Sample Location Plan	1:2,500
Ptv 4 ✓	EL 28/88 Zeehan 1 Stonhenge Prospect, Section 12000E - DD95ZS31	Not to scale
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Appendices

Appendix I	The Gordon Limestone Lithostratigraphy
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Appendix III	Myrtle - DD95ZM188 - 190 Drill Logs
Appendix IV	Pyramid - DD95ZP63 - Drill Logs
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Appendix VI	Sassafras Wacker Sampling Geology and Assay Data
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Appendix X	Zinc Mineralisation in the Gordon Limestone

1. Conclusions and Recommendations

A significant stratabound base metal intercept of 6.5m @ 6.3% Zn, 2.9% Pb and 41 g/t Ag from 34m is recorded from diamond drillhole DD95ZS31 at Stonehenge hosted in the Late Proterozoic Oonah Fm. This has opened up the possibility for an open pit resource being present in the area. However, complex structure needs to be resolved preferably prior to further drilling. Wacker sampling outlined approximately 400m of potential strike length to this mineralisation, open to the west.

Diamond drilling at Myrtle revealed thicker limestone sub-units, and is indicative of syn-sedimentary faults. Re-interpretation of geological data has shown significant anomalous zinc associated with and immediately below the Siltstone Unit.

The black and ferruginous clays seen at the base of the limestone just south of Myrtle at Grieves are not present in DD95ZM189. This suggests that these clays are surficial weathering products.

DD95ZP63 at Pyramid intersected zones of clean micrites analogous to the micrite host at the Navan Mine in Ireland. Re-interpretation of geological data indicates that a major zinc/lead anomaly occurs up stratigraphy from DD95ZP63 and may be the 'Oceana Horizon' which lies below the Siltstone Unit.

At Firewood Siding DD95ZF37 terminated just above the Siltstone Unit and may not have adequately tested the target based on surface geochemistry.

Wacker bedrock sampling at Sassafras confirmed the presence of a regional anomalous metal horizon at the lower sandstone/limestone contact. This contact is not fully developed, with most instances being Cambrian Dundas Group sediments juxtaposed with the Gordon Limestone (thrust or unconformity?).

It is recommended that the following programme be undertaken in 1996.

- 1) Structural mapping of the Stonehenge area to assist in follow-up drillhole tests of the mineralisation found in DD95ZS31.
- 2) Rigorous processing of the helimag data to identify the merit of the Avebury 'skarn' anomaly - if favourable then diamond drill test.
- 3) Identify major siderite alteration zones in the Gordon Limestone using the helimag data. Diamond drill testing of favourable targets, cross referenced with geology, should be undertaken.
- 4) Complete a basin analysis study of the Gordon Limestone in the Zeehan area; attempt to identify Ordovician-aged syn-sedimentary structures and hence favourable sites for sulphide location.
- 5) Identify mineralised structures and test by drilling where they intersect favourable replaceable host stratigraphy.
- 6) Further reconnaissance wacker sampling and diamond drilling at Pyramid particularly in the vicinity of the Little Henty Fault.

2. Introduction

Zeehan 1, EL 28/88 covers 65 km² 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. CRA 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 CRAE (90%) and Allegiance (10%) as tenants in common on 22nd January 1994.

During the period under review, the seventh year of tenure, CRAE has a statutory obligation to spend \$65,000 on exploration. This report details all exploration activities conducted within EL 28/88 by CRAE during 1995.

CRAE's principal focus in the Zeehan area is zinc (plan Tv 1022), either as:

- 1) Irish-style carbonate hosted zinc mineralisation in the Ordovician Gordon Limestone Fm - at Myrtle, Pyramid, Sassafras and Firewood Siding prospects, or
- 2) Shale-hosted zinc mineralisation in the Late Proterozoic Oonah Fm - at Stonehenge

Secondary targets include nickel mineralisation in ultramafic bodies (Trial Harbour), and skarn-type Zn-Pb deposits peripheral to the Heemskirk Granite (Avebury).

Work undertaken on the licence during 1995 included diamond drilling at Myrtle, Pyramid, Firewood Siding and Stonehenge with aircore and wacker sampling also at Stonehenge and wacker sampling at Sassafras. A helimag survey was completed over most of the Ordovician Limestone outcrops and the Avebury 'skarn' anomaly.

Sub-divisions of the Gordon Limestone have been made on a lithologic/lithostratigraphic basis for utilisation in drillhole logging. An explanation of the formation codes is in Appendix I.

3. Review of Previous Work

See Appendix II.

4. Exploration Completed in the 12 Month Period 9/11/94 to 9/11/95

Diamond Drillhole Summary

DDH	Prospect	East	North	Elev (m)	TD (m)	Azim (AMG)	Dip	Date Drilled	Details Appendix
DD95ZF37	Firewood Siding	360636	5350143	190	212	095	45	13/5/95	V
DD95ZM188	Myrtle	364473	5351933	148	201.1	090	60	5/6/95	III
DD95ZM189	Myrtle	364288	5351001	147	702.4		90	7/6/95	III
DD95ZM190	Myrtle	363448	5351780	140	203.9	090	45	7/7/95	III
DD95ZP63	Pyramid	364311	5351810	135	228	202	60	10/7/95	IV
DD95ZS31	Stonehenge	359733	5359462	260	209.5	200	50	8/6/95	VIII

Sampling of the drill core was by splitting the core using a diamond saw with Analabs of Townsville providing the analyses. Analysis was by ICP-OES (G1201) for Ag, Al, As, Ba, Co, Cu, Fe, K, Mg, Mn, Pb, Zn. Sulphur assays were undertaken by LECO furnace (OM613) for zinc assays > 0.5%.

The overburden sampling was done by using a wacker hammer drill and a 'flow-through' sampling bit. Analyses were carried out by Analabs, Townsville by ICP-OES method for Ag, Al, As, Ba, Ca, Cu, Fe, K, Mg, Mn, Pb, Zn.

See Parkinson 1992, 1993 and 1994 for regional setting, prospect geology, mineralisation and previous work summaries.

4.1 Myrtle

3 diamond drillholes totalling 1107.4m (DD95ZM188-190) were completed at the Myrtle prospect.

A revised geology map has been completed showing recent drill hole locations (plan Tv 714).

Drill logs and results are shown in Appendix III.

4.1.1 DD95ZM188 60° to 090° TD 201.1m Drillrig Universal 250
(Diamond Drilling of Tasmania Pty Ltd)

This hole was aimed at testing the lower sandstone/limestone contact (Moina Quartzite - Gordon Limestone) in the north east of the prospect. The hole intersected argillaceous calcarenite and fine grained micritic calcarenite (Plan Tv 1008). The occurrence of red beds, indicating sub-aerial exposure is a distinctive feature of this hole along with several cavities and fault-related alteration zones. Black clays with localised zones of pyrite and minor siderite alteration were also encountered. Unfortunately zinc values for this black clay unit were disappointingly low (max 278 ppm Zn). The hole terminated in the Moina Quartzite. It is believed that considerable faulting occurs in and proximal to this drillhole.

4.1.2 DD95ZM189 90° TD 702.4m Drillrig Longyear 44 (Almac)

Digital processing of EZ - collected gravity data identified a positive feature in the Myrtle area (Plan Tv 1065); further processing of the data to remove the influence of various lithologies and coastal effects highlighted the presence of a major gravity high at Myrtle (Plan Tv 1066). This anomaly was inferred to be a down dip extrapolation of the Grieves mineralisation at the lower sandstone/limestone contact. In order to test this anomaly, a vertical diamond hole DD95ZM189 was drilled in the south eastern part of the anomaly. The hole intersected about 670m of unfaulted limestone giving a true width of approximately 450m (Plan Tv 1013). The limestones pass into a basal unit called the Silty Transition Unit which has been observed elsewhere in the Gordon Limestone (generally 15m thick) and finally into the Moina Sandstone (a silicic sandstone unit). No immediate explanation for the gravity feature was found although it is possible that it is in response to a greater than normal thickness of clean calcarenites - visual observations and calcium/aluminium assays - which would be more calcareous and thus would be reflected in slightly higher densities. Density measurements of drillcore at 1m intervals using the Archimedes Principle show higher densities at the base of the limestone sequence. Check measurements at 10m intervals based on accurate measurements of core to calculate the volume have shown incoherent patterns in densities. This is probably due to a problem with porosity.

Elevated zinc values are associated with the basal 15m of the limestone and the Silty Transition Unit (max 205 ppm). This could be due to:

- a) lateral enrichment associated with replacement mineralisation ie. at Grieves, or
- b) it could be a representation of compositional variations linked to terrestrial sediment input associated with the initial onset of the subsiding shelf which caused the limestone development.

A 1m shale unit at the top of the Silty Transition Unit exhibits minor faulting ie. fractured core with small scale clay gouges, but otherwise the sequence is unfaulted. Enhanced concentrations of iron and magnesium are also associated with the basal limestone and Silty Transition Unit.

DD95ZM189 intersected about 60% of the stratigraphy for the Gordon Limestone in this area and is markedly different from the previous stratigraphic hole ZB1007 (drilled by EZ & Mines Department) which shows considerably more dolomitisation, mineralisation, faulting and evidence of basin/shelf movements.

4.1.3 DD95ZM190 45° to 090° TD 203.9m Drillrig Longyear 44 (Almac)

This diamond hole was designed to test the upper sandstone/limestone contact (Crotty Quartzite/Gordon Limestone) following wacker sampling in the area which indicated the presence of high levels of zinc. The hole passed from the Crotty Quartzite through a dark grey, fissile shale unit - possibly a sheared zone - into the Upper Dolomite Unit. (Plan Tv 1007) The Upper Dolomite Unit is ubiquitous beneath the Crotty Quartzite and consists of dolomitised, locally argillaceous, calcarenites.

It is unsure yet as to whether the dolomite is fault-related, related to mineral fluid introduction or occurs as a result of sedimentary deposition processes.

A 10m cavity occurs between the base of the dolomite at 86m and the underlying limestones, possibly a result of excessive water flow.

Weakly elevated zinc values are associated with the dolomite, up to 0.28% Zn for 0.3m from 71.7m in the presence of semi-massive pyrite. The actual contact between the Crotty Quartzite and Gordon Limestone is weakly mineralised, 0.18% Zn for 2.1m from 51m hosted by sheared sandstone/siltstone(?).

4.2 Pyramid

A revised geology map has been completed showing borehole locations (plan Tv 1018).

DD95ZP63 was designed to test the lower sandstone/limestone contact close to where siderite alteration was recorded in AC94ZP43.

Drill logs and results are shown in Appendix VI.

4.2.1 DD95ZP63 60° to 213° AMG TD 228m Drillrig Universal 250
(Diamond Drilling of Tasmania Pty Ltd)

The hole passed through a series of clean micrite/fine grained clean calcarenite including an eminently replaceable micrite unit for 30m from 127m. The hole passed into black/dark grey clays with minor pyrite and siderite zones before passing into a weathered clay-dominant Silty Transition Unit and finally into Moina Quartzite. (Plan Tv 992).

Assay results for the Dark Clay Unit were disappointingly low, 0.21% Zn for 1.5m from 201m associated with pyritic dark grey clays and small scale siderite alteration.

4.3 Firewood Siding

A revised geology map has been completed showing borehole locations (plan Tv 711).

Deep overburden sampling at Firewood Siding demonstrated zinc enrichment near the upper sandstone/limestone contact (Crotty Quartzite/ Gordon Limestone). Enrichment is complemented by high lead values. Dolomitisation (the Upper Dolomite Unit) does not accompany high zinc values. The best way to proceed with exploration was to drill test this upper contact, DD95ZF36 was collared on licence EL 34/88 (CRAE Report 21151) whilst DD95ZF37 was collared on EL 28/88 and is reported here.

Drill logs and results are shown in Appendix V.

4.3.1 DD95ZF37 45° to 95° TD 212m Drillrig Longyear 38
(Diamond Drilling of Tasmania Pty. Ltd.)

DD95ZF37 was collared in Crotty Quartzite before passing into the Upper Dolomite Unit of the Gordon Limestone at 56m. (Plan Tv 996). The contact appears to be gradational with interbedded sandstone and limestone (dolomitised). Minor silicification is associated with the contact, possibly related to shearing. Dolomitisation ceases to be abundant after 100m. The hole stopped in the Siltstone Unit, an argillite-dominant weakly calcareous siliclastic unit.

Elevated zinc values are associated with:-

- 1) across the Crotty Quartzite/Upper Dolomite contact 0.38% for 10m from 59m, and
- 2) brown dolomite zones (poor recovery) 0.5% for 3.2m from 87.8m. No siderite alteration was observed.

4.4 Sassafras

This is the most northerly prospect of the Zeehan carbonate area. The limestone occurs on the east flank of a gently folded syncline.

4.4.1 Wacker Sampling

A bedrock sampling grid was undertaken over the Sassafras area. The grid consisted of 5 lines at 400m spacing with a 25m sample spacing. 130 holes were drilled for 767m at an average depth of 5.9m (depth ranged between 1.1 and 24.2m).

Results for the sampling showed a peak zinc value of 2590 ppm (mean 164 ppm) with lead values up to 441 ppm (mean 31 ppm). These anomalous results are associated with the basal contact of the Gordon Limestone. This anomalous zinc horizon has 1200m of strike length and remains open to the NNW. Minor siderite alteration is associated with this lower contact.

The resultant geology map is a combination of chip sample logging and assay data (plan Tv 1017).

The Moina Quartzite has only a minor presence with the Gordon Limestone being overthrust on its eastern contact by Cambrian Dundas Group sediments. The Upper Dolomite Unit is generally absent. There also appears to be two siltstone units within the upper 33% of the Gordon Limestone - a feature seen elsewhere in the limestone of the Zeehan area.

4.5 Stonehenge

The target at Stonehenge is a shale-hosted zinc deposit within the Late Proterozoic black shales of the Oonah Fm. Previous drilling by RGC and CRAE encountered moderate zinc grades often associated with poor core recovery. An aircore drilling programme was designed to systematically test inferred shallow mineralisation, indicated by previous shallow soil sampling and IP.

4.5.1 Aircore Drilling

Two 0.3 km traverses were completed at 25m spacing -27 holes totalling 503m (Plan Tv 1019). Material was collected over 3m intervals. No end-of-hole samples were taken. Analyses were performed by Analabs of Townsville for Ag, Fe, Mn, Cu, Pb, Zn. Results from the two traverses are as follows (see Appendix VII):

i) Traverse One

Perpendicular to stratigraphy and parallel to DD93ZS3; tested for shallow stratiform Pb-Zn-Ag mineralisation.

Significant intersections were:

ZS5	17m	@ 2.82% Zn, 2.06% Pb	from 9m to EOH
ZS6	6m	@ 2.79% Zn, 1.22% Pb	from 0m
ZS8	3m	@ 1.43% Zn	from 12m
ZS10	9m	@ 2.42% Zn	from 3m

Mineralisation consists of galena and dark brown sphalerite, intergrown with fine grained pyrite in a black shale unit within the Oonah Formation. It is unclear if mineralisation is stratiform or related to discordant quartz-carbonate veining.

ii) Traverse Two

Parallel to stratigraphy and profiling historic discordant vein style Pb-Zn-Ag mineralisation. No significant mineralisation was intersected - possibly because holes were drilled 150m north of the most prospective zone due to poor access.

Four cuttings samples with high Zn values were submitted for Pb isotope analyses (ICP-MS). Interpretation of data (207Pb/204 Pb - 206 Pb/204 Pb ratio plot) indicates:

- 1) Results plot in a single tight* cluster (*taking into account 0.5-1.0% error on ratios).
- 2) This cluster does not directly correspond to other W.Tasm. mineralisation signatures determined by Thermal-ICP. This is probably a result of the analytical technique used.
- 3) The cluster plots closer to measured Devonian vein signature (Gulson et al., 1987) than a predicted Proterozoic mineralisation signature.

4.5.2 Diamond Drilling

As a result of encouraging aircore drilling it was decided to undertake further diamond drilling with an emphasis of obtaining superior core recovery.

DD95ZS31	50° to 200° AMG	TD209.4m	Drillrig Universal 650 (Diamond Drilling of Tasmania Pty Ltd)
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A U650 rig operated by Diamond Drilling of Tasmania was used with HQ triple tube equipment. Recovery in the shales in the upper 45m of the hole averaged 62% and contained mineralisation. Elsewhere recovery was generally 100%.

DD95ZS31 intersected geochemically distinctive black shale, from 7.5-40.5m (Plan PTv 4), underlain by heavily altered sandstone and siltstone units +/- minor carbonate horizons, to 78.4m. From 78.4 to 124m the sediments comprise mainly dolomitised limestone units, and from 124m to 152.95m a more mixed sequence of dolomite, sandstone and siltstone. A black pyritic shale unit occurs from 152.95m to 159m where it becomes interbedded with grey quartzite units before passing into massive quartzite units at 171.1m. From 182m sediments are interbedded massive quartzite and black siltstone/shale. Drill logs and results are shown in Appendix VIII.

Results included:-

- 1) 6.5m x 6.3% Zn from 34m.
Associated with heavily sheared, pyritic black shales at the base of the shale unit (+/- minor quartz veining). A distinctive manganese halo structurally underlies mineralisation, which may be related to mineralisation or sediment composition.
- 2) 1.3m x 3.51% Zn from 66.2m
Associated with locally massive, brecciated sphalerite hosted by a sandstone/quartz breccia vein.

- 3) 3.25m x 2.5% Zn from 152.95m
Associated with massive pyrite zones related to a ?sheared black shale unit.
Zinc mineralisation consists of minor blebs and dissemination of sphalerite.

Other intervals between 141.7 and 159m show 1-2m widths grading 1.5-1.7% Zn.

An interesting breccia occurs at 188m with massive coarse grained galena in the matrix.

4.5.3 Bedrock Sampling

In an effort to accurately define the surface trace of the mineralisation in DD95ZS31 and to provide more evidence for geological interpretation, wacker bedrock sampling was completed over part of the Stonehenge area.

163 samples were collected totalling 799m drilled with an average depth of 4.9m and a depth range of 0.5 to 32.8m. A maximum zinc value of 9.65% was recorded (Pb 9.63%). This mineralisation probably correlates with the 6.5m x 6.3% Zn interval (34-40.45m) in DD95ZS31. A distinctive E-W striking anomaly of > 500 ppm Zn is open to the west. Wacker sample logs and results are shown in Appendix IX.

In addition surface mapping was carried out by R Parkinson see Plan Tv 1019.

4.6 Detailed Helimag Survey

The Gordon Limestone of the Zeehan area was flown over as part of a detailed sub-regional helicopter magnetic survey. Line spacing was approximately 60m with an average flight height of 30m and 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. This resulted in time consuming and complex processing and at the time of writing final results are still awaited.

5. Discussion of Results

5.1 Myrtle

Diamond drilling at Myrtle had limited success. However, re-interpretation of geological and geochemical information shows that zinc mineralisation is spatially related to, and underlying the Siltstone Unit. This is analogous to the concept of the Irish deposits where the Siltstone Unit provides a cap to replaceable micrites underneath. Drilling of the deep stratigraphic hole (DD95ZM189) revealed significant lithological variation to elsewhere in the stratigraphy and may link in with the idea of the gravity anomaly being related to a sub-basin. In Ireland, most carbonate deposits occur on the flanks of major linear gravity highs. Thus one further drill test possibility is the on flank of the gravity feature where it is cut by a mineralised structure and comes close to the Siltstone Unit. Proof of an orthogonal secondary/tertiary fault to the gravity anomaly long axis is also seen as favourable.

5.2 Pyramid

Potential for a large carbonate hosted zinc deposit at the lower limestone/sandstone contact appears limited although an inferred large siderite alteration zone occurs to the south east. Anomalous geochemical zones in the middle/upper part of the limestone have been only partially diamond drill tested. This area would correspond to the Oceana Mine horizon. It is characterised by a distinctive mutual segregation of the zinc (+ lead) and iron anomalies which may represent:-

- i) alteration zoning associated with a large deposit in which iron bearing sulphide? mineralisation overlies the zinc-bearing rocks or,
- ii) a more argillaceous limestone unit which could have acted as a capping unit for zinc-rich mineralising fluids.

It is therefore proposed to drill test the 'Oceana Horizon' beneath the anomalous geochemistry.

It is apparent from the 1:50,000 mapping that there is considerable variations in the limestone thickness at Pyramid and that the limestone is cut off in the south by the major E-W trending Little Henty Fault. Surface sampling has not covered these areas and therefore it is proposed to undertake reconnaissance wacker sampling and to drill test any quality anomalies generated.

5.3 Firewood Siding

Relative to DD95ZF36 it is apparent that the dolomitisation effect is greatly reduced in DD95ZF37 suggesting a reduced influence of nearby major faulting, although zinc assays were slightly higher. Interpretation of subsurface geology with aircore and wacker sampling suggest that DD95ZF37 should have been carried through the Siltstone Unit.

Future work at Firewood Siding is suggested:-

- 1) Step back further to diamond drill test the Crotty Quartzite and Gordon Limestone contact with the aim to achieve better core recovery and less weathered rock.
- 2) Diamond drill test beneath the Siltstone Unit - a clean calcarenite/micrite unit lies beneath this unit which is conceptually rewarding working on the Irish analogy of the first replaceable horizon up from the basement beneath a cap (the Siltstone Unit).

5.4 Sassafras

Further exploration should consist of:-

- 1) Infill wacker sampling around the high zinc values at the base of the limestone contact;
- 2) extending wacker sampling testing of the same contact NNW of the present grid;
- 3) If sufficient encouragement from this wacker sampling is achieved and siderite related magnetic anomalies are found then targets need to be tested by diamond drilling.

5.5 Stonehenge

The conclusion is that the area is structurally complex. The zinc mineralisation in the upper part of DD95ZS31 can be inferred to be stratabound although the mineralisation in the lower part of the hole is thought to be of a discordant shear-related style. The near surface mineralisation is cut off to the east by a 160° trending fault but what happens to the west is uncertain. Bedrock dolomite as identified by the wacker sampling shows very limited areal extent, to the point that the main dolomite unit in DD95ZS31 apparently does not outcrop vertically above the drillhole. However it does outcrop to the east (before the 160° fault) perhaps implying

- i) A plunging anticlinal structure to the west - thought unlikely due to the presence of buff coloured sandstones in the upper part of the drillhole sequence which are not seen lower down the hole - (unless the buff colour is the result of sericitic alteration - stockwork?).
- ii) The black shale unit is thrust over the dolomite unit, the thrust orientation being possibly N-S.

Future work in the Stonehenge area is planned to consist of follow-up drilling around DD95ZS31 and a more detailed structural mapping exercise. Further wacker sampling is planned to help delineate stratigraphic units and mineral traces.

6. Environment and Rehabilitation

A number of activities conducted during 1995 have impacted on the environment. These include:

- diamond drilling at Myrtle
- diamond drilling at Pyramid
- diamond drilling at Firewood Siding (Helicopter supported site)
- aircore drilling at Stonehenge
- diamond drilling at Stonehenge
- line cutting and wacker sampling at Stonehenge
- line cutting and wacker sampling at Sassafras.

Rehabilitation of surface disturbance included:-

- filling of diamond drill sumps
- capping of diamond drill hole collars
- raking of drill sites
- recovering sites with the cleared vegetation
- filling air-core holes with cuttings
- removing excess aircore cuttings from sites.

Drill sites and grid lines will naturally revegetate. No permanent new access tracks were created. Where possible, low-impact technologies were employed in exploration.

All exploration work is discussed on site with the Department of Industry Safety and Mines personnel prior to it being undertaken. Their advice allows for environmental impact of the proposed work to be kept to a minimum.

One potential problem area may be the Myrtle prospect where gorse infestation along access tracks put in by previous explorers has got beyond control. This illustrates the importance of not removing the natural vegetation.

7. References

- | | | |
|-----------------|-------|--|
| Parkinson, R.G. | 1992b | Zeehan No. 1 EL 28/88, Tasmania. Report on exploration for the fourth year of tenure, 9/11/91 to 9/10/92. CRAE Report No. 18355. |
| Parkinson, R.G. | 1993 | Zeehan No. 1 EL 28/88, Tasmania. Report on exploration for the fifth year of tenure, 9/11/92 to 9/11/93. CRAE Report No. 19284. |
| Parkinson, R.G. | 1994 | Zeehan No. 1 EL 28/88, Tasmania. Report on Exploration for the Sixth Year of Tenure 9/11/93 - 9/11/94. |
| Summons, T.G. | 1991 | EL 28/88 Zeehan, Tasmania. Statutory Progress Report for the Period Ending 9th November 1991. CRAE Report No. 17636. |

8. Location

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

9. Keywords

Tasmania, Late Proterozoic, Ordovician, Oonah Fm, Gordon Limestone, Wacker Sampling, Helicopter-borne Magnetism, Diamond Drilling, Aircore Drilling, Zinc, skarn.

10. DPO Register

CRA Exploration Pty Limited**DPO Register****EL 28/88 Zeehan 1**

DPO Number	LAB Batch Number	LAB	DPO Location	Office Date	Geologist	Prospect Name	Sample Type	Number of Samples	250,000 Map Sheet	100,000 Map Sheet
77377	11024	Analabs	Zeehan	21/6/95	S Tear	Firewood Siding	Half D DHQ/NQ		SK55-5	7914
77379	11026	Analabs	Zeehan	21/6/95	S Tear	Myrtle	Half D DHQ/NQ	78	SK55-5	7914
77380	11072	Analabs	Zeehan	7/7/95	S Tear	Myrtle	Half D DHQ/NQ	63	SK55-5	7914
77383	11043	Analabs	Zeehan	30/6/95	S Tear	Stonehenge	Half D DHQ/NQ	125	SK55-5	7914
77388	11098	Analabs	Zeehan	19/7/95	S Tear	Myrtle	Half D DHQ/NQ	49	SK55-5	7914
77390	11120	Analabs	Zeehan	28/7/95	S Tear	Pyramid	Half D DHQ/NQ	70	SK55-5	7914
77382	11042	Analabs	Zeehan	30/6/95	S Tear	Sassafras	Rock	130	SK55-5	7914
77385	11074	Analabs	Zeehan	7/7/95	S Tear	Stonehenge	Rock	112	SK55-5	7914
77389	11099	Analabs	Zeehan	19/7/95	S Tear	Stonehenge	Rock	63	SK55-5	7914

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ANNUAL REPORT PE 9/11/95 - EL28/88 -
ZEEHAN NO.1 - CRA - TEAR S J



Location Diagram

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

Mapsheet Reference

Legend

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

CRA EXPLORATION PTY. LIMITED

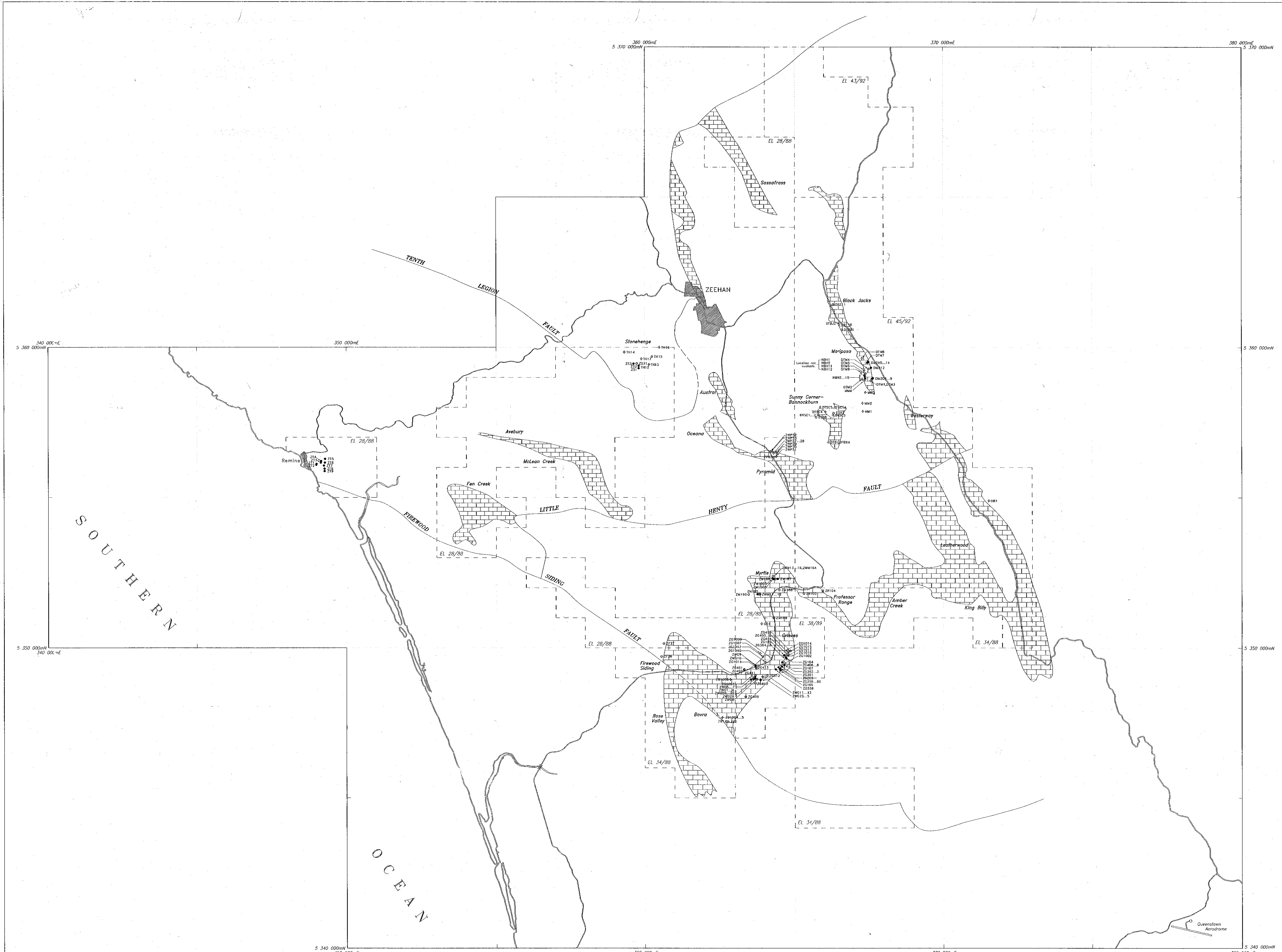
5 cm

EL28/88 Zeehan 1

Location Plan

342019

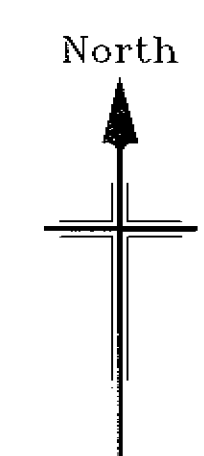
Author: Simon Tear	Reference: SW Tasmania SK55-22
Drawn: Tony Sargeant	File Name: Tv1021.wor
Date: December 1995	Report No: 21102
Scale: 1:100,000	Plan No: Tv1021



- Z0401 Diamond Drillhole - CRAE 1995
- Z0101 Diamond Drillhole - CRAE Pre 1995
- ZW0411 Diamond Drillhole - Other
- Major Faults
- - - CRAE Tenement Boundaries
- ▨ Ordovician Gordon Limestone (usually covered by peat and gravels)

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ANNUAL REPORT PB 9/11/95 - EL2888 - ZEEHAN NO.1 - CRA - TEARS J



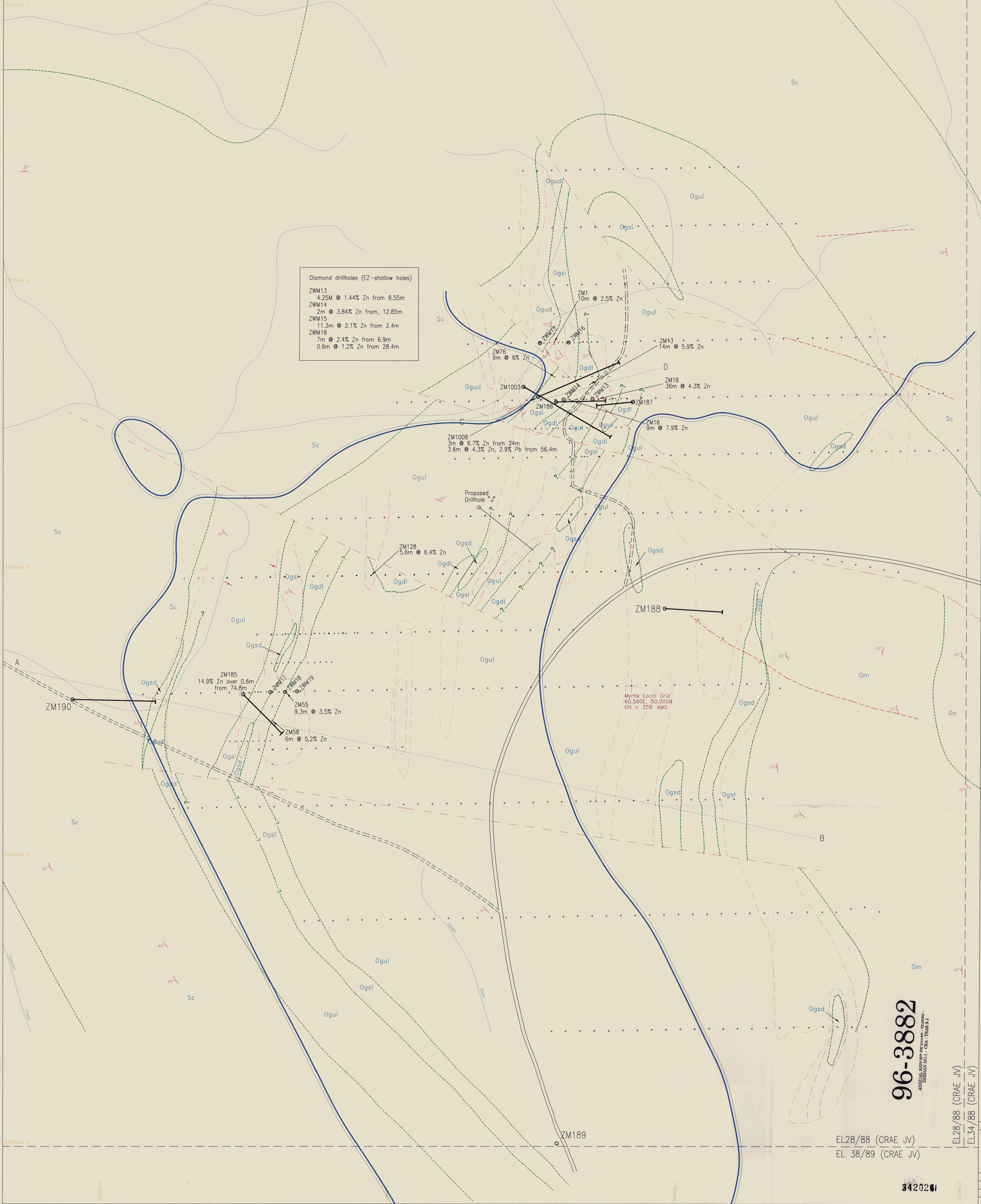
5cm

CRA EXPLORATION PTY. LIMITED

ZEEHAN PROJECT

Target Plan 42920

Ref.: SK95 - 5	File: Tv1022.dwg
Scale: 1 : 50000	Date: November 1995
Author: Simon Tear	Report No.: 21102
Drawn: T. Sargeant	Plan No.: Tv 1022

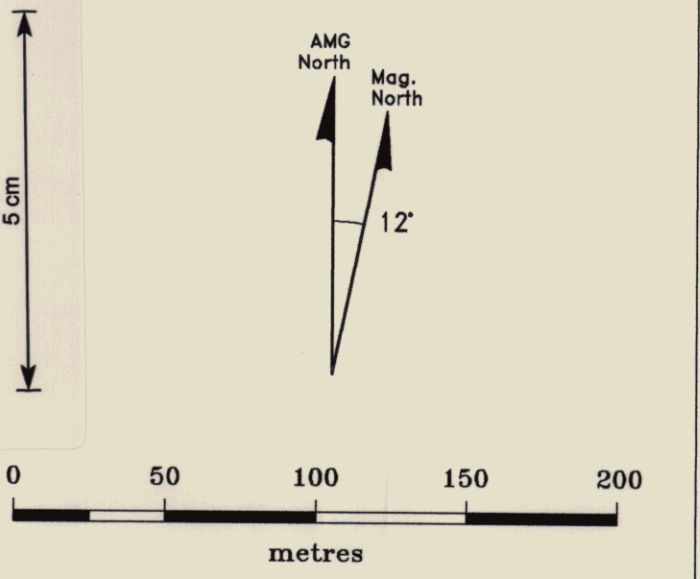


LEGEND

- Air Photo Linears
- Faults
- Geological Boundary
- Significant Zn/Pb Anom. (>1000ppm Zn & Pb)
- Fe Enhanced Zones
- Gravity High
- Diamond Drillhole and Trace
- Aircore Drillholes
- Rockchip or Wacker Bedrock Sample <0.1% Zn
- Rockchip or Wacker Bedrock Sample >0.1% Zn
- Dip of Cleavage
- Dip of Bedding
- Road, Track
- Creek
- Section Line

Sc	Croftly Quartzite	Silurian
Ogud	Upper Dolomite Unit	
Ogsi	Siltstone Unit	
Ogul	Undifferentiated Limestone	
Ogd	Undifferentiated Dolomite	
Ogm	Laminated Micrite Unit	Ordovician
Ogo	Oolite Unit	
Ogsd	Siderite Unit	
Ogc	Dark Grey / Black Clay Unit	
Ogf	Ferruginous Clay Unit	
Ogm	Massive Sulphide Unit	Cambrian
Ogt	Stilly Transition Unit	
Ogz	Fault Zone	
Ogb	Carbonate Breccia	
Om	Moine Sandstone	
Oo	Owen Conglomerate	
Cd	Dundas Group (undifferentiated)	

NOTE
Detailed Mapping Revised from E2 report TCR 86-2547
Additional mapping from geochemical interpretation
(wacker and aircore sampling).

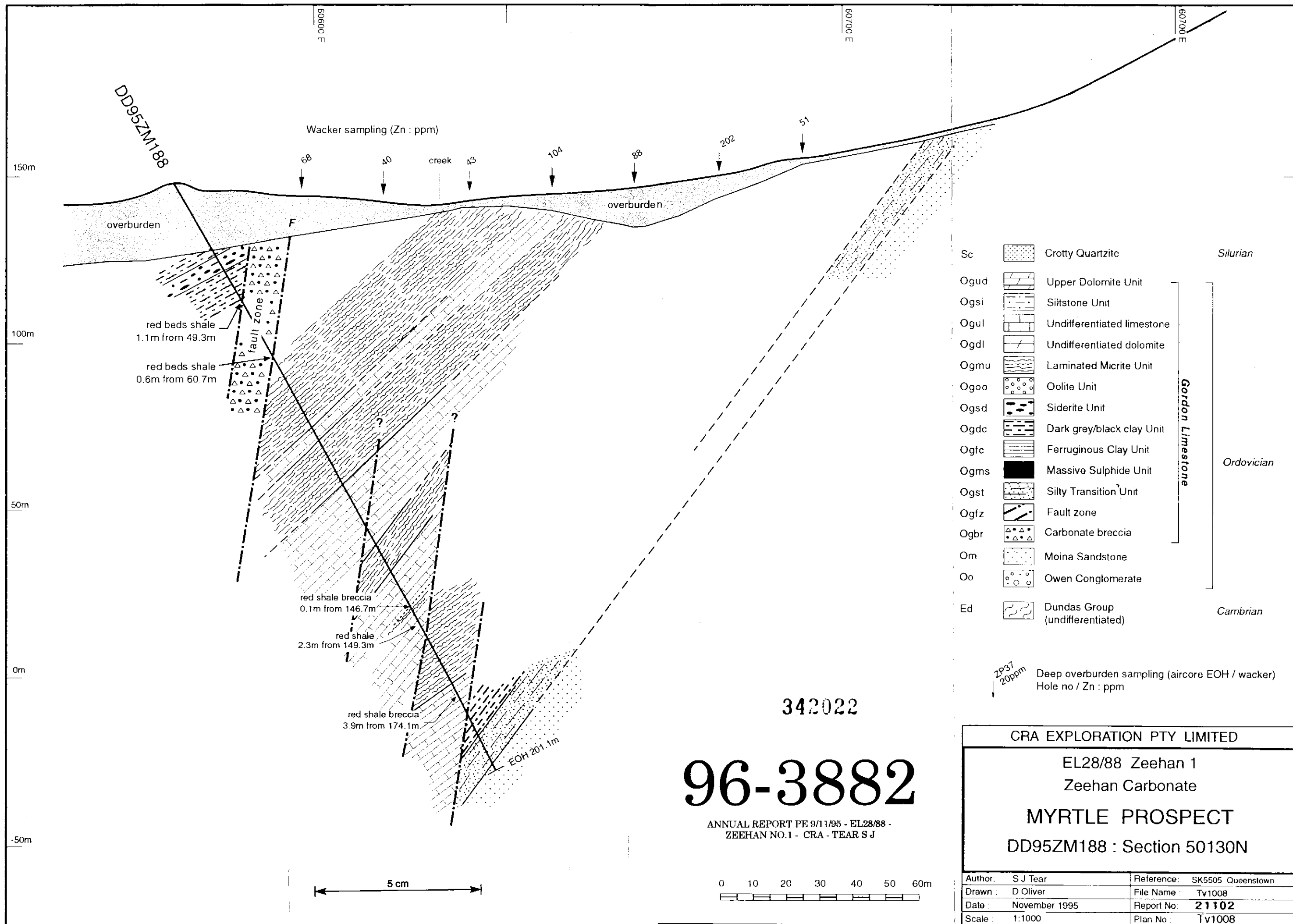


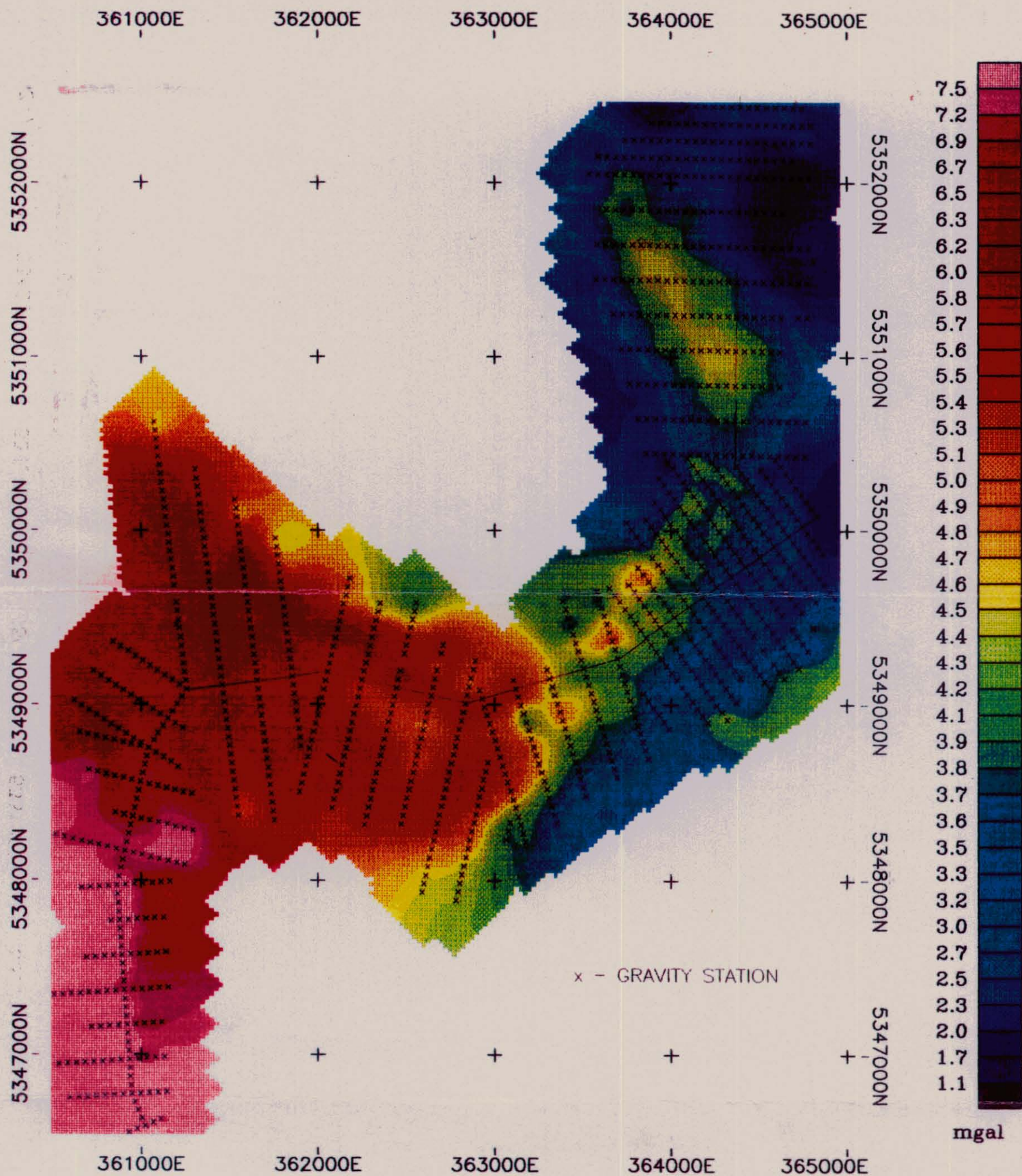
96-3882
ANNUAL REPORT REVISED
ZEEHAN NO.1 - CEA - YEAR 8 87

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

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

CRA EXPLORATION PTY LIMITED			
EL 28/88 ZEEHAN 1			
Zeehan Carbonate			
Myrtle Prospect			
Geology and Drillhole Location Plan			
Ref.	SK55-05		
Author	S.Tear	Drawn	Hambridge Drafting & Topo. Services
Scale	1 : 2500	Report	21102
Date	14-11-95	Plan No	TV 714





Scale 1:25000
250 0 250 500 750
(meters)

5 cm

CRA EXPLORATION PTY. LIMITED

EL28/88 Zeehan 1

Badger Creek

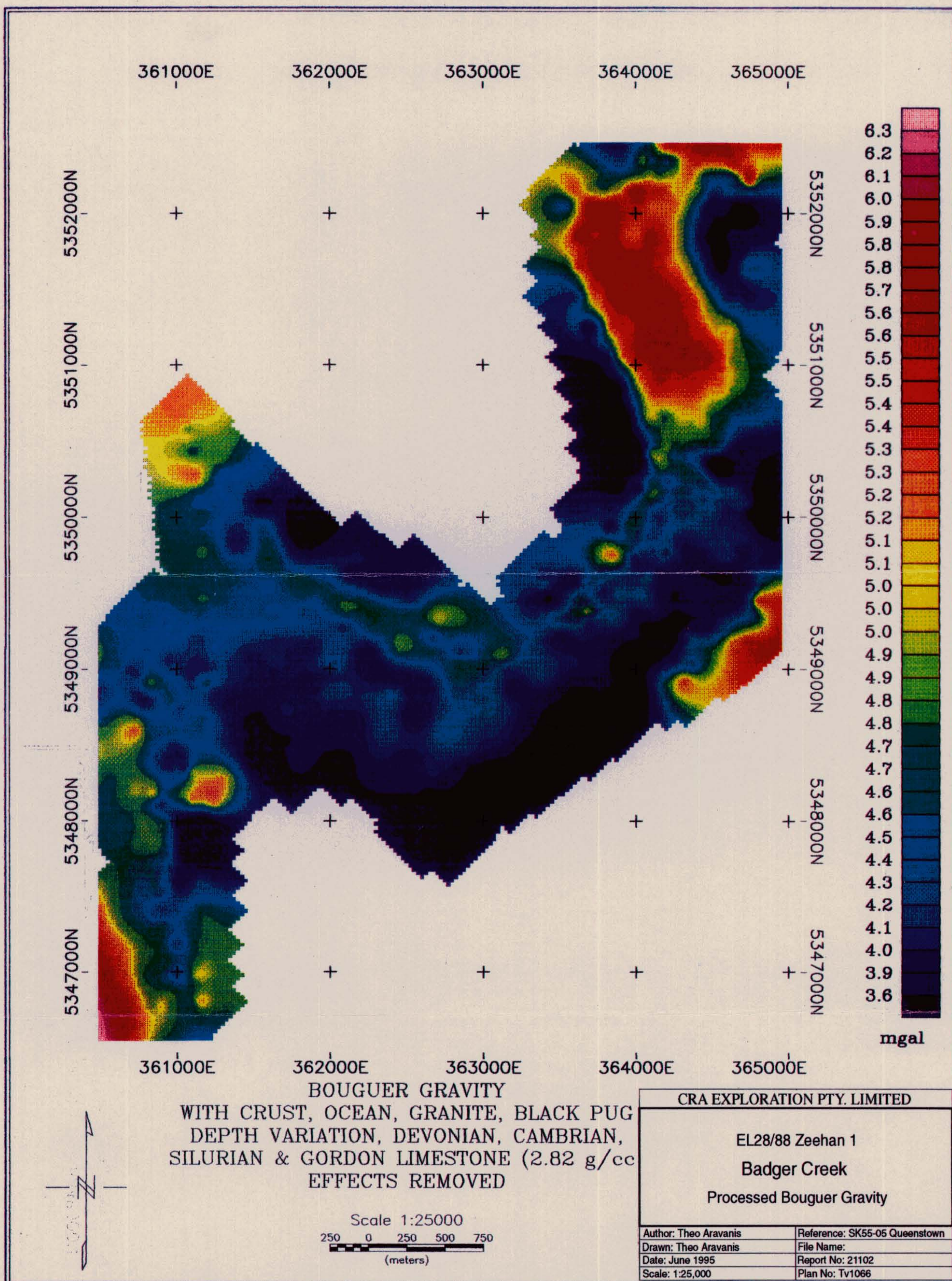
Raw Bouguer Gravity

Author: Theo Aravanis	Reference: SK55-05 Queenstown
Drawn: Theo Aravanis	File Name:
Date: June 1995	Report No: 21102
Scale: 1:25,000	Plan No: Tv1065

96-38882

342023

ANNUAL REPORT PE 9/11/95 - EL28/88 -
ZEEHAN NO.1 - CRA - TEAR S J

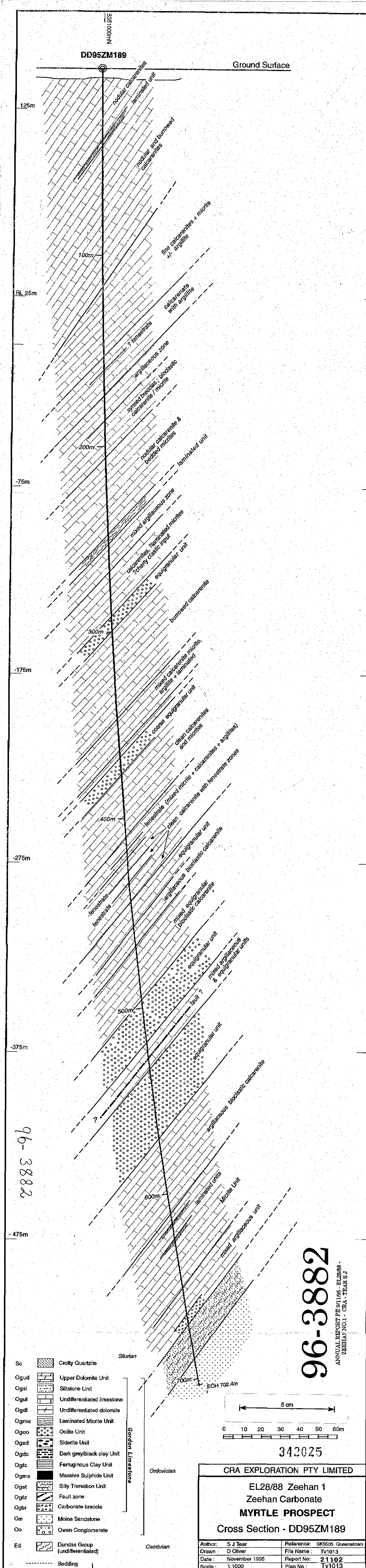


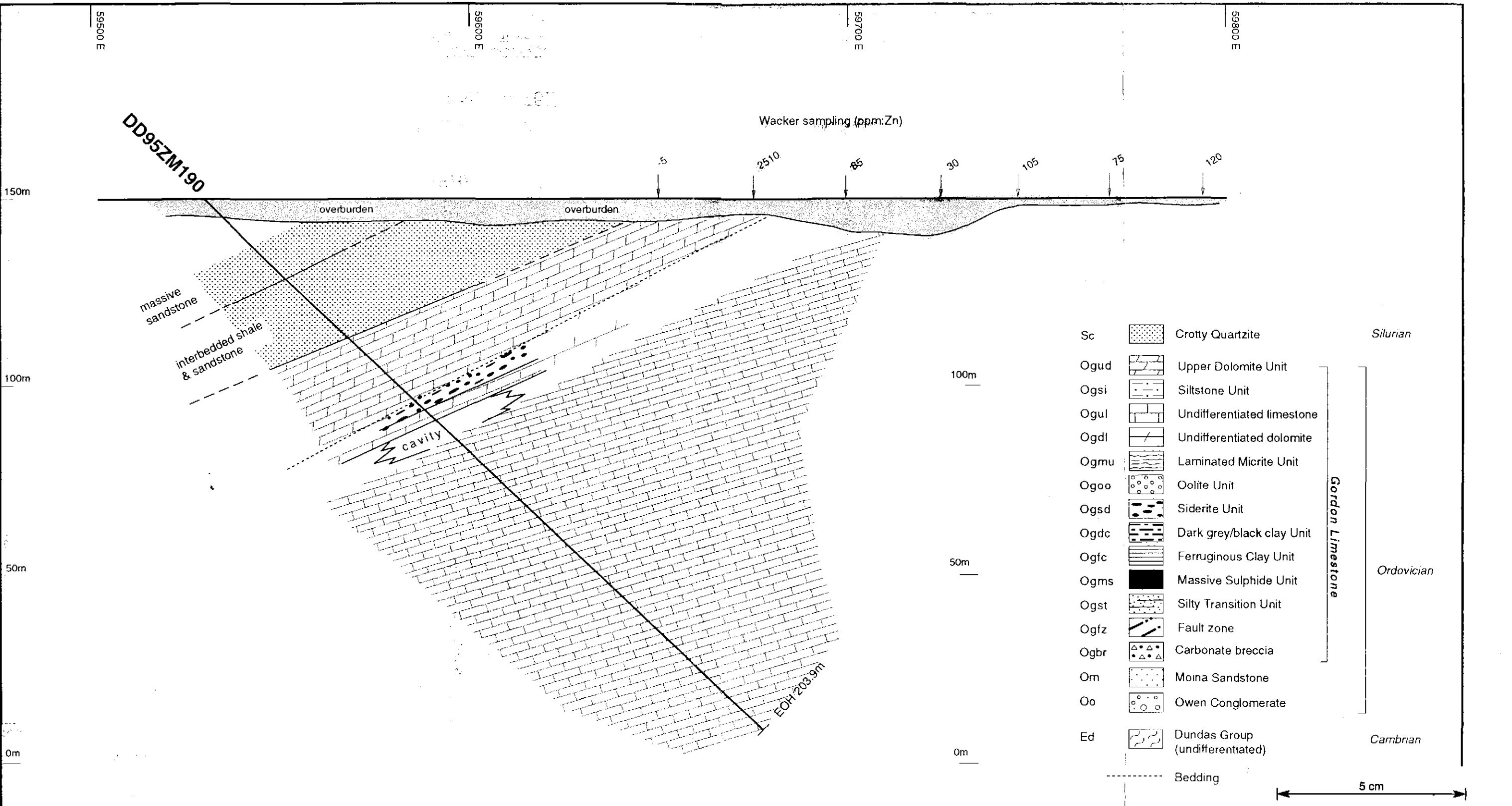
5 cm

342024

96-3882

ANNUAL REPORT PE 9/11/95 - EL28/88 -
ZEEHAN NO.1 - CRA - TEAR S J





96-3882

ANNUAL REPORT PE 9/11/95 - EL28/88 -
ZEEHAN NO.1 - CRA - TEAR S J

0 10 20 30 40 50 60m

CRA EXPLORATION PTY LIMITED

EL28/88 ZEEHAN 1

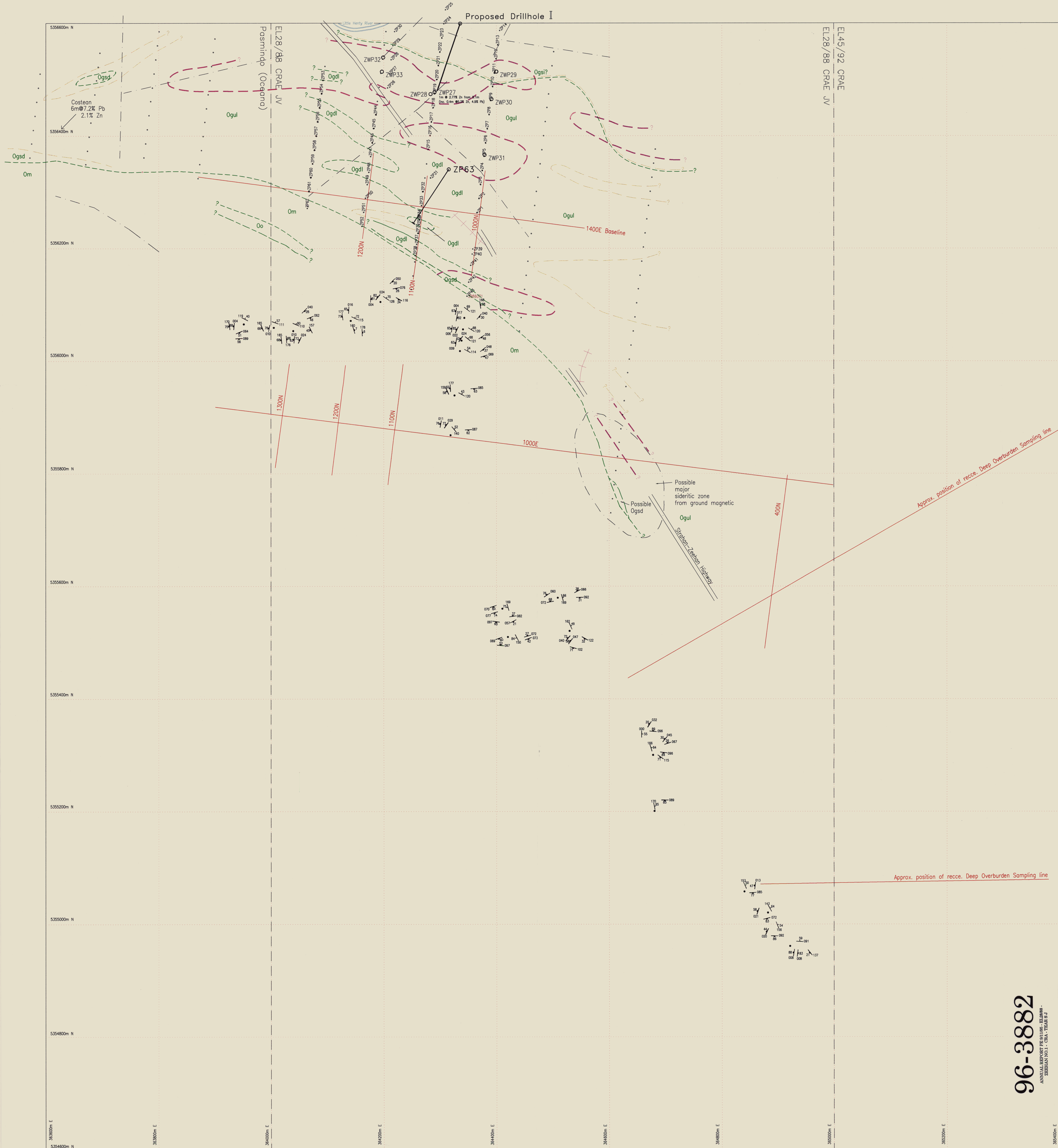
Zeehan Carbonate

MYRTLE PROSPECT

DD95ZM190 : Section 49995N

Author:	S J Tear	Reference:	SK5505 Queenstown
Drawn:	D Oliver	File Name:	Tv1007
Date:	November 1995	Report No:	21102
Scale:	1:1000	Plan No:	Tv1007

342026



LEGEND

- Main Road
- Tramway (dashed)
- Local Ghd (EZ)
- Wicker Sample Site
- Aircore Drillhole
- Borehole and Trace
- Field Survey Control Point
- Strike & Dip of Bedding
- Strike & Dip of Joint
- Lithological Boundary
- Inferred Lithological Boundary
- Ground Magnetic Linear
- Significant Zn/Pb Anomaly (>1000 ppm Zn & Pb)
- Significant Iron Enhancements

Sc	Croby Quartzite	Silurian
Ogud	Upper Dolomite Unit	
Ogai	Siltstone Unit	
Ogul	Undifferentiated Limestone	
Ogdl	Undifferentiated Dolomite	
Ogmu	Laminated Micrite Unit	
Ogou	Dolite Unit	
Ogsi	Siderite Unit	
Ogdc	Dark Grey / Black Clay Unit	
Ogfc	Ferruginous Clay Unit	
Ogms	Massive Sulphide Unit	Ordovician
Ogst	Silty Transition Unit	
Ogfr	Fault Zone	
Ogbr	Carbonate Breccia	
Om	Moina Sandstone	Cambrian
Oo	Owen Conglomerate	
Cd	Dundas Group (undifferentiated)	

5 cm

0 50 100 150 200 metres

342027

CRA EXPLORATION PTY LIMITED

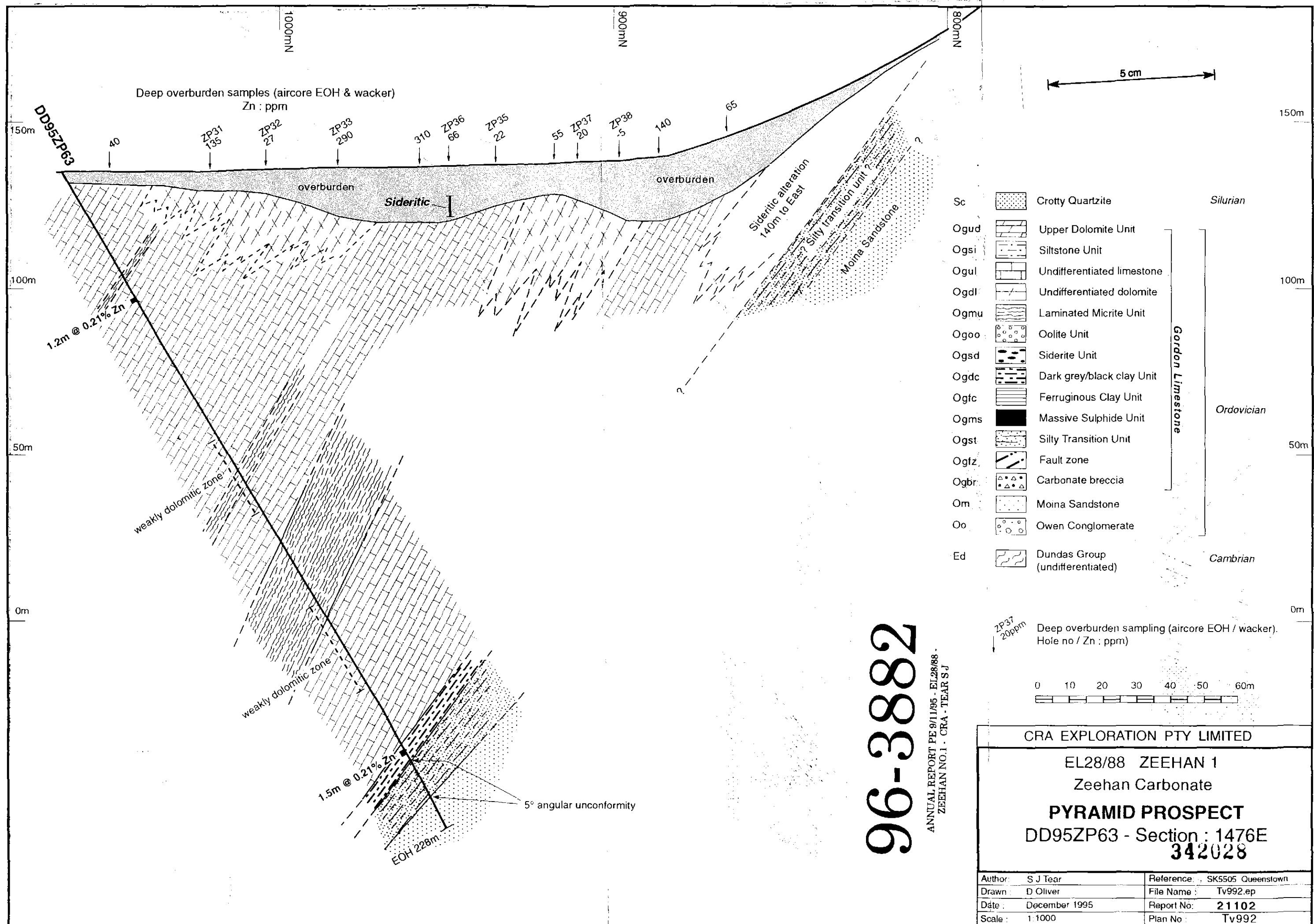
EL 28/88 ZEEHAN 1

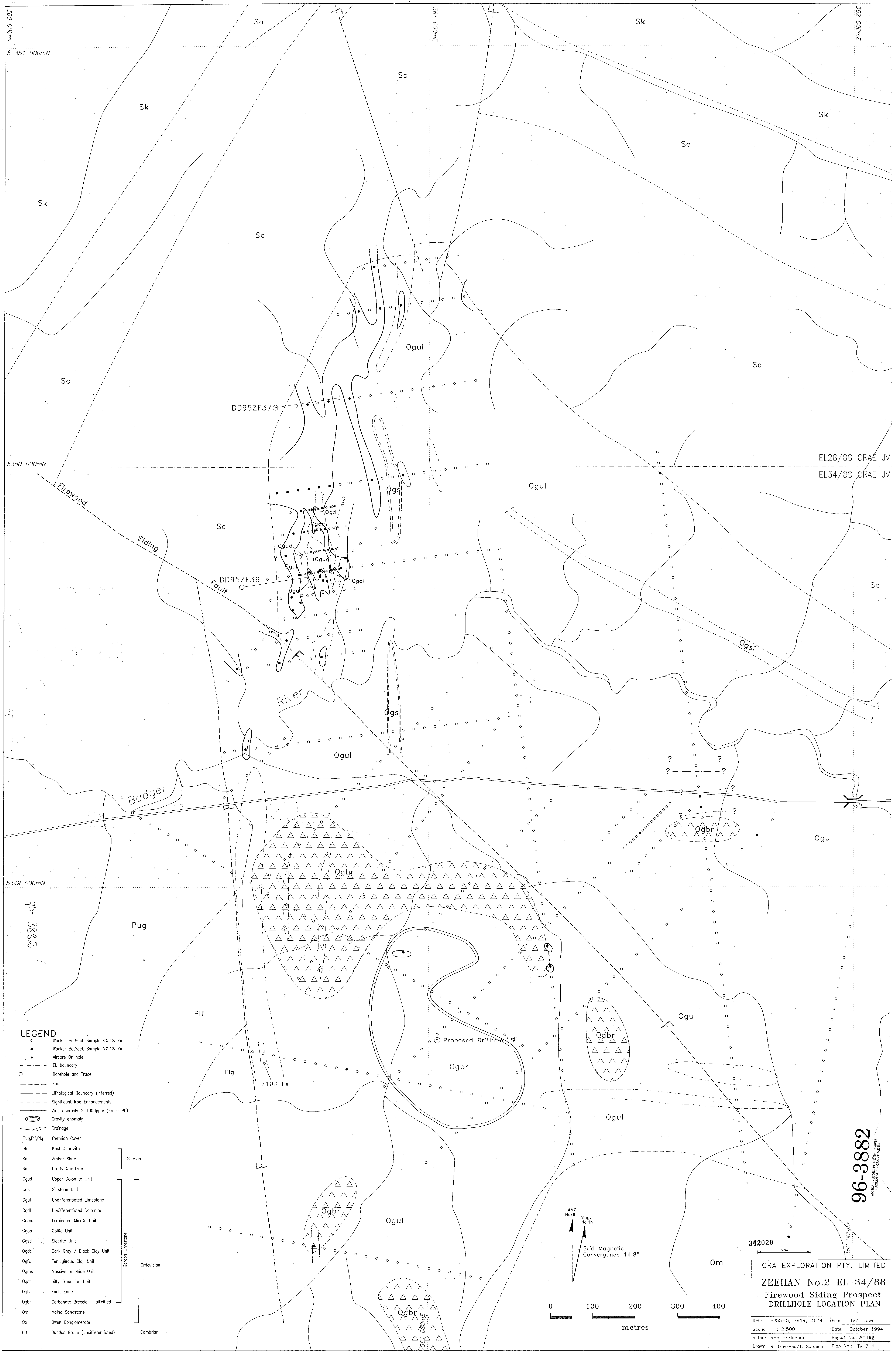
Zeehan Carbonate Pyramid Prospect

Geology & Drillhole

Location Plan

Ref.	SK55-05
Author	S.Tear
Scale	1 : 2500
Date	14-11-95
Drawn	Humbridge Drafting P/L
Report	21102
Plan No	TV 1018





LEGEND

- Wacker Bedrock Sample <0.1% Zn
- Wacker Bedrock Sample >0.1% Zn
- Aircore Drillhole
- Borehole and Trace
- Fault
- Lithological Boundary (Inferred)
- Significant Iron Enhancements
- Zinc anomaly > 1000ppm (Zn + Pb)
- Gravily anomaly
- Drainage
- Pug, Plf, Plg Permian Cover
- Sk Keel Quartzite
- Sa Amber Slate
- Sc Crofty Quartzite
- Ogud Upper Dolomite Unit
- Ogsi Siltstone Unit
- Ogul Undifferentiated Limestone
- Ogdl Undifferentiated Dolomite
- Ogmu Laminated Micrite Unit
- Ogoa Oolite Unit
- Ogsd Siderite Unit
- Ogdc Dark Grey / Black Clay Unit
- Ogfc Ferruginous Clay Unit
- Ogms Massive Sulphide Unit
- Ogst Silty Transition Unit
- Ogft Fault Zone
- Ogbr Carbonate Breccia - silicified
- Om Molna Sandstone
- Oo Owen Conglomerate
- cd Dundas Group (undifferentiated)

Silurian

Ordovician

Cambrian

342029

6m

CRA EXPLORATION PTY. LIMITED

ZEEHAN No.2 EL 34/88

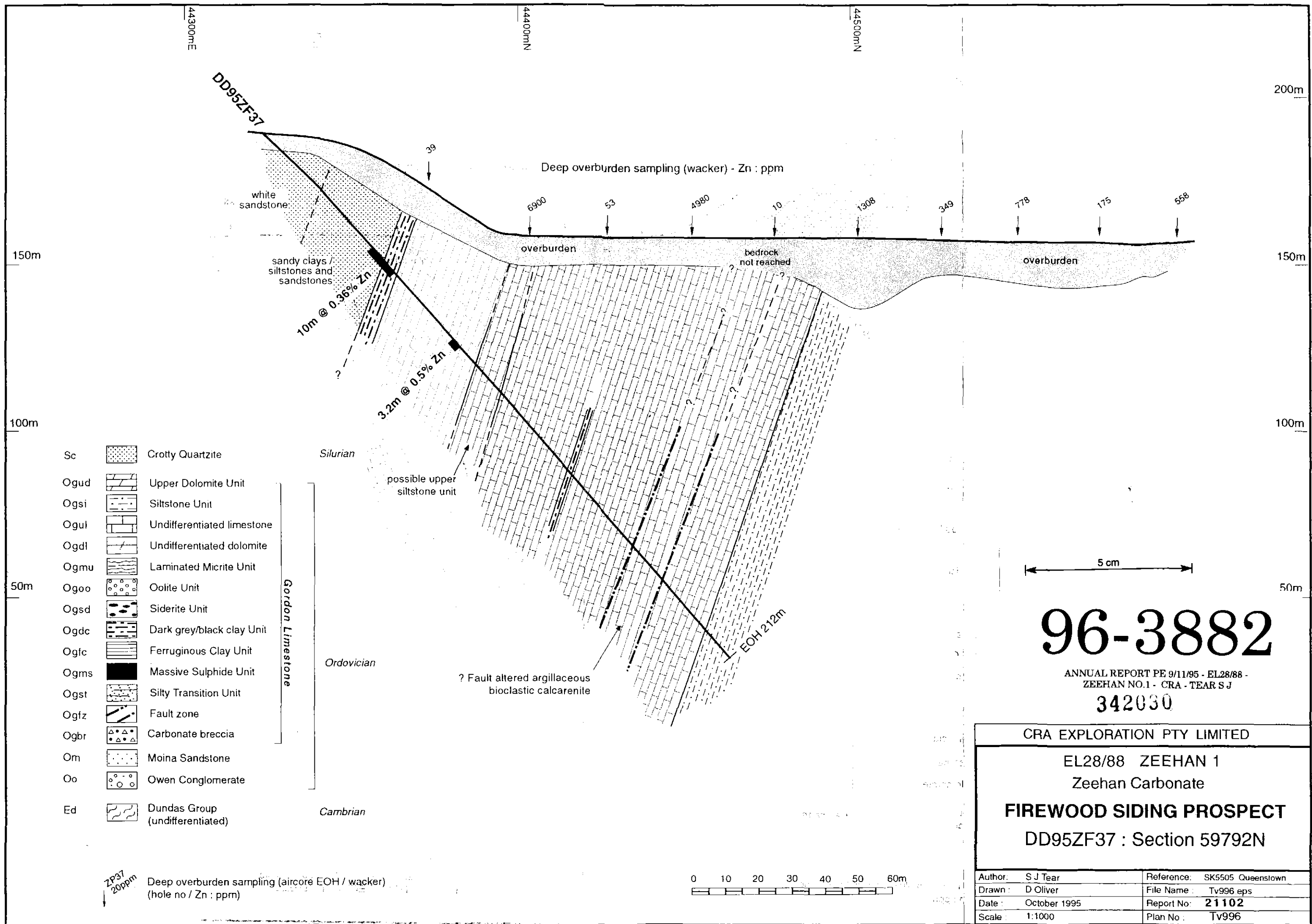
Firewood Siding Prospect

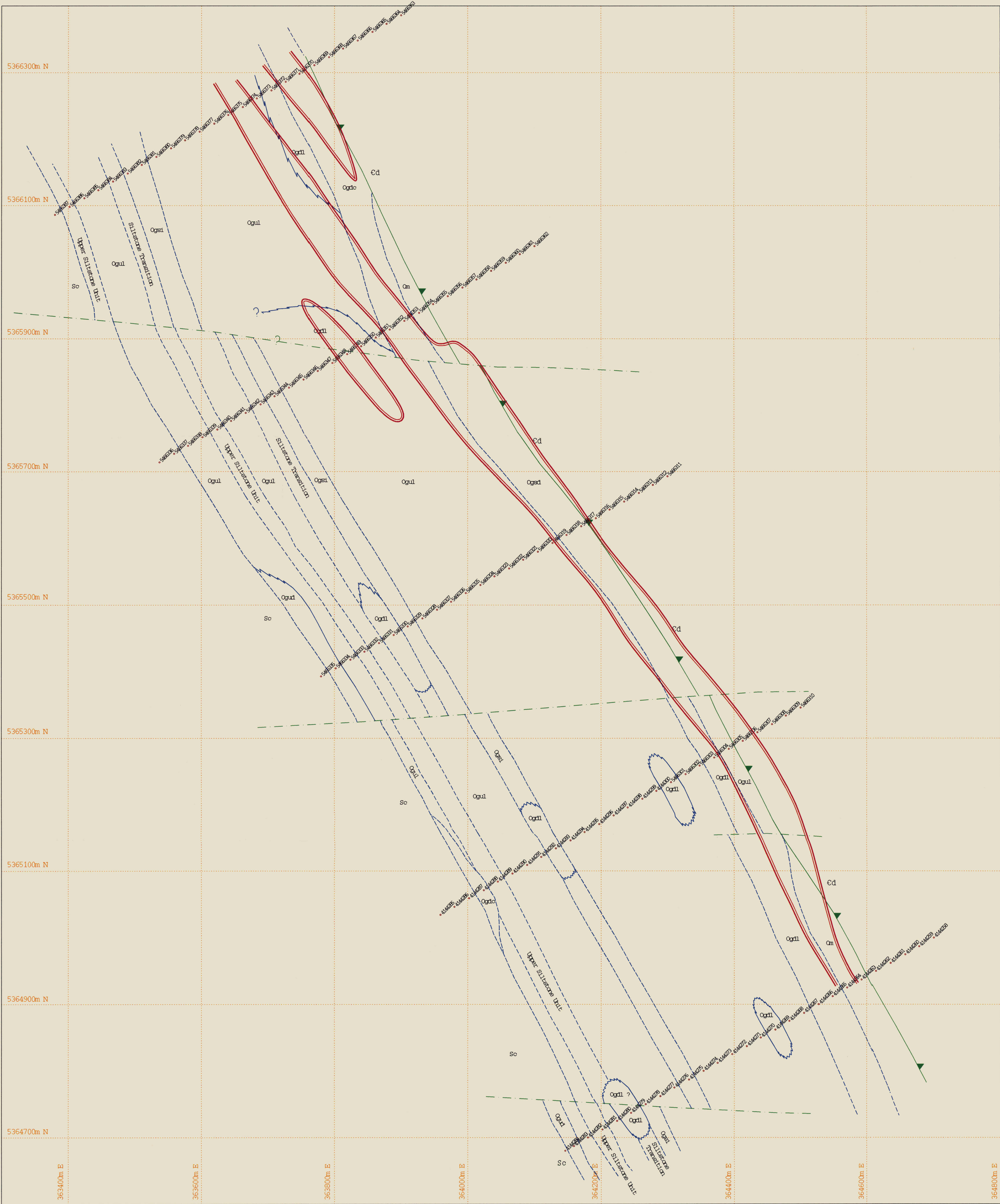
DRILLHOLE LOCATION PLAN

Ref.: SJ55-5, 7914, 3634	File: Tv711.dwg
Scale: 1 : 2,500	Date: October 1994
Author: Rob Parkinson	Report No.: 21102
Drawn: R. Traverso/T. Sargeant	Plan No.: Tv 711

96-3882

ANNUAL REPORT FOR THE YEAR ENDING 30 SEPTEMBER 1994





LEGEND

- Thrust Fault
- Inferred Fault
- Geology Boundaries
- Significant Zn + Pb anomaly >1000ppm
- Deep bedrock sample sites - wacker (1995)

Sc Crotty Quartzite Silurian

Ogr1 Upper Dolomite Unit

Ogr2 Silstone 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 Moira Sandstone

Ogr15 Owen Conglomerate

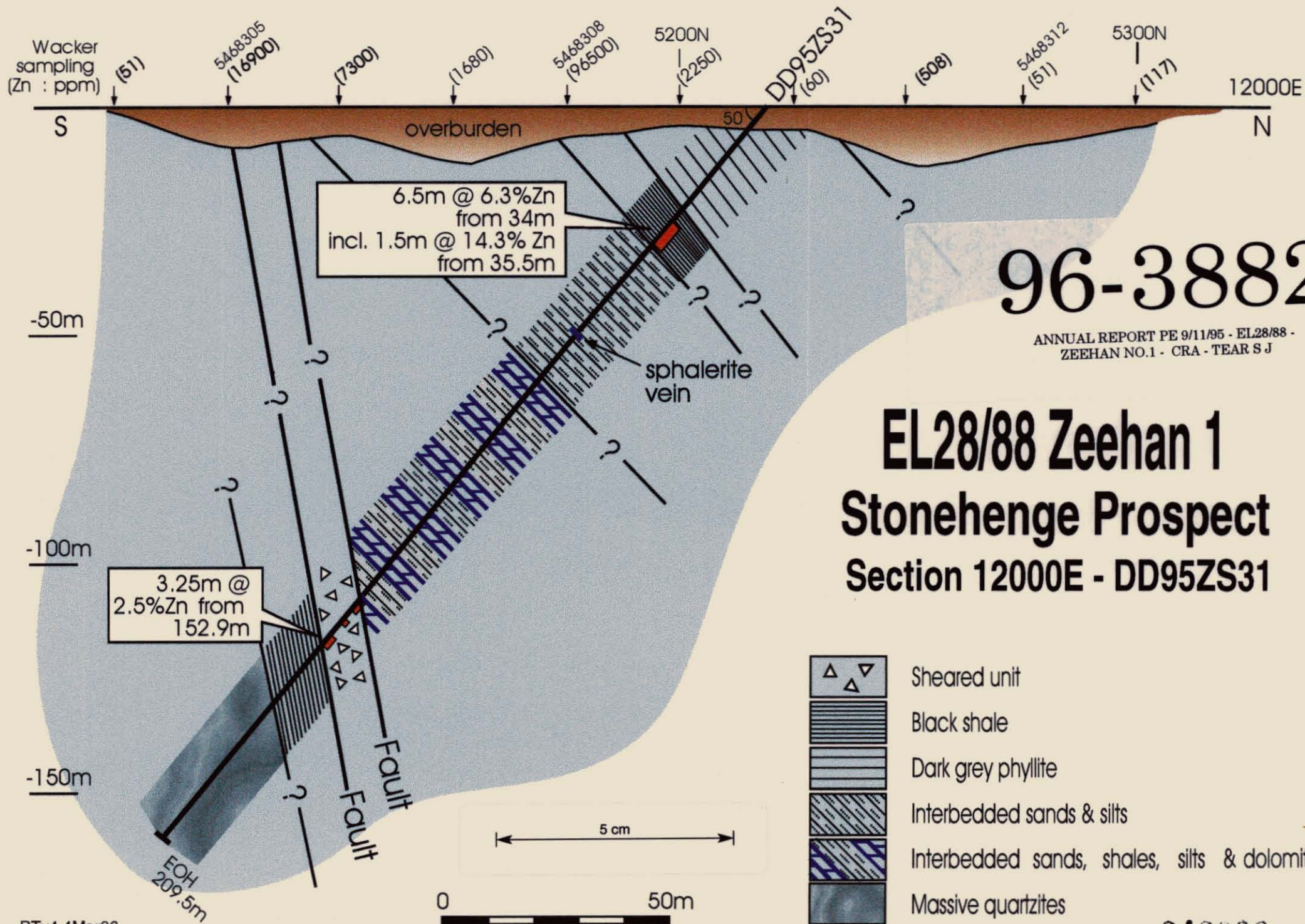
Ogr16 Dundas Group (undifferentiated) Cambrian

5 cm

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ANNUAL REPORT PE 9/1185 - EL2888 -
ZEEHAN NO.1 - CRA - TEAR S.J
342031

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



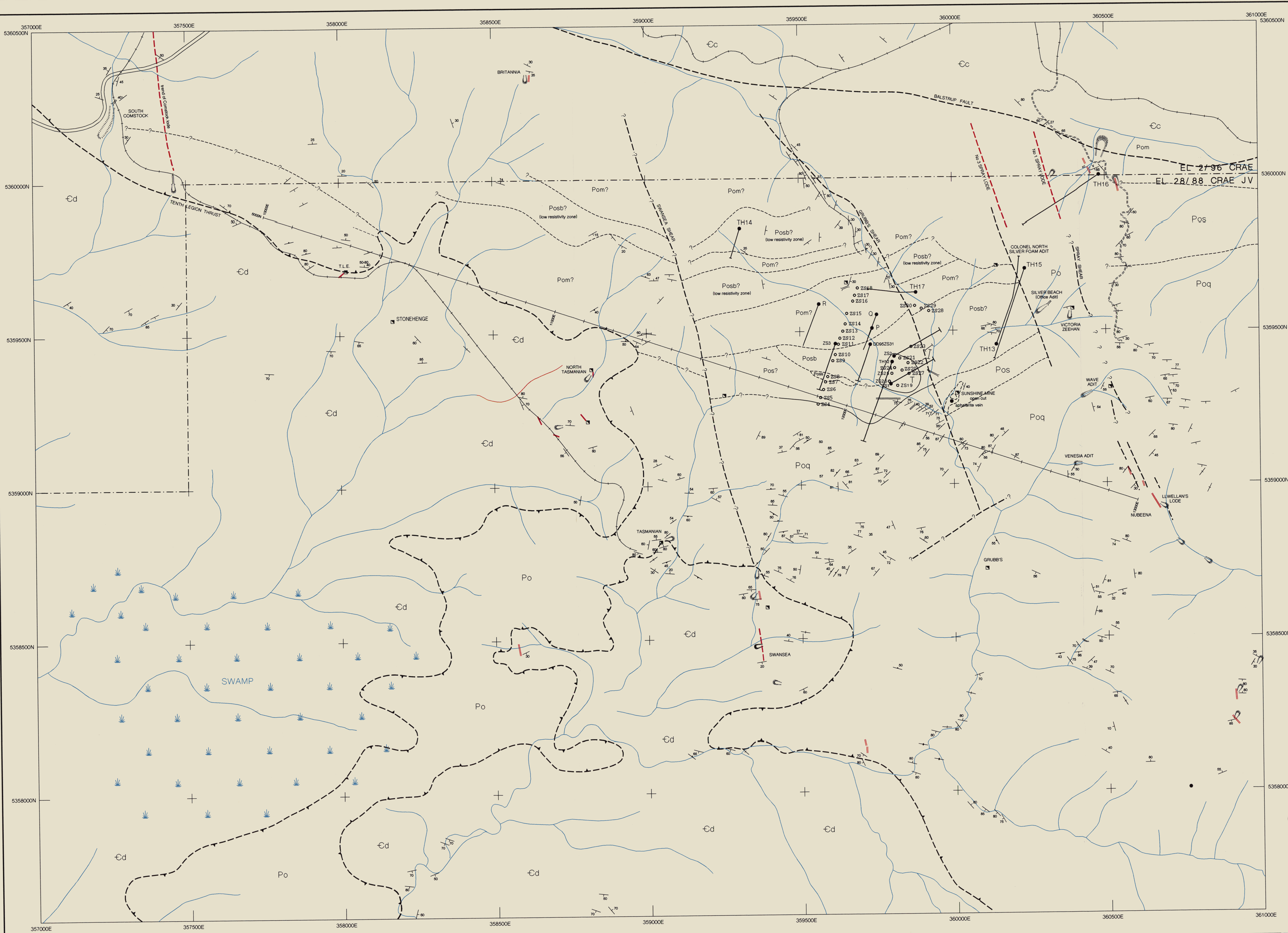
96-3882

ANNUAL REPORT PE 9/11/95 - EL28/88 -
ZEEHAN NO.1 - CRA - TEAR S J

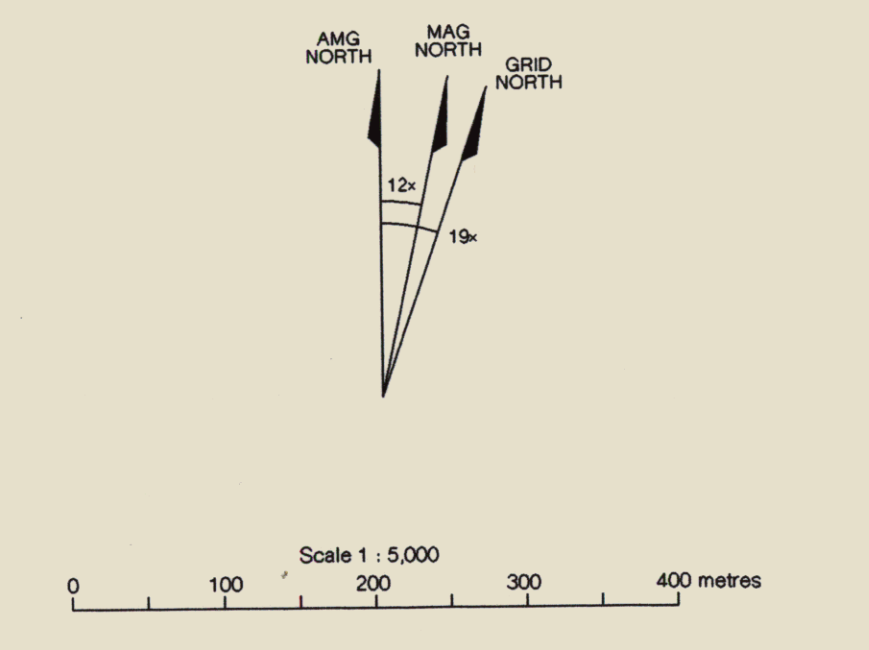
EL28/88 Zeehan 1

Stonehenge Prospect

Section 12000E - DD95ZS31



- | | | |
|-------------|------|---|
| CRETACEOUS | T | Surficial massive ironstone |
| | Ed | Dundas Group
Undifferentiated chert conglomerates,
gitty sandstone, siltstone and lt green basalt |
| CAMBRIAN | Ec | Crimson Creek Formation
Interbedded dark green basalt, reddish orange
volcaniclastics, khaki mudstone and dk gy shale |
| | Po | Oonah Formation - undifferentiated |
| | Pom | micaceous sandstone, siltstone, minor shale |
| | Pos | siltstone, shale, dolomite undifferentiated |
| PROTEROZOIC | Posb | graphitic shale dominant |
| | Posd | dolomite dominant |
| | Posi | siltstone dominant |
| | Poq | massive quartzite |
-
- | | |
|-------|------------------------------------|
| — | Lithological contact - accurate |
| - - - | Lithological contact - approximate |
| - ? - | Lithological contact - inferred |
| - - - | Fault - approximate |
| - - - | Fault - inferred |
| - - - | Thrust fault - approximate |
| + | Diamond drill hole |
| o | 1995 aircore drill hole |
| o | Proposed diamond drill hole 1996 |
| + | Shaft and dump |
| + | Mine workings/adit |
| + | Trench |
| + | Lode, open stops |
| + | Dip and strike of bedding |
| + | Dip and strike of foliation |



Sources
- RGC EL11/76 TCR 86-2536
- Air photo interpretation
- CRAE mapping 1992 and 1995
- IP interpretation
- Bedrock sampling 1995

96-3882

CRA EXPLORATION PTY. LIMITED	
EL 28/88, ZEEHAN 1, TAS	
STONEHENGE PROSPECT	
INTERPRETIVE GEOLOGY	
Ref.: SK55-05	Scale: 1 : 5000
Author: Rob Parkinson	Report No.: 21102
Drawn: Exploration Graphics	Plan No.: Tv1019

342033

342034

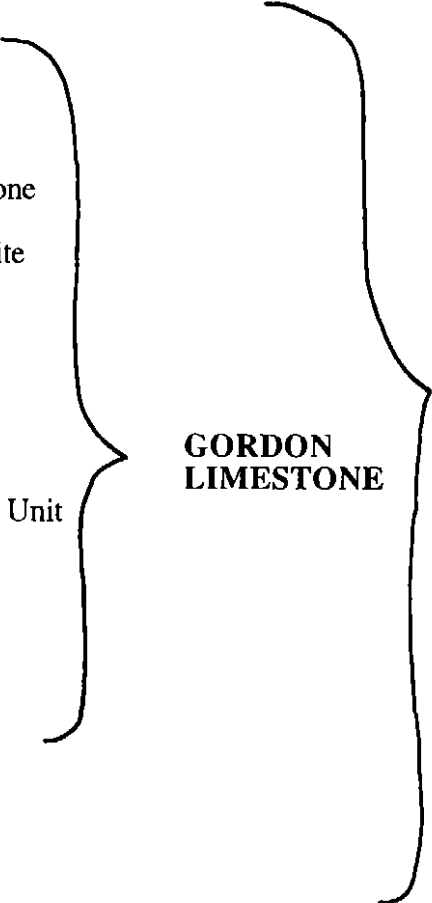
Appendix I

The Gordon Limestone Lithostratigraphy

Zeehan Carbonate Project

In the Zeehan sub-basin the Gordon Limestone has a thickness of 500m (DDH ZB1007). Drilling by CRAE has subdivided this formation into lithologic and lithostratigraphic units. These subdivisions have been utilised in the drillhole logging and are displayed below.

Drill Hole Logging Formation / Lithology Codes

Sc	=	Crotty Quartzite		SILURIAN
Ogud	=	Upper Dolomite	 GORDON LIMESTONE	ORDOVICIAN
Ogsi	=	Siltstone Unit		
Ogul	=	Undifferentiated limestone		
Ogdl	=	Undifferentiated dolomite		
Ogmu	=	Laminated Micrite Unit		
Ogoo	=	Oolite Unit		
Ogsd	=	Siderite Unit		
Ogdc	=	Dark Grey / Black Clay Unit		
Ogfc	=	Ferruginous Clay Unit		
Ogms	=	Massive Sulphide Unit		
Ogst	=	Silty Transition Unit		
Om	=	Moina Sandstone		
Oo	=	Owen Conglomerate		
Ed	=	Dundas Group (undifferentiated)		CAMBRIAN

An explanation for the sub-divisions is given below.

1) The Crotty Quartzite

This formation is a sequence of deltaic quartzites of Silurian age. However in drillcore there appears to be no consistency in lithologies at its base. The question of faulted contacts is brought to mind and the unit has not been subdivided. In DD95ZM190 the sequence passes from white massively bedded sandstone into interbedded/interlaminated sands, shales and silts before finally passing into dark shales (fissile) and clays (possible fault gouge). This is possibly matched in DD95DS98 but there are considerable thickness variations, as would be expected in the depositional environment.

2) The Upper Dolomite Unit (Ogud)

This is a dolomitised limestone unit that always occurs beneath the Crotty Quartzite contact. Its thickness is variable, up to 100m in DD95ZR104 and down to 25m in DD95ZM190. It is possible that the dolomitisation is fault related, the fault being the Crotty Quartzite/Gordon Limestone Contact.

3) The Siltstone Unit (Ogsi)

This is an argillaceous calcsiltite with bands of bioclastic calcarenite and nodular calcsiltite. Locally it is unreactive to dilute hydrochloric acid. It generally occurs at the base of the top third of the stratigraphic column and has an average thickness of 15m.

There are transitional upper and lower sequences to the main Siltstone Unit.

4) Undifferentiated Limestone (Ogul)

This is a bucket term to fit all limestones that do not separate out into any distinctive lithology subdivision

5) Undifferentiated Dolomite (Ogdl)

Localised zones of dolomitised limestone occur within various parts of the stratigraphic column. Unless it is part of the Upper Dolomite, it is referred to as undifferentiated dolomite. The dolomitisation is attributable to faults and/or due to mineralisation, often Ogdl units have elevated base metal values.

6) Laminated Micrite Unit (Ogmu)

This is a distinctive lithofacies comprising of banded and stylolitic fine grained calcarenites and micrites. Sometimes the laminae consist of argillaceous material. The individual laminated units have an upper thickness limit of generally <3m except in specific circumstances eg DD95ZP63. Birds eye micrite units are often associated with the laminated zones. The unit is not a marker horizon but occurs with sufficiently regularity in drillcore as to be able to assist stratigraphic correlations.

7) Oolite Unit (Ogoo)

This unit occurs in outcrop at the Grieves Prospect as a dolomitised equigranular calcarenite unit - thought to be an oolite. It is believed that the well sorted, clean medium grained bioclastic calcarenite unit, locally oolitic, is really part of a package of well sorted calcarenites seen towards the base of the limestone sequence, possibly representing a sand bar.

8) Siderite Unit (Ogsd)

The Siderite Unit is an alteration facies imposed on and replacing limestone (?dolomitised) at the base of the Gordon Limestone. It is regarded as being part of the alteration associated with the replacement Zn/Pb mineralisation.

Siderite alteration also occurs at Grieves in the middle of the limestone sequence. Siderite is also present at the upper sandstone/limestone contact at Blackjacks (DD95DB110) and Myrtle (DD95ZM190).

9) Dark Grey/Black Clay Unit (Ogdc)

These clays are encountered at surface and in drill core above 300m vertical depth. They generally are to be found at the base of the limestone, although they can occur at the top contact (DD95DB110). Dark clays can also be found in the top of drillholes where surficial weathering of the limestones has produced a black pug - depths of 45 vertical metres have been recorded (DD95ZR103). The exact nature of the clays at the basal part of the limestone is unclear. They always underlie the Oolite Unit, often can be intermixed with siderite zones of the Siderite Unit and can be part of the underlying Silty Transition Unit. Whether they are products of deep surface weathering, paleaeo-weathering, fault zones or mineral-related alteration remains to be resolved.

10) Ferruginous Clay Unit.

These are light grey, orange, yellow, brown and red coloured clays, often banded. They generally occur beneath the Dark Clay Unit, although at Grieves they can be intermixed with it. In some instances they are sericitic, in others they can be sandy (fine grained quartz grains). They are heavily limonitic and their exact nature is unsure. It is possible that the clays are part of the Silty Transition Unit or even the underlying Moina Sandstone. Alternatively they could be weathering products of mineralisation associated with the dark clay unit.

11) Silty Transition Unit

This is the basal unit of the Gordon Limestone. It comprises of a series of partly dolomitised limestones and fine grained arenaceous units with black siltstones. It appears to have a well defined thickness of between 12-16m and in some instances overlies the Moina Sandstone conformably. Mineralisation would appear to lie immediately above the top contact of the Silty Transition Unit.

12) Moina Sandstone

This sandstone formation is characterised by a silicic quartzite with localised conglomerate bands, often becoming a pink silicic quartzite.

Appendix II

**Exploration by Major Mining Ltd (now Allegiance Mining) and CRAE
Prior to 9/11/94**

- Year 1, Year 2 Activities by Major Mining prior to CRAE's involvement are detailed in the relevant statutory reports. Field activities included a gradient array IP survey covering a small area between the South Comstock and Tasmanian workings.
- Year 3 Exploration by CRAE on EL 28/88 prior to 9/11/91 focussed on an extensive compilation and review of existing open-file data (Summons, 1991). Analysis of the structural controls to historical mineralisation suggested that the Devonian NNW-trending shear/fracture controlled mineralisation possibly overprints an earlier (Precambrian?) ENE-trending mineralised corridor.
- Statistical evaluation of Ag:Pb ratios indicated a decline in Ag:Pb from Proterozoic to Ordovician deposits. Considering the ratio as a vector, areas of high Ag:Pb could be close to a postulated Precambrian "Mother Lode". On this basis, the Spray, Montana No. 2 and Junction deposits are the "closest to source".
- Year 4 CRAE's exploration strategy in 1992 aimed to test these two models (Parkinson, 1992). Dipole-dipole IP surveys at Stonehenge defined a chargeable conductor exceeding 1 km strike length, coincident with mapped black shale. Soil and wacker sampling indicated this horizon to be anomalous in Zn and Pb. Previous drilling by RGC (hole TH12) intersected several metres of percent-level Zn in the area of interest. Diamond drilling to test stratigraphic and structural targets within the envelope of anomalous geophysics and geochemistry were proposed for 1992/93.
- Soil sampling at the Avebury stream sediment anomaly detected Zn-Pb-Cu-As anomalism, in an area of poor outcrop within either Cambrian or Proterozoic lithologies. Infill soil sampling was proposed.
- Open-file literature review revealed the presence of significant surface enrichment of Zn within residual black clays developed over Ordovician Gordon Limestone. Air-core drilling traverses were recommended for Myrtle and Pyramid prospects.
- Systematical soil/rock sampling of dunite at Trial Harbour was recommended to determine whether the body was capable of hosting a bulk low-grade Ni sulphide resource.
- Year 5 (Parkinson, 1993). Three diamond drill holes were drilled at Stonehenge testing stratigraphic and structural targets within the black shale package. Low grade Zn mineralisation was intersected in Devonian age structures, not considered to be economically significant. An air-core traverse across the shale is recommended as diamond drill recoveries were poor near surface.
- Infill soil sampling at the Avebury showed the central area to be characterised by high background Zn-Pb-Fe. High Fe is suggestive of skarn-related mineralisation. Further investigations are required.

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 monomineralic grains of low Fe sphalerite, apparently easily liberated from the unconsolidated pug. Additional air-core and diamond drilling is warranted.

Air-core drilling of near-surface decomposed limestone at Pyramid showed patchy weak mineralisation was developed in several holes. Further air-core drilling is required closer to the Limestone-Moina Sandstone contact.

Wacker sampling of limestone at the N end of Firewood Siding prospect returned strongly elevated Zn values near the contact with the Crotty Quartzite. Air-core drilling is recommended.

Soil/rock sampling at Trial Harbour outlined a large area of elevated Ni. Nickel sulphides in olivine orthocumulates were observed in the adit, and a 50m wide unit of olivine orthocumulate was mapped within the body. Drilling beneath the adit intersected weak pyrrhotite mineralisation only, and the intercumulus phases within the main olivine orthocumulate were dominated by magnetite and chromite. Elevated Ni in soil/rock samples is due to a thin skin of secondary Ni-rich serpentinite. No further work is required.

Year 6

(Parkinson, 1994) Reconnaissance soil sampling and magnetometry was confined to a single line across the magnetic anomaly at Avebury.

At Myrtle a total of 121 reverse circulation air-core drillholes amounting to 1876m was completed; air-core bottom-of-hole sampling was also undertaken with assay results being merged with previous wacker sampling. Follow-up diamond drilling consisted of 3 holes totalling 361.4m using a LY38 rig (ZM185-187). The drilling failed to intersect significant mineralisation or relevant alteration of limestone. Some sampling of previously unsampled EZ drillcore was carried out with the best result being 2.4% Zn for 7.05m from 6.85.

Minor amounts of additional rock chip and wacker sampling were also completed.

At Pyramid air-core drilling amounted to 32 holes totalled 348m; end-of-hole samples were also collected with results merged into the wacker sampling database.

Appendix III

Myrtle - DD95ZM188 - 190 Drill Logs

CRA EXPLORATION PTY. LIMITED
DRILL-HOLE SUMMARY LOG

342042

HOLE NAME: DD9SZM188	AMG	EAST 364473	NORTH S351933
PROSPECT: MYRTLE	GRID	EAST 60558	NORTH S0130
EL: ZEEHAN 1	EL28/88 RL	DEPTH 201.1m	

DATE DRILLED: 5/6/95

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	93°	60°			
100m	93°	61°			
150m	93°	61°			
200m	70°	61.5°			

OBJECTIVES OF HOLE:

DIAMOND DRILL TEST OF LOWER SANDSTONE/LIMESTONE CONTACT

LITHOLOGICAL SUMMARY:

FROM	TO	FORM CODE	COMMENTS
0	43.7	Qpha	Overburden; inc. sandstone gravels and dark grey clays - surficial weathering of limestone.
43.7	46.7	Ogdl	Dolomitised calcarenite with red shale unit and ?conglomerate/fault breccia at top of dolomite
46.7	57.5	-	Caully
57.5	61.3	Ogfs	Faulted unit with red shale
61.3	145.4	Ogul	Undifferentiated Limestones - with laminated micrite top. - Grey med/fine grained calcarenites/micrites. - with occ faulted zones and laminated
145.4	178.9	Ogfs	Faulted micrite units
178.9	179.1	Ogsl	Sidewind Unit.
179.1	189.8	Ogfs/Ogdc	Faulted zone with dark grey clays (Ogdc)
189.8	198.65	Ogst	Silty Transition Unit.
198.65	201.1	Om	Moina Quartzite

MINERALISATION SUMMARY:

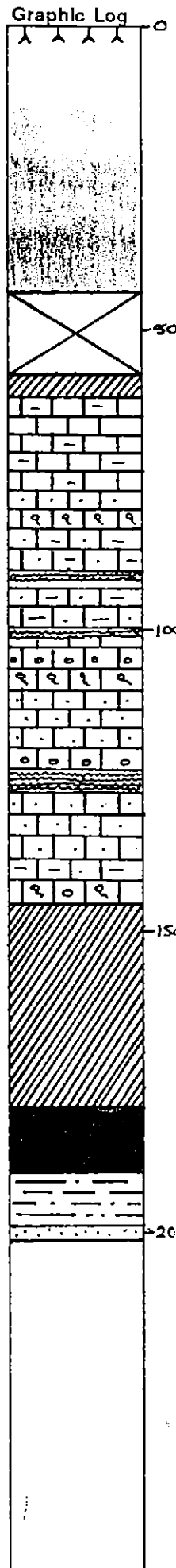
FROM	TO	COMMENTS
0	43.7	Elevated zinc values with the weathered clays up to 503ppm
192.4	194.5	556 ppm Zinc in the Silty Transition Unit.

CONCLUSIONS:

Bedding @ top of hole is 75° to c/a.

The dark clays in the base of the hole appear to represent a fault structure; weathering of the limestones has penetrated downhole depths of 180m.

Movement on fault is unknown.



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

SHEET No. 1
No. OF 11

364473E
CO-ORDINATES 53S1933N AZIMUTH 093 (true) DRILLERS DD & TAS COMMENCED 5.6.95
RL COLLAR INCLINATION 60° DRILL TYPE DD U250 COMPLETED

TENEMENT NAME MYRTLE
PLAN - MAP REFERENCE
DEPTH 201.1m HOLE No. Zm 133
CASING LEFT DPO No(s)

DEPTH		Core Reg	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)		DATA																	
0	0.4	100	5	Qha	Peat Overburden.															
0.4	4.0	11	5	Qha	White friable sandstone.															
4.0	5.0	100	5	Qha	Brown shaley clay	Fabric 65° E c/A.														
5.0	8.5	28	5	Qha	Light grey/white clay															
8.5	13.7	50	5	Qha	Dark grey/black clays ?rotted limestone.	Fabric 75° E c/A.	5465815	8.5	10.2											
							6	10.2	11.7											
							7	11.7	13.7											
13.7	25.7	66	5	Qha	Dark grey/black clays with no weathered ?limestone unit. Minor sandstone with sand infill.	Bedding 70° E c/A. Pore pyrite zone 15.6-15.75 Brown sandy zone 17.4-17.7. at Brown shaley clay zone 22-22.3	8	13.7	15.2											
							9	15.2	16.7											
							80	16.7	18.2											
							1	18.2	19.7											
							2	19.7	21.2											
25.7	30.2	50	5	Qha	Dk grey/brown/black rotted ?limestone - non calcareous.	?siderite alteration	3	21.2	22.7											
							4	22.7	24.2											
							5	24.2	25.7											
30.2	40.6	50	5	Qha	Dark grey clays with sand-filled cavities Occ competent rock (rotted) non calcareous.	Disseminated pyrite. @35m ?Breccia zone with ?? sphalerite (dk brown) in matrix for 10cm.	6	25.7	28.7											
							7	28.7	30.2											
							8	30.2	31.7											
							9	31.7	33.2											
							90	33.2	34.7											
40.6	41.3	75	3	Qha	Dk grey/black non calcareous ?sed breccia / conglomerate. - poss fault breccia.		1	34.7	36.2											
							2	36.2	37.7											
							3	37.7												
							4	40.6	41.3											
41.3	42.4	50	4X	Qha	Red shale - brittle brecciation probably fault related; angular clots.		5	41.3	42.4											
							6	42.4	43.7											
							7	43.7	46.7											

342043

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

SHEET No. 2
No. 511

TENEMENT NAME MYRTLE
PLAN - MAP REFERENCE

CO-ORDINATES 364473E 5351933N AZIMUTH 60° DRILLERS DDTAS COMMENCED 5.6.95 DEPTH 201.1m HOLE No. ZM188
RL COLLAR 4.250 INCLINATION 60° DRILL TYPE 4.250 COMPLETED 4.250 CASING LEFT 4.250 DPO No(s) 4.250

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)																	
42.4	43.7	50	5	Qna	Dark grey black clay Major zone of core loss						Rec (m)	Rec (m)	Rec (m)	Rec (m)				
											57.5	58.1	0.5	84				
											58.1	59.3	0.5	39				
											59.5	60.7	0.8	67				
43.7	46.7	5	5	Ogll	Dark grey ? laminated calcarenite - rotted + 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	Ogfl	Dark grey/black clay with small dk grey calcarenite pieces	calcite veining mm to cm scale.	5465818	57.5	59.5		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	39	5X	Ogfl	Brecciated calcarenite with minor clay zones.	irregular calcite veining					84.1	87.1	3.0	100				
											87.1	89.0	1.9	100				
											89.0	91.2	2.2	100				
59.5	60.7	70	4X	Ogfl	Light grey fine grained calcarenite micritic in places; localized hematite alteration.	calcite veining with hematite alteration	411	59.5	60.7		91.2	93.1	1.6	89				
											93.1	94.8	1.2	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	Ogfl	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/A.	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				

342044

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

SHEET No. 3
No. 211

364473E

CO-ORDINATES 5351933N AZIMUTH..... DRILLERS DDTAS COMMENCED 5.6.95 PLAN - MAP REFERENCE.....
RL COLLAR..... INCLINATION 60° DRILL TYPE U250 COMPLETED..... DEPTH 201.1m HOLE No. ZM188
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)	%																		
62.7	70.8	45	2	Agul	Mixed light grey micrite with calcite veining and limestone conglomerate units; clasts of varined micrite + dark grey black argillite conglomerate sub rounded clasts. Coarsening upwards in conglomerate units and within units. micrite locally fractured; dk grey clay zone from 67.1m for ~20cm. followed by calcite breccia vein for 3cm.	Minor pyrite blebs with vein (P+sphalerite)	5466002	62.7	67.2											
							3	67.2	66.1											
							4	66.1	69.1											
							5	69.1	70.8											
70.8	82.6	65	3V	Agul	light grey micrite with stylolites and calcite veining - locally brecciation mud / coarse grained brecciated unit at base.	Note: localized zones of minor - quartz veining possible dolomite in calcite vns shearing, foliation sub parallel to dip; veining (calcite) sub parallel to C/A and 45° E. / A.	4468	72.1	75.1											
							6	72.1	75.1											
							7	75.1	78.1											
							8	81.1	82.6											
82.6	84.65	20	5x	Agul	Poor RQ - possible cavity; some argillaceous calcarenite + light grey clay / sand matrix															
84.65	85.55	100	3	Agul	Grey med / fine grained calcarenite intermixed with dk grey argillaceous calcarenite	Minor stylolite brecciation and some hematitic alteration at 84.2m - breccia related														

342045

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

TENEMENT NAME MYRTLE SHEET No. 61
No. 01

CO-ORDINATES 364473E 5351933N AZIMUTH.....
RL COLLAR..... INCLINATION 64° DRILLERS DOTAS COMMENCED 5.6.95 PLAN - MAP REFERENCE.....
DEPTH 201.1m HOLE No. 2M133
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)																			
85.55	85.75	100	5x	Ogul	light grey reted micritic zone															
85.75	88.65	100	2	Ogul	Grey med/fine calcarenite with distinct beds (irregular contact) of argillaceous med grained calcarenite nodular effect - stylommatolites or stringers.	Bedding approx 60° to c/a. minor calcite birds eyes. cleavage 40° to c/a. minor calcite veining usually														
88.65	90.6	100	1	Ogul	Clean light grey med/fine grained calcarenite unit possibly locally calcite. V minor dk grey interstitial calcarenite															
90.6	91.2	100	1	Ogul	light grey? altered micritic fine grained calcarenite; locally heavily burrowed; sheared at 91.0 - 91.2m.															
91.2	92.0	100	1	Ogul	Laminated micritic unit	Bedding 70° to c/a.	5466009	91.2	93.1											
92.0	94.8	100	1		light grey micritic clean fine grained calcarenite - possibly burrowed; with birds eyes. poss faulted at base.															
94.8	97.4	100	1	Ogul	Grey fine grained well cleaved calcarenite? micritic increasing amount of thin argillite bands dk grey bearing stylommatolites - distinctive	cleavage 45° to c/a.														

342046

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

SHEET No. 5
No. 411

TENEMENT NAME MYRTLE

PLAN - MAP REFERENCE.....

364473 E
CO-ORDINATES 5351933N

AZIMUTH.....

DRILLERS DDTAS

COMMENCED 25.6.95

DEPTH 201.1m

HOLE No. Zm188

RL COLLAR..... INCLINATION 60°

DRILL TYPE U 250

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)																			
97.4	99.1	100	2	Agul	Lt grey/grey calcarenite equigranular with locally with bioclots intermixed with fine grained micritic calcarenite, with see minor darker grained argillaceous calcarenite															
99.1	100.7	100	3	Agul	Laminated micrite	Bedding 75° to c/A.														
100.8	103.3	100	2	Agul	Grey/light grey fine grained calcarenite with cleavage development minor argillite bands etc.	cleavage 40° to c/A.	5466010	102.1	104.2											
103.3	104.2	100	2	Agul	Distinctive < 1cm bands of argillaceous calcarenite and fine grained grey calcarenite															
104.2	106.	100	2	Agul	Fine grained grey calcarenite equigranular; minor argillite passing into a med grained equigranular bioclastic calcarenite - fining upwards cycles; pos. outliers															
106	108.3	100	2	Agul	Fine med grained calcarenite (grey) with fine grained bioclastic zones. 10-20cm of burrowing	Minor calcite 1/200-1/100														

342047

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

SHEET No. 6
No. of 11

TENEMENT NAME MYRTLE

PLAN - MAP REFERENCE

364473E

CO-ORDINATES 5351933 N AZIMUTH DRILLERS DDTAS COMMENCED 5.6.95 DEPTH 201.1 m HOLE No. ZM188

RL COLLAR INCLINATION 60° DRILL TYPE U.250 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)																			
102.5	117.8	100	2	Ogul	Grey fine/red grained calcarenite - locally brownish with dark grey argillaceous mud grained calcarenite		5466011	114.25	116.45											
					111.6 - 111.9 light grey clay equigranular bicolour. unit after 111.9 decrease in amount of argillite - not a micrite though.	Dissolve pyrite blebs + stringers locally in clayey equigranular units.														
117.8	120.6	100	14	Ogul	Broken core - pos. faulted zone - pos. laminated micrite with clay gouges	calcite veining with clays	12	117.7	119.4											
							13	119.4	120.6											
120.6	123.1	60	2	Ogul	Fenestral limestone - micritic fine grained grey calcarenite with small interstitial clots grey argillaceous calcarenite locally bicolour		14	120.6	123.1											
123.1	129	75	2	Ogul	Zone of shearing + calc. limestone - possibly laminated micrites; light grey clays.	② 124.4 massive wavy pyrite nodules bedding 65° E. N.A.	15	123.1	124.4											
							16	124.4	126.9											
							17	126.9	128.9											
129	133.4	35	1	Ogul	Fenestral calcarenite. Grey fine calcarenite with dk grey interstitial calcarenite	Bedding 65° E. N.A.	18	131.4	133.4											

342048

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

SHEET No. 7
No. 94

364473E

CO-ORDINATES 5351933N AZIMUTH 60° DRILLERS DDTAS COMMENCED 5.6.95 PLAN - MAP REFERENCE 2M 188
RL COLLAR 60° INCLINATION 60° DRILL TYPE U250 COMPLETED 201.1m HOLE No. 2M 188
CASING LEFT 201.1m 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)	%																		
					Followed by laminated micrite with rhy - 130 m	Boldding 60° E c/A														
133.4	135.0	13	5	Ogul	Major conc. lens	Pyrite stringer nodules 2m like	5466019	133.4	135.0											
135.0	135.5	100	2	Ogul	Fenestral calcarenite with shered bone	Shed 70° E c/A	20	135.0	136.7											
135.5	136.15	100	4	Ogul	Fault zone - calcite veining (irregular) passing into 15cm clay gouge	Lower contact 90° E c/A														
136.15	139.4	88	2	Ogul	Fine grey calcarenite with interstitial dark grey calcarenite - fenestral limestones; becoming more argillaceous downhole	Calcite veining 20° E c/A and 45° E c/A														
139.4	141.1	50	4x	Ogul	Dark grey argillaceous calcarenite possibly fault altered; brecciated with well broken core; clay zones at base of unit	Minor pyrite blobs														
141.1	142.2	90	4f	Ogul	Med/coarse grained bioclastic calcarenite		21	141.1	143.0											
142.2	143.0	100	4	Ogul	Limestone conglomerate - variety of limestone clasts inc. argillite															

342049

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

SHEET No. 8
No. of 11

TENEMENT NAME MYRTLE

PLAN - MAP REFERENCE

364473 E

CO-ORDINATES 5351933 N

AZIMUTH

DRILLERS DD TAS

COMMENCED 5.6.0

DEPTH 201.1 m

HOLE No. 2M 188

RL COLLAR

INCLINATION 60°

DRILL TYPE 4250

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)																	
143.0	145.4	75	3f	Oguf	Grey med fine grained calcarenite with interstitial argillite zones										125.4	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	Oguf	Weakly laminated rotted lt grey micritic 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	Oguf	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	0.8	50
147.8	149.3	33	2	Oguf	Biotitic grey calcarenite unit - fault altered	Heavily calcite veined.									141.1	142.6	1.5	100
															142.6	144	1.1	77
															144	145.4	1.2	84
149.3	151.6	25	5x	Oguf	Red shale unit - heavily brecciated with a zone of micritic calcarenite with argillite		34660 22	149.3	151.6						145.4	146.9	1.3	26
															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	156.2	52	3x	Oguf	Faulted zone - abundant calcite veining and occ clay gouge in brecciated calcarenite.		23	151.6	154.6						151.6	153.1	0.5	33
							24	154.6	156.2						153.1	154.6	1.0	67
															154.6	156.1	1.5	100
															156.1	157.6	0.6	40
															157.6	159.1	0.65	44
156.2	171.0	40	4x	Oguf	lt grey micritic limestone; locally well rotted; with clay zones and laminated zones	lt localised zones of pyrite very fine Bedding 70° to c/a	25	156.2	157.6						159.1	160.6	0.7	46
							26	157.6	160.6						160.6	161.6	0.5	50
							27	160.6	161.6						161.6	163.6	0.9	45
							28	161.6	163.6						163.6	165.1	0.9	60
							29	163.6	165.1						165.1	166.6	0.4	26
							30	165.1	166.6						166.6	168.1	0.9	60
171.0	174.1	30	5x	Oguf	Dark grey fault altered and rotted argillaceous calcarenite with some argillite and interstitial fill.		31	168.1	169.6						168.1	169.6	0.15	10
							32	169.6	170.9						169.6	171.1	0.9	60
															171.1	172.6	0.3	20

342050

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

SHEET No. 9
No. of 11

364473E

CO-ORDINATES 5351933 N 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. %	RA 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 (Tn)	REC (m)	REC (%)
174.1	178.9	40	Sx	Ogfc	Fault zone - clay gouge with altered calcareous fragments, 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	178.9	0.3	20
178.9	179.1	100	3	Ogfc	Siderite zone with brecciated ? limestone fragments; breccia fragments re-broken and held by clays.	Pyrite matrix to breccia	37	178.9	179.1		178.9	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
179.1	180.1	40	Sx	Ogfc	light grey calcareous clay ? heavily rotted ? micrite.		38	179.1	180.1		186.1	187.6	0.75	50
											187.6	188.5	0.3	33
											188.5	190.1	1.1	69
180.1	180.65	100	Sx	Ogfc	Fault zone - clay gouge with brecciated fragments including red shale; non calcareous.	Fabric 75° to c/a.	39	180.1	181.6		190.1	191.2	1.0	90
											191.2	193.1	1.2	60
											193.1	194.5	0.2	14
											194.5	195.7	1.2	100
180.65	182.3	100	Sx	Ogfc	Fault zone - clay gouge with smaller fragments, calc vein quartz	Diverminated pyrite throughout latter half of core ? 10%.	40	181.4	182.3		195.7	196.6	0.7	77
						Fabric 70° to c/a.					196.6	198.3	1.7	100
											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	Ogfc	Clay zone with sub rounded light grey/brown clots - fault gouge or weathered conglomerate bands within dark grey clay	Coarser grained disemblers of pyrite associated with conglom. bands.	41	182.3	182.9					
182.9	183.9	100	Sx	Ogdc	Dark grey/black rotted sandstone and siltstone (+/- shales) - now a dark grey clay		42	182.9	183.9					

342051

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

SHEET No.

TENEMENT NAME M/RTLE No. 10

PLAN - MAP REFERENCE.....

364473E

CO-ORDINATES 5351933 N AZIMUTH..... DRILLERS DDTAS COMMENCED 5.6.95 DEPTH 201.1m HOLE No. ZM188

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

DEPTH From (M)	To (M)	Core Rec %	RQ DMT	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)									
83.9	188.6	75	5x	OgFz	Clay zone comprising dk gray clay, large clots 8cm of buff shale (? ferruginous clays) Probable fault zone (? or conglomerate)	Fabric 65° to c/A.	5466043	183.9	186.1											
							44	186.1	188.6											
88.6	189.8	50	5x	OgFz	Dark gray clay with < 0.5m dark gray fragments	Locally, pyrite disseminations	45	188.6	189.8											
89.8	190.1	100	4x	OgSt	Dark gray/black fine grained amorphous looking sandstone		46	189.8	192.4											
90.1	191.8	100	5x	OgFz	Dark gray/black clay with light gray clay zones. Possibly weathered shale.	Fabric 70° to c/A. Minor pyrite dissems and blebs														
11.8	192.4	33	5x	OgSt	Grey/brown clay zone sparingly with weathered/rotted clots possible fault zone.	Basal contact 65° to c/A.														
192.4	194.5	20	4x	OgSt	Dark gray/black fine grained sandstone	Minor pyrite blebs and dissems	47	192.4	194.5											
94.5	194.8	100	3	OgSt	~~Reddish~~ Fine grained quartz conglomer etc.	Bedding 60° to c/A. Minor pyrite in matrix.	48	194.5	196.6											
94.8	196.6	100	3	OgSt	Interbedded and interlaminated fine grained sandstones and siltstones.	Bedding 65° to c/A. Pyrite in gouge zone @ 194.8m + @ 195.9m Conger 60° to c/A x-cutting bedding.														

342052

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

SHEET No. 11 of 11

TENEMENT NAME MYRTLE

PLAN - MAP REFERENCE

3644732

CO-ORDINATES 5351933N

AZIMUTH

DRILLERS DDTAS

COMMENCED 5.6.95

DEPTH 201.1m

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 division of pyrite locally	5466049	196.6	198.65											
198.65	199.6	80	3f	Om.	light grey siliceous quartzite well fractured, with buff shaly 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 sheared.	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.																				

342053

77379				Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
ZN188	5465875	8.5	10.2	-5	6.41	8	296	-0.05	196	1.82	2.65	.42	23	47	31
ZN188	5465876	10.2	11.7	-5	6.93	-5	330	-0.05	9	.37	2.9	.44	38	13	15
ZN188	5465877	11.7	13.7	-5	7.88	15	382	-0.05	44	1.63	3.22	.43	25	24	28
ZN188	5465878	13.7	15.2	-5	8.15	55	176	-0.05	20	4.55	1.52	.21	19	25	235
ZN188	5465879	15.2	16.7	-5	8.95	33	332	-0.05	30	2.84	3.37	.45	42	37	125
ZN188	5465880	16.7	18.2	-5	8.65	39	350	-0.05	30	2.34	3.63	.46	32	27	109
ZN188	5465881	18.2	19.7	-5	6.32	150	250	-0.05	22	5.88	1.97	.3	40	46	167
ZN188	5465882	19.7	21.2	-5	9.02	36	364	-0.05	29	4.16	3.44	.44	50	47	89
ZN188	5465883	21.2	22.7	-5	7.86	83	258	-0.05	23	4.93	2.46	.33	42	51	240
ZN188	5465884	22.7	24.2	-5	9.08	68	317	-0.05	26	4.5	3.15	.4	60	49	301
ZN188	5465885	24.2	25.7	-5	8.4	23	327	-0.05	39	3.83	3.19	.4	25	30	64
ZN188	5465886	25.7	28.7	-5	8.12	33	257	-0.05	18	2.68	2.3	.27	34	29	402
ZN188	5465887	28.7	30.2	-5	9.03	29	291	-0.05	23	2.08	2.69	.31	28	35	503
ZN188	5465888	30.2	31.7	-5	7.53	56	297	-0.05	29	3.87	3	.37	36	43	122
ZN188	5465889	31.7	33.2	-5	5.25	94	247	-0.05	24	3.7	2.6	.32	32	34	50
ZN188	5465890	33.2	34.7	-5	5.92	36	229	.05	24	2.56	2	.25	26	26	159
ZN188	5465891	34.7	36.2	-5	6.02	96	203	-0.05	21	2.81	1.81	.24	21	49	240
ZN188	5465892	36.2	37.7	-5	6.41	69	227	.12	19	3.84	2.54	.35	34	54	97
ZN188	5465893	37.7	40.6	-5	8.9	9	341	1.91	26	2.57	3.91	1.27	115	45	371
ZN188	5465894	40.6	41.3	-5	4.67	6	144	13.4	12	3.86	1.37	6.91	796	23	123
ZN188	5465895	41.3	42.4	-5	2.98	-5	84	18	15	3.19	.89	9.49	738	19	143
ZN188	5465896	42.4	43.7	-5	7.87	11	246	11.1	23	2.3	2.31	5.93	398	26	161
ZN188	5465897	43.7	46.7	-5	2.18	-5	87	16.9	9	1.87	.92	8.5	255	15	29
ZN188	5465898	57.5	59.5	-5	2.67	27	96	19.9	5	1.46	.98	2.61	276	25	45
ZN188	5465899	59.5	60.7	.7	.88	34	29	33.7	-5	.78	.25	.52	389	31	19
ZN188	5465900	60.7	61.3	-5	7.32	-5	241	16.7	19	3.11	1.48	.96	323	29	61
ZN188	5466001	61.3	62.7	-5	2.28	-5	76	27	7	1.14	.7	1.04	317	25	44
ZN188	5466002	62.7	64.2	-5	1.68	-5	53	24.5	6	1.85	.63	1.91	525	23	63
ZN188	5466003	64.2	66.1	-5	1.56	-5	51	29.6	5	1.23	.54	1.33	445	26	23
ZN188	5466004	66.1	69.1	-5	2.03	-5	69	23.8	6	1.77	.67	2.93	469	32	74
ZN188	5466005	69.1	70.8	-5	1	8	36	25.6	7	6.73	.35	1.21	229	18	76
ZN188	5466006	72.1	75.1	.5	.71	-5	27	33.8	-5	.34	.29	.56	131	18	-5
ZN188	5466007	75.1	78.1	.9	.67	-5	24	33.4	-5	.7	.28	1.02	180	21	-5
ZN188	5466008	81.1	82.6	-5	.57	-5	21	33.9	-5	1.07	.25	.9	474	21	-5
ZN188	5466009	91.2	93.1	-5	.91	-5	36	30.1	-5	.55	.34	.64	69	19	-5
ZN188	5466010	102.1	104.2	-5	.84	-5	32	30.5	-5	.71	.36	1.3	137	20	-5
ZN188	5466011	114.3	116.5	-5	.68	-5	25	30.4	-5	1.08	.3	1.92	222	17	-5
ZN188	5466012	117.7	119.4	-5	1.1	-5	40	28.2	-5	.95	.46	2.02	269	17	12
ZN188	5466013	119.4	120.6	-5	.38	-5	16	28.9	-5	.69	.18	2.68	106	18	-5
ZN188	5466014	120.6	123.1	.5	.43	-5	18	29.9	-5	.76	.2	1.83	166	18	-5
ZN188	5466015	123.1	124.4	-5	1.51	-5	56	22.8	7	1.38	.59	2.32	264	15	6
ZN188	5466016	124.4	126.9	-5	1.24	-5	44	25.9	19	4.67	.42	1.45	247	16	21
ZN188	5466017	126.9	128.9	-5	.94	-5	35	29.8	-5	.91	.37	2.32	241	15	-5
ZN188	5466018	131.4	133.4	-5	.6	-5	20	29.6	-5	1.17	.23	1.56	359	16	-5
ZN188	5466019	133.4	135.0	-5	.35	-5	18	19	-5	17.9	.16	2.45	663	22	80
ZN188	5466020	135.0	136.7	-5	1.01	-5	33	29.8	-5	1.12	.32	3.23	287	29	18
ZN188	5466021	141.1	143.0	-5	1.06	-5	33	26.3	6	2.18	.35	4.45	651	44	35
ZN188	5466022	149.3	151.6	-5	7.42	20	270	10.6	20	4.39	1.92	2.32	405	42	77
ZN188	5466023	151.6	154.6	-5	.94	-5	30	26.7	-5	1.38	.3	5.41	324	27	43
ZN188	5466024	154.6	156.2	-5	.77	-5	27	30.1	-5	1.24	.29	4.81	361	27	6
ZN188	5466025	156.2	157.6	-5	.6	-5	23	31	-5	.91	.29	2.64	306	26	-5
ZN188	5466026	157.6	160.6	-5	1.7	34	63	29.7	7	1.86	.59	.88	377	22	-5
ZN188	5466027	163.6	165.1	-5	.73	-5	26	33.7	-5	.84	.27	1.31	161	24	-5
ZN188	5466028	165.1	166.6	-5	1.54	11	55	28.8	-5	1.34	.58	1.65	271	20	-5
ZN188	5466029	166.6	168.1	-5	1.35	-5	49	28.6	6	1.54	.48	1.8	151	34	107
ZN188	5466030	168.1	169.6	-5	.24	-5	10	35	5	.42	.13	1.29	110	26	-5
ZN188	5466031	169.6	170.9	-5	.58	8	20	30.2	9	1.03	.24	1.59	120	24	9
ZN188	5466032	170.9	172.6	-5	1.29	-5	46	28.3	6	1.33	.42	2.61	241	25	10
ZN188	5466033	172.6	174.1	-5	1.56	5	56	26.3	6	2.28	.45	2.85	542	34	72
ZN188	5466034	174.1	175.6	-5	3.21	-5	104	21.6	15	2.06	.89	3.06	228	31	22
ZN188	5466035	175.6	177.1	-5	5.22	18	168	14.2	16	2.99	1.35	2.1	327	30	46
ZN188	5466036	177.1	178.9	-5	2.75	-5	92	21.7	9	1.88	.84	3.15	335	25	17
ZN188	5466037	178.9	179.1	-5	1.53	10	57	10.4	-5	17.8	.52	2.76	5630	-10	8
ZN188	5466038	179.1	180.1	-5	.91	-5	32	27.5	-5	2.25	.32	2.36	633	20	-5
ZN188	5466039	180.1	181.4	-5	7.59	94	246	2.25	25	3.47	2.17	1.43	186	38	63
ZN188	5466040	181.4	182.3	-5	7.02	566	221	.14	25	7.88	2.56	.4	34	113	208
ZN188	5466041	182.3	182.9	-5	10.6	273	346	.08	41	6.56	3.56	.46	36	115	278
ZN188	5466042	182.9	183.9	-5	9.93	91	332	.06	40	4.56	3.68	.51	46	90	111
ZN188	5466043	183.9	186.1	-5	11.1	32	365	.06	33	2.15	3.02	.55	28	61	144
ZN188	5466044	186.1	188.6	-5	9.91	18	333	-0.05	32	1.37	2.97	.46	25	46	116
ZN188	5466045	188.6	189.8	-5	6.98	34	204	-0.05	24	2.61	2.45	.5	51	68	121
ZN188	5466046	189.8	192.4	-5	7.23	39	256	-0.05	23	2.39	2.5	.44	30	39	92
ZN188	5466047	192.4	194.5	-5	6.52	40	188	-0.05	23	2.75	2.08	.23	34	72	556
ZN188	5466048	194.5	196.6	-5	2.1	29	62	.18	22	1.36	.74	.09	38	24	93
ZN188	5466049	196.6	198.7	-5	8.26	25	223	-0.05	66	1.63	2.98	.26	19	42	40
ZN188	5466050	198.7	199.6	-5	3.25	-5	100	-0.05	7	.44	1.2	.11	13	16	57
ZN188	5466051	199.6	200.2	-5	9.53	22	276	-0.05	5	.84	3.52	.29	10	12	31
ZN188	5466052	200.2	201.1	-5	2.13	5	70	-0.05	10	.45	.88	.08	21	-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. J. TEAR
 DRILLING CO.: ALMAC
 DRILL TYPE: DIAMOND
 DRILL RIG: LY44
 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 calcarenites
376.1	410.0	Ogul.	Equigranular calcarenites
410.0	532.1	Ogul	Intermixed fine calcarenites, micrites and argillaceous calcarenites
532.1	570.1	Ogul	ore clean equigranular calcarenite. Repeated cycles
570.1	611.7	Ogul	Equigranular calcarenites
611.7	664.6	Ogul	Argillaceous bioclastic calcarenites
664.6	670.0	Ogul	Mixed argillaceous calcarenites and micrites
670.0	689.0	Ogul	Bioclastic Equigranular calcarenites
689.0	702.4	Om	Silty Transition Unit
			Main Sandstone

MINERALISATION SUMMARY:

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

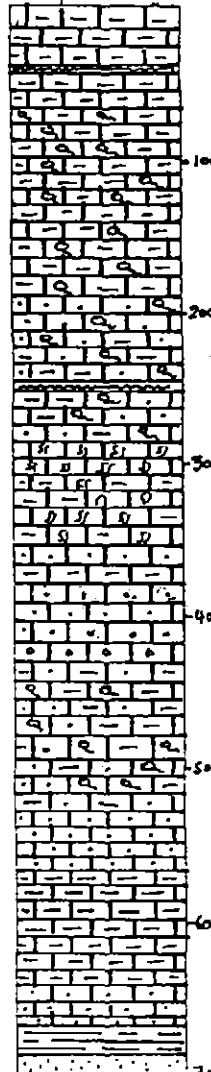
CONCLUSIONS:

Bedding @ 35m 82° 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.

Graphic Log



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

TENEMENT NAME MYRTLE SHEET No. 1
No. of 15

CO-ORDINATES 364288E 5350999N AZIMUTH N/A. DRILLERS DLMAC COMMENCED 5/6/95 DEPTH 702.4m HOLE No. 700137
RL COLLAR 90° INCLINATION 90° DRILL TYPE LY44 COMPLETED 2/6/95 CASING LEFT DPO No(s)

DEPTH		Core Rec	LOG	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by <u></u>)									
From (M)	To (M)																		
3.8	16.4	12.6	1-2	Ogwl	<u>MASSIVE, ARGILLACEOUS, VARIABLY CARBONACEOUS MICRITIC LIMESTONE</u>														
					Dark grey. Some tubululated zones. Some zones of														
					tubular fenestrae, probably after worm burrows														
					Some isolated coral clasts and thin fossiliferous														
					horizons	5465794	3.0	12.0	4.0										
16.4	20.8	4.4	1	Ogwl	<u>FENESTRAL LIMESTONE</u>														
					Clearer grey micritic limestone with common	5465795	16.4	20.8	4.4										
					tubular fenestrae after worm burrows														
					Large isolated coral clast of 18.1m														
20.8	38.4		1-2	Ogwl	<u>MASSIVE, ARGILLACEOUS, VARIABLY CARBONACEOUS MICRITIC LIMESTONE</u>														
					Dark grey. Common large, isolated corals (2 clasts)														
					Base clearer micritic horizons														
					Very organic rich horizons approaching graphite														
					grade														
					Bedding to core intersection angle														
					= 23°														
38.4	42.6	4.2	1-2	Ogwl	<u>MASSIVE TO ARGILL. LAMINATED FENESTRAL LIMESTONE</u>														
					Clearer grey micritic limestone. Basal 1.1m														
					clear, grey micritic limestone with tubular														
					fenestrae after worm burrows Overlying	5465796	39.0	40.4	1.4										
					3.1m predominantly grey with dark grey														
					cryptalgal laminae. Fenestral texture, probably														
					after intense burrowing														
					Bedding to core angle 28-30°														

342056

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

SHEET No. 2
 TENEMENT NAME MYRTLE No. GF15
 PLAN - MAP REFERENCE _____
 DEPTH 702.4 m HOLE No. Zm189
 CASING LEFT _____ DPO No(s) _____

364288E
CO-ORDINATES 535099 N AZIMUTH 157° 15' DRILLERS ALMAC COMMENCED 5.6.95 DEPTH 702.4 m HOLE No. Zm189
RL COLLAR INCLINATION DRILL TYPE LY44 COMPLETED CASING LEFT DPO No(s)

342057

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

TENEMENT NAME MYRTLE SHEET No. 3
PLAN - MAP REFERENCE 8/15
DEPTH 702.4m HOLE No. Z.M.139
CASING LEFT DPO No(s)

364288E
CO-ORDINATES 5350999N AZIMUTH DRILLERS ALMAC COMMENCED 5.6.95
RL COLLAR INCLINATION DRILL TYPE LY44 COMPLETED

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 (Analyzed by <u> </u>)				
From (M)	To (M)	%	DATA								From (m)	To (m)	Cut (m)	Rec (m)	Rec (%)
201.1	204.7	100	1	Dgw	<u>CARBONATE BRECCIA</u>		546560	202.0	204.7m	100%	163.4	164.4	3.0	3.0	100
					Large clasts light grey, finely crystalline limestone / Fine grained calcarenite, and coral in a dark grey to black, argillaceous micrite matrix. Sedimentary slump breccia?						164.4	169.3	2.9	2.9	100
											169.3	172.4	3.1	3.0	97
											172.4	184.4	3.0	2.8	93
											184.4	177.4	3.0	3.0	100
											177.4	181.4	3.0	3.0	100
204.7	227.0	100	1	Dgw	<u>BEDDED, VARIABLY ARGILLACEOUS MICRITIC LIMESTONE</u>		546561	229	227.1	100%	181.4	184.4	3.0	3.0	100
					Grey, micritic limestone with tubular fenestrae (after warm burrows?) in places and dark grey to black, very argillaceous, calcarenaceous (graphitic grade), variably ?siliceous micrite.						184.4	187.4	3.0	3.0	100
					Bioturbated zones in places (feeding trails)						187.4	190.4	3.0	3.0	100
					Rare fossiliferous horizons (echinoderms, bryozoa etc)						190.4	193.4	3.0	2.6	87
											193.4	196.4	3.0	3.0	115
											196.4	199.4	3.0	2.9	97
											199.4	202.0	3.0	2.1	103
											202.0	205.0	3.0	3.0	100
											205.0	208	3.0	2.9	97
											208	211.4	3.4	3.6	106
					242.3-242.7m. White, banded, calcite vein						211.4	214.4	3.0	2.9	97
											214.4	217.4	3.0	2.9	97
					Bedding to core agrees.						217.4	220.4	3.0	3.0	100
											220.4	222.4	3.0	2.9	97
											222.4	226.0	2.6	2.7	104
					234.6-235.7m. 34-38						226	229	3.0	3.0	100
											229	232.1	3.1	3.1	100
											232.1	235.2	3.1	3.1	100
											235.2	238	3.1	3.1	100
											238	241.4	3.1	3.1	100
											241.4	244.4	3.0	3.0	100
											244.4	247.4	3.0	3.0	100
											247.4	250.4	3.0	3.0	100
											250.4	254	3.0	3.0	100
											254	256.4	3.0	3.0	100

342058

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

SHEET No. 4
No. 15

TENEMENT NAME MYRTLE

PLAN - MAP REFERENCE

CO-ORDINATES 364 288 E 5350999 N AZIMUTH

DRILLERS. ALMAC

COMMENCED...5.6.95

DEPTH 702.4

HOLE No.

RL COLLAR

INCLINATION

DRILL TYPE L7 44

COMPLETED

CASING LEFT

DPO No(s)

[illegible]

342059

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

TENEMENT NAME MYRTLE SHEET No. 5
No. 415

PLAN - MAP REFERENCE

DEPTH 702.4 m HOLE No. ZM129

CASING LEFT DPO No(s)

CO-ORDINATES 364 288 E
535 099 N

RL COLLAR INCLINATION

DRILLERS ALMAC COMMENCED 5.6.95

DRILL TYPE LY44 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.....)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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269.7	282.3		CHERTY		~~CALCARENITE AND BEDDED, BANDED LAMINATED MICRITE~~ a Fining upward beds of granular grading to fine grained calcarenite. Cherty clasts in calcite matrix. Minor bands and beds of grey to black micrite. ~~REWORKED, CHESTNUT LIMESTONE~~ => VERY EARLY GANIC/COMAN b Grey, granular calcarenite composed of rounded micrite clasts in white calcite matrix. c Grey micrite with dark grey to black cryptalgal laminae. Calcite filled tubular fenestration after vertical worm burrows (sparse to intense) d Interbedded to Supratidal Deposition? Tidal channels and mud flats. e Minor v fa disseminated pyrite replacing bands and laminae 283.6-282.7m f Grey micrite with darker grey bands and laminae. Minor leucitization (horizontal bedding trails) in places. g Bedding to core intersection angle 38° @ 270.6-270.8m																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

342000

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

SHEET No. 6 of 15
TENEMENT NAME MYRTLE No. 8F15
PLAN - MAP REFERENCE

264289E
CO-ORDINATES 5350999N AZIMUTH DRILLERS ALMAC COMMENCED 5C-95 DEPTH 702.4m HOLE No. 20189
RE COLLAR INCLINATION DRILL TYPE LY44 COMPLETED CASING 15FT DPO No(s)

DEPTH From (M)	To (M)	Core Rec. %	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weather, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)									
288.3	291.8	100	1	OGW	BIOBURSTED GREY AND MICRITE LIMESTONE	946565	289.4	291.8	100										
					Originally banded grey and dark grey (more argillaceous, calcareous) micritic limestone. Bedding now predominantly disturbed by bioturbation.														
291.8	299.7	100	1	OGW	FINE-GRAINED CALCARENITE UNITS WITH ARGILLACEOUS LIMESTONE BANDS AND LAMINAE IN PLACES														
					Massive, micritic, bluish to a medium grained calcarenite. 299.7-299.9m	946566	299.09	299.95											
299.9	310.0	100	1-2	OGW	VARIABLY BIOBURSTED MICRITIC LIMESTONE AND CALCARENITE	946567	304.4	309.4											
					Light grey to medium grained calcarenite and grey to medium dark grey micritic limestone. Variably bioturbated.														
310.0	312.7	100	1-2	OGW	INTERBEDDED FINE GRAINED CALCARENITE AND MICRITIC														
					Grey, saccharine textured, fine grained calcarenite, and dark grey, argillaceous micritic limestone.														
312.7	319.9	100	1	OGW	FINE-GRAINED HIGHLY BURSTED GREY CALCARENITE	946568	317.7	319.5											
					Beccarini micritic argillaceous down hole with occ. bioturb. in places. Larger features; towards base 2m more bioturbated.														
					Thin bedded. Major calcite veining 318.6-319.5														
					Major calcite veining 45° to c/a, + 90° to c/a.														
					Argillaceous micritic calcarenite - shallow water.														

342061

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

TENEMENT NAME MYALE

SHEET No. 7
No. of 15

364288E

CO-ORDINATES 5350999N AZIMUTH

DRILLERS ALMAC

COMMENCED 5.6.95

PLAN - MAP REFERENCE

DEPTH 702.4m

HOLE No. Zm189

RL COLLAR 5 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.....)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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323.9	335.8	100	1	Ogul	INTERMIXED FINE GRAINED CALCAREONITE AND MICRITE Mixed faun. unit. Locally argillaceous laminae @ 327.2-327 w/lt bedding 55° to c/a 323.9-324.62 - Grey micrite with minor coarse dk grey calcarenite. 324.62-326.4 - Micrite micrite + argillaceous calcarenite micrite band. 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 clean micrite. calcite vein @ 330.65-331.72 with reddened micrite 6m varying 55° to c/a. Fabric/cleavage in micrite 37° to c/a ? Parallel to bedding 331.96-335.8 micrite fine grained grey calcarenite/micrite and dark grey argillaceous calcarenite. abundant micro-veining (calcite) cleavage 15° to c/a. well cleaved																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

342062

No. 80-15

HOLE No. ZM189

HOLE No. ZM189

. DPO No(s).....

ASSAY VALUES (Analyzed by	
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364288E
CO-ORDINATES 535099N AZIMUTH 2
RE COLLAR..... INCLINATION

DRILLERS..ALMAC
DRILL TYPE..LY44

COMMENCED 5.6.95
COMPLETED

ASSAY VALUES (Analyzed by	
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342063

DRILL CORE LOG

TENEMENT NAME MYRSLK No. 1915

364288E

CO-ORDINATES 535099N AZIMUTH..... DRILLERS ALMAC COMMENCED 5.6.95 PLAN - MAP REFERENCE.....
 RL COLLAR..... INCLINATION..... DRILL TYPE LY 44 COMPLETED..... DEPTH 702.4 m HOLE No. Zm189
 CASING LEFT..... DPO No(s).....

DEPTH		Core Rec. %	RQ DATA	Graphical Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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						Calcrete veining up to 4mm thick 30°, 45°, 0°, 60° to c/a. Minor pyrite between 399.2-401.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

342064

DRILL CORE LOG

TENEMENT NAME RAMYRTLE No. 10015

364288E

CO-ORDINATES 535 0997N AZIMUTHDRILLERS ALMACCOMMENCED 5.6.95

PLAN - MAP REFERENCE

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 ~~30~~ CALCARENITES	5465678	4359	4374		4334	4364	30	100
					Med to fine grained dk grey + grey calcarenites - disrupted	79	4374	4394		4364	4394	30	100
					look down to possible faulting - major zone of					4394	4424	30	100
					calcite veining 4363-43925; veins up to 40cm thick					4424	4454	30	100
440.5	444.2	100	1	Agul.	CLEAN MED-FINE GRAINED CALCARENITES	4 80	441.0	443.0					
					Clean, light grey to grey calcarenites - locally med grained								
					and possibly biolitic; stylolitic with minimal argillite								
					material and occ calcite vascularity only; almost								
					oolitic in places.								
444.2													

342065

DRILL CORE LOG

PERMIT NAME: 411115

364288E

CO-ORDINATES: 5350997 N AZIMUTH: DRILLERS: ALMAC COMMENCED: 5.6.95 DEPTH: 702.4m HOLE No: 2m/89
RL COLLAR: INCLINATION: DRILL TYPE: LY 44 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.....)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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463.98	463.5	100	1	Ogul	ARGILLACEOUS BIOCLASTIC CALCARENITE Gray fine grained, nodular, bioclastic calcarenite with fine grained bioclastic, argillaceous calcarenite; nodules have irregular margins; possible bioturbation. Minor calcite veining usually 30° to c/a. Gradationally lower contact.		5465682	449.6	451.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</

342066

DRILL CORE LOG

MEN ME. 1

364 288 E

CO-ORDINATES 5350979 N AZIMUTH

DRILLERS ALMAC

COMMENCED 5.6.95

PLAN - MAP REFERENCE

DEPTH 702.4 m HOLE No. ZM189

RL COLLAR INCLINATION

DRILL TYPE LY 44

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)																			
498.2	508.6	100	1	Ogwl	CLEAN EQUIGRANULAR BIOLASTIC CALCARENITE. As before; slightly more argillaceous unit 502.65-503.05 and 503.9-504.3m. 0.5cm calcite veins 35° to c/a; other calcite veining sub-parallel to c/a. Bioclastic calcarenite nod/corals grainy.															
508.6	514.4	100	1	Ogwl	MIXED EQUIGRANULAR CALCARENITES, CALCARENITES AND ARGILLACEOUS BIOLASTIC CALCARENITES. Disturbed calcarenite units; argillaceous unit in nod/corally bioclastic; nodular effect with fine grained calcarenite (micrite). Bioclastic (fine) argillite zones. ?striae bygonia @ 512.4m. Minor calcite veins.		86	511.4	514.0											
514.4	517.9	100	1	Ogwl	CLEAN EQUIGRANULAR CALCARENITE Increase in calcite veining; 10cm vein 45° to c/a. 0.5cm veins 25° to c/a. Also zones of calcite very infill.		86	514.4	517.4											
517.9	527.4	100	1	Ogwl	MIXED EQUIGRANULAR CALCARENITES, CALCARENITES (MICRITES) AND ARGILLACEOUS BIOLASTIC CALCARENITES. Calcite veining is persistent; bedding highly disrupted; nodular effect with the fine calcarenites/micrites; ?bioturbation and syn-sedimentary brecciation, veining generally more intense at top.		87	523.4	525.3											
527.4	531.1	100	1	Ogwl	FAULT BRECCIA Upper and lower contacts parallel 50° to c/a.															
531.1	538.1	100	1	Ogwl	MIXED EQUIGRANULAR CALCARENITES, CALCARENITES (MICRITES) AND ARGILLACEOUS BIOLASTIC CALCARENITE. Poorly bedding @ 531.4 45° to c/a. Disrupted bedding - ? syn-sedimentary brecciation +/- bioturbation.															

342067

REVIEW

CO-ORDINATES 5350999N AZIMUTH

DRILLERS. *ALMAC*

COMMENCED 5-6-95

PLAN - MAP REFERENCE

DEPTH 702.4m

HOLE No. ZM129

RL COLLAR..... INCLINATION

DRILL TYPE LY 44

COMPLETED

CASING LEFT

.. DPO No(s).

342063

DRILL CORE LOG

TENEMENT NAME MYRTLE No. 815

364288E

CO-ORDINATES 5350999N AZIMUTH

DRILLERS ALMAC

COMMENCED 5.6.95

PLAN - MAP REFERENCE

DEPTH 702.4m

HOLE No. Zm189

RL COLLAR 288E INCLINATION

DRILL TYPE LY 44

COMPLETED

CASING LEFT

DPO No(s)

DEPTH		Core Recovery %	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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735.8	611.7	100	1	Ogdl	ARCILLACEOUS BIOCLASTIC CALCARENITE Uniform looking appearance. Fine grained grey calcarenite with red / tan. ground bioclasts, planar micritic. argillaceous material on minor dark grey calcarenite inter (med / fine grained) Unit becoming more argillaceous downwards. Fine argillite. minor calcite veins. 55° to c.l.a. No. calcareous calcarenite @ 607m	5465692	604.4	606.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																</

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				77380	Ag	Al	As	Ba	Ca	Cu	Fe	K	Na	Mn	Pb	Zn
139	5465794	8.00	12.00	5465794	-5	.89	-5	45	30.2	-5	.55	.41	2.02	97	-10	-5
ZM139	5465795	16.40	20.80	5465795	1	.69	-5	35	34.6	-5	.28	.32	.55	55	-10	6
139	5465796	39.00	40.40	5465796	.9	1.52	-5	74	31.5	7	.43	.74	1.4	32	-10	-5
139	5465797	60.00	62.00	5465797	1.6	.36	-5	28	36.3	12	.2	.18	.56	41	-10	20
ZM139	5465798	71.00	74.00	5465798	1.4	.61	-5	33	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
139	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
139	5465658	151.00	153.00	5465658	2.4	1.81	-5	92	29.1	-5	.79	.92	1.78	133	-10	-5
139	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
139	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	-10	-5
139	5465665	289.40	291.80	5465665	1.5	.76	-5	40	30.7	-5	.64	.38	2.75	93	-10	-5
139	5465666	299.08	299.95	5465666	1.1	.45	-5	41	33.2	-5	.4	.19	1.05	80	-10	412
ZM139	5465667	304.40	307.40	5465667	.7	.75	-5	43	29	-5	.58	.33	3.96	109	-10	-5
139	5465668	317.70	319.50	5465668	.6	1.56	-5	96	27.4	-5	.61	.68	1.55	124	-10	-5
139	5465669	333.70	335.20	5465669	1.6	.96	-5	44	32	-5	.47	.43	1.49	70	11	13
ZM139	5465670	338.30	340.40	5465670	.9	1.76	-5	78	27.4	-5	.72	.85	2.58	149	-10	10
ZM139	5465671	353.00	355.40	5465671	.8	1.37	-5	51	25.5	-5	.72	.65	2.4	117	10	-5
139	5465672	365.40	367.20	5465672	1.1	.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
139	5465675	388.40	390.50	5465675	1	.44	-5	17	34.2	-5	.41	.2	1.37	127	-10	-5
139	5465681	399.20	401.40	5465681	.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
139	5465677	422.50	424.90	5465678	.9	.3	-5	8	33.5	-5	.5	.14	2.69	566	-10	-5
139	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
139	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	1.64	252	-10	-5
ZM139	5465684	493.40	495.80	5465684	-5	.47	-5	16	34.2	-5	.4	.26	1.85	376	-10	-5
139	5465685	511.40	514.00	5465685	.7	.56	-5	18	32.1	-5	.41	.28	3.32	221	-10	6
139	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
139	5465688	533.10	535.40	5465688	1.3	.06	-5	-5	36.6	-5	.25	-.05	1.82	225	-10	-5
139	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	.96	342	32	168
139	5465692	604.40	606.40	5465692	-5	2.41	-5	79	24.6	-5	.97	1.13	3.65	150	16	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
139	5465695	630.00	631.80	5465695	.7	.52	-5	18	34.9	-5	.39	.23	.9	234	12	-5
139	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	93	21.6	-5	1.38	.95	4.57	355	12	17
139	5465698	661.00	662.80	5465698	.9	2.61	8	73	24.3	7	2.03	.1	2.24	368	31	193
139	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	.64	.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
139	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	.5	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
139	5466234	677.5	679.85	5466234	-5	1.14	-5	33	13.1	-5	3.59	.4	5.34	1290	21	58
139	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
139	5466065	683.40	687.40	5466065	-5	3.27	13	105	9.51	32	3.68	1.48	4.32	1320	11	31
139	5466055	687.40	689.00	5466055	-5	4.47	29	147	4.73	-5	2.66	1.96	1.82	797	-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	488	-10	16
139	5466057	700.40	702.40	5466057	-5	4.72	12	210	.89	-5	2.13	1.97	.62	163	-10	14

07-3.8
 38-38.4
 38.4-42.6 g/m
 42.6-100
 100-150
 150-201.1
 201.1-227.0
 227.0-252.9 g/m
 252.9-269.2
 269.2-288.7
 288.7-312.7
 312.7-363.6

363.6-443.95
 443.95-485.5
 485.5-527.7
 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

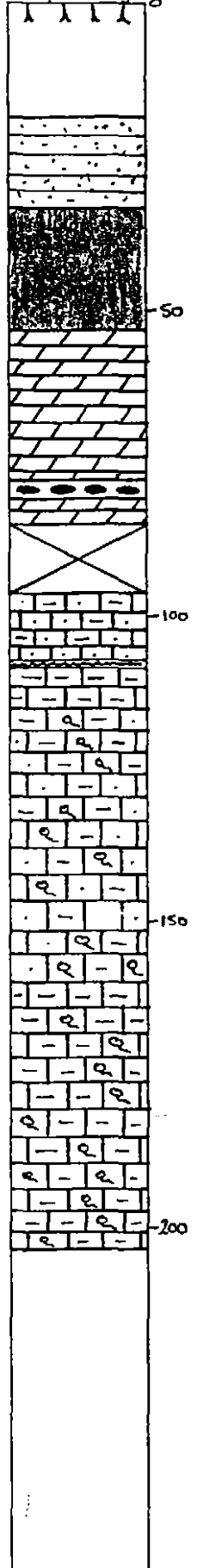
CRA EXPLORATION PTY. LIMITED
DRILL-HOLE SUMMARY LOG

HOLE NAME: DD952M190 AMG EAST 363448 NORTH S351780
 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°			

Graphic Log**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	Ogmu	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.

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

TENEMENT NAME MYRTLE SHEET No. ①.5
No.
PLAN - MAP REFERENCE.....

CO-ORDINATES 363448E 5351780N AZIMUTH 090° (Amc) DRILLERS ALMAC COMMENCED 1.7.1995 DEPTH 203.9 m HOLE No. ZM190
RL COLLAR INCLINATION 45° 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 (Fm)	Rec (To)	Rec (M)	Rec (%)	
0	18.0	-	-	Qha	Overburden													0	18	0	0
																		18	18.3	0.3	100
18.0	26.4	100	2	Sc	Grey medium grained locally well bedded massive sandstone; bioturbated zone 18.8-19m.	Bedding 75° to c/A. (slight variation to 65° to c/A)	5466282	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 - ?transitional to limestone		94	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	5	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	39.95	100	5	Sc	Dark grey clay		96	33.3	36.80									48.0	51.0	1.5	50
							97	35.8	37.80									51.0	53.1	0.7	33
39.95	42.3	63	5	Sc	light grey (intermixed with dark grey clay bands) clay		98	37.8	39.95									53.1	54.3	0.7	72
							99	39.95	42.3									54.3	54.9	0.45	75
																		54.9	55.4	0.35	70
42.3	53.1	40	Sx	Sc	sheared 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	67
																		58.6	59.4	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									58.6	59.4	0.9	72
							95	54.3	56.9									59.4	60.4	0.5	100
							96	56.9	58.8									60.4	62.3	1.9	100
							97	58.8	60.4									62.3	63.3	0.7	70

342073

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

MYRTLE

SHEET No. ②.5

TENEMENT NAME ~~MYRTLE~~ No.

PLAN - MAP REFERENCE

CO-ORDINATES 363448E 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 (From)	REC (To)	REC (M)	REC (%)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
					Minor scattered zones of dol veining + pyrite stringer veining	Dolomitised veining 61-62.3 30°+10° b c/a. possible fault zone.	98	60.4	62.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

342074

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

SHEET No. ③.5

TENEMENT NAME MYRTLE

PLAN - MAP REFERENCE

363 448 E
CO-ORDINATES 5351790 N

AZIMUTH

DRILLERS ALMAX

COMMENCED 17.1995

DEPTH 134.9

HOLE No. ZM190

RL COLLAR

INCLINATION

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.....)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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108.15	111.0	100	2	Ognd	Grey med/fine grained calcarenite with interbedded with argillite bands at top of unit becoming more irregular downwards	Minor calcite veining.	19	108.15	111.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

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

TENEMENT NAME MYRTLE SHEET No. (4) of 5
No.

363448E

CO-ORDINATES S351780N AZIMUTH..... DRILLERS ALMAC COMMENCED 1.7.1995 DEPTH 186.3 HOLE No. 2M190
RL COLLAR..... INCLINATION..... 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 (m)
134.9	135.8	100	2	Ogul	Synsedimentary breccia zone Disrupted units with variable grain size of bioclots.	Calcrete veined 70° E c/a 10° E c/a	22	134.9	135.8							120.3	12.3	3.0	100
																123.3	12.6	3.0	100
																126.3	12.9	3.0	100
																129.3	132.3	3.0	100
135.8	145.45	100	1	Ogul	Fine med grained grey calcarenite (locally biocalcrete + locally almost micritic) with argillite discrete bands - some bands have fine grained bioclots. Argillite bearing less discrete + less frequent downhole.	Calcrete vein 137.9-138.05 45° E c/a. - por. shear. Bedding 60° E c/a. Over V minor calcite veining.	23	135.8	138.3							132.3	135.3	3.0	100
																135.3	138.3	3.0	100
																138.3	141.3	3.0	100
																141.3	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, biocalcrete, fine grained calcarenite with minor interstitial argillite; burrowed zones.	Calcrete veining locally intense but irregular 145.45-150m.	5468424	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	Concords of 10's 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	168.3	100	1	Ogul	Grey med/fine grained biocalcrete calcarenite with minor interstitial argillite and thin bands. Becoming more calcareous (darker grey) @ 163.3m.	Minor calcite veining mainly or 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	195.3	2.7	100
																195.3	198.3	3.0	100
																198.3	201.3	3.0	100
																201.3	203.9	2.9	100
168.3	203.9	100	1	Ogul	Amorphous-looking med/fine grained biocalcrete calcarenite with calcareous appearance (locally)	Occ. bands calcite veins up to 8cm thick ~ 60° E c/a. Calcrete vein @ 175.7m-22m with pyrite at base 45° E c/a.	28	174.3	176.0										
							29	183.3	186.3										

342076

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

SHEET No. ⑤.5

TENEMENT NAME MYRTLE No.

PLAN - MAP REFERENCE

CO-ORDINATES 363448E 5351780N AZIMUTH DRILLERS PLMAC COMMENCED 1.7.95 DEPTH 203.9m HOLE No. ZM190

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

DEPTH		Core Rec. %	RG 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)																			
					Zone of light grey epigranular unit 177 - 178.4m.		5468430	201.0	203.9											
					Very uniform looking Gneiss; minor bi-turbation disturbance; relatively rare bioclots from 178.6m onwards.	minor calcite veining from 178.4m 45° & c/a; 60° & c/a														
					END OF HOLE 203.9m.															

342077

		77388	Ag	Al	As	Ba	Ca	Cu	Fe	K	Hg	Mn	Pb	Zn
	19.7	22.4	5466282	-5	1.85	-5	103	-05	6	.53	.89	.12	22	39
	26.4	28.3	5466283	-5	3.44	21	202	.05	9	.74	1.61	.21	30	210
190	28.3	30.3	5466284	-5	4.38	17	258	-05	14	.7	2.05	.28	19	56
190	30.3	33.3	5466285	-5	6.9	63	573	.13	18	1.93	3.44	.53	20	37
	33.3	35.8	5466286	-5	8.05	57	499	.32	23	2.12	4.12	.63	22	292
	35.8	37.8	5466287	-5	8.7	30	543	.23	20	2.01	4.38	.72	21	35
190	37.8	39.95	5466288	-5	8.15	28	523	.26	22	2.42	4.68	.68	25	42
190	39.95	42.3	5466289	-5	8.4	24	597	.53	23	1.6	4.24	.7	30	65
	42.3	45	5466290	-5	9.23	7	772	.22	23	1.59	4.76	.83	23	16
190	45	48	5466291	-5	9.66	42	821	.36	27	3.92	4.99	.82	1670	14
190	48	51	5466292	-5	7.74	17	769	.98	20	7.32	4.1	.63	3340	20
	51	53.1	5466293	-5	5.26	84	924	5.66	23	4.97	2.59	3.5	1330	184
	53.1	54.3	5466294	-5	.89	-5	128	18.7	5	2.18	.47	10.4	702	25
190	54.3	56.9	5466295	-5	1.44	-5	229	17.7	-5	1.75	.75	9.77	582	30
190	56.9	58.8	5466296	-5	1.28	-5	231	18.6	-5	1.25	.67	10.5	539	29
	58.8	60.4	5466297	-5	1.01	-5	183	18.9	-5	1.23	.53	10.8	512	13
	60.4	62.3	5466298	-5	1.06	-5	259	19.1	-5	1.41	.56	10.8	507	21
190	62.3	63.7	5466299	-5	1.02	77	207	18.6	-5	1.88	.51	10.7	480	26
	63.7	65.1	5466300	-5	.69	-5	140	19.1	-5	2.41	.35	10.9	416	32
	65.1	66.6	5468401	-5	.64	-5	127	19.8	-5	1.06	.31	11.4	515	12
190	66.6	68.6	5468402	-5	2.54	8	287	.18	9	1.84	.63	10.4	625	69
190	68.6	70.5	5468403	-5	.58	-5	115	19.1	-5	1.11	.3	10.8	517	22
	70.5	71.7	5468404	-5	.58	-5	119	19.3	-5	1.31	.31	11	483	16
	71.7	72.5	5468405	-5	.84	17	117	.17	11	5.92	.43	9.68	405	176
190	72.5	75	5468406	.9	.83	-5	87	19.4	8	1.39	.43	11.2	431	22
190	75	76.9	5468407	-5	2.22	-5	241	15.3	10	1.84	1.19	8.33	653	22
	76.9	77.5	5468408	-5	2.86	-5	308	13.6	6	4.03	1.51	7.3	1900	22
190	77.5	78.8	5468409	-5	2.64	-5	267	8.83	-5	16.3	1.39	3.47	8960	-10
190	78.8	80.6	5468410	-5	1.57	-5	171	8.14	-5	22.2	.82	2.63	13180	-10
	80.6	82.1	5468411	-5	4.07	-5	305	11.5	6	3.61	2.13	5.81	1460	14
	82.1	84.3	5468412	-5	4.07	-5	308	14.2	-5	1.97	2.17	4.44	565	15
190	84.3	85	5468413	-5	4.39	-5	341	12.6	6	1.96	2.33	5.58	380	18
190	96	99.3	5468414	-5	.96	-5	71	30.7	-5	.56	.52	.72	237	-10
	99.3	102.3	5468415	-5	.9	-5	67	31.3	-5	1.2	.46	.95	440	12
	102.3	105.3	5468416	-5	.6	-5	48	29.6	-5	1.02	.31	2.47	405	172
190	105.3	107.3	5468417	-5	.98	-5	68	29.9	-5	.64	.53	1.29	359	237
	107.3	108.15	5468418	-5	.77	-5	55	31.5	-5	.26	.41	.68	139	22
	108.15	111	5468419	-5	.83	-5	57	28.3	-5	.48	.45	2.21	186	-19
190	120.9	122.9	5468420	-5	.41	-5	27	32	-5	.5	.22	1.24	137	-10
190	132.3	134.9	5468421	-5	1.11	-5	58	27.2	-5	.84	.6	2.22	299	16
	134.9	135.8	5468422	-5	.72	-5	40	31.4	-5	.53	.39	1.76	196	-10
	135.8	138.3	5468423	-5	.81	-5	41	30.4	-5	.59	.43	1.36	251	16
190	146.3	148.7	5468424	-5	.32	-5	16	34.1	-5	.25	.17	.98	123	-10
190	153.8	155.9	5468425	-5	.21	-5	13	32.9	-5	.27	.09	2.07	165	-10
	155.9	157.9	5468426	2.2	.24	-5	16	37.4	-5	.35	.11	1.68	283	13
190	161.6	163.6	5468427	2.4	.25	-5	12	37.7	-5	.27	.12	2.07	126	12
190	174.3	176	5468428	1.2	1.34	-5	72	32.9	-5	1.34	.71	1.67	247	18
	183.3	186.3	5468429	1.8	1.13	-5	55	29.8	-5	.47	.61	2.72	96	-10
	201	203.9	5468430	1.6	.68	-5	33	31.7	-5	.42	.57	3.92	90	-10

342079

Appendix IV

Pyramid - DD95ZP63 - Drill Logs

CRA EXPLORATION PTY. LIMITED
DRILL-HOLE SUMMARY LOG

342080

HOLE NAME: DD95ZP63	AMG	EAST 364311	NORTH 5356348
PROSPECT: PYRAMID	GRID	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.: DO. 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	Ogfe	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 - siliceous + hematitic.

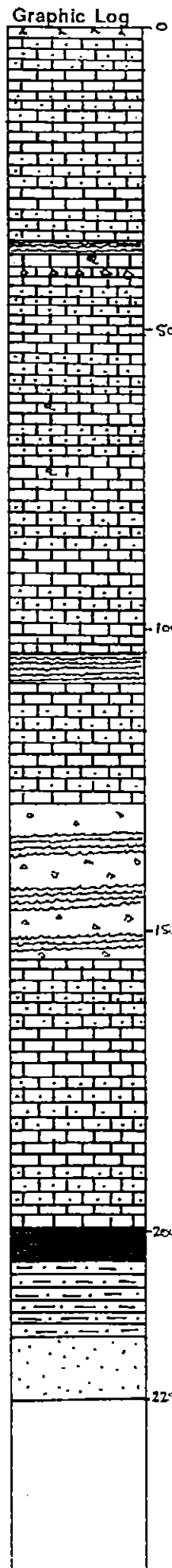
MINERALISATION SUMMARY:

FROM	TO	COMMENTS
43.8	45.0	0.22% Zn (0.11% Pb) Associated a. ? synsedimentary breccia zone.
206.0	207.5	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 replaceable.

Bedding @ 62m 60° E dA @ 213.3m 65° E dA. @ 225m 75° E dA.



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

SHEET No. 10

TENEMENT NAME PYRAMID No.

PLAN - MAP REFERENCE 63

CO-ORDINATES 364311E 5356348N AZIMUTH 200° mag DRILLERS DD TAB COMMENCED 10/7/95 DEPTH 22.8m HOLE No. ZP36

RL COLLAR INCLINATION 60° DRILL TYPE U250 COMPLETED 20/7/95 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 %						
0	1.5		S	Qha	Overburden in peat and sandstone fragments					0	1.5	0.5	60						
										1.5	4.0	0.5	33						
										4.0	4.5	0.5	100						
1.5	4.0		S	Qgl	Weathered limestone - brown grey clay					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	Qgl	V. fine grained grey calcarenite (locally micritic with irregular thin beds(?) of argillaceous calcarenite - ? stylolitic bands. 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	1.5	80						
										15.0	16.5	1.5	100						
										16.5	18.0	1.5	80						
										18.0	19.5	1.5	100						
6.2	11.2	100	1	Qgl	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	Qgl	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	Qgl	Fine grained grey calcarenite (micritic) with stylolites (argillite) with occ bioclastic bands & fossils.					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	Qgl	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						

342081

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

SHEET No. ②-10

TENEMENT NAME Pyramio No.

PLAN - MAP REFERENCE.....

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

RL COLLAR..... INCLINATION 60° DRILL TYPE U250 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.....)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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23.4	35.3	100	1	Ognd	Fine grained grey calcarenite with beds (thin & 2cm) and interstitial argillite; oolitic bioclastic band; well burrowed and bioturbated nodular zone 28.5-30.6 with coarse bioclastic band.	Bedding 60° to c/A	33	25.5	27.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

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

SHEET No. ③ 10

TENEMENT NAME Pyramid No.

PLAN - MAP REFERENCE.....

CO-ORDINATES 364311 E 5356348 N AZIMUTH 200° MAC DRILLERS DDTAS COMMENCED 10.7.95 DEPTH 22.8m 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 (m)	REC (m)	REC (m)	REC (%)	REC (m)	REC (m)	REC (m)	REC (%)
48.6	58.2	85	100	Agul	As above with well/coar- grained bioclastic bands one 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	54.0	2.0	66
															54.0	57.0	2.4	80
															57.0	60.0	3.0	100
58.2	60.0	100	28	Ogma	Light grey micritic calcarenite almost laminated underlain by ? laminated argillite and micrite to 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	2.0	100
															75.0	78.0	3.0	100
60.0	68.7	100	1	Agul	Five grained grey ^{light grey} calcarenite locally micritic with thin argillite bands - ? stylolomites 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.	5cm irregular calcite vein sub parallel to c/A @ 62m.	37	63.9	66.0						78.0	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 med/fine grained calcarenite possible nodular effect - unweathered 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
															126.4	129.0	3.0	83
70.8	73.5	100	1	Agul.	Mixed sequence of fine med calcarenite with locally coarsely bioclastic zones; burrowed minor argillite										129.0	132	2.1	70
															132	133.9	1.3	67

342080

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

SHEET No. 47.10

TENEMENT NAME PYRAMID No.

PLAN - MAP REFERENCE

CO-ORDINATES 364311 E 5356349 N AZIMUTH 200° MAG DRILLERS D.D.T.A.S COMMENCED 10.7.95 DEPTH 228 m HOLE No. ZP63

RL COLLAR INCLINATION 60° DRILL TYPE 11250 COMPLETED 20.7.95 CASING LEFT DPO No(s)

DEPTH		Core Rec.	P.O.	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)																			
73.5	74.8	100	1	Qgsl	Med grained equigranular unit with locally coarse biotite, bioturbated at base.		5468439	73.5	74.8											
74.8	83.5	100	1	Qgsl	Mixed sequence of heavily bioturbated calcarenites with minor argillites at top; with an equigranular unit <40cm; v. fine calcarenites with distinct irregular argillite bands (shylocumulates) (77.7-79m) Biotitic bands and burrowed zones.	V. minor calcite veining in stringers; 45° to c/a, bedding parallel 60° to c/a; and 15° to c/a often multiple thin veins → ? shearing.	40	78.0	81.0											
83.5	86.8	100	1	Qgsl	V. fine grained light grey locally laminated calcarenite micrite; zones of bioturbation + shylocumulates. Passing into an equigranular unit @ 85.3m		41	83.5	85.9											
86.8	90.2	100	1	Qgsl	Med grained (locally fine) grey/light grey calcarenite (almost equigranular in places) with locally abundant interstitial argillite - not quite penetrative - bioturbated; fine grained biotites.															
90.2	92.2	100	1	Qgsl	Distinctive medium grained (equigranular) calcarenite bands up to 30cm thick; showing graded bedding; locally burrowed and bioturbated.	Bedding 70° to c/a.	42	90.2	92.2											

342084

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

SHEET No. ⑤/10

TENEMENT NAME Pyramid No.

PLAN - MAP REFERENCE.....

CO-ORDINATES 364311E 5356348N AZIMUTH 200° MAC DRILLERS DDTAS 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. %	Graph 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)																		
					Block argillite band @ 90.85 to 91m. (? calcareous sandstone)														
92.2	95.0	100	2	Ogul	Grey/dark grey red grained argillaceous calcarenite; locally well burrowed														
95.0	97.0	100	2f	Ogul	red/fine grained grey calcarenite with interbedded argillite; locally bioclastic; locally broken conc. Slightly nodular appearance.														
97.0	104.3	100	1	Ogul	Grey/dark grey burrowed argillaceous calcarenite red/fine grained locally bioclastic. Argillite almost forms beds < 3cm thick; lens well bedded for band 2.7m bioclastic bands at base.	43	99.0	102.0											
104.3	109.0	88	3f	Ogmu	light grey micritic / v. fine grained calcarenite with coarse bioclastic bands and argillite bands locally - not really laminated.	44	105.0	108.0											
109.0	115.6	100	1	Ogul	Mixed v. fine grained grey/light grey calcarenite with dark grey argillaceous calcarenite; bioturbated & disturbed bedding (Syn-sed breccia) - localised	45	113.2	115.6											
					Minor calcite veining at top of unit. 60° to dA minor Tourmaline parallel to dA @ 113m & 114m.														

342085

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

SHEET No. 6.10

TENEMENT NAME Pyramid No.

PLAN - MAP REFERENCE

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

RL COLLAR INCLINATION 60° DRILL TYPE 4.2.50 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)	%																		
					nodular zones - v. distinctive															
115.6	117.9	866	5x	OgFz	Fault zone - weathered lt grey micrite - with pyrite cherts + clay zones		46	115.6	117.1											
117.1	120.0	50	5x	OgFz	Lt grey/black argillaceous calcarenite - ? fault altered broken core.		47	117.1	120.0											
120.0	125.4	66	4C	OgFz	lt grey v. fine grained calcarenite - locally micritic minor argillite bands interstitial	cleavage 30° to c/a. Calcite veining associated with unit 75° to c/a; + minor in other direction.	48 49	120.0 122.7	122.7 125.4											
125.4	126.5	81	3	OgFz	Calcite vein - brecciated upper margin with 1.5cm pyrite clast		5468450	125.4	126.5											
126.5	126.9	100	1	OgFz	Breccia zone; clasts and fragments of limestone with angular/sub-rounded frags. Calcite subarkose - dark grey/black colour.	Minor pyrite in limestone and veinlet	51	126.5	126.9											
126.9	129.0	84	3	OgFz	light grey locally fault brecciated micritic calcarenite with clay ? gouge zones	Minor calcite veining Some pyrite seams ① 127.6 Pyrite clast in light grey clay ? gouge. cleavage pos 45° to c/a.														

342086

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

SHEET No. ⑦.10

TENEMENT NAME Pyramo No.

PLAN - MAP REFERENCE.....

CO-ORDINATES 364311 E 5356349 N AZIMUTH 200 MAC DRILLERS DDTAS COMMENCED 10.7.95 DEPTH 228 m HOLE No. 2P63

RL COLLAR..... INCLINATION 60° DRILL TYPE 4.250 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)																			
129.0	140.4	85	3	Ogmu	light grey micritic calcarenite locally partially rotted with cavities; Bird's eye micrite and red grained epigenetic calcarenites also present, Occ bioclasts Occ clay zone. Argillaceous siltstones from 133.2m. 134.1-136.3 Increase in argillite up to 50% locally. Calcarenite micrite is gray/dk grey.	Minor amounts of calcite veining; Some veining parallel to c/A.	52	129.0	132.0								133.9	137	3.1	100
							53	132.0	133.9								137	140.7	3.0	94
							54	133.9	136.3								140.7	144	2.1	63
							55	136.3	138.1								144	147	1.5	50
							56	138.1	140.4								147.0	150	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	~~micritic~~ 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 siltstones		58	142.0	144.0								161.6	163.4	1.5	84
																	163.4	165.0	1.2	75
																	165.0	166.5	1.5	100
144.0	150.0	60	2	Ogmu	Grey micritic calcarenite fine to red 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 stockwork 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	Ogfc	Calcite breccia zone + veining including 15cm ? dolomitised zone (total dolomite ? clast in vein)		63	155.3	155.8								184.5	186.0	1.35	100
																	186.0	187.5	0.3	20
																	187.5	189.0	1.35	90

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

SHEET No. ... (8) ... 10

TENEMENT NAME PYRAMID No.

PLAN - MAP REFERENCE

CO-ORDINATES 344311E 5356348N AZIMUTH 200' MAC DRILLERS DDTAS COMMENCED 10.7.95 DEPTH 228m HOLE No. ZP63
RL COLLAR INCLINATION 60° DRILL TYPE LI 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)	%																		
155.8	160.1	75	4x	Ogul	Grey, slightly rotted argillaceous calcarenite; argillite or shylacumulates and zones of more massive calcarenite evidence of synsedimentary brecciation; clay zones possibly fault related/or rotted zones.		64 65	155.8 157.5	157.5 160.1											
160.1	163.4	90	2	Ogul	Grey calcarenite with argillaceous shylacumulates (? localized synsed brecciation) locally calcarenites are biotitic and argillite content increasing substantially downhole.	Bedding 60° to c/A.	66	160.1	163.4											
163.4	168.0	92	2	Ogul	Grey med/fine grained partially rotted calcarenite with dark grey argillaceous calcarenite bands (<1cm thick) - shylacumulates almost fenestrate in places. locally biotitic; minor clay zones		67 68	163.4 166.5	166.5 168.0											
168.0	171.0	50	3x	Ogmu	Rotted light grey ? calcarenite possible laminated micrite cont. with shylolites.	Bedding 45°-60° to c/A ? cross bedding.	69	168.0	171.0											
171.0	175.3	50	3x	Ogul	Grey med/fine grained grey calcarenite with border into argillite; zone of partial rotting. locally major core loss.		70 71	171.0 172.5	172.5 175.3											

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

TENEMENT NAME Pyramid SHEET No. 9 of 10
No.

364311 E
CO-ORDINATES 5356348N AZIMUTH 200° MAG DRILLERS DDTAS COMMENCED 10.7.95 DEPTH 228 m HOLE No. 2P63
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	Qgl	Biotitic argillaceous calcarenite; bioclots locally coarse; bioclots in argillite zones; occ. clay zone.	cleavage 45° to c/A. Bedding 60° to c/A.	34684	175.3	177.0						189.0	190.5	0.3	20
							33	177.0	180.0						190.5	192.0	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	Ogfc	Dark grey clay - ? fault zone		74	180.0	181.5						196.5	198.0	0	0
															198.0	199.5	0	0
181.5	199.5	40	4f	Oggl	Grey partially rolled mud/fine grained calcarenite with major argillite bands; bioturbated; clay from 182.1 - 182.9m. Argillite dominant locally localised bioturbated zones.	cleavage. randomly 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	Ogpk	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	Ogst	Grey/dark grey/black clays and silty/sandy clays - noncalcareous	Dissem. pyrite in bedding parallel layers ? fine 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	Ogst	Interbedded dark grey/black siltstone and grey sandstones - burrowed + bioturbated	Bedding 65° to c/A	89	205.2	207.0						220.5	222.0	1.5	100
							90	207.0	208.5						222.0	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	Ogst	Medium grained light grey/fine 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									

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

SHEET No. (10) of 16

TENEMENT NAME Pyramid No.

PLAN - MAP REFERENCE.....

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

RL COLLAR..... INCLINATION 60° DRILL TYPE 4250° COMPLETED 20.7.95 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)	%	DATA																	
216.3	217.45	100	1	Qst	Angular quartz conglomerate with red + green coloured zones Basal conglomerate	Lower contact 20° c/a														
217.45	219.2	64	4b	Om	Interbedded fawn coloured shaley sandstone and silicic quartzite (locally hematitic)	Bedding 70° to c/a.														
219.2	225.0	100	1	Om	Pink massive quartzite with minor fawn coloured shaly ssb. bands (disappears after 220.5m)		99	220.5	222.0											
225.0	228.0	100	1	Om	Grey/white massive quartzite locally silicic	Bedding 75° to c/a.	5468500	226.5	228.0											

342030

			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

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ZP63R.XLS

				Ag	Al	As ~~Ba~~	Ba	Ca	Cu ~~Fe~~	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

342092

Appendix V

Firewood Siding - DD95ZF37 - Drill Logs

DRILL-HOLE SUMMARY LOG

Graphic Log

HOLE NAME: DD95 ZF37 GRID AMG EAST 59792 NORTH 44323
 PROSPECT FIREWOOD STDWGR AMG GRID EAST 360635.9 NORTH 5350142.6
 EL: ZEEHAN 1 EL 28/88 RL DEPTH 212.0

DATE DRILLED: MAY 1995
 LOGGED BY: SST / 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	8.5	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	Ogud	Dolomite - intermixed with sandstone.
76.0	100.3	Ogud	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 Ogud 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.
 Bedding @ 20m 70° to c/a @ 53m 60° to c/a @ 134m 45° to c/a
 @ 150.7 60° to c/a.

360836 E
5350143 N

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

SHEET NO. 1055

CO-ORDINATES 14323 N AZIMUTH 070° DRILLERS DD TAJ COMMENCED 18/5/95
RL COLLAR INCLINATION 45° DRILL TYPE LY38 COMPLETED 2/6/95
TENEMENT NAME BREWSTER SIDING No. 1055
PLAN - MAP REFERENCE
DEPTH 212.0 HOLE No. ZF37
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 (Tm)	Rec (G)	Rec (P-)
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 65° 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	.7	27
											14.5	15.5	.8	90
											15.5	16.5	.8	80
9.8	12.6	61	3	Sc	Brown weathered sandstone ? bioturbation						16.5	17.5	.4	40
											17.5	18.5	.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	130
											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 at hole; 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	40
											35.5	38.5	3.0	100
											38.5	41.5	2.0	16
											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	21.0	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

342095

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

SHEET NO. 2 of 5

TENEMENT NAME FIREWOOD SIDING No. 2 of 5

PLAN - MAP REFERENCE

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

RL COLLAR 5350143N INCLINATION 45° DRILL TYPE LY38 COMPLETED 2.6.95 CASING LEFT DPO No(s)

DEPTH		Core Rec.	RA	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)																			
28.3	28.3	100	5	Sc	Brown sandy clay - core lost															
28.3	32.5	100	6X	Sc	Brown/grey rotted sandstone with a clay component becoming greyer and less weathered at base.	Bedding 80° to c/a (?) @ 31.2m bedding 60° to c/a														
32.5	35.5	70	5X	Sc	Brown (Grey) clay - possibly weathered sandstone + clay															
35.5	39.5	95	5	Sc	Gray/brown (?) siliceous shales siltstone + sandstone - weathered possible sulphides - decomposed. Lower contact 60° to c/a.	Minor pyrite stringers parallel to bedding 60° to c/a.	5465770	35.5	39.4											
39.5	44.5	33	5X	Sc	lt grey/white sandy clay with siliceous sandstone zones (red grained sandstone)															
44.5	50.3	50	5	Sc	lt grey sandy clay with minor limonite alteration.															
50.5	51.7	100	5	Sc	Gray fawn coloured clay	Weak fabric 60° to c/a.														
51.7	53.7	100	5	Sc	Brown/gray clay with sandstone fragments (well rotted)	Bedding 60° to c/a.														
53.7	58.3	50	5	Quartz	Brown resinous clay - rotted limestone.															

342096

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

SHEET NO.
TENEMENT NAME FIREWOOD SIDING No. 3p5
PLAN - MAP REFERENCE

CO-ORDINATES 360636E AZIMUTH 070° DRILLERS DDTAS COMMENCED 18.5.95 DEPTH 212m HOLE No. ZF37
RL COLLAR 5350143N INCLINATION 45° DRILL TYPE L/38 COMPLETED 2.6.95 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)										REC (g/t)	REC (g/t)	REC (g/t)	REC (g/t)
58.3	61.6	50	4x	Ogud	Grey dolomitised calcarenite						71.2	72.0	1.2	60
61.6	66.6	40	4x	Ogud	Dolomitised limestone +/- sandstone - transitional sequence. Brown coloration						72.0	75.0	0.4	20
											75	75.5	0.5	100
											78.5	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.						81	82.3	1.0	77
											82.3	85.0	1.2	44
69.6	76.0	50	3x	Ogud	Vuggy grey dolomite with calcite vsg. white locally.	?white matrix brecciation locally - re. Irish 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 sigmoidalimentary breccias.	more vugs					115	117.3	2.3	100
											117.3	119	0.7	100
											119	121	3.0	100
											121	124	3.0	100
											124	127	3.0	100
100.0	100.5	50	5	Ogud	Broken core - as 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; one bioclastic band <10cm	Bedding 90° to c/A. Cavity 102.5-103 Minor irregular <1cm scale					133	136	3.0	100
											136	139	3.0	100
											139	142	3.0	100
											142	145	3.0	100

342097

DRILL CORE LOG

TENEMENT NAME FIREWOOD Spring No. 486

PLAN - MAP REFERENCE

CO-ORDINATES 360636 E AZIMUTH 070° DRILLERS DDTAS COMMENCED 18.5.95 DEPTH 212 m HOLE No. Z.F.37RL COLLAR 5350143 N INCLINATION 45° DRILL TYPE LY38 COMPLETED 2.6.95 CASING LEFT DPO No(s)

DEPTH m	To (M)	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									
1	105.2	100	5	Ogul	Grey/brown clay (v. wet) possible fault gouge.															
2	108.7	100	1	Ogul	Dark grey/grey bioclastic argillaceous calcarenite with minor calcite veining locally sub-brecciation veins bioclasts often solitary.	Calcite veins 45° to c/A.														
7	112.0	100	1	Ogul	Dark grey uniform looking argillaceous calcisiltite with bioclastic zones.	① 115m bedding 70° to c/A. minor pyrite blebs with calcite cavity-fill.														
80	118.3	100	5	Ogul	Calcite vein and clay gouge	60° to c/A.														
33	126.8	100	1	Ogul	Fine/medium grained calcarenite with a major argillite component.	① 119.6m 3cm calcite vein 45° to c/A; bedding 55° to c/A. ② 121.5 large blebs of pyrite associated with calcite veins calcite vein 15° to c/A.														
8	134.2	100	1	Ogul	Distinct irregularly interbedded grey fine grained calcarenite locally bioclastic and dark grey argillaceous calcisiltite	Bedding ③ 128m 45° to c/A.														
12	137.0	100	1	Ogul	Synsedimentary limestone breccia ; bioclastic micrite clasts and strange ? stromatolite textures															

342098

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

SHEET No. 5
TENEMENT NAME FIREWOOD Spring No. 5

CO-ORDINATES 360636E AZIMUTH 070 DRILLERS DDTAS COMMENCED 18.5.95
RL COLLAR 5350/43N INCLINATION 45° DRILL TYPE LY38 COMPLETED 2.6.95
PLAN - MAP REFERENCE DEPTH 212 m HOLE No. ZF34
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)																			
137.1	138.9	100	1	Agul	Inter laminated argillite and fine grained grey calcarenite	Bedding 60° to c/a.														
138.9	139.5	100	1	Agul	Syn sedimentary breccia on below.															
139.5	147	100	1	Agul	Interbedded grey med/fine grained grey calcarenite and dark grey argillaceous ? micritic. Localised zones of birds eye micritic; well defined bedding	Bedding @ 146.5m 60° to c/a Major large calcite veins @ 146.8m 3m calcite vein 45° to c/a.														
147 c	149	100	1	Agul	Fine grained, locally micritic, calcarenite with minor argillite in irregular interbeds slight nodular appearance.															
149		100	1	Agul	Zone of cavities, core loss, and minor calcite veining	Bedding @ 150.7m 60° to c/a														
See next Page.																				

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

SHEET No. 5025
TENEMENT NAME FIREWOOD SIGN No.
PLAN - MAP REFERENCE

CO-ORDINATES 360636E AZIMUTH 070° DRILLERS DD TAS COMMENCED 18.5.95 DEPTH 212.4 HOLE No. 2F37
RL COLLAR 5350143N 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)																			
137.0	139.0		1F	Ogm	LAMINATED MICRITE Grey micrite with planar algal laminations 138.3 S ₀ - 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 ₀ - 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/calcareous 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				

342100

			77377	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
F37	35.5	39.4	5465770	-5	7.78	46	452	-0.05	24	2.45	3.66	.59	29	342	1780
F37	39.5	44.5	5465771	-5	5.03	3	214	-0.05	3	.7	1.77	.29	14	140	74
F37	44.5	49.0	5465772	-5	5.28	-5	192	-0.05	22	.42	1.71	.27	14	285	83
F37	49.0	53.0	5465773	-5	3.96	47	310	-0.05	93	.87	3.76	.66	15	1310	4200
F37	53.0	58.0	5465774	-5	7.11	56	233	.17	34	.66	2.8	.49	27	1130	3830
F37	56.0	59.0	5465775	-5	3.16	37	107	11.2	21	1.19	1.32	6.54	141	917	3250
F37	59.0	64.0	5465776	-5	.82	8	40	19.2	-5	.57	.42	11.1	250	155	522
F37	64.0	68.5	5465777	-5	.65	-5	51	19.6	5	.39	.34	11.2	276	129	352
F37	68.5	73.0	5465778	-5	.24	-5	13	19.5	-5	.84	.11	11.4	285	97	194
F37	73.0	77.5	5465779	-5	.18	-5	9	19.3	-5	.72	.1	11.7	507	58	158
F37	77.5	81.0	5465780	-5	.47	9	17	19.5	-5	.77	.24	11.4	334	153	225
F37	81.0	85.0	5465781	.6	.4	-5	16	19.9	5	.72	.19	11.6	325	169	224
F37	85.0	87.8	5465782	-5	.62	-5	26	20.1	-5	.54	.31	11.5	263	222	296
F37	87.8	91.0	5465783	-5	1.22	14	57	16.1	8	1.62	.58	10.1	719	1090	4970
F37	91.0	94.0	5465784	-5	1.68	-5	84	17.6	8	1.45	.76	9.6	563	608	2090
F37	94.0	97.0	5465785	.6	1.88	8	84	16.8	5	1.28	.94	9.47	382	123	340
F37	97.0	100.3	5465786	-5	1.43	-5	58	18.2	-5	1.36	.71	9.42	392	195	563
F37	100.3	103.0	5465787	.6	1.6	-5	71	27	-5	.93	.78	2	253	92	194
F37	167.1	171.5	5465788	-5	.45	-5	20	32.7	6	.4	.23	.55	343	371	154
F37	171.5	175.9	5465789	.8	.46	-5	21	33.3	6	.37	.23	.66	291	228	321
F37	175.9	178.0	5465790	-5	.1	-5	8	36.3	-5	.24	.06	.21	485	557	168
F37	178.0	180.6	5465791	-5	.42	-5	20	28.3	-5	.27	.18	5.79	209	185	200
F37	208.0	210.4	5465792	-5	1.38	-5	80	24.3	-5	.75	.71	5.35	171	21	-5
F37	210.0	212.0	5465793	-5	3.14	13	198	13.9	-5	1.17	1.56	7.37	170	13	7

Appendix VI

Sassafras Wacker Sampling Geology and Assay Data

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	Cl	G	Chloritic shale
4144259	364678	5364987	77382	WACKER	SASSAFRAS	EL28/88	6375	65000	5.2	Y	Ed	Ssh	Sandy clay	Cl	G	Chloritic shale
4144260	364657	5364975	77382	WACKER	SASSAFRAS	EL28/88	6350	65000	3.8	Y	Ed	Ssh	Sandy clay	Cl	G	Chloritic shale
4144261	364635	5364962	77382	WACKER	SASSAFRAS	EL28/88	6325	65000	6	Y	Ed	Ssh	clay	Cl	GV	Chloritic shale
4144262	364613	5364950	77382	WACKER	SASSAFRAS	EL28/88	6300	65000	7	Y	Ed	Ssh	clay	Cl	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	Cl	DG	Weakly calcareous - brown dolomite
4144266	364527	5364900	77382	WACKER	SASSAFRAS	EL28/88	6200	65000	18.9	Y	Ogul	Sdl	Sandy clay	Cl	DGG	Weakly calcareous dk grey crystalline calcillite
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		BBBO	?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	LGWGDG	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 calcillite
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	364176	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	DGG	
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		GLG	
5466301	364305	5365234	77382	WACKER	SASSAFRAS	EL28/88	6175	65400	3	Y	Ogul	Sls	Sandy clay		G	

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SASSAFRAS WACKER

Sample No	AMQE	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
5466308	364413	5365296	77382	WACKER	SASSAFRAS	EL28/88	6300	65400	10.2 Y	Ed	Ssh		clay		PD	Red shale with non-calcareous limonitic bands
5466307	364435	5365309	77382	WACKER	SASSAFRAS	EL28/88	6325	65400	2.2 Y	Om	Ssh		clay		LB	Butt/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 fine sandstone
5466313	364257	5365668	77382	WACKER	SASSAFRAS	EL28/88	6350	65800	5.5 Y	Om	Sss		Sandy clay		OB	Limonitic fine sandstone
5466314	364235	5365655	77382	WACKER	SASSAFRAS	EL28/88	6325	65800	5.3 Y	Ed	Ssh		clay		LQVR	Maroon shale
5466315	364213	5365643	77382	WACKER	SASSAFRAS	EL28/88	6300	65800	2.8 Y	Ed	Ssh		clay		BR	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	1.2 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	Calcarenite
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 - qtzite 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		GDG	Argillaceous calcarenite/calcsiltite
5466330	363889	5365455	77382	WACKER	SASSAFRAS	EL28/88	5925	65800	17 Y	Ogul	Sls		Sandy clay		GDG	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	Ogd	Sdl		sand		LGG	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

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	RO	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		Qha	Ccy	clay		DB	?Bedrock
5466378	363575	5366198	77382	WACKER	SASSAFRAS	EL28/88	6025	66600	3 N		Qha	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		LGDG	
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

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	2.28	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

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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	8.4	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	865	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	401	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	0.28	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	1080	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	160
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

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Appendix VII

Stonehenge - Aircore Results

STONEHENGE AIRCORE

Hole No	Bore Hole	Prospect	EL No	AMGE	AMGN	Local E	Local N	Depth	Azimuth	Inclination
ZS04	AC95ZS04	STONEHENGE	EL28/88	359558	5359262	11900	4975	15.9	0	-90
ZS05	AC95ZS05	STONEHENGE	EL28/88	359566	5359286	11900	5000	26	0	-90
ZS06	AC95ZS06	STONEHENGE	EL28/88	359575	5359310	11900	5025	16.7	0	-90
ZS07	AC95ZS07	STONEHENGE	EL28/88	359583	5359334	11900	5050	5	0	-90
ZS08	AC95ZS08	STONEHENGE	EL28/88	359589	5359353	11900	5070	44.2	0	-90
ZS09	AC95ZS09	STONEHENGE	EL28/88	359607	5359405	11900	5125	17	0	-90
ZS10	AC95ZS10	STONEHENGE	EL28/88	359614	5359424	11900	5145	15	0	-90
ZS11	AC95ZS11	STONEHENGE	EL28/88	359625	5359457	11900	5180	44.2	0	-90
ZS12	AC95ZS12	STONEHENGE	EL28/88	359630	5359476	11898	5200	66	0	-90
ZS13	AC95ZS13	STONEHENGE	EL28/88	359640	5359499	11900	5225	31.8	0	-90
ZS14	AC95ZS14	STONEHENGE	EL28/88	359648	5359523	11900	5250	3.5	0	-90
ZS15	AC95ZS15	STONEHENGE	EL28/88	359654	5359558	11894	5285	4	0	-90
ZS16	AC95ZS16	STONEHENGE	EL28/88	359674	5359598	11900	5330	10.2	0	-90
ZS17	AC95ZS17	STONEHENGE	EL28/88	359680	5359617	11900	5350	11	0	-90
ZS18	AC95ZS18	STONEHENGE	EL28/88	359689	5359641	11900	5375	4.2	0	-90
ZS19	AC95ZS19	STONEHENGE	EL28/88	359820	5359322	12128	5116	28	0	-90
ZS20	AC95ZS20	STONEHENGE	EL28/88	359835	5359371	12126	5167	9	0	-90
ZS21	AC95ZS21	STONEHENGE	EL28/88	359826	5359410	12105	5201	25	0	-90
ZS22	AC95ZS22	STONEHENGE	EL28/88	359854	5359396	12136	5197	15	0	-90
ZS23	AC95ZS23	STONEHENGE	EL28/88	359862	5359449	12126	5250	3	0	-90
ZS24	AC95ZS24	STONEHENGE	EL28/88	359809	5359380	12099	5168	22	0	-90
ZS25	AC95ZS25	STONEHENGE	EL28/88	359800	5359360	12097	5146	2	0	-90
ZS26	AC95ZS26	STONEHENGE	EL28/88	359792	5359336	12097	5120	25.4	0	-90
ZS27	AC95ZS27	STONEHENGE	EL28/88	359856	5359362	12149	5166	20	0	-90
ZS28	AC95ZS28	STONEHENGE	EL28/88	359922	5359566	12145	5380	15	0	-90
ZS29	AC95ZS29	STONEHENGE	EL28/88	359898	5359574	12120	5380	15	0	-90
ZS30	AC95ZS30	STONEHENGE	EL28/88	359875	5359582	12095	5380	9	0	-90

STONEHENGE AIRCORE 2

Prospect	Hole No	From	To	Sample No	DPO No	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag	Cu	Fe	Mn	Pb	Zn
STONEHENGE	AC95ZS4	0	3	4142601	77232	Pou	Sbs	VqFi	We	NO		2	59	1.32	85	167	110
STONEHENGE	AC95ZS4	3	6	4142602	77232	Pou	Sbs	VqFi		NW		3	51	0.53	44	112	44
STONEHENGE	AC95ZS4	6	9	4142603	77232	Pou	Sbs	VqFi		NW	50% Vq	22	46	0.5	25	75	25
STONEHENGE	AC95ZS4	9	12	4142604	77232	Pou	Sbs	VqFi		N		6	402	1.67	64	111	63
STONEHENGE	AC95ZS4	12	15	4142605	77232	Pou	Mq	Vq	Py	N	Di Py	1	82	1.68	40	454	114
STONEHENGE	AC95ZS4	15	15.9	4142606	77232	Pou	Mph	Vq	Py	N		-1	141	0.7	26	540	137
STONEHENGE	AC95ZS5	0	3	4142607	77232	Pou	Sbs	Vq		G		1	35	0.42	43	181	87
STONEHENGE	AC95ZS5	3	6	4142608	77232	Pou	SbsMph			N		4	107	0.41	44	391	87
STONEHENGE	AC95ZS5	6	9	4142609	77232	Pou	Sbs			N		9	280	2.74	54	4961	2515
STONEHENGE	AC95ZS5	9	12	4142610	77232	Pou	Sbs	Vq	PySpGa	N	35% barren, open space fill textured Vq. <3mm Sp & <6mm Ga intergrown w/ massive Py. Vq is not generally intergrown w/ sulphide. 10% Py, including Di.	17	419	6.3	68	15600	31500
STONEHENGE	AC95ZS5	12	15	4142611	77232	Pou	SbsMq	Vq	PyGaSpSdSi	N	15% barren, open space fill textured Vq. <3mm R Sp intergrown w/ massive Py. 15% Py, including Di. Vq is not generally intergrown w/ sulphide.	9	132	5.6	56	32800	34700
STONEHENGE	AC95ZS5	15	18	4142612	77232	Pou	SbsMq	Vq	PySiSdSpGa	N	1% barren, open space fill textured Vq. <3mm Sp & Ga intergrown w/ massive Py (also Vq). 10% Py, including Di. Pb isotope analysis - 77234.	9	91	5.2	100	27900	29400
STONEHENGE	AC95ZS5	18	21	4142613	77232	Pou	SbsMq	Vq	PySdSpSi	N	10% barren, open space fill textured Vq. <1mm O Sp intergrown w/ massive Py. Vq is not generally intergrown w/ sulphide.	4	50	2.3	38	14100	18900
STONEHENGE	AC95ZS5	21	24	4142614	77232	Pou	CcyMq	Vq	PySpGaSi	N	60% Py. 15% barren, open space fill textured Vq. <2mm R Sp & <1mm Ga intergrown w/ massive Py. Vq is not generally intergrown w/ sulphide. Pb isotope analysis - 77234.	7	31	11.8	66	21600	27100
STONEHENGE	AC95ZS5	24	26	4142615	77232	Pou	SbsMq	Vq	PySdSpGaSi	N	6% Sp - up to 5mm, intergrown w/ minor Ga & Py. 10% barren, open space fill textured Vq. 6% Py, including Di.	8	84	5.4	61	6984	27700
STONEHENGE	AC95ZS6	0	3	4142616	77232	Pou	SbsMq	Vq	PySi	N	25% barren, open space fill textured Vq. 3% Py. Pb isotope analysis - 77234.	6	86	3.43	39	16800	37000
STONEHENGE	AC95ZS6	3	6	4142617	77232	Pou	CcySbs	Vq	PyWe	N	70% Vq. 3% Py. Vq is intergrown with massive Py.	4	61	4.74	32	7588	18800
STONEHENGE	AC95ZS6	6	9	4142618	77232	Pou	Ssh	Vq	Py	G		1	39	4.02	77	1385	5684
STONEHENGE	AC95ZS6	9	12	4142619	77232	Pou	Ssh	Vq	PySd	VN		1	32	3.63	52	834	4349
STONEHENGE	AC95ZS6	12	15	4142620	77232	Pou	Mph	Vq	Py	G		2	38	2.52	52	1227	3753
STONEHENGE	AC95ZS6	15	16.7	4142621	77232	Pou	Sbs	VqFi	Py	N		1	46	2.63	54	752	2794
STONEHENGE	AC95ZS7	0	3	4142622	77232	Pou Qha	SshCg			B		2	20	0.5	22	198	440
STONEHENGE	AC95ZS7	3	5	4142623	77232	Pou	Sbs		Py	N		2	155	6.1	117	595	1402
STONEHENGE	AC95ZS8	0	3	4142624	77232	Pou Qha	SbsCg			NW		-1	19	0.84	34	181	409
STONEHENGE	AC95ZS8	3	6	4142625	77232	Pou	Sbs	VqFi	Py	B	Prominent Py	1	87	2.01	21	380	2305
STONEHENGE	AC95ZS8	6	9	4142626	77232	Pou	Sbs	VqFi	Py	B	Prominent Py	-1	60	5.5	27	374	3877
STONEHENGE	AC95ZS8	9	12	4142627	77232	Pou	Sbs	Vq	PySp	G	Prominent Py	1	80	2.43	24	326	8489
STONEHENGE	AC95ZS8	12	15	4142628	77232	Pou	Sss	VqFi	We	G	Trace Vq.	-1	38	1.16	18	207	14300
STONEHENGE	AC95ZS8	15	18	4142629	77232	Pou	Mq			W		-1	37	0.95	15	89	4221
STONEHENGE	AC95ZS8	18	21	4142630	77232	Pou	MqSst			W		-1	23	1.4	16	232	2115
STONEHENGE	AC95ZS8	21	24	4142631	77232	Pou	MqSst			W		-1	36	1.25	14	93	2895
STONEHENGE	AC95ZS8	24	27	4142632	77232	Pou	MqSst			W		-1	48	0.75	19	81	2002
STONEHENGE	AC95ZS8	27	30	4142633	77232	Pou	MqSst			W		-1	20	0.56	12	34	1999
STONEHENGE	AC95ZS8	30	33	4142634	77232	Pou	MqSst	Vq		W		-1	42	0.46	12	25	2628
STONEHENGE	AC95ZS8	33	36	4142635	77232	Pou	MqSst	Vq		W		-1	87	0.55	12	18	2647
STONEHENGE	AC95ZS8	36	39	4142636	77232	Pou	MqSst	VqFi		W		-1	24	0.48	10	31	2613
STONEHENGE	AC95ZS8	39	42	4142637	77232	Pou	Sst	Vq		G		3	43	1.32	22	1102	3945
STONEHENGE	AC95ZS8	42	44.2	4142638	77232	Pou	Sbs		Py	N		1	61	3.93	24	210	1542
STONEHENGE	AC95ZS9	0	3	4142639	77232	Pou Qha	CgSbs			B		-1	6	0.5	21	49	78
STONEHENGE	AC95ZS9	3	6	4142640	77232	Pou	SbsSsh		PySdSp	G		1	25	5.3	12	802	9071
STONEHENGE	AC95ZS9	6	9	4142641	77232	Pou	Sbs		Py	N		1	54	2.75	34	4955	490
STONEHENGE	AC95ZS9	9	12	4142642	77232	Pou	Sbs		Py	N		1	94	3.18	74	1241	2984
STONEHENGE	AC95ZS9	12	15	4142643	77232	Pou	Sbs	Vq	Py	N		1	83	3.06	85	564	479
STONEHENGE	AC95ZS9	15	17	4142644	77232	Pou	Sbs	Vq	Py	N		1	66	3.13	91	507	1204
STONEHENGE	AC95ZS10	0	3	4142645	77232	Qha	Cg		Py	B		1	26	5.2	19	42	2220
STONEHENGE	AC95ZS10	3	6	4142646	77232	Pou Qha	CgMq	Vq	PySi	G	70% Vq. 2% massive Py. Pb isotope analysis - 77234.	-1	113	6.8	22	4956	17400
STONEHENGE	AC95ZS10	6	9	4142647	77232	Pou	Mq	Vq	SiSp?Sd?	G	8% Vq. Sp/Sd? films line some partings.	-1	21	2.05	10	1330	34600
STONEHENGE	AC95ZS10	9	12	4142648	77232	Pou	Sbs	VqFi	Py	G	8% Vq. 1% massive Py.	-1	83	3.25	32	1554	20700
STONEHENGE	AC95ZS10	12	15	4142649	77232	Pou	Sbs	Vq	Py	N		-1	66	3.38	69	1058	2211
STONEHENGE	AC95ZS11	0	3	4142650	77232	Pou Qha	CgVq	Vq	Py	LB		-1	7	1.15	16	17	56
STONEHENGE	AC95ZS11	3	6	4142651	77232	Pou	Vq	Vq	Py	LB		-1	5	1.9	14	7	51
STONEHENGE	AC95ZS11	6	9	4142652	77232	Pou	VqSst	Vq		LB		-1	6	0.55	15	18	365
STONEHENGE	AC95ZS11	9	12	4142653	77232	Pou	Vq	Vq		LB		-1	6	0.65	13	17	1693
STONEHENGE	AC95ZS11	12	15	4142654	77232	Pou	SchVq	Vq		NV		-1	84	1.57	9	464	6673
STONEHENGE	AC95ZS11	15	18	4142655	77232	Pou	Ccy			B		-1	230	0.84	7	2405	9333
STONEHENGE	AC95ZS11	18	21	4142656	77232	Pou	Sch	Vq	WePy	GB		-1	310	1.27	12	1702	3845
STONEHENGE	AC95ZS11	21	24	4142657	77232	Pou	Ccy	Vq		B		-1	293	1.24	13	1848	1496
STONEHENGE	AC95ZS11	24	27	4142658	77232	Pou	Sch	Vq		LB		-1	150	0.44	11	2352	1364
STONEHENGE	AC95ZS11	27	30	4142659	77232	Pou	SchVq	Vq		G		-1	41	0.14	6	631	144
STONEHENGE	AC95ZS11	30	33	4142660	77232	Pou	SshVq	Vq		G		-1	19	0.23	10	51	40
STONEHENGE	AC95ZS11	33	36	4142661	77232	Pou	SshVq	Vq		G		-1	29	0.78	14	42	26
STONEHENGE	AC95ZS11	36	39	4142662	77232	Pou	SbsSst	Vq		G		-1	17	0.96	13	208	95
STONEHENGE	AC95ZS11	39	42	4142663	77232	Pou	SbsSst	Vq		G		-1	52	0.93	14	466	410
STONEHENGE	AC95ZS11	42	44.2	4142664	77232	Pou	Sbs	Vq	Py	G	Graphitic Ssh. Prominent Vq	-1	66	1.05	27	177	88
STONEHENGE	AC95ZS12	0	3	4142665	77232	Qha	CgVq	Vq		B		-1	5	0.47	18	3	27
STONEHENGE	AC95ZS12	3	6	4142666	77232	Pou	Vq	Vq	Py	B		-1	7	1.9	16	20	124
STONEHENGE	AC95ZS12	6	9	4142667	77232	Pou	MphSsh	Vq	Py	W		-1	9	1.92	12	87	1404
STONEHENGE	AC95ZS12	9	12	4142668	77232	Pou	Ssh	Vq		W		-1	14	1.24	12	73	166
STONEHENGE	AC95ZS12	12	15	4142669	77232	Pou	Mph			LB		-1	10	0.78	10	76	204
STONEHENGE	AC95ZS12	15	18	4142670	77232	Pou	Mph			LB		-1	10	0.81	10	65	129
STONEHENGE	AC95ZS12	18	21	4142671	77232	Pou	Mph			LB		-1	6	1.58	13	110	41
STONEHENGE	AC95ZS12	21	24	4142672	77232	Pou	Mph			LB		-1	6	1.07	13	61	64
STONEHENGE	AC95ZS12	24	27	4142673	77232	Pou	Mph			LB		-1	6	0.9	14	126	113
STONEHENGE	AC95ZS12	27	30	4142674	77232	Pou	Mph	Vq		LB		-1	8	0.47	12	382	205
STONEHENGE	AC95ZS12	30	33	4142675	77232	Pou	Mph	Vq		LB		-1	5	0.68	14	70	50
STONEHENGE	AC95ZS12	33	36	4142676	77232	Pou	Mph	Vq		LB		-1	3	0.56	14	85	64
STONEHENGE	AC95ZS12	36	39	4142677	77232	Pou	Mph	Vq		LB		-1	4	0.64	16	66	56

Prospect	Hole No	From	To	Sample No	DPO No	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments	Ag	Cu	Fe	Mn	Pb	Zn
STONEHENGE	AC95ZS12	39	42	4142678	77232	Pou	Ssh	Vq		G		-1	13	0.97	17	431	164
STONEHENGE	AC95ZS12	42	45	4142679	77232	Pou	SbsMph	Vq		N		-1	34	1.42	36	450	94
STONEHENGE	AC95ZS12	45	48	4142680	77232	Pou	SbsMph	Vq		N		-1	38	1.33	29	760	42
STONEHENGE	AC95ZS12	48	51	4142681	77232	Pou	SbsMph	Vq	Py	N		-1	48	1.62	33	224	68
STONEHENGE	AC95ZS12	51	54	4142682	77232	Pou	SbsMph	Vq	Py	N		-1	31	0.92	28	166	135
STONEHENGE	AC95ZS12	54	57	4142683	77232	Pou	SbsSsh	Vq		N		-1	19	0.28	16	203	430
STONEHENGE	AC95ZS12	57	60	4142684	77232	Pou	Sch	Vq		N		-1	16	0.96	23	117	125
STONEHENGE	AC95ZS12	60	63	4142685	77232	Pou	Sch	Vq		N		-1	21	0.65	21	240	43
STONEHENGE	AC95ZS12	63	66	4142686	77232	Pou	Ssh			G	Cubic pits	-1	41	0.8	35	233	56
STONEHENGE	AC95ZS13	0	3	4142687	77232	Pou	Ssh	Vq		B		-1	24	0.47	17	156	154
STONEHENGE	AC95ZS13	3	6	4142688	77232	Pou	Ccy			B		-1	21	0.48	13	145	1352
STONEHENGE	AC95ZS13	6	9	4142689	77232	Pou	Mph			LB		-1	39	0.44	13	269	470
STONEHENGE	AC95ZS13	9	12	4142690	77232	Pou	Mph			LB		-1	44	0.52	12	458	257
STONEHENGE	AC95ZS13	12	15	4142691	77232	Pou	Ssh	Vq		LB		-1	14	0.42	14	317	640
STONEHENGE	AC95ZS13	15	18	4142692	77232	Pou	Sbs	Vq	Py	N		-1	15	1.84	19	124	567
STONEHENGE	AC95ZS13	18	21	4142693	77232	Pou	Sbs	Vq	Py	N		-1	17	2.44	20	136	754
STONEHENGE	AC95ZS13	21	24	4142694	77232	Pou	Sbs	Vq	Py	N		-1	11	0.91	15	101	144
STONEHENGE	AC95ZS13	24	27	4142695	77232	Pou	Sbs	Vq		N	Graphitic Ssh	-1	12	0.64	13	94	170
STONEHENGE	AC95ZS13	27	30	4142696	77232	Pou	SbsSss	Vq	Py	N		-1	8	0.72	13	112	310
STONEHENGE	AC95ZS13	30	31.8	4142697	77232	Pou	SbsSss	Vq	Py	N		-1	8	0.57	12	68	112
STONEHENGE	AC95ZS14	0	3.5	4142698	77232	Pou	Ssh	Vq		G		-1	10	0.42	13	29	12
STONEHENGE	AC95ZS15	0	3	4142699	77232	Pou	Mph	Vq	Py	G		-1	33	2.27	64	367	214
STONEHENGE	AC95ZS15	3	4	4142700	77232	Pou	Mph	Vq	Py	G		-1	24	2.4	66	235	250
STONEHENGE	AC95ZS16	0	3	4142701	77232	Pou	Mph			G		-1	5	0.45	14	112	19
STONEHENGE	AC95ZS16	3	6	4142702	77232	Pou	Mph			G		-1	5	0.45	12	164	11
STONEHENGE	AC95ZS16	6	9	4142703	77232	Pou	Mph		We	G		-1	8	0.55	12	176	10
STONEHENGE	AC95ZS16	9	10.2	4142704	77232	Pou	Mph		We	G		-1	26	1.06	17	166	13
STONEHENGE	AC95ZS17	0	3	4142705	77232	Pou	Mph	Vq		G		-1	19	1.07	16	41	15
STONEHENGE	AC95ZS17	3	6	4142706	77232	Pou	Mph	Vq		G		-1	9	0.39	13	18	12
STONEHENGE	AC95ZS17	6	9	4142707	77232	Pou	Mph	Vq		G		-1	10	0.37	18	19	14
STONEHENGE	AC95ZS17	9	11	4142708	77232	Pou	Mph	Vq		G		-1	7	0.47	22	22	16
STONEHENGE	AC95ZS18	0	3	4142709	77232	Pou	Mph			G	Adjacent shaft. S1/S0: 40/100mag	-1	4	0.4	21	15	15
STONEHENGE	AC95ZS18	3	4.2	4142710	77232	Pou	Mph			G		-1	3	0.37	15	13	16
STONEHENGE	AC95ZS19	0	3	4142711	77232	Pou	Csl	Vq		LB		-1	4	43.9	12000	16	65
STONEHENGE	AC95ZS19	3	6	4142712	77232	Pou	MphMq	Vq		G	Poor recovery	-1	11	4.8	556	146	444
STONEHENGE	AC95ZS19	6	9	4142713	77232	Pou	MphMq	Vq		G		-1	33	2.49	521	182	1404
STONEHENGE	AC95ZS19	9	12	4142714	77232	Pou	Sss			G		-1	36	1.16	122	126	1109
STONEHENGE	AC95ZS19	12	15	4142715	77232	Pou	Sss			G		-1	36	1.09	98	74	907
STONEHENGE	AC95ZS19	15	18	4142716	77232	Pou	Sss			G		-1	39	0.95	42	50	723
STONEHENGE	AC95ZS19	18	21	4142717	77232	Pou	Mq		Py	G		-1	21	0.76	11	17	473
STONEHENGE	AC95ZS19	21	24	4142718	77232	Pou	Mq	Vq	Py	LG		-1	125	2.07	34	2096	8913
STONEHENGE	AC95ZS19	24	27	4142719	77232	Pou	Sbs	Vq	Py	N	Prominent Vq	-1	118	2.21	35	441	2799
STONEHENGE	AC95ZS19	27	28	4142720	77232	Pou	Sbs	Vq	Py	N	Prominent Vq	-1	126	3.05	75	373	1861
STONEHENGE	AC95ZS20	0	3	4142721	77232	Pou	Csl	Vq		B		-1	5	53.2	4608	8	60
STONEHENGE	AC95ZS20	3	6	4142722	77232	Pou	Sst			N		-1	14	9.7	722	49	33
STONEHENGE	AC95ZS20	6	9	4142723	77232	Pou	Sst	Vq		N		-1	138	3.97	192	199	135
STONEHENGE	AC95ZS21	0	3	4142724	77232	Pou	Csl	Vq		B		-1	11	47.7	17000	3	49
STONEHENGE	AC95ZS21	3	6	4142725	77232	Pou	Vq	Vq	Sd	B		-1	39	12.2	3015	459	209
STONEHENGE	AC95ZS21	6	9	4142726	77232	Pou	Mph			G		-1	61	4.05	604	974	1170
STONEHENGE	AC95ZS21	9	12	4142727	77232	Pou	Sbs	VqFi	Py	N		-1	31	2.1	110	247	666
STONEHENGE	AC95ZS21	12	15	4142728	77232	Pou	Sbs	VqFi	Py	N		-1	45	3.32	1127	473	1091
STONEHENGE	AC95ZS21	15	18	4142729	77232	Pou	Sbs	VqFi	Py	N		-1	46	5.3	1397	615	781
STONEHENGE	AC95ZS21	18	21	4142730	77232	Pou	Mq	Vq	Py	N		-1	36	3.58	898	312	752
STONEHENGE	AC95ZS21	21	24	4142731	77232	Pou	Mq	Vq	Py	N		-1	43	3.65	747	215	121
STONEHENGE	AC95ZS21	24	25	4142732	77232	Pou	Mq	Vq	Py	N		-1	31	4.45	1404	211	84
STONEHENGE	AC95ZS22	0	3	4142733	77232	Pou	MphCsl	Vq		MG		-1	27	23.3	2028	147	669
STONEHENGE	AC95ZS22	3	6	4142734	77232	Pou	Mph			N		-1	82	6.4	280	298	83
STONEHENGE	AC95ZS22	6	9	4142735	77232	Pou	Sbs		Py	N		-1	85	4.24	139	327	103
STONEHENGE	AC95ZS22	9	12	4142736	77232	Pou	Sbs		Py	N		-1	74	3.63	106	187	178
STONEHENGE	AC95ZS22	12	15	4142737	77232	Pou	Sbs		Py	N		-1	65	3.98	370	113	167
STONEHENGE	AC95ZS23	0	3	4142738	77232	Pou	Msl			G		-1	54	8.7	933	43	32
STONEHENGE	AC95ZS24	0	3	4142739	77232	Pou	Cfs			B		-1	6	47.1	15000	-3	53
STONEHENGE	AC95ZS24	3	6	4142740	77232	Pou	Cfs			B		-1	7	43	4820	39	57
STONEHENGE	AC95ZS24	6	9	4142741	77232	Pou	Cfs			B		-1	11	43.5	2662	36	51
STONEHENGE	AC95ZS24	9	12	4142742	77232	Pou	SbsMph			G		-1	20	12.7	821	49	58
STONEHENGE	AC95ZS24	12	15	4142743	77232	Pou	SbsMph			G		-1	116	4.05	128	128	181
STONEHENGE	AC95ZS24	15	18	4142744	77232	Pou	SbsMph	Vq		G		-1	138	3.15	339	197	897
STONEHENGE	AC95ZS24	18	21	4142745	77232	Pou	Mq	Vq	Py	N		-1	103	2.67	1365	957	3902
STONEHENGE	AC95ZS24	21	22	4142746	77232	Pou	Mq	Vq	Py	N		-1	79	3.28	3740	1382	5031
STONEHENGE	AC95ZS25	0	2	4142747	77232	Pou	Cfs			B		-1	7	45.8	58000	17	47
STONEHENGE	AC95ZS26	0	3	4142748	77232	Pou	Cfs	Vq		B		-1	4	39	60000	38	64
STONEHENGE	AC95ZS26	3	6	4142749	77232	Pou	Mph	Vq		G		-1	6	10.8	12000	29	60
STONEHENGE	AC95ZS26	6	9	4142750	77232	Pou	Mph	Vq		B		-1	35	7.5	4397	42	4243
STONEHENGE	AC95ZS26	9	12	4142751	77232	Pou	Mph	Vq		B		-1	116	3.38	3657	61	4926
STONEHENGE	AC95ZS26	12	15	4142752	77232	Pou	SbsMq	Vq		N		-1	128	1.8	323	106	6001
STONEHENGE	AC95ZS26	15	18	4142753	77232	Pou	SbsMph			N		-1	98	2.98	661	294	3876
STONEHENGE	AC95ZS26	18	21	4142754	77232	Pou	Sbs		Py	N		-1	73	3.65	120	682	1580

Prospect	Hole No	From	To	Sample No	DPO No	MRT Lith	Field/D	Texture	Alt/Min	Colour	Comments	Ag	Cu	Fe	Mn	Pb	Zn
STONEHENGE	AC95ZS26	21	24	4142755	77232	Pou	SbsSss			N		2	86	2.43	82	653	1962
STONEHENGE	AC95ZS26	24	25.4	4142756	77232	Pou	SbsSss			NW		1	73	1.38	64	242	1725
STONEHENGE	AC95ZS27	0	3	4142757	77232	Pou	SshCsl			EG		-1	12	26.4	2578	16	60
STONEHENGE	AC95ZS27	3	6	4142758	77232	Pou	SshSss			G		-1	108	9.4	868	55	984
STONEHENGE	AC95ZS27	6	9	4142759	77232	Pou	SbsSsh	Vc	Si	G		-1	36	4.55	1831	41	1468
STONEHENGE	AC95ZS27	9	12	4142760	77232	Pou	SbsSsh	Vc	Si	G		-1	20	11.9	3281	39	1045
STONEHENGE	AC95ZS27	12	15	4142761	77232	Pou	SshSss	VcVq	Py	G		-1	28	3.41	1931	34	1653
STONEHENGE	AC95ZS27	15	18	4142762	77232	Pou	Sss	VqVc	PyGa	G		5	45	5.2	9000	5117	1626
STONEHENGE	AC95ZS27	18	20	4142763	77232	Pou	MphSss	Vq		G		3	42	7.6	12000	2235	8428
STONEHENGE	AC95ZS28	0	3	4142764	77232	Pou	SbsMph	Vq		N		-1	97	0.4	73	108	36
STONEHENGE	AC95ZS28	3	6	4142765	77232	Pou	Sbs	Ds		N		-1	199	0.5	53	255	29
STONEHENGE	AC95ZS28	6	9	4142766	77232	Pou	Sbs	DsVq		N		-1	246	0.76	57	185	31
STONEHENGE	AC95ZS28	9	12	4142767	77232	Pou	VqSbs	Vq	Fe	B		-1	208	2.39	351	722	95
STONEHENGE	AC95ZS28	12	15	4142768	77232	Pou	Mph	Vq		B		-1	62	1.72	4	209	65
STONEHENGE	AC95ZS29	0	3	4142769	77232	Pou	NMphSas	Vq		G		-1	14	0.48	168	169	25
STONEHENGE	AC95ZS29	3	6	4142770	77232	Pou	Mph			B		-1	41	1.21	97	135	47
STONEHENGE	AC95ZS29	6	9	4142771	77232	Pou	Mph	Vq		BO		-1	82	4.15	275	143	193
STONEHENGE	AC95ZS29	9	12	4142772	77232	Pou	VqMph	Vq		B		-1	41	2.93	62	84	101
STONEHENGE	AC95ZS29	12	15	4142773	77232	Pou	Mph	Vq		G		-1	27	1.62	28	52	60
STONEHENGE	AC95ZS30	0	3	4142774	77232	Pou	Sss			G		-1	23	1.59	38	57	56
STONEHENGE	AC95ZS30	3	6	4142775	77232	Pou	Sss			G		-1	14	1.02	24	42	41
STONEHENGE	AC95ZS30	6	9	4142776	77232	Pou	Sss	Vq		G		-1	9	1.01	26	21	35

Appendix VIII

Stonehenge - DD95ZS31 - Drill Logs

CRA EXPLORATION PTY. LIMITED DRILL-HOLE SUMMARY LOG

HOLE NAME: DD952531 AMG EAST 359733 NORTH 5359462
PROSPECT: STONEHENGE GRID EAST 12000 NORTH 5220
EL: ZEEHAN 1 EL 29/88 RL DEPTH 209.5m

DATE DRILLED: 8/6/95
LOGGED BY: S.J. TEAR
DRILLING CO.: DD. TAS. LTD
DRILL TYPE: DIAMOND
DRILL RIG: U650
LOC DRILL CORE: ZEEHAN

SURVEYS:

DEPTH	AZIM (AMG)	DIP	DEPTH	AZIM (AMG)	DIP
0	200°	50°			
50	201°	52°			
100	202°	49°			
150	201°	47.5°			
200	198°	47°			

OBJECTIVES OF HOLE:

DRILL TEST AIRCORE RESULTS OF:- 255 17m @ 2.8% Zn
256 6m @ 2.8% Zn
2510 9m @ 2.4% Zn

AIRCORE LINE PROJECTED 100m to East.

LITHOLOGICAL SUMMARY:

FROM	TO	FORM CODE	COMMENTS
0	2.5	Qha	Overburden; no recovery.
2.5	28.5	Posb	Black, fissile, graphitic shales.
28.5	40.5	Posb	Mineralised sheared zone with black shales.
40.5	52.7	Pos	Buff coloured medium grained sandstone.
52.7	68.35	Pos	Mixed sequence of sandstones and siltstones with dolomitic limestone beds.
68.35	78.4	Pos	Buff coloured fine grained sandstone and shales.
78.4	124.0	Pos.	Intermixed sandstones, siltstones and dolomitic limestones (?limestone dominant).
124.0	133.15	Pos	Fine grained sandstone and siltstones with graphitic shales.
133.15	152.95	Pos	Interlamated fine grained sands, silts and dolomitic limestones.
152.95	159.0	Posb	Sheared massive pyrite zone with siltstones and black shales.
159.0	171.1	Pos	Interbedded black shales and quartzitic sandstones.
171.1	182.0	Pog	Massive Quartzites.
182.0	209.5	Pog	Mixed sequence of massive quartzites with units of interbedded quartzites and dk gray/black siltstone shales.

MINERALISATION SUMMARY:

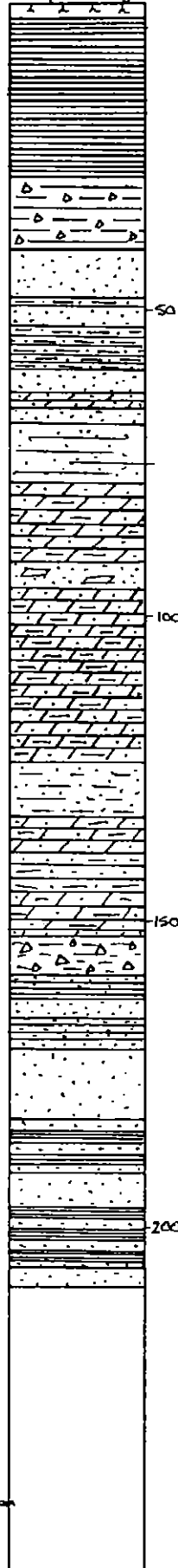
FROM	TO	COMMENTS
30.35	40.5	4.49% Zn inc 6.5m @ 6.3% Zn from 34.0-40.5m. silver values up to 119 ppm; Semi massive sphalerite zones (+/- galena) in sheared black shales with ptz boundaries.
152.95	156.2	2.51% Zn (30 ppm Ag) on semi massive/massive pyrite ? veins with blebs of sphalerite.

CONCLUSIONS:

BEDDING @ 49.5m 60° E c/a (locally folded) @ 88.5 45° E c/a @ 114.75m 30° E c/a @ 45° E c/a to 10° E c/a
@ 133.15m 60° E c/a, to 15° E c/a @ 115.3m @ 161.5m 60° E c/a @ 191.8m 55° E 70° E c/a

The upper zone of black shale hosted mineralisation is heavily sheared but possibly stratabound; the lower zone of black shale hosted mineralisation is thought to be structurally controlled; Distinctive elemental signatures are related to each zone.

Graphic Log



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

SHEET No. 1
of 14

CO-ORDINATES 359738E 5359462N AZIMUTH 200 AMG DRILLERS DD OF TAS COMMENCED 8.6.95 DEPTH 209m HOLE No. ZS31
RL COLLAR INCLINATION - 45° DRILL TYPE DD u650 COMPLETED 29.7.95 CASING LEFT DPO No(s)

DEPTH		Core Rec.	R.Q. DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by				REC (Fm)	REC (Tn)	REC (M)	REC (%)
From (M)	To (M)	%																
0	2.5	0	-	Alpha	Overburden										0	2.5	0	0
2.5	4.5	0.8	5	Posb	Brown clay - ? rotted black shale										2.5	3.5	0.75	75
															3.5	4.5	0.5	50
															4.5	6.0	0.5	33
															6.0	7.5	0.15	10
4.5	6.1	50	5	Posb	Light brown/fawn clay with white quartz vein fragments										7.5	8.1	0.45	75
															8.1	9.0	0.9	100
															9.0	10.0	0.9	90
6.1	7.9	19	5	Posb	Black clay - rotted black shale		5466101	7.5	9.0						10.0	11.0	0.8	80
															11.0	11.9	0.3	33
															11.9	13.4	1.3	87
7.9	28.5	70	4C	Posb	Black shale - heavily sheared well folded. Localised zones where black shale interbedded with v. fine grained grey sandstones (< 35mm thick)	major plane 20° to c/A. cleavage 45° to c/A. also plane 70° to c/A. @ 9.4m bedding sub parallel to c/A. - unless a primary cleavage.	2	9.0	11.0						13.4	14.5	1.0	90
						V.V. minor quartz veining usually folded or boudinaged.	3	11.0	13.4						14.5	15.75	1.25	100
							4	13.4	15.75						15.75	16.5	0.75	100
							5	15.75	18.00						16.5	18.0	1.0	67
							6	18.00	19.5						18.0	19.5	1.5	100
							7	19.5	20.7						19.5	20.7	0.9	75
							8	20.7	23.6						20.7	22.1	0.7	50
							9	23.6	25.5						22.1	23.6	1.2	80
							10	25.5	27.0						23.6	24.25	0.65	100
							11	27.0	28.5						24.25	25.5	0.3	24
															25.5	27.0	1.2	80
28.5	31.4	66	5X	Posb	Very sheared and fissile black shale - pyritic zone (+/- minor sphalerite) from 30.35 - 30.65	Quartz vein boundaries Minor dissemin. blebs of pyrite - localised silicification minor qtz stringers	12	28.5	29.55						27.0	28.5	1.0	67
						@ 31.40 dk brown sphalerite blebs	13	29.55	30.35						28.5	29.75	0.9	72
							14	30.35	31.5						29.75	31.5	1.2	69
							15	31.5	32.5						31.5	32.5	0.2	20
							16	32.5	33.5						32.5	33.5	0.4	40
31.4	34.0	50	5	Posb	Dark grey clay with occ black shale fragments & qtz vein (vuggy)	Disseminations of pyrite blebs with minor sphalerite	17	33.5	34.0						33.5	34.5	0.8	90
															34.5	35.5	0.8	80
															35.5	36.0	0.25	50
															36.0	37.0	0.5	50

342116

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

TENEMENT NAME STONEHENGE SHEET No. 2
No. 2 of 14

PLAN - MAP REFERENCE

CO-ORDINATES 367733E 5359462N AZIMUTH 200 AMG DRILLERS DDTAS COMMENCED 8.6.95 DEPTH 209 m HOLE No. ZS31
RL COLLAR INCLINATION - 50 DRILL TYPE 4650 COMPLETED 29.7.95 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.....)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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34.0	35.2	67	5x	Posb	Black clay - sheared black shale + fine siltstone fragments	Minor dissem of fine grained pyrite; with siliceous bands of dk brown sphalerite (? veins or beds?)	5466118	34.0	35.2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

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

SHEET No. 3. A
TENEMENT NAME STONEHENGE No. 2/14

359733E
CO-ORDINATES 5359462N AZIMUTH 200 AMG DRILLERS DDTAS COMMENCED 8.6.95
RL COLLAR INCLINATION -50° DRILL TYPE U650 COMPLETED 29.7.95
PLAN - MAP REFERENCE DEPTH 209m HOLE No. ZS31
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 (%)
40.5	48.1	90	SX	Pos	Cream coloured heavily cleaved interbedded fine grained sandstones, siltstones and shales - sericitised? Generally thinly bedded < 1.5cm. Decreasing shale @ hole.	Vuggy qtz veins at top of unit. Fracture planes. 20° E c/a 50° E c/a.	5466126	40.5	42.25						37.0	37.5	0.4	30
							27	42.25	44.50						37.5	38.5	0.4	40
							28	44.50	46.05						38.5	39.0	0.15	30
							29	46.05	48.1						39.0	40.0	0.2	20
							30	48.1	49.5						40.0	40.5	0.2	40
							31	49.5	51.5						40.5	42.25	0.3	50
															42.25	43.5	0.25	30
48.1	49.5	100	4X	Pos	Dark grey silt/shale unit 48.1 - 49.50 with folded qtz veins.	Bedding sub parallel to c/a. (previous cleavage).									43.5	44.5	0.9	90
															44.5	46.05	1.55	100
															46.05	47.2	1.15	100
															47.2	48.75	1.55	100
49.5	51.5	90	4X	Pos	Fine grained cream/buff sandstones locally more massive bedding.	Bedding 60° E c/a. Qtz veining scarce.									48.75	49.5	0.75	100
															49.5	51.0	1.5	100
															51.0	52.5	1.3	87
															52.5	53.05	0.4	73
51.5	52.7	90	SX	Pos	Sheared zone of buff sandstone and dark grey shales + siltstones	Minor quartz veining.	32	51.5	52.7						53.05	54.0	0.85	89
															54.0	55.5	1.5	100
															55.5	57.0	1.5	100
															57.0	58.5	1.5	100
52.7	60.0	90	3C	Pos	Dark grey / grey fine grained sandstones and siltstones; locally heavily sheared; Zones of quartz veining eg 54-54.4m. locally quite fissile; well rotted core; light brown zones towards base of unit	Top contact sheared with minor qtz vein stringers. Fabric 60° E c/a. Folded bedding @ 59.7m.	33	52.7	54.4						58.5	60.0	1.5	100
							34	54.4	57.0						60.0	61.5	0.75	50
							35	57.0	58.5						61.5	63.0	1.2	80
							36	58.5	60.0						63.0	64.5	1.3	87
															64.5	66.0	1.5	100
															66.0	67.5	1.2	80
															67.5	69.0	1.5	100
															69.0	70.5	1.5	100
															70.5	72.0	1.5	100
60.0	61.5	50	4X	Pos	Gray med grained sandstone locally calcareous with qtz veining - well rotted	Core loss at 60.6m - cuttings retained contain sphalerite possibly sourced further up hole.	37	60.0	61.5						72.0	73.5	1.5	100
															73.5	75.0	1.5	100
															75.0	76.5	1.5	100

34211100

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

SHEET No. 4 of 4
TENEMENT NAME STONE HEDGE No. 4084

359733E

CO-ORDINATES 5359462 N AZIMUTH 200 AMG DRILLERS DDTAS COMMENCED 8.6.95 DEPTH 209m HOLE No. ZS31
RL COLLAR INCLINATION -50° DRILL TYPE 4650 COMPLETED 29.7.95 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)	9/1	DATA																	
61.5	63.0	90	3X	Pos	Heavily sheared grey med grained sandstone with argillite partings. Sandy clay towards base of unit.	Boundained qtz veining with ore crush zones.	5466138	61.5	63.0											
63.0	66.2	90	2	Pos	Distinctive alteration unit with strong silicification with qtz veins; smeared clays from chert are calcareous; core source for carbonate unware. Major quartz stockwork.	63-63.4 3 brown alteration siderite or sphalerite? v. minor late-stage qtz veining	39 40 41	63.0 63.4 64.5	63.4 64.5 66.2											
66.2	67.05	70	3C	Pos	Dark grey/grey altered sandstone with qtz veining; with brown coloured zones.	locally qtz veining has dark brown sphalerite. light brown alteration zones may siderite or sphalerite	42	66.2	67.05											
67.05	67.21	100	1	Pos	Quartz vein followed by semi massive sulphide zone.	Massive sphalerite locally with v. minor galena; vein infill Vain 45° to clA contact. lower contact 65° to clA.														
67.21	67.5	100	2	Pos	Footwall silicic alteration to vein with some sphalerite + galena.															
67.5	68.35	100	2	Pos	Dark grey/grey sandstone with qtz-silicite alteration and veining as before vein.	v. irregular lower contact qtz veined.	43	67.5	68.35											

342119

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

SHEET No. 5 of 14
TENEMENT NAME STONEHENGES No. 5014

357733E
CO-ORDINATES 5359462N AZIMUTH 200 AMG DRILLERS DDTAS COMMENCED 8.6.95 DEPTH 209m HOLE No. 2531
RL COLLAR INCLINATION -50 DRILL TYPE 4.650 COMPLETED 29.7.95 CASING LEFT DPO No(s)

DEPTH		Core Rec. %	R.A. 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)																	
68.35	77.7	100	1c	Pos	Cream/buff coloured shales, siltstones + occ fine grained sandstones. Coarsening downhole in siltstones + more massively bedded sandstones. Folded unit.	Possible refolded thin bedding parallel quartz veinlets. Bedding locally parallel to c/a.	5466/44	68.35	70.5						76.5	78.0	1.5	100
							45	70.5	72.0						73.0	74.5	1.5	100
							46	72.0	73.5						74.5	81.0	1.5	100
							47	73.5	75.5						81.0	82.5	1.5	100
							48	75.5	77.0						82.5	84.0	1.5	100
						Qtz vein zone 74.6-75.4									84.0	85.5	1.5	100
						irregular thick veining									85.5	87.0	1.5	100
															87.0	88.5	1.5	100
															88.5	90.0	1.5	100
77.7	78.4	84	3	Pos	light brown/cream interbedded sandstone, siltstone + shale. slightly rotted - sericitic alteration?		49	77.0	78.4						78.4	79.5	1.5	100
															79.5	81.0	1.5	100
															81.0	82.5	1.5	100
															82.5	84.0	1.5	100
															84.0	85.5	1.5	100
															85.5	87.0	1.5	100
															87.0	88.5	1.5	100
78.4	88.5	100	1	Pos	Grey/light grey heavily qtz veined sandstone with total silicification; localised breccias at top contact. hydraulic fracturing. minor argillite material. Possible fine sandstone and siltstone interbeds. Darker colouration after 86m. + less veining	Silicic alteration on pre-existing qtz (+carbonate) veining in multi-phase quartz veining. ?antabrecciation; veining reducing downhole. Vein lens at 88.4m 45° to c/a	50	78.4	80.3						80.3	82.5	1.5	100
							51	80.3	82.5						82.5	84.0	1.5	100
							52	82.5	84.0						84.0	85.5	1.5	100
							53	84.0	84.5						84.5	86.0	1.5	100
							54	84.5	87.0						86.0	87.5	1.5	100
							55	87.0	88.5						87.5	89.0	1.5	100
															89.0	90.5	1.5	100
															90.5	92.0	1.5	100
															92.0	93.5	1.5	100
															93.5	95.0	1.5	100
															95.0	96.5	1.5	100
															96.5	98.0	1.5	100
															98.0	99.5	1.5	100
															99.5	101.0	1.5	100
															101.0	102.5	1.5	100
															102.5	104.0	1.5	100
															104.0	105.5	1.5	100
															105.5	107.0	1.5	100
															107.0	108.5	1.5	100
															108.5	110.0	1.5	100
															110.0	111.5	1.5	100
															111.5	113.0	1.5	100
															113.0	114.5	1.5	100
															114.5	116.0	1.5	100
															116.0	117.5	1.5	100
															117.5	119.0	1.5	100
															119.0	120.5	1.5	100
															120.5	122.0	1.5	100
															122.0	123.5	1.5	100
															123.5	125.0	1.5	100
88.5	91.5	100	1	Pos	Laminated shales, siltstones +/- fine sandstones - well sheared with boundaries	Localised zones of dissolution pyrite; minor qtz veins 60° to c/a. + 20° to c/a. Bedding 45° to c/a. possible crenulation cleavage.	56	88.5	90.0						90.0	91.5	1.5	100
							57	90.0	91.5						91.5	93.0	1.5	100
															93.0	94.5	1.5	100
															94.5	96.0	1.5	100
															96.0	97.5	1.5	100
															97.5	99.0	1.5	100
															99.0	100.5	1.5	100
															100.5	102.0	1.5	100
															102.0	103.5	1.5	100
															103.5	105.0	1.5	100
															105.0	106.5	1.5	100
															106.5	108.0	1.5	100
															108.0	109.5	1.5	100
															109.5	111.0	1.5	100
															111.0	112.5	1.5	100
															112.5	114.0	1.5	100
															114.0	115.5	1.5	100
															115.5	117.0	1.5	100
															117.0	118.5	1.5	100
															118.5	120.0	1.5	100
															120.0	121.5	1.5	100
															121.5	123.0	1.5	100

342120

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

SHEET No. 6 of 14

TENEMENT NAME STONEHENGE No. 2831

PLAN - MAP REFERENCE

CO-ORDINATES 359733E 5359462N AZIMUTH 200 AMG DRILLERS DDTAS COMMENCED 8.6.95 DEPTH 209m HOLE No. 2831
RL COLLAR 150 INCLINATION 150 DRILL TYPE 4650 COMPLETED 29.7.95 CASING LEFT DPO No(s)

DEPTH		Core Rec	QA 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)	%																		
91.5	95.7	100	1	Pos	Dark grey, locally black well folded interbedded shales and siltstones; occ clay fin grained sandstone.	Localized zones of disseminated pyrite Occ large qtz veins irregular size and shape.	5466158	91.5	93.0											
							59	93.0	94.5											
							60	94.5	95.7											
							9													
95.7	97.5	100	1	Pos	Grey interbedded shales siltstones and fine grained thin sandstones. locally well shaled.	2 silicification; local zone of irregular quartz veining / brecciation Minor pyrite disseminations	61	95.7	97.5											
							62													
							63	97.5	99.0											
								99.0	100.5											
97.5	100.4	100	1	Pos	Increase in amount of quartz veining + auto-brecciation	③ 99.3 Qtz-py-epg veinlet Minor pyrite disseminations v. minor galena + shales + pyrite.														
100.4	100.5	100	2	Pos	Breccia - possibly fault related with clasts of siltstone / sandstone in dark grey/black matrix															
100.5	104.7	100	1	Pos	Grey fine grained sandstone becoming more interbedded with siltstones (+/- shales) well veined and localized zones of brecciation	Qtz veining 70° to c/a. cleavage 40-20° to c/a. Minor galena in qtz veins minor pyrite blobs, localized. loc dolomite veining	64	100.5	102.0											
							65	102.0	103.5											
							66	103.5	104.7											
104.7	107.9	100	1	Pos	lt grey altered fine grained sandstone / limestone.	Heavily veined with qtz carbonate veining - localized areas of vein brecciation. Multi phase veining up to 50% of rock	67	104.7	106.3											
							68	106.3	107.9											

342121

SHEET No. 7
TENEMENT NAME, STONE HENGE No. 214

359733E
CO-ORDINATES 5359462N AZIMUTH 200 Amc DRILLERS DDTAS COMMENCED 8.6.95 DEPTH 209 m HOLE No. ZS31
RL COLLAR INCLINATION -50° DRILL TYPE u650 COMPLETED 27.7.95 CASING LEFT DPO No(s)

[illegible]

342122

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

SHEET No. 8
TENEMENT NAME STONE HENG 5 No. 214

359733E

CO-ORDINATES 5359442N AZIMUTH 200 AMG DRILLERS DDTAS COMMENCED 8.6.95 DEPTH 209 m HOLE No. Z531
RL COLLAR -50 INCLINATION -50 DRILL TYPE 4650 COMPLETED 29.7.95 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)																			
117.1	118.2	100	1	P05	Light grey, heavily veined dolomitised ? calcarenite; veining becomes brecciation generally; weakly calcareous	Qtz-carbonate veining brecciation Cream coloured ? dolomite veins 45° to c/a - late stage.	5466/74	117.1	118.2								123.0	124.5	1.5	100
																	124.5	126.0	1.5	100
																	126.0	127.5	1.5	100
																	127.5	129.0	1.5	100
																	129.0	130.5	1.5	100
118.2	124.0	100	1	P02	Fine grained grey sandstones with siltstone layers; shale bands also occur. Lt grey / grey / dark grey.	Qtz-carbonate veining at top of unit - disappearing d/hole; becoming more stringer veining variety; Bedding 45° to c/a. Zones of more intense Qtz-carb. veining can be pyritic. Carbonate not present in veins after veining 45° to c/a. and thin veinlets 80° to c/a. Bedding parallel pyrite @ 121.4m + 124.0m Bedding @ 122.5 10° to c/a. Minor pyrite blobs + stringers	75 76 77	118.2 120.0 121.5	120.0 121.5 124.0							130.5	132.0	1.5	100	
																	132.0	133.5	1.5	100
																	133.5	135.0	1.5	100
																	135.0	136.5	1.5	100
																	136.5	138.0	1.5	100
																	138.0	139.5	1.5	100
																	139.5	142.4	2.9	100
																	142.4	144.0	1.6	100
																	144.0	145.5	1.5	100
																	145.5	147.0	1.5	100
																	147.0	148.5	1.2	90
																	148.5	150.0	1.5	100
124.0	126.0	100	1	P02	Dark grey fine grained siltstone locally well laminated; becoming light grey or bone, coincident with more veining.	Bedding 10° to c/a. Large pyrite blobs < 2cm. Some bedding parallel pyrite bands (< 0.5cm thick) @ 124.9m. Qtz-carbonate veining towards base of unit. - a	78	124.0	126.0								150.0	151.5	1.5	100
																	151.5	153.0	1.5	100
																	153.0	154.5	1.5	100
																	154.5	156.0	1.5	100
																	156.0	157.5	1.3	80
																	157.5	159.0	1.5	100
																	159.0	160.0	0.9	90
126.0	133.15	100	1	P02	Interbedded fine grained ^{grey} sands, silt and darker grey shales. locally graphitic; locally siliceous beds - cherts Minor galena with Qtz-carb veins eg 129.3. Sphalerite-rich vein @ 131.4m 25° to c/a. chert fringes after 132.0m.	light grey / white veining? or boundained sandstone at top of unit; passing after 70m into more off white / light brown Qtz-carbonate veining which locally locally is v. pyritic (and ? silicified) - as dissemi and blobs up to 10%.	79 80 81 82 83	126.0 127.2 128.3 130.0 132.0	127.2 128.3 130.0 132.0 133.15							160.0	161.5	1.5	100	
																	161.5	163.0	1.5	100
																	163.0	164.5	1.5	100
																	164.5	166.0	1.5	100
																	166.0	167.5	1.5	100
																	167.5	169.0	1.5	100
																	169.0	170.5	1.5	100

342123

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

SHEET No. 9
TENEMENT NAME. STONEHENCE No. 214

CO-ORDINATES 359733E 5359462N AZIMUTH 200 AMG DRILLERS DDTAS COMMENCED 8.6.95 DEPTH 209m HOLE No. 2531
RL COLLAR -50° INCLINATION 4650 DRILL TYPE 4650 COMPLETED 29.7.95 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)																			
133.15	136.5	100	1	Pos	Inter laminated grey fine grained sands and silts; well folded (open). Coarser sand bands in band 0.75m.	Bedding 60° to c/A. Zone of Qtz-carbonate stringer veining; rare chloropyrite, pyrite sphalerite in veins eg 134m Veining locally producing brecciation, larger single veins 45° to c/A (>1cm)	5466184 95	133.15 135.0	1350 136.5											
136.5	140.1	100	1	Pos	Grey fine grained ? bioturbated sandstone; locally disturbed; brecciation zones ? tectonic or hydrothermal @ 137.2m-137.6m. becoming more silty d/hole with shaly beds.	Bedding 60° to c/A. @ 138.5 microne in carb/Qtz veining - cross cutting bedding @ 60° to c/A	86 87	136.5 137.9	137.9 140.1											
140.1	141.7	100	1	Pos	Qtz-carb brecciation zone; intense irregular veining; silicified dark grey siltstone host.	Minor dissemin pyrite +/- sphalerite (dark brown) locally; generally associated with later stage fawn colour dolomite veining	88	140.1	141.7											
141.7	143.6	100	1	Pos	Silicified dark grey siltstone (?+ cherts) with locally intense impersistent and irregular Qtz carb veining.	Later phase of Qtz-carb (dolomite) fawn coloured veining with flecks of sphalerite and galena locally 3cm vein at 142.4 60° to c/A, also thinner veins 30° to c/A.	89	141.7	143.6											
143.6	145.3	100	1	Pos	Fine grained dark grey sand and silts with shale laminae. Disrupted bedding due to folding and shearing	Bedding 15°. Qtz-carb veining (dol) 30° to c/A. cuts earlier Qtz-carb (white) veins.	90	143.6	145.3											

342124

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

SHEET No. 10214
TENEMENT NAME STONEHENGE No.

359733E
CO-ORDINATES 5359462N AZIMUTH 200 AMC DRILLERS DDTAS COMMENCED 8.6.95 DEPTH 209m HOLE No. ZS31
RL COLLAR INCLINATION -50° DRILL TYPE 4650 COMPLETED 29.7.95 CASING LEFT DPO No(s)

DEPTH		Core Rec.	RA	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)	% DATA																		
145.3	147.50	100	1	Pos	Dark grey interbedded sand, silt and shales; Bone veined / brecciated.	Bedding sub parallel to c/A. Minor qtz-carb stringer veins.	5466191	145.3	147.65											
147.50	147.65	100	1	Pos	(Dolomitic) bi-elastic calcarenite with argillite zones - silicified.															
147.65	148.5	90	3	Pos	Zone of qtz veining / breccia zone. Fawn coloured dolomite veining with increased amounts of sphalerite	Galena and sphalerite with pyrite in veins + country rock. Galena dominant.	92	147.65	148.5											
148.5	150.15	100	1	Pos	Grey silicified limestone (?) dolomitic locally almost brecciated by veining.	With abundant thin imperforate qtz-carb veining (white) and fawn coloured qtz-carb veining (dolomite)	93	148.5	150.15											
150.15	152.1	100	1	Pos	Possibly silicified limestone / sandstone heavily veined and brecciated localized shearing with graphite surfaces	Qtz-carb (white) veining. Locally broken core due to veining. Qtz-carb (fawn) vein with sphalerite @ 151.60 45° to c/A. Pyrite / sphalerite ? vein @ 152.05 65° to c/A.	94	150.15	152.1											
152.1	152.95	100	3	Pos	Interbedded fine grained grey / dk grey sand, silt and shales; heavily veined; heavily sheared	Shear planes 45° to c/A. Qtz-carb (white) veining. Minor disseminated + blebs of pyrite.	95	152.1	152.95											
152.95	154.5	100		Posb	Sheared vein system: Qtz carbonate veining with sheared ? sand, silt and shales.	Local zones of semi-massive pyrite with disseminated blebs of sphalerite + minor galena 152.95 - 153.20m associated	96	152.95	154.5											

342125

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

TENEMENT NAME STONEHENGE SHEET No. 11 of 14
No. 914

359733E

CO-ORDINATES 5359462N AZIMUTH 200 AMG DRILLERS DDTAS COMMENCED 8.6.95 PLAN - MAP REFERENCE.....
RL COLLAR..... INCLINATION -50° DRILL TYPE 1650 COMPLETED 29.7.95 DEPTH 209m HOLE No. 2531
CASING LEFT..... DPO No(s).....

DEPTH		Core Rec.	Graph 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)																		
				Posb	Qtz-carb veining;														
					Pyrite scattered through altered country rock														
					153.87-154.12 Zone of Qtz-carb (fawn) veining with disseminated sphalerite and small zones of semi-massive to massive pyrite 75% to c/a. Vein system upper contact 75% to c/a.														
					154.12-154.50 Black shale/shear siltstone with pyrite, white Qtz vein 5cm 70% to c/a.														
154.5	156.2	100	2f	Posb	Semi massive pyrite ? vein Minor black shale zones, shear planes (graphitic)	Dissem blebs of sphalerite locally <1%; interstitial white quartz. Minor fawn coloured dol veining at base	97	154.5	156.2										
156.2	156.7	100	2	Posb	Semi massive pyrite zones within fawn coloured dolomite veins localised brecciation.		98	156.2	157.87										
156.7	157.94	85		Posb	Fawn coloured dolomite veining with minor disseminated veinlets of pyrite; host rock appears to be grey sandstone with shearing along graphitic shale beds	Minor galena blebs													

342126

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

SHEET No. 12 of 14
TENEMENT NAME STONEHENGE No. 214

CO-ORDINATES 359733E 5359462N AZIMUTH 200 AM 9 DRILLERS DDTAS COMMENCED 8.6.95 DEPTH 209 m HOLE No. Z531
RL COLLAR INCLINATION -50° DRILL TYPE U 650 COMPLETED 29.7.95 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 (%)
157.87	158.31	100	3c	Posb	Black graphitic shale; heavily sheared.	Cleavage 55° to c/A Bedding (lower contact) 65° to c/A	99	157.87	158.31		170.5	171.0	0.5	100
											171.0	172.5	1.5	100
											172.5	174.0	1.5	100
158.31	159	85	2x	Posb	Light gray ? sandstone with fawn coloured dolomite veining	Zones of locally sericite pyrite and sphalerite (+/- galena)	5466200	158.31	159.0		174.0	175.5	1.5	100
											175.5	177.0	1.5	100
											177.0	178.5	1.5	100
159	162.8	100	2	Posb	Interbedded fine grained sand, silts and shales; heavily sheared. Shale dominant. Becoming almost interlaminated from 161.5 to 162.8 m.	Qtz (+carb) veining and minor brecciation Minor pyrite. Variable bedding angle. @ 161.5 60° to c/A.	5466201	159.0	160.0		178.5	180.0	1.5	100
							2	160.0	161.5		180.0	181.5	1.5	100
							3	161.5	162.8		181.5	183.0	1.5	100
											183.0	184.5	1.5	100
											184.5	186.0	1.5	100
											186.0	187.5	1.5	100
162.8	165.5	100	1	Pos	Quartzite dominant unit with minor interlaminations of silt and shale. Becoming more intermixed (intermingled). No discrete bedding.	Minor quartz and fawn coloured dolomite veining; minor vein brecciation zones	4	162.8	165.5		187.5	189.0	1.5	100
											189.0	190.5	1.5	100
											190.5	192.0	1.5	100
											192.0	193.5	1.5	100
											193.5	195.0	1.5	100
165.5	166.1	100	1	Pos	Quartzite and shale unit (Black shales)	Zone is veined and sheared (oblique); veining mainly qtz-carb with some fawn coloured dol veining.	5	165.5	167.50		195.0	196.5	1.5	100
											196.5	198.0	1.5	100
											198.0	199.5	1.5	100
											199.5	201.0	1.5	100
											201.0	202.5	1.5	100
166.1	171.1	100	2cb	Pos	Black shale unit with minor siltstone intercalations; becoming interlaminated and interbedded with fine grained quartzite downhole. Possible sheared base	Minor veining generally cleavage parallel. Minor qtz veining with pyrite associated with base of unit.	6	167.5	169.0		202.5	204.0	1.5	100
							2	169.0	171.1		204.0	205.5	1.5	100
											205.5	206.5	1.0	100
											206.5	208.0	1.5	100
											208.0	209.5	1.5	100
171.1	182.0	100	1	Pos	Gray massive quartzite unit	Some fawn dolomite veining (tension gashes) cut by later qtz veins.	8	171.1	174.0					
							9	174.0	177.0					
							10	177.0	180.0					

342121

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

SHEET No. 13 of 14
TENEMENT NAME STONEDENGE No. 13014

359733 E
CO-ORDINATES 5359462N AZIMUTH 200 AMC DRILLERS DDTAS COMMENCED 8.6.95
RL COLLAR..... INCLINATION -50° DRILL TYPE 4650 COMPLETED 29.7.95
PLAN - MAP REFERENCE..... DEPTH 209 m HOLE No. 7531
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)																			
182.0	190.5	100	1	Pog	Grey quartzite with dark grey/black shale beds and laminae; quartzite predominant; with vein & occur on shale/silt at base coarsening up into sandstone	Fawn coloured dolomite veining on tension veins and stringers larger qtz (+/- carb) veins (white) occur sporadically @ 187.5 bedding 65° to c/a. 188.4 - 188.8 :- dolomite breccia vein with galena in matrix; cavities filled with platy dolomite/ankerite.	5466211	180.0	182.0											
							12	182.0	184.65											
							13	184.65	187.5											
							14	187.5	189.0											
							15	189.0	190.5											
190.5	196.2	100	1	Pog	Grey quartzite with only minor shale/silt zones.	Bedding @ 191.8 70° to c/a @ 196.15 55° to c/a Minor fawn dolomite veining as tension gashes + stringers Early qtz veins 45° to c/a.	16	190.5	193.5											
							17	193.6	196.2											
196.2	205.7	100	1	Pog	Intermixed and interbedded grey fine grained quartzites and silty shales. Elusive? dolomite zone @ 198.9 - 199.2m. @ 204.5m possible synsedimentary breccia zone (although possibly fault related)	Boundaries textures; disrupted bedding due to tectonism Fawn coloured dolomite veining as tension gashes + stringers V. rare galena with dolomite. Brecciated early white quartz veining.	18	196.2	198.7											
							19	198.7	200.4											
							20	200.4	202.0											
							21	202.0	204.0											
							22	204.0	205.7											
205.7	206.5	100	3x	Pog	White qtz vein underlain by clay gouge with brecciated grey sandstone / quartz fragments. Followed by white quartz vein.	Fault gouge possibly 65° to c/a Vein contact irregular	23	205.7	206.5											
								206.5	209.0											
206.5	209.5	100	1	Pog	Grey quartzite with shaly siltstone units; predominately quartzite	White qtz veining; boundings zones and zones of broken up.	24	206.5	208.0											
							25	208.0	209.5											

342128

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

TENEMENT NAME STONEHEDGE SHEET No. 14 of 14

PLAN - MAP REFERENCE.....

CO-ORDINATES 5359462N AZIMUTH 200 RMG DRILLERS DP TAS COMMENCED 8.6.95 DEPTH 209.5m HOLE No. 2931
RL COLLAR..... INCLINATION -50° DRILL TYPE U650 COMPLETED 29.7.95 CASING LEFT..... DPO No(s).....

[illegible]

342129

ZS31ALL.XLS

Results for DD95ZS31																		
bhole	smpno	afrom	ato	aag	aal	aas	aau	aba	aca	acu	afe	ak	amg	amn	apb	asn	azn	as
ZS31	5466102	9	11	-0.5	10.4	35	-0.008	555	-0.05	30	0.99	4.48	0.53	14	465	8	249	
ZS31	5466103	11	13.4	-0.5	10	22	-0.008	563	-0.05	33	0.71	4.41	0.52	-10	348	6	289	
ZS31	5466104	13.4	15.75	-0.5	9.34	49	-0.008	523	-0.05	32	1.55	3.88	0.47	28	477	10	475	
ZS31	5466105	15.75	18	-0.5	10.2	26	-0.008	552	-0.05	26	0.57	3.81	0.51	-10	394	6	387	
ZS31	5466106	18	19.5	-0.5	10.7	30	-0.008	604	-0.05	17	0.55	4.16	0.5	-10	300	4	264	
ZS31	5466107	19.5	20.7	-0.5	10.3	33	-0.008	571	-0.05	29	0.5	4.07	0.48	-10	107	11	295	
ZS31	5466108	20.7	23.6	-0.5	10.8	37	-0.008	613	-0.05	25	0.8	4.54	0.51	36	649	-3	457	
ZS31	5466109	23.6	25.5	-0.5	11.4	45	-0.008	679	-0.05	21	0.63	4.82	0.54	11	628	-3	405	
ZS31	5466110	25.5	27	-0.5	9.81	37	-0.008	586	-0.05	35	0.58	4.36	0.5	11	1020	9	776	
ZS31	5466111	27	28.5	-0.5	9.98	43	-0.008	615	-0.05	41	0.8	4.39	0.52	34	1340	4	1300	
ZS31	5466112	28.5	29.55	-0.5	9.6	49	-0.008	741	-0.05	45	0.76	4.1	0.52	38	861	9	588	
ZS31	5466113	29.55	30.35	9.2	9.06	255	-0.008	734	-0.05	109	2.45	3.96	0.53	40	1040	18	1620	
ZS31	5466114	30.35	31.5	11.7	1.89	443	0.009	264	-0.05	93	2.5	0.7	0.15	68	6750	7	9600	2.82
ZS31	5466115	31.5	32.5	3	0.79	184	-0.008	91	0.05	30	1.37	0.17	0.07	36	3810	7	15100	1.99
ZS31	5466116	32.5	33.5	5.2	3.05	479	0.014	214	0.05	66	2.71	1.17	0.17	55	4840	13	16800	3.22
ZS31	5466117	33.5	34	11.6	2.91	628	0.009	206	0.05	71	9.32	1.18	0.18	76	8080	9	8610	9.42
ZS31	5466118	34	35.2	9.7	0.5	169	-0.008	77	-0.05	71	1.77	0.11	0.06	34	2140	11	38600	3.24
ZS31	5466119	35.2	35.5	26.5	1.09	303	0.01	140	-0.05	105	25.6	0.46	0.08	32	9400	12	88000	32.9
ZS31	5466120	35.5	36	119	0.89	406	0.017	109	-0.05	410	12	0.31	0.06	127	49400	72	213000	23.5
ZS31	5466121	36	37	108	2.69	987	0.021	198	-0.05	755	14.3	1.17	0.18	108	73000	17	108000	21.8
ZS31	5466122	37	37.5	10.8	8.28	259	-0.008	519	-0.05	160	4.12	3.73	0.56	78	4260	40	31200	5
ZS31	5466123	37.5	39	6.6	1.53	633	-0.008	194	0.06	67	4.56	0.53	0.12	74	4740	17	14600	4.84
ZS31	5466124	39	40	5.1	1.46	198	-0.008	200	-0.05	50	3.35	0.57	0.12	35	2740	9	12700	3.27
ZS31	5466125	40	40.5	117	1.67	674	0.01	221	-0.05	395	11.6	0.73	0.13	115	79000	57	143000	19.6
ZS31	5466126	40.5	42.25	1.1	6.53	58	-0.008	442	0.1	76	1.26	3.62	1.05	41	848	8	4250	
ZS31	5466127	42.25	44.5	-0.5	5.36	23	-0.008	370	0.09	132	4.55	3.15	4.09	4220	70	-3	1170	
ZS31	5466128	44.5	46.05	-0.5	4.92	24	-0.008	314	0.14	51	7.47	2.83	5.41	7720	39	-3	1050	
ZS31	5466129	46.05	48.1	-0.5	5.1	18	-0.008	357	0.12	17	6.35	2.9	3.8	6890	19	-3	710	
ZS31	5466130	48.1	49.5	-0.5	2.77	22	-0.008	231	0.26	-5	26.4	1.4	2.99	36200	33	-3	3130	
ZS31	5466131	49.5	51.5	0.8	8.18	58	-0.008	575	0.25	173	14	4.88	6.74	15500	59	-3	1660	
ZS31	5466132	51.5	52.7	-0.5	9.01	39	-0.008	739	0.3	77	13.4	4.88	11.1	11500	24	-3	1110	
ZS31	5466133	52.7	54.4	-0.5	8.85	31	-0.008	703	0.3	28	15.5	4.84	9.1	11900	28	-3	853	
ZS31	5466134	54.4	57	0.5	3.86	22	-0.008	343	0.17	18	8.01	1.94	8.68	5440	-5	-3	282	
ZS31	5466135	57	58.5	1.4	4.72	28	-0.008	506	0.15	112	7.28	2.41	9	5320	20	5	337	

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ZS31	5466136	58.5	60	-0.5	3.74	24	-0.008	529	1.78	14	9.92	1.84	4.55	8950	12	-3	412	
ZS31	5466137	60	61.5	-0.5	1.67	33	-0.008	383	6.8	17	15.9	0.8	4.46	16500	142	-3	2700	
ZS31	5466138	61.5	63	-0.5	2.78	26	-0.008	483	3.46	12	15.5	1.19	3.04	17500	32	-3	767	
ZS31	5466139	63	63.4	1.7	0.51	25	-0.008	120	1.11	6	22	0.22	2.71	26800	716	-3	1850	
ZS31	5466140	63.4	64.5	-0.5	0.07	-5	-0.008	29	10.9	-5	5.17	-0.05	7.77	6390	35	-3	104	
ZS31	5466141	64.5	66.2	-0.5	0.04	-5	-0.008	19	12.1	-5	9.96	-0.05	9.46	7510	22	-3	161	
ZS31	5466142	66.2	67.5	10.2	0.24	10	-0.008	49	1.76	23	19.8	0.1	3.94	41800	5870	-3	35100	1.96
ZS31	5466143	67.5	68.35	-0.5	0.06	9	-0.008	26	9.77	-5	9.84	-0.05	9.67	5030	267	-3	1020	
ZS31	5466144	68.35	70.5	-0.5	3.46	9	-0.008	156	4.21	9	4.34	1.8	11.4	1990	15	5	75	
ZS31	5466145	70.5	72	-0.5	3.2	-5	-0.008	192	1.95	19	2.5	1.95	6.47	945	10	-3	26	
ZS31	5466146	72	73.5	-0.5	3.4	14	-0.008	198	2	18	2.92	2.04	8.08	1150	13	8	48	
ZS31	5466147	73.5	75.5	1.1	3.85	15	-0.008	248	3.08	18	3.76	2.3	8.01	1780	15	4	48	
ZS31	5466148	75.5	77	0.6	3.23	-5	-0.008	221	3.86	13	2.02	1.94	5.79	605	14	6	30	
ZS31	5466149	77	78.4	-0.5	3.15	-5	-0.008	202	3.25	21	3.92	1.94	5.79	2260	-5	-3	44	
ZS31	5466150	78.4	80.3	-0.5	0.04	-5	-0.008	30	14.7	6	0.47	-0.05	9.38	386	41	-3	114	
ZS31	5466151	80.3	82.5	-0.5	0.09	-5	-0.008	28	14.6	20	0.5	-0.05	9.4	389	23	-3	50	
ZS31	5466152	82.5	84	-0.5	0.06	9	-0.008	20	14.7	-5	1.02	-0.05	9.37	923	17	-3	13	
ZS31	5466153	84	84.5	-0.5	0.02	-5	-0.008	17	15.6	22	0.47	-0.05	10.1	365	14	-3	17	
ZS31	5466154	84.5	87	-0.5	0.05	-5	-0.008	18	17.1	5	0.38	-0.05	11.1	355	14	-3	10	
ZS31	5466155	87	88.5	-0.5	0.07	-5	-0.008	22	15.7	19	0.68	-0.05	10.2	497	29	-3	11	
ZS31	5466156	88.5	90	-0.5	0.09	11	-0.008	22	13.3	-5	1.76	-0.05	8.98	1150	16	-3	17	
ZS31	5466157	90	91.5	-0.5	0.09	-5	-0.008	21	14	22	1.15	-0.05	8.92	707	14	-3	5	
ZS31	5466158	91.5	93	0.8	0.11	8	-0.008	33	7.19	5	0.43	-0.05	14.9	422	50	-3	26	
ZS31	5466159	93	94.5	1.3	0.09	-5	-0.008	21	4.01	9	0.67	-0.05	17	750	18	-3	54	
ZS31	5466160	94.5	95.7	0.7	0.06	5	-0.008	21	8.44	-5	0.3	-0.05	15.5	272	19	-3	17	
ZS31	5466161	95.7	97.5	-0.5	0.11	-5	-0.008	30	16.9	5	1.46	-0.05	11.3	741	20	-3	7	
ZS31	5466162	97.5	99	-0.5	0.18	13	-0.008	28	16.1	10	1.87	0.07	9.75	1170	41	-3	12	
ZS31	5466163	99	100.5	0.9	0.47	15	-0.008	47	14.6	42	2.74	0.23	8.68	2180	37	-3	67	
ZS31	5466164	100.5	102	-0.5	1.61	16	-0.008	86	13.1	22	2.71	0.88	7.69	1550	196	-3	25	
ZS31	5466165	102	103.5	-0.5	1.86	22	-0.008	269	15.1	18	2.54	1.06	9.15	1330	132	4	27	
ZS31	5466166	103.5	104.7	0.8	4.16	30	-0.008	524	9.29	29	2.71	2.42	5.88	873	91	-3	54	
ZS31	5466167	104.7	106.3	-0.5	1.35	17	-0.008	142	14.6	8	3.52	0.75	8.95	3570	206	-3	570	
ZS31	5466168	106.3	107.9	0.6	0.93	-5	-0.008	75	18.5	15	2.48	0.51	11.3	2020	129	-3	374	
ZS31	5466169	107.9	109.25	-0.5	2.15	21	-0.008	122	15.5	9	2.18	1.15	9.42	1340	267	-3	96	
ZS31	5466170	109.25	111	-0.5	0.24	13	-0.008	26	20.5	13	1.07	0.1	12.6	1470	157	-3	557	
ZS31	5466171	111	113.6	-0.5	0.13	47	-0.008	31	19.6	-5	1.39	0.06	12.3	2610	62	-3	188	
ZS31	5466172	113.6	114.73	-0.5	0.95	9	-0.008	72	17.1	16	2.28	0.55	10.1	1240	71	-3	169	
ZS31	5466173	114.73	117.1	1.1	1.81	-5	-0.008	255	11.9	24	2.6	1.1	7.41	1550	99	-3	61	

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ZS31	5466174	117.1	118.2	6.7	0.7	14	-0.008	73	14.3	123	4.31	0.38	9.19	3670	119	-3	143	
ZS31	5466175	118.2	120	3.6	1.4	35	-0.008	250	11.3	48	4.43	0.79	7.56	3430	700	-3	228	
ZS31	5466176	120	121.5	2.5	1.52	11	-0.008	334	13.9	26	1.91	0.95	8.5	1100	575	-3	115	
ZS31	5466177	121.5	124	1.3	1.4	6	-0.008	361	21.5	23	2.52	0.85	13.2	1480	155	-3	76	
ZS31	5466178	124	126	2.3	4.44	114	-0.008	793	3.77	36	7.81	2.8	4.47	4470	444	-3	149	
ZS31	5466179	126	127.2	1.6	2.38	714	0.027	254	8.66	23	7.16	1.33	6.61	5820	241	-3	250	
ZS31	5466180	127.2	128.3	2.8	2.22	2180	0.054	147	1.95	30	16.5	1.11	4.52	12500	279	-3	154	
ZS31	5466181	128.3	130	3.9	4.76	66	-0.008	524	0.85	31	7.64	2.75	2.37	5980	745	5	405	
ZS31	5466182	130	132	5.7	3.67	680	0.025	446	0.69	36	9.47	2.12	1.92	16500	1420	-3	1520	
ZS31	5466183	132	133.15	5.3	2.45	75	-0.008	425	7.7	60	2.12	1.6	4.88	1150	386	-3	295	
ZS31	5466184	133.15	135	1.8	0.28	8	0.01	64	14.2	47	1.45	0.14	8.72	1200	34	-3	84	
ZS31	5466185	135	136.5	-0.5	0.13	25	-0.008	42	16.2	7	3.05	0.06	10.6	3390	39	-3	55	
ZS31	5466186	136.5	137.9	-0.5	0.12	7	-0.008	47	17.8	18	1.29	0.05	11.2	982	45	-3	22	
ZS31	5466187	137.9	140.1	1	0.18	-5	-0.008	44	13.8	7	1.62	0.08	8.6	1200	51	-3	67	
ZS31	5466188	140.1	141.7	5.6	0.17	18	-0.008	48	14.5	116	2.22	0.07	8.73	2160	1270	-3	716	
ZS31	5466189	141.7	143.6	11.9	0.32	166	-0.008	34	4.45	43	11.5	0.18	3.82	38500	4770	25	15200	1.49
ZS31	5466190	143.6	145.3	4.4	0.31	32	0.016	45	9.67	27	4.08	0.19	5.8	9710	1050	-3	970	
ZS31	5466191	145.3	147.65	-0.5	0.43	12	-0.008	58	12.3	14	1.72	0.25	7.04	1580	290	-3	83	
ZS31	5466192	147.65	148.5	17.5	0.39	59	-0.008	95	3.42	220	8.32	0.21	2.37	20400	11100	10	17000	1.48
ZS31	5466193	148.5	150.15	0.6	0.22	19	-0.008	46	12.8	53	2.4	0.15	6.77	3100	127	-3	256	
ZS31	5466194	150.15	152.1	3.8	0.38	113	-0.008	54	12.6	39	2.95	0.23	6.42	4540	808	-3	1870	
ZS31	5466195	152.1	152.95	3.4	2.62	94	-0.008	357	9.48	24	2.86	1.41	4.86	3550	1580	4	734	
ZS31	5466196	152.95	154.5	49.3	2.59	9550	0.269	218	2.05	428	16.7	1.32	1.64	14700	14900	6	32100	15.2
ZS31	5466197	154.5	156.2	11.4	0.75	2300	0.03	117	0.18	32	32.4	0.38	0.38	6580	2630	-3	18800	37.4
ZS31	5466198	156.2	157.87	4.1	1.11	264	0.009	132	0.37	6	23.5	0.59	5.66	22100	1300	-3	2950	
ZS31	5466199	157.87	158.31	13	8.99	218	-0.008	467	0.2	59	7.19	4.48	0.79	2050	2580	17	489	
ZS31	5466200	158.31	159	11.3	0.44	293	0.014	45	0.41	15	19.3	0.22	3.65	37000	4560	-3	15700	5
ZS31	5466201	159	160	1.7	6.77	102	-0.008	646	0.25	20	4.97	3.52	0.92	3810	418	9	585	
ZS31	5466202	160	161.5	0.6	8.57	35	-0.008	806	0.11	15	3.5	4.35	0.81	1110	78	5	133	
ZS31	5466203	161.5	162.8	0.7	7.11	54	-0.008	567	0.1	29	3.77	3.72	1.17	1490	55	5	74	
ZS31	5466204	162.8	165.5	1.6	6.25	20	-0.008	440	0.09	51	3.17	3.3	1.01	1710	82	4	67	
ZS31	5466205	165.5	167.5	-0.5	8.27	41	-0.008	595	0.11	26	3.58	4.11	0.83	613	38	-3	153	
ZS31	5466206	167.5	169	-0.5	8.56	29	-0.008	651	0.11	20	3.8	4.22	1.08	715	37	8	40	
ZS31	5466207	169	171.1	1.3	8.43	60	-0.008	598	0.12	24	4.51	4.18	0.96	1110	270	11	105	
ZS31	5466208	171.1	174	-0.5	3.44	17	-0.008	244	-0.05	40	2.31	1.87	0.64	545	15	-3	39	
ZS31	5466209	174	177	-0.5	4.49	8	-0.008	296	0.13	24	3.14	2.36	0.79	1630	74	-3	246	
ZS31	5466210	177	180	1.2	4.64	24	-0.008	306	0.07	36	3.11	2.45	0.74	2480	313	6	1970	
ZS31	5466211	180	182	-0.5	5.4	13	-0.008	355	0.09	21	2.91	2.83	0.83	804	15	4	32	

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ZS31	5466212	182	184.65	-0.5	4.93	17	-0.008	318	0.09	21	3.35	2.6	0.85	1330	37	5	43
ZS31	5466213	184.65	187.5	1	5.3	30	-0.008	307	0.07	21	3.5	2.9	0.91	3030	213	4	45
ZS31	5466214	187.5	189	39.4	6.34	33	-0.008	412	0.13	31	3.33	3.48	0.8	3800	16300	-3	121
ZS31	5466215	189	190.5	1	5.21	20	-0.008	352	0.07	22	3.1	2.84	0.64	3510	200	6	99
ZS31	5466216	190.5	193.5	-0.5	4.01	10	-0.008	273	-0.05	14	2.71	2.22	0.69	1280	65	6	43
ZS31	5466217	193.5	196.2	-0.5	2.86	6	-0.008	182	-0.05	58	2.79	1.59	0.71	736	16	-3	16
ZS31	5466218	196.2	198.7	1.3	5.06	56	-0.008	321	0.1	30	3.94	2.6	0.57	5110	288	5	46
ZS31	5466219	198.7	200.4	2.8	6.24	32	-0.008	328	0.09	125	3.64	3.26	0.64	5110	604	12	42
ZS31	5466220	200.4	202	6.1	6.53	54	-0.008	428	0.1	93	4.85	3.56	0.69	5980	396	8	48
ZS31	5466221	202	204	4.2	5.28	30	-0.008	291	0.08	68	4.08	2.69	0.6	4740	309	8	20
ZS31	5466222	204	205.7	5.2	6.69	35	-0.008	370	0.09	155	4.15	3.34	0.67	5240	310	7	60
ZS31	5466223	205.7	206.5	1.6	5.84	36	-0.008	385	0.07	19	3.37	3.14	0.59	4840	406	8	43
ZS31	5466224	206.5	208	2.7	7.48	39	-0.008	504	0.09	25	2.95	4.16	0.72	2770	322	6	62
ZS31	5466225	208	209.5	1.3	3.25	8	-0.008	160	0.07	11	4.44	1.73	0.66	8010	167	5	54

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Appendix IX

Stonehenge Wacker Sampling - Geology and Assay Data

STONEHENGE WACKER
(+ ROCK CHIPS)

Sample No	AMGE	AMGN	DPO No	Sample Type	Prospect	EL No	Local E	Local N	Depth	Bedrock	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
4142777	359958	5359532	77385	RKGRAB	STONEHENGE	EL28/88	12190	5360	0		Pos	Ssh	Lm		DG	Old trench.
4142778	359852	5359273	77385	RKGRAB	STONEHENGE	EL28/88	12174	5080	0		Posb	Sbs	VqSI		N	Graphitic shale in old trench
4142779	359845	5359275	77385	RKCHIP	STONEHENGE	EL28/88	12167	5080	3		Posb	Sbs	VqSiSh		N	Graphitic shale in old trench
4142780	359835	5359279	77385	RKCHIP	STONEHENGE	EL28/88	12156	5080	4		Posb	Sbs	VqSiSh		N	Graphitic shale in old trench
4142781	359831	5359280	77385	RKCHIP	STONEHENGE	EL28/88	12152	5080	4		Posb	Sbs	VqSiSh		N	Graphitic shale in old trench
4142782	359827	5359281	77385	RKCHIP	STONEHENGE	EL28/88	12148	5080	4		Posb	Sbs	VqSiSh		N	Graphitic shale in old trench
4142783	359823	5359283	77385	RKCHIP	STONEHENGE	EL28/88	12144	5080	3		Posb	Sbs	VqVsSiSh	Sp	N	Graphitic shale in old trench
4142784	359820	5359284	77385	RKCHIP	STONEHENGE	EL28/88	12140	5080	3		Posb	Sbs	VqVsSiSh	Sp	N	Graphitic shale in old trench
4142785	359801	5359290	77385	RKCHIP	STONEHENGE	EL28/88	12120	5080	5		Pos	SsiSsh	VqSI		DG	Minor graphite. old trench
4142786	359765	5359282	77385	RKCHIP	STONEHENGE	EL28/88	12089	5060	2		Posb	Sbs			N	Graphitic shale in old trench
4142787	359980	5359197	77385	RKCHIP	STONEHENGE	EL28/88	12320	5050	1		Pos	Ssh	Lm		DG	Shale bed in sst. on tramway
4142788	359941	5359237	77385	RKCHIP	STONEHENGE	EL28/88	12270	5075	3		Pos	Ssh	Lm		DG	Shale bed in sst. on tramway. Graphitic?
5466388	359537	5359508	77385	WACKER	STONEHENGE	EL28/88	11800	5200	5 Y		Pos	Ssi	We		B	
5466389	359529	5359484	77385	WACKER	STONEHENGE	EL28/88	11800	5175	5 Y		Pos	Ssi	LmVc	DI	G	
5466390	359521	5359461	77385	WACKER	STONEHENGE	EL28/88	11800	5150	5 Y?		Pos	SshCcy			GB	
5466391	359513	5359437	77385	WACKER	STONEHENGE	EL28/88	11800	5125	5.6 Y?		Pos	Ccy			G	
5466392	359505	5359413	77385	WACKER	STONEHENGE	EL28/88	11800	5100	1.5 N?		PosQha?	Ccy			B	
5466393	359496	5359390	77385	WACKER	STONEHENGE	EL28/88	11800	5075	1.5 N		Qha	CcyCs				
5466394	359488	5359366	77385	WACKER	STONEHENGE	EL28/88	11800	5050	7.6 Y		Posb	Ssh	Fi		N	Graphitic
5466395	359480	5359343	77385	WACKER	STONEHENGE	EL28/88	11800	5025	8.3 Y		Pos	Ssi			G	
5466396	359472	5359319	77385	WACKER	STONEHENGE	EL28/88	11800	5000	9.2 Y		Posb	Ssh	Fi		N	Graphitic
5466397	359464	5359295	77385	WACKER	STONEHENGE	EL28/88	11800	4975	6.3 Y		Pos	Ssh	Vn	Qz	W	
5466398	359456	5359272	77385	WACKER	STONEHENGE	EL28/88	11800	4950	3 N?		PoqQha?	SssCg?				May be gravel
5466399	359448	5359248	77385	WACKER	STONEHENGE	EL28/88	11800	4925	2.5 Y		Poq	Sss			LGW	
5466400	359439	5359224	77385	WACKER	STONEHENGE	EL28/88	11800	4900	2 Y		Poq	Sss			G	
5468301	359661	5359254	77385	WACKER	STONEHENGE	EL28/88	12000	5000	2.3 Y?		Pos	SsiCcy			LG	
5468302	359669	5359277	77385	WACKER	STONEHENGE	EL28/88	12000	5025	2 Y?		Pos	SsiCcy			LG	
5468303	359677	5359301	77385	WACKER	STONEHENGE	EL28/88	12000	5050	2.2 Y		Posb	Ssh	Fi		N	Graphitic
5468304	359686	5359325	77385	WACKER	STONEHENGE	EL28/88	12000	5075	1.2 Y?		Pos	Ssi?			B	
5468305	359694	5359348	77385	WACKER	STONEHENGE	EL28/88	12000	5100	9.3 Y?		Pos	SshCcy			DG	
5468306	359702	5359372	77385	WACKER	STONEHENGE	EL28/88	12000	5125	6.5 Y		Posb	Ssh	Fi		N	Graphitic
5468307	359710	5359396	77385	WACKER	STONEHENGE	EL28/88	12000	5150	13 Y		Pos	SsiSdl?	Lm		LGW	
5468308	359718	5359419	77385	WACKER	STONEHENGE	EL28/88	12000	5175	7.6 Y		Posb	Ssh	Fi		N	Graphitic
5468309	359726	5359443	77385	WACKER	STONEHENGE	EL28/88	12000	5200	5 Y		Pos	Ssh	We		LB	
5468310	359734	5359467	77385	WACKER	STONEHENGE	EL28/88	12000	5225	5.2 Y?		Pos	SsiCcy			B	
5468311	359743	5359490	77385	WACKER	STONEHENGE	EL28/88	12000	5250	13.5 Y		Pos	SsiSdl?	Lm		LGW	
5468312	359751	5359514	77385	WACKER	STONEHENGE	EL28/88	12000	5275	8.8 Y?		Pos	SsiCcy			B	
5468313	359759	5359537	77385	WACKER	STONEHENGE	EL28/88	12000	5300	3.8 Y?		Pos	SsiCcy			B+N	
5468314	359767	5359561	77385	WACKER	STONEHENGE	EL28/88	12000	5325	11.5 Y?		Pos	Ssi?			B	
5468315	359775	5359585	77385	WACKER	STONEHENGE	EL28/88	12000	5350	5.2 Y?		Pos	Ssi?			B	
5468316	359783	5359608	77385	WACKER	STONEHENGE	EL28/88	12000	5375	15 Y?		Pos	Ssi?			FB	

STONEHENGE WACKER
(+ ROCK CHIPS)

Sample No	AMGE	AMGN	DPO No	Sample Type	Prospect	EL No	Local E	Local N	Depth	Bedrock	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
5468317	359791	5359632	77385	WACKER	STONEHENGE	EL28/88	12000	5400	1.5 Y	Y	Poq	Sss			LGW	
5468318	359886	5359599	77385	WACKER	STONEHENGE	EL28/88	12100	5400	5 Y	Y	Poq	SssSsi			LGW	
5468319	359878	5359576	77385	WACKER	STONEHENGE	EL28/88	12100	5375	9.8 N?		Qha?	CsCcy			YO	
5468320	359870	5359552	77385	WACKER	STONEHENGE	EL28/88	12100	5350	23.6 Y		Posb	Ssh	Fi		N	Graphitic
5468321	359861	5359529	77385	WACKER	STONEHENGE	EL28/88	12100	5325	3 Y		Posb	Ssh	Fi		N	Graphitic
5468322	359853	5359505	77385	WACKER	STONEHENGE	EL28/88	12100	5300	1.5 Y		Posb	Ssh	Fi		N	Graphitic
5468323	359845	5359481	77385	WACKER	STONEHENGE	EL28/88	12100	5275	1 Y		Pos	Ssh			DG	
5468324	359837	5359458	77385	WACKER	STONEHENGE	EL28/88	12100	5250	1.8 Y		Posb?	Ssh	WeFi		LG	Weath. Graphitic?
5468325	359829	5359434	77385	WACKER	STONEHENGE	EL28/88	12100	5225	23.6 Y		Pos	Ssi			G	
5468326	359821	5359410	77385	WACKER	STONEHENGE	EL28/88	12100	5200	28.6 Y		Pos	Ssi			G	
5468327	359813	5359387	77385	WACKER	STONEHENGE	EL28/88	12100	5175	22.8 Y		Posb	Ssh	Fi		N	Graphitic
5468328	359805	5359363	77385	WACKER	STONEHENGE	EL28/88	12100	5150	17.6 Y		Posb	Ssh	Fi		N	Graphitic
5468329	359796	5359339	77385	WACKER	STONEHENGE	EL28/88	12100	5125	17.6 Y		Posb	Ssh	Fi		N	Graphitic
5468330	359788	5359316	77385	WACKER	STONEHENGE	EL28/88	12100	5100	6 Y		Pos	Sch			DG	Chert
5468331	359780	5359292	77385	WACKER	STONEHENGE	EL28/88	12100	5075	1.8 Y		Posb	Ssh	Fi		N	Graphitic
5468332	359772	5359269	77385	WACKER	STONEHENGE	EL28/88	12100	5050	0.8 Y?		Pos	Ssh?			B	
5468333	359764	5359245	77385	WACKER	STONEHENGE	EL28/88	12100	5025	0.8 N?		Qha?	CsCcy			LB	
5468334	359756	5359221	77385	WACKER	STONEHENGE	EL28/88	12100	5000	0.8 Y		Pos	Ssh			LB	
5468335	359850	5359189	77385	WACKER	STONEHENGE	EL28/88	12200	5000	0.8 N?		Qha?	CsCcy			LB	
5468336	359858	5359212	77385	WACKER	STONEHENGE	EL28/88	12200	5025	0.8 N?		PoqQha?	CsSss?			LB	
5468337	359867	5359236	77385	WACKER	STONEHENGE	EL28/88	12200	5050	1 N?		PoqQha?	CsSss?			LB	
5468338	359875	5359260	77385	WACKER	STONEHENGE	EL28/88	12200	5075	2.5 N?		PoqQha?	CsSss?			LB	
5468339	359883	5359283	77385	WACKER	STONEHENGE	EL28/88	12200	5100	10.6 Y?		Pos	SsiCcy			G	
5468340	359891	5359307	77385	WACKER	STONEHENGE	EL28/88	12200	5125	2.8 Y		Posb	Ssh	FiVq		N	Graphitic
5468341	359899	5359331	77385	WACKER	STONEHENGE	EL28/88	12200	5150	10.3 Y?		Pos?	Ccy			Y	
5468342	359907	5359354	77385	WACKER	STONEHENGE	EL28/88	12200	5175	6 Y?		T?	CsfCcy	Fe		YB	Ferrug clay after ironstone?
5468343	359915	5359378	77385	WACKER	STONEHENGE	EL28/88	12200	5200	1.1 Y		Pos	SsiSdl	Lm		LG	
5468344	359923	5359401	77385	WACKER	STONEHENGE	EL28/88	12200	5225	1.2 Y		Pos	Ssi	Sl		LG	
5468345	359932	5359425	77385	WACKER	STONEHENGE	EL28/88	12200	5250	29.3 Y		Pos	Ssi			G	
5468346	359940	5359449	77385	WACKER	STONEHENGE	EL28/88	12200	5275	2.4 Y		Pos	Ssi			G	
5468347	359948	5359472	77385	WACKER	STONEHENGE	EL28/88	12200	5300	3 Y		Pos	Ssi	Vq		G	
5468348	359956	5359496	77385	WACKER	STONEHENGE	EL28/88	12200	5325	3.6 Y		Pos	SsiSdl?			B	
5468349	359964	5359520	77385	WACKER	STONEHENGE	EL28/88	12200	5350	4.8 Y		Pos	Ssh			B+DG	
5468350	359972	5359543	77385	WACKER	STONEHENGE	EL28/88	12200	5375	2.1 N?			Ccy	Ds	Py	DB	
5468351	359980	5359567	77385	WACKER	STONEHENGE	EL28/88	12200	5400	2 N?		Qha?	OvqMq			LGW	quartzite or qtz gravels?
5468352	360075	5359534	77385	WACKER	STONEHENGE	EL28/88	12300	5400	2 Y?		Poq?	Sss			B	quartzite or qtz gravels?
5468353	360067	5359511	77385	WACKER	STONEHENGE	EL28/88	12300	5375	2.5 Y?		Poq?	Sss			B	quartzite or qtz gravels?
5468354	360059	5359487	77385	WACKER	STONEHENGE	EL28/88	12300	5350	8.8 Y		Pos	Ssi			G	minor veg contam.
5468355	360051	5359463	77385	WACKER	STONEHENGE	EL28/88	12300	5325	4.5 Y		Poq	Sss			LB	
5468356	360042	5359440	77385	WACKER	STONEHENGE	EL28/88	12300	5300	9.2 Y?		PoqQha	SssCg			G	ssst and qtz gravels
5468357	360034	5359416	77385	WACKER	STONEHENGE	EL28/88	12300	5275	8.5 Y		Pos	SsiSss			LG	fine sst?

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STONEHENGE WACKER
(+ ROCK CHIPS)

Sample No	AMGE	AMGN	DPO No	Sample Type	Prospect	EL No	Local E	Local N	Depth	Bedrock	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
5468358	360026	5359393	77385	WACKER	STONEHENGE	EL28/88	12300	5250	6.2 Y	Pos	SsSss				LG	fine sst?
5468359	360018	5359389	77385	WACKER	STONEHENGE	EL28/88	12300	5225	6.6 Y	Poq	Sss				LG	
5468360	360010	5359345	77385	WACKER	STONEHENGE	EL28/88	12300	5200	11.8 N?	Qha	CsCcy				DBG	sandy clay
5468361	360002	5359322	77385	WACKER	STONEHENGE	EL28/88	12300	5175	14 N	Qha	CsCcyCg				DB	sandy clay and qtz gravels
5468362	359994	5359298	77385	WACKER	STONEHENGE	EL28/88	12300	5150	32.8 N	Qha	Ccy				BG	
5468363	359985	5359274	77385	WACKER	STONEHENGE	EL28/88	12300	5125	11.8 Y	Pos	Ssh	Sl			DG	
5468364	359977	5359251	77385	WACKER	STONEHENGE	EL28/88	12300	5100	1.5 Y	Pos	Ssi	Lm			LG	
5468365	359969	5359227	77385	WACKER	STONEHENGE	EL28/88	12300	5075	2.5 Y	Poq	Sss				G	
5468366	359961	5359203	77385	WACKER	STONEHENGE	EL28/88	12300	5050	1 Y	Poq	Sss				W	
5468367	359953	5359180	77385	WACKER	STONEHENGE	EL28/88	12300	5025	1 Y	Poq	Sss				W	
5468368	359945	5359156	77385	WACKER	STONEHENGE	EL28/88	12300	5000	2.2 Y	Pos	Ssh				LG	
5468369	360080	5359242	77385	WACKER	STONEHENGE	EL28/88	12400	5125	1 Y	Poq	Sss				W	
5468370	360088	5359265	77385	WACKER	STONEHENGE	EL28/88	12400	5150	1 Y	Poq	Sss				W	
5468371	360096	5359289	77385	WACKER	STONEHENGE	EL28/88	12400	5175	1 Y	Pos	CcySsh	Lm			LB	Clay after shale/dolomite?
5468372	360104	5359313	77385	WACKER	STONEHENGE	EL28/88	12400	5200	1 Y	Pos	CcySsh	Lm			LB	Clay after shale/dolomite?
5468373	360113	5359336	77385	WACKER	STONEHENGE	EL28/88	12400	5225	1 Y	Pos	CcySsh	Lm			LB	Clay after shale/dolomite?
5468374	360121	5359360	77385	WACKER	STONEHENGE	EL28/88	12400	5250	3 Y	Pos	CcySsh	Lm			LB	Clay after shale/dolomite?
5468375	360129	5359384	77385	WACKER	STONEHENGE	EL28/88	12400	5275	1.4 N	Qha	CcyCg				B	
5468376	360137	5359407	77385	WACKER	STONEHENGE	EL28/88	12400	5300	1 Y	Pos	Ssi	Lm			B	
5468377	360145	5359431	77385	WACKER	STONEHENGE	EL28/88	12400	5325	3.2 N	Qha	CcyCg				DB	
5468378	360153	5359455	77385	WACKER	STONEHENGE	EL28/88	12400	5350	2.1 Y	Pos	Ssi	Lm			MWB	
5468379	360161	5359478	77385	WACKER	STONEHENGE	EL28/88	12400	5375	1.5 Y	Pos	Sh	Fi			DG	Not graphitic
5468380	360170	5359502	77385	WACKER	STONEHENGE	EL28/88	12400	5400	7.5 Y	Pos	Ssh	ShVc			G	
5468381	360264	5359469	77385	WACKER	STONEHENGE	EL28/88	12500	5400	1.3 Y	Pos	SsSsh	Lm			B	
5468382	360256	5359446	77385	WACKER	STONEHENGE	EL28/88	12500	5375	2 Y	Pos	SsSsh	Lm			ABLB	
5468383	360248	5359422	77385	WACKER	STONEHENGE	EL28/88	12500	5350	2.4 Y	Pos	SsSsh	Lm			ABLB	
5468384	360240	5359398	77385	WACKER	STONEHENGE	EL28/88	12500	5325	2.5 Y	Pos	SsSsh	Lm			ABLB	
5468385	360232	5359375	77385	WACKER	STONEHENGE	EL28/88	12500	5300	2 Y	Pos	SsSsh	Lm			ABLB	
5468386	360223	5359351	77385	WACKER	STONEHENGE	EL28/88	12500	5275	1.8 Y	Pos	SsSsh	Lm			ABLB	
5468387	360215	5359327	77385	WACKER	STONEHENGE	EL28/88	12500	5250	1.5 Y	PosPoq?	SsSss	Lm			LG	Laminated silt or fine sand
5468388	360207	5359304	77389	WACKER	STONEHENGE	EL28/88	12500	5225	6 Y	Poq	Sss	Sandy clay			LBW	Qtz vein frags. sandstone
5468389	360199	5359280	77389	WACKER	STONEHENGE	EL28/88	12500	5200	1.8 Y	Poq	Sss	Sandy clay			DBLBW	Qtz frags sandstone.
5468390	360191	5359257	77389	WACKER	STONEHENGE	EL28/88	12500	5175	2.2 Y	Poq	Sss	Sandy clay			LB	Qtz frags sandstone.
5468391	360183	5359233	77389	WACKER	STONEHENGE	EL28/88	12500	5150	1.5 Y	Poq	Sss	Sandy clay			LB	Qtz frags sandstone.
5468392	360175	5359209	77389	WACKER	STONEHENGE	EL28/88	12500	5125	1.2 Y	Pos	SssSsh	Sandy clay			LBW	sandstone/shale?
5468393	360166	5359186	77389	WACKER	STONEHENGE	EL28/88	12500	5100	1 Y	Pos	Ssh	Sandy clay			GW	(?chloritic)shale with vein qtz frags.
5468394	359653	5359230	77389	WACKER	STONEHENGE	EL28/88	12000	4975	1 Y	Poq	Sss	Sandy clay			LBBW	sandstone
5468395	359645	5359207	77389	WACKER	STONEHENGE	EL28/88	12000	4950	1 Y	Poq	Sss	sand			LBW	Qtz vein frags sandstone
5468396	359637	5359183	77389	WACKER	STONEHENGE	EL28/88	12000	4925	1 Y	Poq	Sss	Sandy clay			LBW	Qtz vein+other frags sandstone
5468397	359629	5359159	77389	WACKER	STONEHENGE	EL28/88	12000	4900	1 Y	Poq	Sss	Sandy clay	mica		LB	Qtz vein frags -sandstone
5468398	359723	5359127	77389	WACKER	STONEHENGE	EL28/88	12100	4900	1 Y	Pos	SssSsh	Sandy clay			B	Qtz vein(translucent in some)frags -sandy shale

STONEHENGE WACKER
(+ ROCK CHIPS)

Sample No	AMGE	AMGN	DPO No	Sample Type	Prospect	EL No	Local E	Local N	Depth	Bedrock	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
5468399	359731	5359150	77389	WACKER	STONEHENGE	EL28/88	12100	4925	1 Y	Poq	Sss		sand		B	sandstone with qtz vein frags
5468400	359739	5359174	77389	WACKER	STONEHENGE	EL28/88	12100	4950	1 Y	Poq	Sss		Sandy clay		LB	sandstone with qtz vein frags
5468701	359748	5359198	77389	WACKER	STONEHENGE	EL28/88	12100	4975	1 Y	Posb	Ssh		clay		DGB	Black and dk grey shale
5468702	357927	5359745	77389	WACKER	STONEHENGE	EL28/88	10200	4900	2.3 Y	Poq	Sss		Sandy clay		LGW	no Qtz vein frags
5468703	357935	5359769	77389	WACKER	STONEHENGE	EL28/88	10200	4925	5.3 Y	Pos	SshSd		Sandy clay		DLGLG	?dolomite unit
5468704	357943	5359793	77389	WACKER	STONEHENGE	EL28/88	10200	4950	1.2 N	Pos	Sss		sand		LB	?bedrock
5468705	357951	5359816	77389	WACKER	STONEHENGE	EL28/88	10200	4975	1.2 Y	Pos	Ssh		Sandy clay	sericite	LBG	sericite shale
5468706	357959	5359840	77389	WACKER	STONEHENGE	EL28/88	10200	5000	3.3 Y	Pos	Sss		sandy		DGLBW	Dark grey shale in part of sample
5468707	357967	5359863	77389	WACKER	STONEHENGE	EL28/88	10200	5025	1.2 Y	Pos	Ssh		Sandy clay		BLB	?sheared+altered shale
5468708	357975	5359887	77389	WACKER	STONEHENGE	EL28/88	10200	5050	4 Y	Pos	Ssh		Sandy clay		LGWLB	?sheared+altered shale
5468709	357984	5359911	77389	WACKER	STONEHENGE	EL28/88	10200	5075	3 Y	Pos	Ssh		Sandy clay		LBLG	?sheared+altered shale
5468710	357992	5359934	77389	WACKER	STONEHENGE	EL28/88	10200	5100	1 Y	Pos	SshSss		Sandy clay		LBLGW	with qtz vein frags+sandstone components
5468711	358621	5359612	77389	WACKER	STONEHENGE	EL28/88	10900	5000	0.5 Y	Poq	Sss		sand		W	White equigranular sandstone
5468712	358629	5359636	77389	WACKER	STONEHENGE	EL28/88	10900	5025	0.8 Y	Poq	Sss		sand		W	with white vein qtz-sandstone
5468713	358637	5359659	77389	WACKER	STONEHENGE	EL28/88	10900	5050	0.8 Y	Poq	Sss		sand		LB	?altered/rotted sandstone
5468714	358645	5359683	77389	WACKER	STONEHENGE	EL28/88	10900	5075	1 Y	Posb	Ssh		Sandy clay		GLGLB	rotted shale ?dk grey shale
5468715	358654	5359707	77389	WACKER	STONEHENGE	EL28/88	10900	5100	1 Y	Poq	Sss		sand	Limonitic	DBBO	Limonitic sandstone
5468716	358662	5359730	77389	WACKER	STONEHENGE	EL28/88	10900	5125	1.5 Y	Posb	Ssh		Sandy clay		LGGDG	Folded shale (dk grey/black)
5468717	358670	5359754	77389	WACKER	STONEHENGE	EL28/88	10900	5150	1 Y	Pos	Ssh		Sandy clay		LBG	grey shale
5468718	358678	5359777	77389	WACKER	STONEHENGE	EL28/88	10900	5175	1 Y	Pos	Sss		sand		WLG	cleaved sandstone
5468719	358686	5359801	77389	WACKER	STONEHENGE	EL28/88	10900	5200	8.2 Y	Pos	Ssh		Sandy clay	PyCl	DGVG	Odd shale with dissem pyrite and silicic clasts
5468720	358694	5359825	77389	WACKER	STONEHENGE	EL28/88	10900	5225	3.2 Y	Posb	Ssh		Sandy clay	Py	DGN	Black+grey shale
5468721	358702	5359848	77389	WACKER	STONEHENGE	EL28/88	10900	5250	2.8 Y	Posb	Ssh		Sandy clay		LGB	altered shale
5468722	358711	5359872	77389	WACKER	STONEHENGE	EL28/88	10900	5275	8.3 Y	Posb	Ssh		clay	Py	NLG	Black shale with dissem pyrite
5468723	358719	5359896	77389	WACKER	STONEHENGE	EL28/88	10900	5300	2.3 Y	Pos	Sss		Sandy clay	Limonite	OB	Heavily limonitic sandstone or shale?
5468724	358727	5359919	77389	WACKER	STONEHENGE	EL28/88	10900	5325	2 Y	Pos	Ssh		Sandy clay		LGGDG	?sericitic shale
5468725	358735	5359943	77389	WACKER	STONEHENGE	EL28/88	10900	5350	5.5 Y	Poq	Sss		sand		WLGLB	white Qtz vein frags in sandstone
5468726	358743	5359967	77389	WACKER	STONEHENGE	EL28/88	10900	5375	3.5 Y	Poq	SssSsh		sand		LB	white Qtz vein frags in sandstone(shale)
5468727	358751	5359990	77389	WACKER	STONEHENGE	EL28/88	10900	5400	1.5 Y	Poq	Sss		sand		LGW	white Qtz vein frags in sandstone
5468728	358957	5359972	77389	WACKER	STONEHENGE	EL28/88	11100	5450	3 Y	Pos	Sss		sand		GLBLG	Interbedded sands shales and silts unit
5468729	358949	5359949	77389	WACKER	STONEHENGE	EL28/88	11100	5425	1.5 Y	Pos	Ssh		sand		LBDG	Interbedded shales; dk grey/light brown
5468730	358940	5359925	77389	WACKER	STONEHENGE	EL28/88	11100	5400	4 Y	Pos	Ssh		Sandy clay		DGLGB	Interbedded shales
5468731	358932	5359901	77389	WACKER	STONEHENGE	EL28/88	11100	5375	3.4 Y	Pos	Ssh		sand	Sericite	LGDG	Interlaminated shales
5468732	358924	5359878	77389	WACKER	STONEHENGE	EL28/88	11100	5350	7 Y	Pos	Sss		Sandy clay	Limonite	LGO	Limonitic ?sandstone
5468733	358916	5359854	77389	WACKER	STONEHENGE	EL28/88	11100	5325	2.5 Y	Pos	Sss		sand		LG	cleaved sandstone
5468734	358908	5359830	77389	WACKER	STONEHENGE	EL28/88	11100	5300	1 Y	Posb	Ssh		sand		N	black shale
5468735	358900	5359807	77389	WACKER	STONEHENGE	EL28/88	11100	5275	1 Y	Pos	SssSsh		sand		DGGLG	Interbedded sands shales and silts unit
5468736	358892	5359783	77389	WACKER	STONEHENGE	EL28/88	11100	5250	1 Y	Pos	SssSsh		sand		EG	Interbedded sands shales and silts unit
5468737	358883	5359760	77389	WACKER	STONEHENGE	EL28/88	11100	5225	1.5 Y	Pos	SssSsh		sand		LGB	intermixed sandstone +/- shales + silts
5468738	358875	5359736	77389	WACKER	STONEHENGE	EL28/88	11100	5200	0.5 Y	Poq	SssSsh		sand		LG	powdery sandstone with cleaved ? shales
5468739	358867	5359712	77389	WACKER	STONEHENGE	EL28/88	11100	5175	1 Y	Pos	SssSsh		sand		LGLB	Interbedded sands shales and silts unit

STONEHENGE WACKER
(+ ROCK CHIPS)

Sample No	AMGE	AMGN	DPO No	Sample Type	Prospect	EL No	Local E	Local N	Depth	Bedrock	MRTLith	FieldID	Texture	Alt/Min	Colour	Comments
5468740	358859	5359689	77389	WACKER	STONEHENGE	EL28/88	11100	5150	1.5	Y	Pos	Ssh	Sandy clay		LGDG	Interlaminated shales
5468741	358851	5359665	77389	WACKER	STONEHENGE	EL28/88	11100	5125	1.2	Y	Poq	Sss	sand		LBW	white vein Qtz frags
5468742	358843	5359641	77389	WACKER	STONEHENGE	EL28/88	11100	5100	1	Y	Pos	SssSsh	sand		LGLB	Interbedded sands shales and silts unit
5468743	358835	5359618	77389	WACKER	STONEHENGE	EL28/88	11100	5075	1	Y	Posb	Ssh	sand		N	Black shale with Qtz vein
5468744	358826	5359594	77389	WACKER	STONEHENGE	EL28/88	11100	5050	1.5	Y	Posb	Ssh	sand		N	Black shale
5468745	358818	5359570	77389	WACKER	STONEHENGE	EL28/88	11100	5025	1.3	Y	Poq	Ssh	sand		BLB	Micaeous sandstone
5468746	358810	5359547	77389	WACKER	STONEHENGE	EL28/88	11100	5000	1	Y	Poq	Sss	sand		W	Qtz vein frags in sandstone
5468747	358802	5359523	77389	WACKER	STONEHENGE	EL28/88	11100	4975	10.5	Y	Posb	Ssh	clay		LGBN	mixed sample v pyrite in black shale
5468748	358794	5359500	77389	WACKER	STONEHENGE	EL28/88	11100	4950	2.3	N	Pos	Sss	Sandy clay		BOGDG	mixed up sample ?bedrock
5468749	358786	5359476	77389	WACKER	STONEHENGE	EL28/88	11100	4925	6.5	Y	Pos	Ssh	clay		LBLGG	shale with sandstone component
5468750	358778	5359452	77389	WACKER	STONEHENGE	EL28/88	11100	4900	5.8	Y	Pos	Ssh	clay		NDGBV	weathered clay mixed colours.

STONEHENGE WACKER
(+ ROCK CHIPS)

Sample No	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
4142777	1.8	8.34	30	809	-0.05	8	1.05	3.41	0.74	41	22	20
4142778	1.7	6.57	-5	388	-0.05	83	1.42	2.54	0.54	57	87	13
4142779	1	6.88	28	485	-0.05	77	1.92	3.27	0.67	63	33	18
4142780	3.7	4.73	19	318	-0.05	23	0.35	2.4	0.47	41	103	87
4142781	1.1	5.91	9	399	-0.05	41	0.42	2.7	0.55	51	176	48
4142782	4.4	4.45	7	276	-0.05	34	0.35	1.73	0.32	37	145	144
4142783	4.8	4.98	18	361	-0.05	27	0.64	2.43	0.41	39	1940	21100
4142784	6.9	5.58	-5	373	-0.05	21	0.36	2.36	0.44	46	759	914
4142785	2.1	4.89	-5	341	0.06	29	0.37	2.16	0.51	42	56	20
4142786	0.9	9.07	-5	953	-0.05	43	0.51	3.53	0.94	90	34	19
4142787	-0.5	9.52	-5	562	-0.05	11	0.83	3.62	0.48	17	41	22
4142788	0.6	7.58	-5	467	-0.05	-5	0.64	2.88	0.29	11	37	13
5466388	-0.5	7.82	9	387	-0.05	-5	0.89	3.78	0.74	12	41	12
5466389	-0.5	12.2	-5	647	-0.05	-5	0.57	5.21	0.52	24	-10	19
5466390	7.7	2.89	-5	225	0.06	32	0.07	0.84	0.11	-10	512	15
5466391	1.7	6.78	29	989	-0.05	83	1.75	2.91	0.67	27	391	755
5466392	-0.5	8.27	36	376	-0.05	26	0.47	3.51	0.77	57	26	4040
5466393	-0.5	0.18	-5	18	-0.05	7	0.39	0.09	0.02	25	18	17
5466394	-0.5	7.87	87	588	-0.05	129	4.15	3.76	0.75	98	313	428
5466395	2.2	2.1	33	90	0.06	2010	0.38	0.32	0.11	14	1640	1590
5466396	-0.5	5.33	119	269	0.05	155	2.43	2.33	0.38	73	11900	9300
5466397	0.8	4.54	-5	220	-0.05	6	0.24	1.81	0.16	-10	33	16
5466398	0.6	5.04	-5	219	-0.05	-5	0.21	2.06	0.15	12	270	16
5466399	-0.5	3.91	-5	139	-0.05	15	1.63	1.47	0.12	10	50	25
5466400	-0.5	2.2	-5	114	-0.05	5	0.17	0.9	0.09	11	28	13
5468301	-0.5	9.66	-5	435	-0.05	7	0.47	3.66	0.86	81	60	14
5468302	-0.5	10.4	13	498	-0.05	16	0.7	3.97	0.9	69	44	18
5468303	-0.5	11.7	-5	677	-0.05	94	0.75	4.45	1.13	77	91	31
5468304	2.1	0.55	21	134	-0.05	23	0.21	0.13	0.02	-10	100	51
5468305	3.1	2.31	426	326	-0.05	44	4.57	1.04	0.21	36	2440	16900
5468306	2.1	4.1	55	335	-0.05	102	1.88	1.93	0.23	26	657	7300
5468307	-0.5	6.4	23	520	-0.05	9	0.72	3.4	0.86	21	22	1680
5468308	106	3.97	322	253	-0.05	1000	3.08	1.71	0.25	141	96300	96500
5468309	-0.5	10.2	28	515	-0.05	32	1.34	4.98	0.47	14	277	2250
5468310	-0.5	2.77	-5	183	-0.05	6	0.31	1.31	0.14	16	145	80
5468311	-0.5	5.79	-5	698	-0.05	50	0.28	2.38	0.47	-10	328	508
5468312	-0.5	4.74	-5	625	-0.05	40	0.16	1.97	0.48	-10	141	51
5468313	-0.5	7.5	12	630	-0.05	80	1.32	3.68	0.81	17	168	117
5468314	-0.5	3.47	56	226	-0.05	7	2.23	1.58	0.37	11	782	2350
5468315	-0.5	5.46	35	97	-0.05	-5	4.96	0.81	0.18	-10	31	1810
5468316	-0.5	5.23	-5	724	-0.05	-5	0.43	1.82	0.25	-10	13	267

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STONEHENGE WACKER
(+ ROCK CHIPS)

Sample No	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
5468317	-0.5	1.51	-5	309	-0.05	-5	0.16	0.7	0.07	-10	11	8
5468318	-0.5	7.27	8	6570	-0.05	-5	0.81	3.93	0.94	147	46	21
5468319	-0.5	7.65	14	7470	-0.05	-5	1.03	4.02	0.92	23	63	48
5468320	-0.5	5.68	16	935	0.15	51	3.45	3.19	0.67	235	253	89
5468321	-0.5	10.7	21	568	0.06	38	2.74	4.83	0.77	90	57	64
5468322	-0.5	10.1	23	439	0.08	23	2.64	4.5	0.61	60	39	67
5468323	-0.5	12.2	-5	561	-0.05	18	0.56	4.86	0.68	10	25	22
5468324	-0.5	11.4	16	550	-0.05	-5	0.55	5.48	0.64	46	21	18
5468325	-0.5	0.14	23	26	7.75	-5	8.53	0.08	8.11	14500	280	576
5468326	-0.5	0.25	151	42	3.66	-5	16.1	0.15	9.75	11000	121	593
5468327	0.7	6.22	63	567	0.08	82	3.33	2.91	0.64	108	357	1190
5468328	-0.5	8.08	140	347	0.06	74	4.53	3.26	0.72	142	178	2200
5468329	0.8	8.93	142	614	0.06	41	2.35	3.56	0.56	58	273	5010
5468330	-0.5	0.21	14	44	-0.05	-5	0.24	-0.05	0.02	26	76	967
5468331	2.5	8.6	292	620	0.16	113	4.33	3.43	0.61	124	2580	7220
5468332	-0.5	2.88	-5	229	-0.05	-5	0.29	2.31	0.33	11	15	15
5468333	-0.5	1.73	-5	201	-0.05	6	0.26	1.08	0.15	10	13	15
5468334	-0.5	3.97	-5	320	-0.05	-5	0.43	2.87	0.28	13	24	12
5468335	-0.5	1.01	-5	176	-0.05	-5	0.13	0.69	0.06	-10	14	9
5468336	-0.5	1.33	-5	200	0.11	7	0.18	0.81	0.02	17	14	8
5468337	-0.5	2.4	-5	291	0.1	-5	0.17	1.7	0.09	10	17	9
5468338	-0.5	5.7	-5	351	-0.05	-5	0.39	3.01	0.35	15	-10	13
5468339	-0.5	5.74	25	419	-0.05	29	1.59	3.61	0.98	27	43	862
5468340	-0.5	6.02	128	566	-0.05	31	2.45	2.38	0.48	64	434	6210
5468341	-0.5	0.38	-5	136	0.42	10	2.6	0.32	26	3720	28	700
5468342	-0.5	1.7	379	241	0.21	-5	28.8	1.09	0.03	2500	975	5170
5468343	-0.5	3.91	-5	249	0.05	-5	4.19	2.34	9.44	3680	18	960
5468344	-0.5	-0.01	15	21	2.34	-5	5.99	-0.05	3.76	6870	36	904
5468345	-0.5	2.71	25	248	-0.05	26	1.09	2.03	0.67	38	116	3760
5468346	-0.5	4.59	12	321	-0.05	29	0.59	2.54	0.37	11	42	985
5468347	1.2	0.66	-5	134	-0.05	-5	0.43	0.57	0.06	-10	29	801
5468348	1.5	0.66	-5	153	-0.05	-5	0.21	1.07	0.13	-10	56	136
5468349	5.9	4.44	153	569	-0.05	84	3.37	2.2	0.38	19	1160	5090
5468350	2.7	0.75	200	88	-0.05	50	4.64	-0.05	0.09	13	794	3010
5468351	-0.5	1.03	-5	153	-0.05	-5	0.19	0.83	0.13	-10	15	17
5468352	1.2	0.66	-5	92	-0.05	-5	0.16	0.18	0.08	-10	72	12
5468353	4.2	-0.01	-5	53	-0.05	-5	0.17	-0.05	0.02	-10	20	31
5468354	3.8	0.54	-5	145	-0.05	-5	0.36	0.76	0.13	21	38	13
5468355	1.9	-0.01	-5	17	-0.05	-5	0.22	-0.05	0.02	13	-10	577
5468356	1.3	2.1	-5	185	-0.05	-5	0.36	1.14	0.17	24	51	8
5468357	1.1	1.32	-5	201	-0.05	-5	0.81	1.62	0.13	23	57	34

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STONEHENGE WACKER
(+ ROCK CHIPS)

Sample No	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
5468358	1.2	1.17	6	208	-0.05	-5	0.48	1.66	0.18	20	54	13
5468359	2.7	-0.01	6	70	-0.05	6	0.16	-0.05	0.02	28	70	660
5468360	-0.5	-0.01	20	62	-0.05	11	1.2	-0.05	0.05	147	30	444
5468361	-0.5	-0.01	-5	19	-0.05	-5	0.55	-0.05	0.02	60	22	759
5468362	0.6	3.53	53	273	-0.05	11	3.53	1.89	0.17	203	149	4470
5468363	5.5	2.31	45	307	-0.05	28	0.59	1.14	0.16	18	2290	16200
5468364	-0.5	4.61	-5	390	-0.05	-5	0.32	2.4	0.24	12	36	65
5468365	-0.5	1.64	-5	182	-0.05	6	0.3	0.76	0.11	19	101	280
5468366	-0.5	1.48	-5	159	-0.05	13	0.21	0.82	0.14	-10	11	12
5468367	-0.5	0.82	-5	174	-0.05	-5	0.19	0.99	0.11	-10	12	10
5468368	-0.5	5.76	-5	427	-0.05	-5	0.58	2.79	0.45	-10	28	18
5468369	-0.5	-0.01	-5	8	-0.05	-5	0.09	-0.05	0.01	-10	-10	9
5468370	-0.5	0.37	-5	97	-0.05	-5	0.14	0.26	0.06	-10	-10	7
5468371	-0.5	4.47	-5	305	-0.05	-5	0.37	3	0.29	11	-10	10
5468372	-0.5	3.54	-5	545	-0.05	6	0.21	2.7	0.23	-10	95	9
5468373	0.5	0.55	-5	165	-0.05	-5	0.2	1.09	0.13	-10	28	10
5468374	-0.5	6.55	9	331	-0.05	6	0.4	2.86	0.36	-10	79	52
5468375	0.8	1.93	-5	143	-0.05	-5	0.23	0.83	0.18	10	197	11
5468376	-0.5	6.12	-5	462	-0.05	-5	0.47	3.8	0.4	15	42	16
5468377	0.8	3.87	-5	201	-0.05	-5	0.29	1.65	0.15	11	61	9
5468378	1	4.14	6	223	-0.05	-5	0.26	1.63	0.16	-10	176	12
5468379	1.4	4.38	11	233	-0.05	45	0.25	2.01	0.21	-10	49	9
5468380	6.1	5.13	11	355	-0.05	22	0.61	2.78	0.24	17	1100	291
5468381	-0.5	5.07	7	496	-0.05	-5	0.26	3.36	0.63	-10	38	12
5468382	-0.5	10	-5	491	-0.05	-5	0.58	3.9	0.41	17	108	12
5468383	-0.5	6.98	-5	353	-0.05	-5	0.45	3.1	0.33	12	61	11
5468384	-0.5	5.07	-5	271	-0.05	-5	0.35	2.14	0.24	-10	435	9
5468385	0.6	3.62	12	199	-0.05	-5	0.48	1.62	0.17	-10	32	8
5468386	0.7	5.58	-5	193	-0.05	-5	0.23	1.99	0.17	-10	53	8
5468387	-0.5	3.59	-5	198	-0.05	-5	0.26	1.62	0.17	-10	56	9
5468388	-0.5	1.32	-5	86	-0.05	-5	0.26	0.61	0.07	11	67	10
5468389	1.9	1	-5	50	-0.05	9	0.15	0.35	0.05	11	51	14
5468390	-0.5	1.23	-5	73	-0.05	-5	0.17	0.56	0.06	-10	57	10
5468391	0.7	0.51	-5	32	-0.05	-5	0.22	0.22	0.02	11	23	9
5468392	-0.5	5.94	-5	393	-0.05	-5	0.3	2.92	0.19	-10	101	13
5468393	-0.5	5.37	-5	342	-0.05	-5	0.44	2.5	0.26	18	29	15
5468394	1.5	1.23	-5	62	-0.05	-5	0.17	0.58	0.08	10	56	10
5468395	4.2	4.56	-5	269	-0.05	-5	0.27	2.2	0.22	12	126	11
5468396	-0.5	5	6	265	-0.05	-5	0.28	2.25	0.2	-10	35	11
5468397	-0.5	4.46	8	224	-0.05	-5	0.24	2.08	0.19	-10	200	10
5468398	-0.5	3.41	10	173	-0.05	-5	0.28	1.64	0.18	-10	20	10

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STONEHENGE WACKER
(+ ROCK CHIPS)

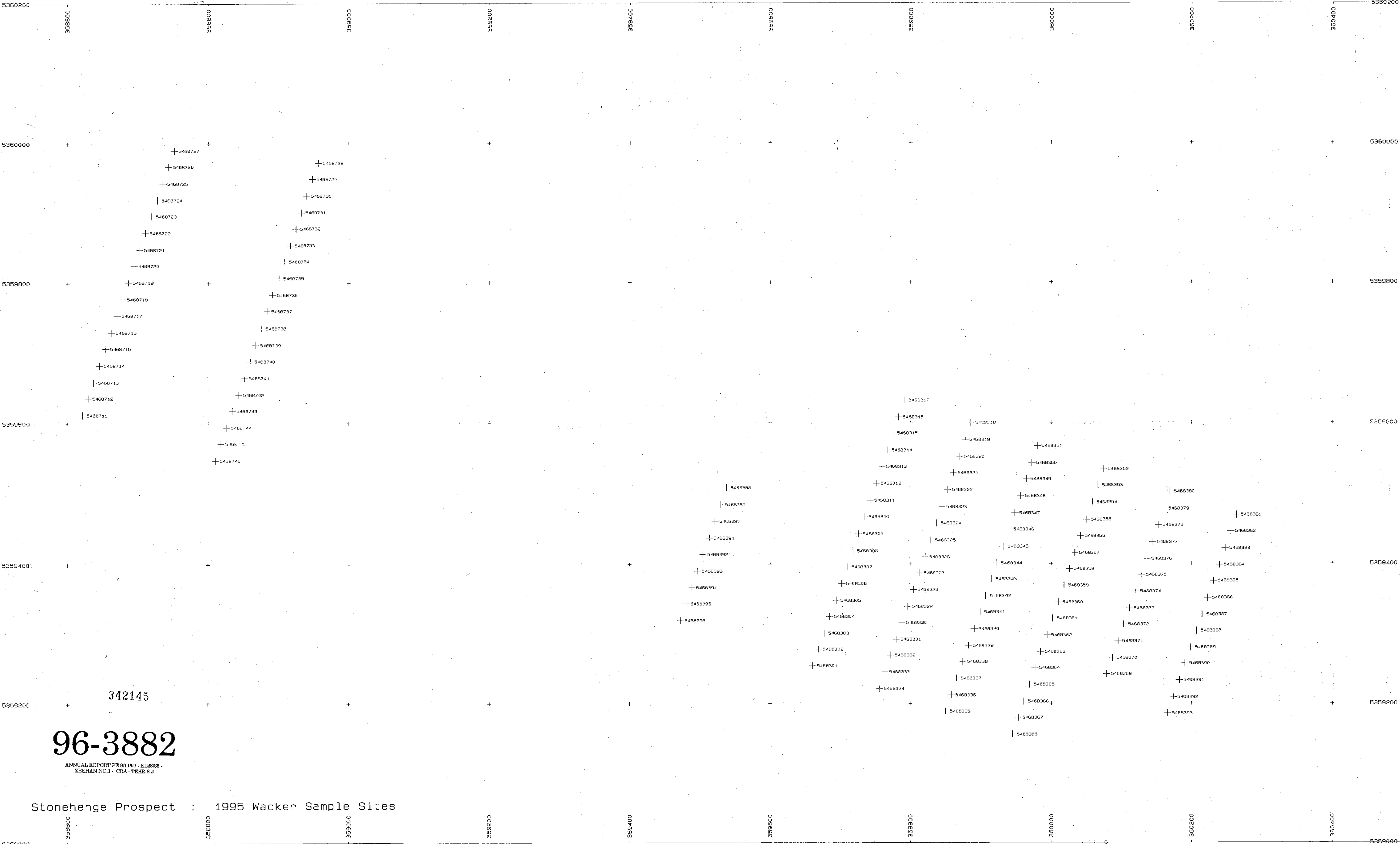
Sample No	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
5468399	-0.5	1.91	-5	118	-0.05	-5	0.17	0.85	0.08	-10	19	10
5468400	-0.5	2.78	-5	152	-0.05	-5	0.23	1.33	0.14	-10	24	13
5468701	-0.5	8.66	6	495	-0.05	-5	0.5	4.22	0.42	13	30	18
5468702	-0.5	5.48	11	107	0.28	53	2.77	0.32	1.29	721	298	144
5468703	-0.5	5.27	21	639	-0.05	28	0.64	2.05	0.29	305	755	455
5468704	-0.5	3.01	-5	230	-0.05	-5	0.33	1.39	0.17	212	13	16
5468705	-0.5	5.4	-5	339	-0.05	-5	0.37	2.63	0.33	22	21	13
5468706	-0.5	3.3	-5	231	-0.05	-5	0.28	1.36	0.15	20	25	12
5468707	1.9	7.55	-5	631	-0.05	-5	0.51	3.86	0.42	80	808	23
5468708	0.6	8.15	9	507	-0.05	-5	0.49	3.39	0.37	33	262	21
5468709	-0.5	8.46	-5	334	-0.05	-5	0.44	2.88	0.34	56	65	16
5468710	1.1	5.07	-5	306	-0.05	-5	0.36	2.44	0.35	199	165	34
5468711	-0.5	3.43	-5	177	-0.05	-5	0.31	1.43	0.17	32	-10	17
5468712	0.5	2.53	-5	119	-0.05	6	0.3	1.19	0.12	56	12	12
5468713	1	2.92	-5	167	-0.05	-5	0.31	1.3	0.15	85	13	13
5468714	-0.5	9.07	11	553	-0.05	-5	0.56	4.21	0.35	40	31	32
5468715	-0.5	6.4	23	312	-0.05	63	3.55	2.3	0.31	36	29	18
5468716	-0.5	6.89	-5	552	-0.05	-5	0.64	4.58	0.41	35	58	23
5468717	-0.5	7.73	-5	556	-0.05	6	0.58	3.44	0.41	132	65	30
5468718	-0.5	2.97	-5	239	-0.05	15	0.32	1.37	0.18	87	73	19
5468719	-0.5	4.76	-5	114	0.07	6	6.94	0.23	8.36	1430	323	955
5468720	0.7	7.68	-5	604	-0.05	10	0.65	4.63	0.52	26	89	21
5468721	-0.5	8.18	-5	576	-0.05	-5	0.53	3.7	0.44	65	27	20
5468722	-0.5	8.01	25	407	-0.05	53	3.91	0.77	2.64	180	544	696
5468723	-0.5	4.36	180	230	-0.05	130	32.9	2.02	0.46	217	320	1870
5468724	-0.5	7.41	-5	545	-0.05	-5	0.63	3.87	0.49	18	41	21
5468725	-0.5	3.83	-5	218	-0.05	-5	0.36	1.46	0.19	24	63	14
5468726	-0.5	5.72	-5	364	-0.05	-5	0.47	2.53	0.31	24	214	14
5468727	-0.5	0.33	-5	27	-0.05	-5	0.16	0.15	0.02	22	12	8
5468728	-0.5	7.89	19	519	-0.05	13	1.47	3.3	0.33	51	266	88
5468729	0.7	8.03	31	654	-0.05	49	1.01	3.59	0.32	49	2010	61
5468730	-0.5	9.6	11	487	-0.05	9	0.63	3.93	0.5	140	507	83
5468731	0.7	4.62	-5	269	-0.05	-5	0.34	1.88	0.24	20	59	16
5468732	2.4	8.96	6	1250	-0.05	15	1.22	2.54	0.46	24	295	30
5468733	-0.5	7.37	-5	443	-0.05	-5	0.48	3.34	0.48	16	32	5
5468734	-0.5	10.5	-5	648	-0.05	-5	0.64	4.19	0.54	40	47	21
5468735	-0.5	4.73	-5	274	-0.05	11	0.72	2	0.3	156	65	37
5468736	-0.5	8.69	-5	423	-0.05	-5	0.59	3.58	0.31	-10	68	19
5468737	-0.5	4.4	-5	245	-0.05	-5	0.37	1.85	0.19	37	79	11
5468738	0.6	3.06	-5	408	-0.05	5	0.36	1.39	0.19	14	44	13
5468739	-0.5	5.5	-5	360	0.13	-5	0.37	2.24	0.24	52	210	11

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STONEHENGE WACKER
(+ ROCK CHIPS)

Sample No	Ag	Al	As	Ba	Ca	Cu	Fe	K	Mg	Mn	Pb	Zn
5468740	-0.5	8.87	-5	511	-0.05	-5	0.66	3.89	0.46	25	26	19
5468741	-0.5	2.35	-5	125	-0.05	-5	0.29	1.08	0.13	18	41	7
5468742	-0.5	3.59	-5	198	-0.05	-5	0.29	1.56	0.18	21	28	7
5468743	0.7	9.12	45	542	-0.05	140	2.09	3.67	0.6	366	245	28
5468744	-0.5	10.8	-5	641	-0.05	48	2.12	4.22	0.71	109	35	24
5468745	-0.5	2.19	-5	131	-0.05	7	0.26	0.89	0.11	21	16	7
5468746	-0.5	0.26	-5	20	-0.05	-5	0.14	0.1	0.02	17	-10	6
5468747	-0.5	8.82	96	459	-0.05	44	1.6	2.73	0.66	208	457	491
5468748	-0.5	1.04	-5	61	-0.05	10	0.58	0.28	0.06	32	18	10
5468749	2.2	13	34	76	-0.05	774	2.26	0.66	0.85	284	2500	1150
5468750	-0.5	9.15	-5	31	-0.05	277	13.1	0.19	4.29	1050	-10	221

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Stonehenge Prospect : 1995 Wacker Sample Sites

Appendix X

Zinc Mineralisation in the Gordon Limestone

Zinc Mineralisation in the Gordon Limestone

CRAE's exploration and research activities directed at locating carbonate-hosted Zn-Pb mineralisation within Gordon Limestone at Zeehan have led to a number of mineralisation styles being recognised. The following discussion is a synthesis of CRAE's current level of knowledge, gained from work throughout the Zeehan area.

CRAE's exploration activities in the Zeehan area have indicated that Zn-Pb mineralisation within the Gordon Limestone may be pre-Devonian in age, and therefore unrelated to the Tabberabberan Orogeny. On this basis, it is possible that carbonate-hosted Zn-Pb mineralisation may be more widespread than that presently under evaluation at Zeehan.

The Gordon Limestone originally occupied a large area, deposited at the close of a major period of tectonic activity that produced the metal-rich Mount Read Volcanics. During and immediately before carbonate deposition the tectonic regime was still unstable, evidenced by rapid changes in stratigraphic thickness of Ordovician strata. Hydrothermal systems may have continued to emit metals into this system, focussed by basement irregularities and syn-sedimentary faults.

The present Gordon Limestone exposure is a vestige of Devonian deformation. Ordovician mineralisation may have a distribution totally independent of the well-documented Devonian systems.

Five targets are recognised for the carbonate-hosted Zn mineralisation in Gordon Limestone at Zeehan, subdivided by the stratigraphic interval in which they are hosted (Figure):-

- stratabound at the lower limestone-sandstone contact
- stratabound at the upper limestone-quartzite contact
- stratabound within a sub-unit in the middle of the limestone sequence
- structurally controlled discordant mineralisation
- surficial "clay-hosted" accumulations developed above primary mineralisation.

Stratabound at the lower limestone-sandstone contact

Mineralisation at Grieves and Mariposa falls into this category. Alteration located at Blackjacks, Pyramid and Professor Range may also belong to this deposit type.

This position is characterised by carbonaceous and/or ferruginous clays resting on the Moina Sandstone, in turn overlain by a massive siderite zone. The siderite zone passes stratigraphically upward either gradationally or abruptly into unaltered and unmineralised limestone. The clay layer may be up to 50m thick and the siderite zone up to 25m thick. Both may contain Zn mineralisation up to several percent. The clay and siderite zone are laterally quite uniform and it may be that the mineralisation is actually stratiform.

Mineralisation of this style has an alteration halo that is both visually and geochemically distinct. This halo, characterised by vuggy, broken or massive recrystallised Fe-carbonate and Fe-rich clays, may extend laterally hundreds of metres beyond the main Zn mineralisation, and thus present a considerably larger target than the mineralised core. Lateral alteration geochemistry is reflected by Fe-Mn-As-Zn. Stratigraphy above the mineralised core is a weaker halo of elevated Zn ($\pm$ As).

Ore mineralogy, based on work at Grieves, is complex with a mixture of zincian siderite and minor sphalerite in the siderite zone, and a Zn-clay with minor to moderate amounts of sphalerite in the siderite zone, and a Zn-clay with minor to moderate amounts of sphalerite in the clay zone. It is not known whether this is a regional characteristic of this position.

The stratiform character, replacive style of alteration/mineralisation, intense Fe-Mn alteration, and reasonably predicatable geometry suggest similarities to Navan or Reocin.

Stratabound at the upper limestone-quartzite contact

Low-grade but widely anomalous zones from Firewood Siding, Grieves, Professor Range, Sunny Corner, and Mariposa are examples of this type.

Upper zone mineralisation occurs near the contact between the limestone and overlying Crotty Quartzite. Mineralisation is not closely bound to the upper quartzite contact, but may "wander" up to 100m stratigraphically below the contact.

Mineralisation appears characterised by widespread but low-level Zn in the 0.1% to 2% Zn range. None of the prospects tested has revealed a higher-grade core, although given the limited drilling it is entirely possible high-grade cores may exist. Limited mineralogy suggests all Zn to be as sphalerite.

Air-core drilling shows the mineralised zones to be comprised of clays and decomposed carbonate. Rare fresher material is usually a granular recrystallised dolomite, and can be ferroan. Intense siderite alteration is absent. A detailed geochemical study of the alteration has not been completed.

The upper zone style may be occurring within karstic structures formed by Ordovician weathering before deposition of the Crotty Quartzite. This setting is analogous to Bleiberg or Cracow-Silesia.

Stratabound in a middle sub-unit of the limestone sequence

Currently two occurrences fall into this grouping, Grieves middle zone, and Oceana. Apart from their stratigraphic concurrence, these two deposits may not share many other similarities.

The mineralised middle sub-unit is equidistant from the upper and lower contacts, although facies variations may affect the location at other prospects. Mineralisation is breccia hosted, and in the case of Grieves has a linear aspect. For Grieves there is very little indication of proximity to mineralisation as there is virtually no alteration outside the breccia zone itself.

Mineralogy at Grieves is a mixture of zincian siderite and sphalerite. Oceana is dominated by galena with subordinate (?) sphalerite. There is also intense siderite alteration at Oceana, presumably containing Zn?

Zinc grades at both prospects are high, locally forming massive sulphide.

There has been insufficient work completed at Grieves middle zone to suggest any controlling mechanisms.

Structurally controlled discordant mineralisation

Most mineralisation in the Zeehan area is structurally controlled. Mineralisation at the historic Mariposa mine, and at Myrtle belong to this type. Possibly some of the mineralisation at Oceana is also structurally controlled.

Structurally controlled mineralisation may occur at any stratigraphic level. It appears to be late-stage filling of brittle fractures. Alteration of wall-rocks is absent, and the gangue to mineralisation may be pure calcite. Mineralisation within the structures is patchily distributed. Ore minerals are coarse-grained sulphides.

Devonian deformation is the likely cause of the fracturing and mineralisation. Potential deposit size is small, although the presence of discordant mineralisation may indicate a nearby stratabound source. Late-stage structurally controlled deposits *per se* are not currently considered a valid CRAE target.

Surficial "clay-hosted" accumulations developed above primary mineralisation

Surficial Zn accumulations within decomposed carbonate was CRAE's original target for carbonate exploration in Zeehan. All currently tested prospects were selected due to the presence of known surficial mineralisation.

It has now been conclusively demonstrated that the surficial mineralisation occupies the surface trace of underlying stratabound mineralisation. Geometry of the surficial deposits are therefore dependent on the shape and extent of this underlying mineralisation. Depth extent of the Zn-rich clays and decomposed carbonates averages 10m to 20m, but have been reported to be over 100m at Oceana.

A thin layer of decomposed carbonate exists over large areas of limestone, but this layer only thickens and becomes substantially Zn-rich as "basement" mineralisation is approached. Areas of +0.1% Zn in the clay layer are regionally extensive, indicating substantial dispersions from the primary zone. Clay thickness and Zn grade may be useful vectors toward primary zones. Geochemically inert peat and gravels up to 5m thick obscure the clays and limestone over virtually the entire trace of the Gordon Limestone.

Zinc ore mineralogy is dominantly to exclusively sphalerite.

Because of their restriction to the surface zone, the potential size of the surficial deposit is somewhat limited. They are probably unlikely to be a CRA target in themselves. Their main attraction is their usefulness as an indicator of the underlying primary mineralisation. If a large primary deposit suitable to CRAE's requirements can be identified, then the surficial deposits would possibly be an easy way to generate short-term cash-flow whilst the major deposit was being developed.

Zinc-rich clay deposits overlying primary carbonate mineralisation have been described at Tynagh and Silvermines.