

CRA EXPLORATION PTY. LIMITEDMOUNT DUNDAS EL 45/92, TASMANIA.REPORT ON EXPLORATION FOR THE FIRST YEAR OF TENURE.16/4/93 TO 15/3/94.

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CONTENTS

	Page no.
1. SUMMARY	1
2. INTRODUCTION	2
3. CONCLUSIONS	2
4. RECOMMENDATIONS	3
5. REGIONAL GEOLOGY	3
6. MINERALISATION	5
7. PREVIOUS EXPLORATION BY COMPETITORS	7
8. EXPLORATION ACTIVITIES FOR THE PERIOD 16/4/93 TO 16/3/94	9
8.1 Exploration Philosophy	9
8.2 Mariposa Prospect	10
8.2.1 Introduction	10
8.2.2 Geology	10
8.2.3 Aircore Drilling	11
8.2.4 Resampling of EZ Diamond Drillholes	13
8.2.5 Mineralogical Studies	14
8.2.6 Proposed Work Program	15
8.3 Sunny Corner-Bannockburn Prospect	15
8.3.1 Introduction	15
8.3.2 Aircore Drilling	16
8.3.4 Resampling of EZ Diamond Drillholes	17
8.3.5 Proposed Work Program 1994/95	17

8.4	Lackjacks Prospect	
8.4.1	Introduction	17
8.4.2	Geology	18
8.4.3	Aircore Drilling	18
8.4.4	Mineralogical Studies	18
8.4.5	Proposed Work Program 1994/95	20
8.5	Resource Considerations	20
9.	ENVIRONMENT	20
	REFERENCES	21
	KEYWORDS	22
	LOCATION	22
	LIST OF DPOs	22
	LIST OF APPENDICES	22
	LIST OF PLANS	

## 1. SUMMARY

CRA Exploration Pty. Limited (CRAE) is exploring EL45/92 for surficial secondary Zn deposits derived from the decomposition of Ordovician Gordon Limestone and underlying primary stratiform/stratabound carbonate-hosted Zn mineralisation.

Zinc (and Pb) is being enriched at the surface by dissolution of the carbonate. This decarbonatisation has left a layer of black sulphidic pug sitting above fresh limestone in which Zn has been retained and concentrated. The black pug is sporadically developed at-surface over virtually all areas of Gordon Limestone, although it reaches greatest thickness and highest metal content over primary mineralised carbonate. The degree of upgrading is such that surface Zn concentrations may reach ore-grade.

Three targets were selected for work during 1993/94; Mariposa, Blackjacks and Sunny Corner -Bannockburn prospects. Activities included literature research, reverse-circulation air-core drilling, mineralogical studies and relogging of old Amoco-CSR drill core.

Reviews of Amoco-CSR open-file data highlighted the Mariposa and Sunny Corner areas as having anomalous surface geochemistry. At Mariposa prospect, costeans returned best results of 14m @ 3.0% Zn from the historically exploited W zone, and 8m @ 6.2% Zn and 395ppm Ag from the E fault contact with the Dundas Group. Costeans at Sunny Corner produced up to 22m at 3.9% Zn, including 6m at 9.7% Zn and 74ppm Ag. Percent levels of Zn were also detected in costeans at Blackjacks and Bannockburn although at reduced levels compared to Mariposa and Sunny Corner.

Limited drilling by Amoco-CSR failed to locate economic mineralisation, although sub-percent levels of Pb and Zn were common over wide areas, indicating substantial alteration systems. Better holes from Mariposa include:-

DTM-84-7	12m at 1.5% Zn, 48ppm Ag
DTM-84-9	9m at 6.4% Pb, 53ppm Ag

Drilling at Sunny Corner was disappointing, although access problems may have precluded holes from being optimally positioned.

Air-core drilling by CRAE during 1993-94 at Mariposa returned significant intersections from the E fault contact with the Dundas Group including:-

59450N	DM70	10m	@	4.1% Zn	2.5% Pb	19 ppm Ag
59400N	DM13	6m	@	4.1% Zn	1.5% Pb	16 ppm Ag
59350N	DM97	8m	@	5.0% Zn	2.9% Pb	60 ppm Ag
59300N	DM102	8m	@	18.5% Zn	16.9% Pb	231 ppm Ag
59250N	DM118	8m	@	4.6% Zn	6.5% Pb	95 ppm Ag
59150N	DM150	6m	@	3.5% Zn	2.5% Pb	88 ppm Ag
58850N	DM199	8m	@	4.6% Zn	3.2% Pb	185 ppm Ag

Mineralisation appears to be subvertical and narrow, the widths above being apparent thicknesses.

The best result from Blackjacks was:-

61000N      DB11      14m @      1.4% Zn

Results of air-core drilling from Sunny Corner-Bannockburn and additional drilling at Blackjacks are not yet available.

Zinc mineralogy is dominated by low-Fe sphalerite. No smithsonite has been recorded, and Zn clays are rare.

## 2. INTRODUCTION

Mount Dundas EL45/92 was granted to CRA Exploration Pty. Limited on 16th April 1993. EL45/92 covers 70 sqkm located E of Zeehan on the Tasmanian W coast (Plan Tv498). During the first two years of tenure, CRAE has a statutory obligation to spend \$33000.

CRAE's principal commodity of interest in the Zeehan area is Zn-Pb. A review of publicly available Amoco-EZ-CSR open-file data from EL15/76 highlighted the importance of secondary surficial mineralisation derived from the decomposition of Ordovician Gordon Limestone. CRAE's activities focussed on potential for Zn-Pb deposits developed within this surficial residual black pug, and on primary stratabound carbonate-hosted targets existing beneath areas of surface enrichment.

Three targets were selected for work during 1993/94; Mariposa, Blackjacks and Sunny Corner -Bannockburn prospects. Activities included literature research, reverse-circulation air-core drilling, mineralogical studies and relogging of old Amoco-CSR drill core.

This report details all exploration activities conducted within EL45/92 by CRAE during the first year of tenure, 1993/94.

## 3. CONCLUSIONS

Reviews of Amoco-CSR open-file data highlighted the Mariposa and Sunny Corner areas as having anomalous surface Zn-Pb-Ag geochemistry sufficient to justify investigation by CRAE for shallow open-cuttable resources. Previous diamond drilling at Mariposa and Sunny Corner encountered substantial alteration systems within the Gordon Limestone with sub-percent levels of Pb and Zn over wide areas.

Significant Zn-Pb-Ag mineralisation has been intersected in shallow air-core drilling by CRAE during 1993-94 at Mariposa over a 300m strike length from the E fault contact with the Dundas Group. The best hole produced 8m @ 18.5% Zn, 16.9% Pb, 231 ppm Ag.

Mineralisation appears to be subvertical and narrow and may be patchily developed. It is feasible that mineralisation will extend beyond this 300m zone.

Limited mineralogical studies suggest sphalerite to be the dominant Zn mineral. Iron content within the sphalerite is very low, around 1%.

Analyses of air-core drilling from other prospects within EL45/92 have not been received.

#### 4. RECOMMENDATIONS

Immediate requirements are to collate and interpret all geological and geochemical information amassed during the current drilling program. It may take until April 1994 before all results are available.

If analyses from the air-core drilling are encouraging, diamond drilling should test beneath the near-surface anomalies for primary stratabound mineralisation. Due to variable Zn distribution, 50m drill spacings in anomalous areas may be required. Initial work should target the Zn-Pb-Ag anomalism at Mariposa E zone.

In addition, widely spaced (500m) reconnaissance diamond drilling of favourable stratigraphic positions in the Gordon Limestone should be conducted extending away from known mineralisation to define any other major alteration/mineralisation zones that may not have been adequately tested by air-core drilling.

Some reconnaissance bedrock wacker sampling is required in the Amber Creek area where previous exploration has been patchy, and the S Nevada area to the N, where there is no recorded past activity.

Additional mineralogical work on a selection of sample pulps is required to adequately define Zn species. Geochemical data can be used to identify the major mineralisation sub-populations from which samples can be selected for XRD and/or optical study.

#### 5. REGIONAL GEOLOGY

Zeehan and its surrounding districts have seen almost continuous sedimentation, igneous activity and deformation from the Late Proterozoic to the Quaternary. Consequently the picture of geological evolution is a complex one. Recent mapping by the Tas Dept of Mines is helping to solve old puzzles, but also continues to open new cans of worms. Corbett (1989) gives a good summary of possible tectonic models to account for the early palaeozoic geology of NW Tasmania. Some interesting new concepts are summarised informally in Turner (1992). For CRAE staff, Parkinson (1992) attempts to pull together a few loose threads. Regional geology is summarised on Plan Tv628.

The Rocky Cape Association forms basement in NW Tasmania. This association is not represented on the Zeehan 1:63360 sheet. In the late Precambrian, around 700Ma, a shallow basin was forming in the stretched intracratonic area between the Rocky Cape and Tyennan Regions. Coarse clastic sediments (conglomerates and sandstones) of the Forest Conglomerate, Donaldson Fm and base of the Timbs Gp were deposited.

Turbidite sequences of interbedded sands and silts of upper Donaldson Fm, Timbs Gp and Oonah Fm were laid down as the intracratonic basin deepened.

As the rift phase drew to a close, sag phase Black River Dolomite, Savage Dolomite, ?Timbs Gp magnesite horizons, and Success Creek Gp limestones were deposited. Rift tholeiites and associated sediments of the Smithton Volcanics, Bernafai Volcanics, Timbs Gp and Crimson Creek Fm erupted over the now filled basin.

During the mid to late Cambrian, an arc-continent collision caused overthrusting of ultramafic-mafic rocks and related sediments, possibly from a subduction complex some distance E of the Tyennan Block. The gabbros and basalts between Trial Harbour and Zeehan are of Boninitic composition - present understandings of basalt chemistry require that these Boninites derive from a fore-arc wedge (Brown and Jenner, 1989).

Post-collision extension tectonics then produced troughs into which the Dundas Gp sediments and Mount Read Volcanics were deposited. A local metamorphic event dated at 500Ma (Penguin Orogeny), possibly contemporaneous with eruption of the MRV, affected the rift sediments in the area of the present-day Arthur Lineament. This event probably affected the formations over a broader area than seen today.

Latest Cambrian to Ordovician times saw tectonic uplift of the Tyennan Block. Rapid stripping of this nucleus produced the coarse clastics of the Owen Conglomerate and correlates. As the rate of erosion slowed, sequences became finer (e.g. Moina Sandstone). Finally, in a short period of quiescence, limestones of the Gordon Group were deposited.

A second phase of uplift introduced sands and silts into a shallow marine environment to form the Eldon Group. This event took place from the early Silurian until the early Devonian, when the first rumblings of the Tabberabberan Orogeny were being felt.

Earliest of events forming part of the Tabberabberan Orogeny was a period of thrusting, possibly induced by compressive stresses caused by the rising plutons of the Heemskirk, Meredith and Husetop Granites.

To the NW of the granites, this compression thrust imbricate slices of the Timbs Gp over one another to produce the rapid, apparently quantum jumps in metamorphic grade seen in the Arthur Lineament. To the S, the Tenth Legion Thrust within the EL area is the clearest evidence of the early Devonian thrust event (Findlay and Brown, 1992). Other thrusts are likely to have developed, perhaps along the Little Henty and Firewood Siding Faults, to "poke the tongue" of Zeehan area geology southward into the Henty Basin.

Continued Tabberabberan deformation folded the Zeehan Basin formations about NNW-trending axes.

Geological events subsequent to the Tabberabberan Orogeny do not capture the imagination of mineral explorers. Terrestrial sedimentation continued in the Permian. Jurassic dolerite sills intruded the Zeehan area. Tertiary basalts flooded much of NW Tasmania, with remnants preserved near Granville Harbour.

Tertiary and Quaternary erosion and deposition continue to modify the ancient landsurface.

## 6. MINERALISATION

Several periods, styles and commodities of mineralisation are recognised in the Zeehan area. In summary these are:-

PERIOD	STYLE	EXAMPLE
Proterozoic	Stratiform syn-depositional pyrite in black shale.	Oonah Fm
Cambrian	Stratiform? magmatic Ni-sulphides in ultramafics	Cuni
Ordovician	Stratabound sphalerite-galena in limestone.	Oceana
Devonian	Stratabound replacement cassiterite-pyrrhotite in carbonates	Renison Bell
Devonian	Discordant lode-style pyrite-galena-sphalerite	Spray, Comstock
Devonian	Discordant vein-style pyrite-galena-sphalerite	Comet
Devonian	Skarn magnetite (+sphalerite-cassiterite)	Saint Dizier
Devonian	Skarn pyrrhotite (+sphalerite-galena)	Sylvester
Quaternary	Residual Pb-Zn in surficial decomposed limestone	Myrtle, Grieves

Historically it has been the lode and vein-style Pb-Ag mineralisation of the Zeehan and Dundas fields that have dominated interest. Lode-style mineralisation at Zeehan is usually hosted within graphitic shears in Oonah or Crimson Creek Fms. These deposits are high grade, but narrow (typically 0.3m) and with short strike and depth extent (usually less than 100m). In the context of modern large-scale mining practises, it is unlikely that such a target could be of economic interest on its own.

In the last 20 years or so, replacement-style Sn deposits have been given considerable attention. West Tasmania is well endowed with these deposits, which include Renison Bell, Queen Hill, Mt Bischoff and Cleveland. At Renison Bell, most ore occurs as massive pyrrhotite replacement of carbonate horizons, although a substantial quantity of ore occurs within the Federal-Bassett feeder zone. Source of the mineralisation is believed to be from Sn-rich fluids emanating from the underlying Devonian granite. A pre-mining resource is estimated at 42Mt @ 1.1% Sn (Collins, 1989).

Queen Hill is similar in style to Renison Bell, with a resource of 4Mt @1% Sn. Given the world oversupply of Sn, and the inherent low grade and metallurgical difficulties of these deposits, a replacement style Sn deposit is probably not a valid exploration target for a company without an existing Sn portfolio.

Magnetite skarn deposits such as Saint Dizier and Tenth legion have formed in carbonate lithologies adjacent to the Heemskirk Granite. St Dizier contains 5Mt @ 0.5% Sn, whilst the skarn at Tenth Legion contains low percent levels of Zn as sphalerite.

Zinc mineralisation in a pyrrhotite-serpentine skarn within Oonah Fm carbonates was discovered by RGC at Sylvester prospect, W of Zeehan in 1992. Resources are estimated to be 6Mt @ 5.5% Zn, 3.3% Pb and 40ppm Ag, The sphalerite is reported to be very high in Fe (around 18% Fe) which substantially lowers the quality of this style of mineralisation.

Nickel mineralisation as magmatic segregations within the ultramafics appears to be insignificant in quantity, although the grade of individual occurrences sounds impressive. Deposits are generally less than 50m long and of the order of 1m wide, with several percent of Ni and Cu (Blissett, 1962). Although some drilling has been carried out, there is no clear understanding of the geometry of the deposits with depth. This style of mineralisation should be considered incompletely explored.

Stratabound Pb-Zn in limestone is exemplified by the Oceana deposit where Amoco outlined a resource of 4Mt @ 19.4% Pb, 4% Zn and 106 ppm Ag (Taylor and Mathison, 1990). Mineralisation is described as syndiagenetic replacement, broadly equivalent to Irish-type deposits. Indications of other stratabound carbonate-hosted Pb-Zn mineralisation is recorded in Amoco-EZ diamond drilling from Myrtle and Grieves prospects. Despite intensive but fruitless exploration by Amoco-EZ, the Gordon Limestone still holds potential for base-metal discoveries.

Perhaps more significant than potential within the limestone is near-surface enrichment of Zn by the dissolution of the carbonate. This decarbonatisation has left a layer of black sulphidic pug sitting above fresh limestone, beneath a veneer of glacial gravels. Zinc and Pb have been *retained and concentrated in this pug layer*. The mechanism for this process is unclear, but it is suggested that low pH, strongly reducing conditions have acted to remove carbonate, but preserve sulphides near the surface. The black pug is extensively developed over virtually all areas of near-surface Gordon Limestone.

The degree of upgrading is such that surface Zn concentrations can reach ore-grade. This fact, combined with likely favourable mining characteristics of low ore:waste ratio, ease of excavation, and close proximity to established infrastructure, significantly upgrades the prospectivity of this style of mineralisation. Potential of this target is currently being evaluated by CRAE.

Stratiform syngenetic sulphides in Proterozoic black shale was CRAE's principal focus in the Zeehan area prior to 1993. To date, no economic occurrences of base-metals in this deposit type are known in Tasmania. Gross similarities can be drawn between Zeehan and the Mt Isa and Lawn Hill areas, and on that basis some potential exists for discovery of another Century-type deposit.

The best reference for brief descriptions of all deposits of the Zeehan field, although somewhat dated now, is Blissett (1962). Early Geological Survey bulletins from between 1890 and 1910 are important historical references. A new 1:50000 geological map of the Zeehan quadrangle is soon to be published.

## 7. PREVIOUS EXPLORATION BY COMPETITORS

A number of competitors have previously explored the area covered by EL45/92 for carbonate-hosted Zn-Pb-Ag mineralisation. An excellent summary of previous exploration is given in Ellis (1987), and relevant sections of this work are paraphrased here. Readers should refer to that report for a full review of prior activities, including maps showing previous grid coverages and exploration techniques employed.

### ***Pre 1945:***

Earliest published accounts of sulphide mineralisation within black pug are reported in the Zeehan and Dundas Herald of March 1892 describing the Mariposa main shaft:-

*"The Mariposa main shaft is in lode material, the eastern side being in black pug and the western in pug mixed with gossan veins, occasionally showed carbonate ore. The eastern portion of the pug yields occasional slugs of fine-grained clean galena, which is seemingly of better quality than that obtained from the surface outcrop."*

Mining activities at Mariposa are summarised by Blissett (1962) from early Mining Warden reports (e.g. Montgomery, 1893, Twelvetrees, 1909).

### ***North Broken Hill Ltd.:***

North Broken Hill Ltd. evaluated the Mariposa Mine between 1946 and 1951. Eleven holes were drilled to define a near-vertical body 460ft long and 5ft 6in wide with a grade of 9.2% Pb, 1.7% Zn and 4.7oz Ag. A total of 99000 tons were defined to 260ft in two bodies.

**Bureau of Mineral Resources:**

The BMR conducted a ground magnetic and gravity survey over the Mariposa area in the late 1940's. Two gravity anomalies coincided with known Mariposa mineralisation.

**Rio Tinto Australia Pty. Ltd. - EL4/59:**

Rio Tinto Australia Pty. Ltd. flew an airborne magnetometer and EM survey over most of NW Tasmania in 1957. Some follow-up work was undertaken at Sunny Corner - Bannockburn in 1959 including ground magnetics, gravity and EM. A geological map based on air-photo interpretation was produced, but no further work was reported. The licence lapsed in 1963.

**MacIntyre Mines - SPL46:**

MacIntyre Mines (Australia) Pty. Ltd. explored the Mariposa area between 1968 and 1972. Soil sampling identified a Cu-Pb-Zn anomaly S of the old workings. An IP survey over the same area produced a strong anomaly. Four diamond holes were drilled, but no significant mineralisation was detected in the intervals assayed.

**Geophoto Resources Consultants - SPL89 and EL7/68:**

Between 1968 and 1974 Geophoto Resources Consultants completed shallow soil geochemical surveys, ground magnetic and VLF EM surveys over 14000ft of surveyed grid on the Gordon Limestone at Amber Creek. The entire EL was flown with Turair EM. Selected geochemical and geophysical anomalies were bedrock-sampled at 50ft depths by an air-track rig. Some base-metal anomalism was detected but was written off as alluvial outwash.

Further review of the Geophoto work is required to assist target selection in the Amber Creek area.

**Tenneco - EL44/70:**

Tenneco optioned into EL44/70, held by A.R. Dobson. Regional exploration included a heli-borne EM and magnetic survey that took in the Blackjacks to Bannockburn area. Weak EM anomalies were followed up by ground EM and SP surveys, and a gravity traverse. Tenneco concluded that results did not indicate potential for economic mineralisation, and the licence lapsed in 1972.

**Amoco-CSR - EL15/76:**

CSR Limited initially covered EL15/76 with a regional stream sediment sampling program. In 1981, Amoco Minerals Australia Ltd entered into a joint venture with CSR to explore areas of Gordon Limestone within EL15/76, essentially to complement their concurrent program on EL4/78.

Initially Amoco completed a stream sediment sampling program and air-photo geological interpretation. The Mariposa, Blackjacks and Sunny Corner - Bannockburn areas were gridded, followed by jackro and wacker soil/bedrock geochemical sampling and VLF EM surveys. Some areas were also trialled with ground magnetics, gravity, EM37 and dipole-dipole IP surveys.

Selected geochemical anomalies were tested by digging costeans. At Mariposa prospect, costeans returned best results of 14m @ 3.0% Zn from the historically exploited W zone, and 8m @ 6.2% Zn and 395ppm Ag from the E fault contact with the Dundas Group (Plan Tv670).

Costeans at Sunny Corner produced up to 22m at 3.9% Zn, including 6m at 9.7% Zn and 74ppm Ag (Plan Tv665). Percent levels of Zn were also detected in costeans at Blackjacks and Bannockburn although at reduced levels compared to Mariposa and Sunny Corner.

Limited drilling failed to locate economic mineralisation, although sub-percent levels of Pb and Zn were common over wide areas, indicating substantial alteration systems. Better holes from Mariposa (nine holes drilled) include:-

DTM-84-7 12m at 1.5% Zn, 48ppm Ag  
DTM-84-9 9m at 6.4% Pb, 53ppm Ag

Drilling at Sunny Corner (five holes) was disappointing, although access problems may have precluded holes from being optimally positioned.

## 8. EXPLORATION ACTIVITIES FOR THE PERIOD 16/4/93 TO 16/3/94.

### 8.1 Exploration Philosophy

CRAE's principal commodity of interest in the Zeehan area is Zn-Pb. A review of publicly available Amoco-EZ-CSR open-file data from EL15/76 highlighted the importance of secondary surficial mineralisation derived from the decomposition of Ordovician Gordon Limestone. CRAE's activities focussed on potential for Zn-Pb deposits developed within this surficial residual black pug, and on primary stratabound carbonate-hosted targets existing beneath areas of surface enrichment.

Zinc and Pb are being enriched at the surface by dissolution of the carbonate. This decarbonisation has left a layer of black sulphidic pug sitting above fresh limestone, beneath a veneer of glacial gravels. Zinc and Pb have been retained and concentrated in this pug layer. The mechanism for this process is unclear, but it is suggested based on studies by Amoco (Wall, 1984) that low pH, strongly reducing conditions have acted to remove carbonate, but preserve sulphides near the surface. Wall (1984) has suggested a four-fold increase in grade above that of underlying primary mineralisation. The black pug is sporadically developed at-surface over virtually all areas of Gordon Limestone, although it reaches greatest thickness and highest metal content over primary mineralised carbonate.

The rationale behind the pursuit of the secondary surficial targets rests on a number of features of the mineralisation already defined in open-file literature. These features are:-

- Zn mineralisation at % levels is defined at several prospects
- The deposit style has not been previously evaluated
- Mineralisation is shallow, thereby offering low stripping ratios for mining
- Sediments are soft, capable of being mined without drilling and blasting
- Sealed roads run adjacent to all targets

The latter three factors theoretically may translate to lower capital and operating costs for a mine, which in turn may allow lower grades to be mined, thereby maximising the resource.

## 8.2 Mariposa Prospect

### 8.2.1 Introduction

Mariposa prospect is 5km E of Zeehan, adjacent to the Murchison Highway (Plan Tv542). The prospect is within Gordon Limestone on the E margin of the Zeehan Basin. Vegetation, organic clays and minor alluvial gravels obscure the limestone, which has eroded to form a valley between a prominent ridge of Crotty Quartzite and an undulating surface of Dundas Group siltstones.

Mariposa was selected based on highly anomalous open-file costean geochemistry suggesting potential for sufficient Zn accumulations to justify CRAE's interest.

During the period, 200m x 25m spaced reverse-circulation air-core drilling traverses were completed in an effort to identify areas of substantial secondary near-surface mineralisation. Encouraging results from the initial air-core program led to a large campaign of air-core drilling at 50m x 10m to enable preliminary resource estimates to be made.

### 8.2.2 Geology

Mariposa prospect is hosted in Ordovician Gordon Limestone. The base of the Gordon Limestone at Mariposa has been faulted off by a major steeply dipping structure that has brought the limestone into contact with siltstones of the Dundas Group. This fault is exposed on the track from the highway into the prospect, and has been observed in air-core and CSR diamond holes as a zone of intense quartz-carbonate (+/- sulphide) veining and brecciation.

Conformably overlying the limestone is Silurian Crotty Quartzite that forms a prominent strike ridge. At Mariposa the Gordon Limestone varies from 100m to 300m thick. The sequence dips about 80deg W.

At present it is not possible to subdivide the Gordon Limestone in the Mariposa area as outcrop is poor to non-existent and there are no stratigraphic holes in the area. Bedrock specimens collected during air-core drilling will be used to further define local carbonate facies variations and alteration trends. This work is still in progress at time of writing.

Erosion has reduced the limestone to rare outcrops in Quaternary gravel and vegetation-covered valleys between ridges of sandstone and quartzite. Gravels may be locally up to 5m thick. In-situ weathering has further degraded the limestone to a black decarbonated clay. This weathering surface is variable in depth but may locally reach 30m, averaging 3-10m.

A geological summary taken from mapping by Amoco is shown as Plan Tv671, and reproduced on drill-hole plan Tv666.

### 8.2.3 Air-core Drilling

Wallis Drilling Pty. Ltd. of Western Australia were contracted to drill a series of shallow reverse-circulation air-core holes on EL45/92 to test the thickness and lateral extent of Zn mineralisation within surficial decomposed limestone. The rig used is a small system mounted on a Bombardier Muskeg snowmobile. The fully operational rig has a total weight of eight tonnes, with a ground pressure of less than 4psi, slightly greater than a human footprint. Air-core drilling relies on compressed air to return drill cuttings to the surface. No water (except natural groundwater) or muds are circulated and all cuttings are collected via a cyclone into bags. This rig and drilling system are ideal for testing soft formations in areas where vegetation is sensitive to disturbance.

Air-core drilling was selected as it is one of the only methods capable of obtaining accurate uncontaminated samples in wet, clay-rich and unconsolidated ground. With hindsight, it has been shown the rig was ideally suited to the task, being able to hammer through quartzite boulders, easily drill the clays and broken ground, then finally obtaining a small core of fresh bedrock.

The initial air-core program was undertaken in early 1993. Four 300m traverses with a hole spacing of 25m were completed to test anomalous open-file costean results. In total, 35 holes for a total metreage of 500m were completed (DM1 to DM35).

Encouraging results from this initial program led to a large campaign of air-core drilling in December 1993 - January 1994, with the aim of acquiring sufficient information to prepare a preliminary resource estimate. Areas of greatest potential were tested at 50m x 10m spacing. A total of 172 holes for a total metreage of 3262m were completed in the second phase (DM36 to DM207).

Cuttings were collected at 2m intervals, with a wet 1-2kg sample "snatched" by hand for analysis. Samples were assayed at Analabs Burnie by AAS (aqua regia-perchloric acid digest) for Ag-Cu-Pb-Zn-Fe-Mn. Numerous samples were over-range for this method, and were subsequently redetermined by AAS (aqua regia-perchloric acid-hydroflouric acid digest). In the second campaign, samples exceeding 1% Zn were analysed for S by leco furnace.

Drill-hole locations and geology are shown on Plan Tv666. Collar information and down-hole logs and assays are tabulated in Appendices 1 and 2. At the time of writing, final analyses had been received only for holes DM1 to DM60. Preliminary results are available for holes DM61 to DM207. Intervals exceeding 2m at 1% Zn are listed in Table 1.

A typical drillhole encountered a profile of vegetation and organic clays, followed by surficial clays derived from weathering of the limestone, finally bottoming in fresh limestone. Locally some alluvial gravels were developed, particularly near the Dundas River.

Clays are most strongly developed at the contact with the Crotty Quartzite. Up to 30m of clays were intersected in some holes. The clay varied in character from light brown or light grey through to black, strongly carbonaceous and sulphidic. The majority were dark grey carbonaceous clays. There seems to be a gradation from clay into clay weathered carbonaceous formations.

At the E faulted margin of the limestone, clays were erratically developed, with much of the drilling in strongly fractured and veined carbonates.

Reference samples of fresh bedrock were retained to aid geological mapping of the limestone facies and to define alteration trends. Study of these samples was in progress at time of writing.

***Gordon Limestone - Crotty Quartzite contact:***

Better Zn intersections include:-

59600N	DM1	14.0m @	1.4% Zn
59550N	DM51	4.0m @	3.1% Zn
59500N	DM55	10.0m @	1.4% Zn
59400N	DM9	8.0m @	2.0% Zn

Holes 10m away on these sections usually intersected Zn in the 0.1% to 1.0% range. This suggests a narrow lateral extent for mineralisation at the upper contact on this prospect.

Further S two Pb-Ag intersections were made:-

59150N	DM139	6.0m @	2.2% Pb	29ppm Ag
59050N	DM173	2.2m @	3.2% Pb	145ppm Ag

These intersections are probably related to the historically exploited Mariposa mineralisation, and in particular, DM173 may be in dump material.

Sulphur analyses and visual observations indicate that most of the mineralisation will be as sphalerite.

TABLE 1: MARIPOSA PROSPECT							
AIR-CORE DRILLING - ZINC INTERSECTIONS EXCEEDING 1%							
1.0% ZN CUTOFF							
HOLE	DFROM	DTO	EOH?	WIDTH	ZINC%	LEAD%	SILVER ppm
DM1	8.0	22.0		14.0	1.4	0.8	8
DM8	2.0	8.0		6.0	1.4	0.3	17
DM9	6.0	14.0		8.0	2.0	0.6	12
DM10	2.0	20.0		18.0	2.5	1.2	102
	32.0	36.0		4.0	0.6	0.3	185
DM13	6.0	12.0		6.0	4.1	1.5	16
DM15	10.0	12.0		2.0	1.1	0.7	9
DM23	18.0	22.0		4.0	2.6	2.4	38
DM24	30.0	32.0	EOH	2.0	3.1	0.5	19
DM33	4.0	6.0		2.0	1.4	0.6	3
DM34	6.0	10.0		4.0	2.8	0.7	6
DM37	10.0	16.0	EOH	6.0	2.2	1.0	29
DM47	4.1	22.0		17.9	5.9	11.1	97
DM50	4.0	8.0		4.0	1.4	0.8	2
DM51	8.0	12.0		4.0	3.1	1.4	38
DM52	4.0	8.0		4.0	1.3	1.1	8
DM55	6.0	16.0		10.0	1.4	0.5	8
DM60	22.0	26.0		4.0	3.0	5.6	71
	30.0	32.0		2.0	1.6	1.7	6
DM63	8.0	12.0		4.0	1.9	1.2	22
DM64	24.0	26.0		2.0	1.3	0.6	7
DM65	20.0	22.0		2.0	2.6	2.1	147
DM69	38.0	44.0		6.0	3.3	0.6	37
	46.0	50.0	EOH	4.0	0.2	3.2	12
DM70	4.0	14.0		10.0	4.1	2.5	19
DM71	22.0	26.0		4.0	1.2	0.3	1
DM72	16.0	24.0		8.0	3.0	1.3	3
DM73	8.0	10.0		2.0	1.4	3.7	56
	14.0	16.5	EOH	2.5	1.1	5.3	51
DM79	20.0	38.0		18.0	2.1	0.5	22
DM84	22.0	26.0		4.0	2.1	1.5	36
DM96	4.0	8.0		4.0	0.3	3.3	88
DM97	6.0	14.0		8.0	5.0	2.9	60
DM98	16.0	20.0		4.0	4.6	1.4	63
DM102	18.0	26.0		8.0	18.5	16.9	231
DM111	26.0	30.0		4.0	0.7	0.7	138
	48.0	52.0		4.0	0.6	0.6	77
DM113	32.0	34.0		2.0	1.1	0.1	4
DM118	10.0	14.0		4.0	2.2	2.0	47
	22.0	26.0		4.0	3.4	2.8	173
	32.0	40.0		8.0	4.6	6.5	95
DM120	8.0	19.9	EOH	11.9	1.5	0.6	61
DM121	14.0	16.0		2.0	1.5	0.3	9
DM139	10.0	16.0		6.0	0.7	2.2	29
DM148	4.0	6.0		2.0	1.1	0.7	3
DM149	4.0	8.0		4.0	1.6	0.0	1
DM150	12.0	18.0		6.0	3.5	2.5	88
	12.0	40.0		28.0	1.5	0.8	39
DM164	10.0	11.5	EOH	1.5	0.1	2.8	32
DM173	0.0	2.2	EOH	2.2	0.5	3.2	145
DM199	2.0	10.0		8.0	4.6	3.2	185

**Gordon Limestone - Dundas Group contact:**

Drilling at the faulted contact with the Dundas Group intersected significant Zn-Pb-Ag mineralisation over a 300m zone between 59150N and 59450N. Minor, although potentially significant mineralisation was encountered along strike to the N and S. Best values include:-

59450N	DM70	10.0m @	4.1% Zn	2.5% Pb	19ppm Ag
59400N	DM13	6.0m @	4.1% Zn	1.5% Pb	16ppm Ag
59350N	DM97	8.0m @	5.0% Zn	2.9% Pb	60ppm Ag
59300N	DM102	8.0m @	18.5% Zn	16.9% Pb	231ppmAg
59250N	DM118	8.0m @	4.6% Zn	6.5% Pb	95ppm Ag
59150N	DM150	6.0m @	3.5% Zn	2.5% Pb	88ppm Ag
58850N	DM199	8.0m @	4.6% Zn	3.2% Pb	185ppm Ag

The E zone is likely to be steeply dipping, narrow and patchily developed. The thicknesses above may not be true widths, although Amoco costean results from 58800N and 59200N show highly elevated Zn-Pb-Ag over comparable widths of 6m and 8m. Diamond drilling is required to better define the structural control, persistence and nature of mineralisation.

**Other areas:**

Drilling away from the defined targets at the faulted contact with the Dundas Group and the contact with the Crotty Quartzite generally failed to detect Zn-Pb-Ag mineralisation. Most holes in the central area encountered fresh barren limestone immediately beneath soil/veg cover. However, two holes have made intercepts of note:-

59550N	DM47	17.9m @	5.9% Zn	11.1% Pb	97ppm Ag
59400N	DM10	18.0m @	2.5% Zn		

Adjacent holes are poorly mineralised suggesting the mineralisation in DM47 and DM10 may be as narrow, steeply dipping structures. Therefore the widths above are unlikely to be true thicknesses.

No drillhole cross sections have yet been generated as most analyses are incomplete and lithological logs are still being verified.

**8.2.4 Resampling of EZ Diamond Drill Holes**

Pasminco have retained all drill core from Amoco-CSR drilling on EL15/76 at their Tullah core shed, and were kind enough to allow CRAE to make use of their facilities to relog and sample selected portions of this core.

All altered and mineralised sections from Mariposa and Sunny Corner drillholes were relogged by Tim Moody, seconded from CRAE Mount Isa (Appendix 3). Any altered, mineralised or clay zones not previously sampled were resampled, although at time of writing, no assays were available.

#### 8.2.5 Mineralogical Studies

##### ***XRD and SEM/EDX:***

Advanced Technical Development (ATD), of Bundoora, Victoria, were commissioned to study the mineralogy of two Zn-anomalous air-core samples from Mariposa DM10 and DM13. Investigations involved detailed XRD, optical microscopy and SEM/EDX studies.

XRD and SEM scans of the pulp containing 4.9% Zn from hole DM10 showed almost all the Zn present is as sphalerite, with traces of a Zn-clay - fraipontite. This is a true Zn-clay, containing 25% Zn as part of its structure, not as adsorbed cations. The sample from DM13 (8.9% Zn) contains sphalerite as the sole Zn species. Sphalerite is very low Fe, approximately 1.0%. No smithsonite was observed.

##### ***Optical mineralogy:***

Selected samples containing over 3% Zn from the initial drilling program (DM1 to DM35) were panned to produce a heavy mineral concentrate, enabling identification of sulphide mineralogy. Sphalerite was not identified immediately due to its fine grain size and pale cloudy-white colour. Microscope examination of three HMC's confirmed very pale sphalerite to be the exclusive Zn mineral present. Pyrite and galena were common constituents.

##### ***Multi-element geochemistry:***

Air-core sample pulps with over 1% Zn were submitted for multi-element analyses by ICP-EOS at Analabs, Perth. Results show:-

- Au assays were generally below 8ppb, with a maximum of 78ppb.
- Ca and Mg values are low, indicating that virtually no limestone remains in the weathered pug layer.
- K and Al values are quite high, indicative of the development of clays
- As ranges between 50 and 300ppm, suggesting its usefulness as a pathfinder
- Sn, Bi, Mo are very low to below detection
- Ba is also low, suggesting no barite alteration
- C values range up to 5%, reflecting the carbonaceous character of the pug

Principal components analysis reveals a number of associations including:-

- Ca-Mg-C reflecting limestone-dolomite hosted mineralisation
- Cu-Pb-Ag-Cd sulphide association
- Al-K indicative of strong clay development
- Fe-Mn correlative with siderite-ankerite alteration

Additional mineralogical studies should be undertaken on samples from the recent drilling campaign.

Laboratory reports are presented in Appendix 4.

#### 8.2.6 Proposed Work Program 1994/95

Sufficient air-core drilling has been completed at Mariposa to enable estimation of surficial resources once all analyses are received. No additional air-core drilling is required in the coming period.

Office-based activities will involve data collation, generation of plans and sections and, if relevant, calculation of a preliminary resource estimate.

Diamond drilling is planned to test for primary mineralisation below the Zn-Pb-Ag anomalous surficial zone at the limestone - Dundas Group contact. Three shallow (~100m) holes between 59150N and 59450N should be sufficient to estimate width and nature of the mineralisation.

Additional mineralogical studies are required to confirm the majority of Zn is as sphalerite, and to determine metallurgical characteristics.

### 8.3 Sunny Corner - Bannockburn Prospect

#### 8.3.1 Introduction

Sunny Corner - Bannockburn prospect straddles the Dundas River 5km SE of Zeehan, accessible via the old Mariposa tramway from the Murchison Hwy (Plan Tv542). The prospect is within a structurally complex faulted block of Gordon Limestone near the E margin of the Zeehan Basin. Vegetation, organic clays and minor alluvial gravels obscure the limestone, which has eroded to form a semi-circular valley surrounded by ridges of Crotty Quartzite and Moina Sandstone.

Sunny Corner - Bannockburn was selected based on highly anomalous open-file costean geochemistry suggesting potential for sufficient Zn accumulations to justify CRAE's interest.

During the period, 10m or 25m spaced reverse-circulation air-core drilling traverses along old costeans were completed in an effort to identify areas of substantial secondary near-surface mineralisation.

### 8.3.2 Geology

Sunny Corner - Bannockburn prospect is hosted in Ordovician Gordon Limestone. The lower contact between the Gordon Limestone and Moira Sandstone is in the E of the prospect. The N and W of the prospect are overlain by Crotty Quartzite. At Sunny Corner the sequence is folded so that the limestone is exposed in a breached dome. A few hundred metres further N is a major fault (thrust?) that has brought Devonian Bell Shale in contact with Crotty Quartzite.

Because of faulting, the true thickness of Gordon Limestone at Sunny Corner - Bannockburn is unknown, but the horizontal width is up to 300m. The sequence has a variable strike/dip, generally moderate to steep W.

At present it is not possible to subdivide the Gordon Limestone at Sunny Corner - Bannockburn as outcrop is poor to non-existent and there are no stratigraphic holes in the area. Bedrock specimens collected during air-core drilling will be used to further define local carbonate facies variations and alteration trends. This work is still in progress at time of writing.

Erosion has reduced the limestone to rare outcrops in Quaternary gravel and vegetation-covered valleys between ridges of sandstone and quartzite. Gravels may be locally up to 5m thick. In-situ weathering has further degraded the limestone to a black decarbonated clay. This weathering surface is variable in depth but may locally reach 30m, averaging 3-10m.

Interpreted geology from the work of Amoco is shown as Plan Tv664, and a modified map based on air-core and Amoco diamond drilling presented as Plan Tv672.

### 8.3.3 Air-core Drilling

The air-core program was undertaken in January - February 1994. Sixty holes were completed at Sunny Corner (DS1 to DS60), and a further 36 holes were drilled at Bannockburn (DS61 to DS96). Total metreage was 1740m. Cuttings were collected at 2m or 3m intervals, with sampling and analysis techniques as above.

Drill-hole locations are shown on Plan Tv672. Collar information and down-hole logs are tabulated in Appendices 1 and 2. At the time of writing, no analyses had been recieved for Sunny Corner - Bannockburn.

A typical drillhole encountered a profile of vegetation and organic clays, followed by surficial clays derived from weathering of the limestone, grading into weathered and broken carbonates, finally bottoming in fresh carbonate. Locally some gravels are developed.

Up to 25m of clays were intersected in some holes. The clay varied in character from light brown or light grey through to black, strongly carbonaceous and sulphidic. The majority were dark grey carbonaceous clays.

Reference samples of fresh bedrock were retained to aid geological mapping of the limestone facies and to define alteration trends. Study of these samples was in progress at time of writing.

#### 8.3.4 Resampling of EZ Diamond Drill Holes

All altered and mineralised sections from Mariposa and Sunny Corner drillholes were relogged by Tim Moody, seconded from CRAE Mount Isa (Appendix 3). Any altered, mineralised or clay zones not previously sampled were resampled, although at time of writing, no assays were available.

#### 8.3.5 Proposed Work Program 1994/95

Sufficient air-core drilling has been completed at Sunny Corner - Bannockburn to enable an estimate of the potential for surficial resources to be made once all analyses are received. If results are encouraging some additional air-core drilling may be required in the coming period.

Office-based activities will involve data collation, generation of plans and sections.

Diamond drilling is planned to test the anomalous Zn-Pb-Ag zone at the limestone - Crotty Quartzite contact that was not satisfactorily tested by Amoco holes DTSC-84-1 and DTSC-84-2. One shallow (~50m) hole is recommended. Helicopter support is necessary. Other Diamond drill targets may arise from the air-core drilling once analyses are to hand.

If air-core results are encouraging, mineralogical studies will be required to define the Zn species, as sphalerite is not readily identifiable in the cuttings.

### 8.4 Blackjacks Prospect

#### 8.4.1 Introduction

Blackjacks prospect straddles Zeehan Hwy 4km E of Zeehan and 2km N of Mariposa (Plan Tv542). The prospect is within Gordon Limestone on the E margin of the Zeehan Basin. Vegetation, organic clays and minor gravels obscure the limestone, which has eroded to form a valley between a prominent ridge of Crotty Quartzite in the W and an undulating surface of Moina Sandstone and Dundas Group siltstones to the E. In essence, Blackjacks is the N strike continuation of Mariposa. The intervening ground is heavily vegetated and poorly explored and thus creates an artificial barrier to joining the two prospects. Blackjacks is defined here as the carbonates from N of the Dundas River to the junction of the Zeehan and Murchison Highways.

Blackjacks was selected based on moderately anomalous open-file costean geochemistry suggesting potential for sufficient Zn accumulations to justify CRAE's interest.

During January 1993, 25m spaced reverse-circulation air-core drilling traverses were completed on two costeans 200m apart in an effort to identify areas of substantial secondary near-surface mineralisation. Additional air-core drilling at 200m x 25m spacings was underway at the time of writing, results are thus unavailable for inclusion in this period's report.

#### 8.4.2 Geology

Blackjacks prospect is hosted in Ordovician Gordon Limestone. Underlying the limestone is Ordovician Moina Sandstone, which is incompletely preserved due to a major fault displacing the lower Ordovician formations. This fault is the continuation of the N-S structure that bounds the E side of the limestone at Mariposa.

Conformably overlying the limestone is Silurian Crotty Quartzite, that forms a prominent strike ridge. At Blackjacks the *Gordon Limestone varies from 250m thick in the S to 450m thick to the N. The sequence dips steeply W.*

At present it is not possible to subdivide the Gordon Limestone in the Blackjacks area as outcrop is poor to non-existent and there are no stratigraphic holes in the area. Bedrock specimens collected during air-core drilling will be used to further define local carbonate facies variations and alteration trends. This work had not commenced at time of writing.

Erosion has reduced the limestone to rare outcrops in Quaternary gravel and vegetation-covered valleys between ridges of sandstone and quartzite. Gravels may be locally up to 5m thick. In-situ weathering has further degraded the limestone to a black decarbonated clay. This weathering surface is variable in depth but may locally reach 30m, averaging 3-10m.

#### 8.4.3 Air-core Drilling

The original air-core program was undertaken in early 1993. Twelve holes were drilled along two costeans 200m apart for a total metreage was 225m. Cuttings were collected at 2m intervals, with sampling and analysis techniques as above. Additional air-core drilling at 200m x 25m spacings on the remainder of *Blackjacks prospect was underway at the time of writing, results are thus unavailable for inclusion in this period's report.*

Drill-hole locations for the 1993 program are shown on Plan Tv598. Collar information and down-hole logs for holes DB1 to DB12 are tabulated in Appendices 1 and 2. No data for the March 1994 program are available for inclusion here.

A typical drillhole encountered a profile of vegetation and organic clays, followed by surficial clays derived from weathering of the limestone, grading into weathered and broken carbonates, finally bottoming in fresh carbonate. Locally some gravels are developed.

Up to 25m of clays were intersected in some holes. The clay varied in character from light brown or light grey through to black, strongly carbonaceous and sulphidic. The majority were dark grey carbonaceous clays.

Reference samples of fresh bedrock were retained to aid geological mapping of the limestone facies and to define alteration trends. This work had not commenced at time of writing.

Low levels of Zn mineralisation were recorded within clays and weathered carbonate in several holes, but only DB11 encountered percent grades, i.e. 14m @ 1.4% Zn. Coarse grained sphalerite was visible in one interval in DB12. Lead values were comparable to Zn grades, but Ag was uniformly low, less than 5ppm.

#### 8.4.4 Mineralogical Studies

##### ***Optical mineralogy:***

Two samples containing over 1% Zn from DB11 were panned to produce a heavy mineral concentrate, enabling identification of sulphide mineralogy. Sphalerite was not identified immediately due to its fine grain size and pale cloudy-white colour. Microscope examination of one HMC confirmed pale sphalerite to be the exclusive Zn mineral present. Pyrite and galena were common constituents.

##### ***Multi-element geochemistry:***

Air-core sample pulps with over 1% Zn from DB11 were submitted for multi-element analyses by ICP-EOS at Analabs, Perth. Results show:-

- Au assays were generally below 8ppb, with a maximum of 12ppb.
- Ca and Mg values are low, indicating that virtually no limestone remains in the weathered pug layer.
- K and Al values are quite high, indicative of the development of clays
- As averages around 150ppm, suggesting its usefulness as a pathfinder
- Sn, Bi, Mo are very low to below detection
- Ba is also low, suggesting no barite alteration
- C values range up to 5%, reflecting the carbonaceous character of the pug

Additional mineralogical studies should be undertaken on samples from the recent drilling campaign if analyses justify further work.

Laboratory reports are presented in Appendix 4.

#### 8.4.6 Proposed Work Program 1994/95

Sufficient air-core drilling has been completed at Blackjacks to enable an estimate of the potential for surficial resources to be made once all analyses are received. If results are encouraging some additional air-core drilling may be required to infill the widely spaced traverses.

Office-based activities will involve data collation and generation of plans and sections.

Some diamond drilling may be warranted if air-core drilling has defined significant targets.

If air-core results are encouraging, mineralogical studies will be required to define the Zn species, as sphalerite is not readily identifiable in the cuttings.

#### 8.5 Resource Considerations

There are insufficient results to hand to calculate a resource for surficial mineralisation at any of the prospects tested.

Additional resources may be contributed by underlying primary zones, although no economic intersections had been made in previous deeper diamond drilling. Although Zn is the primary commodity, at Mariposa there may be significant Ag and Pb credits.

Mineralogy appears to be favourable. Limited mineralogical testwork completed for Mariposa indicates low-Fe sphalerite to be the dominant Zn species.

### 9. ENVIRONMENT AND REHABILITATION

The past year has seen a substantial amount of exploration work completed in relatively small areas. More than 300 air-core holes have been drilled in an area not much greater than 1sqkm at Mariposa, Blackjacks and Sunny Corner -Bannockburn prospects..

The air-core rig was chosen to minimise impact on the button grass. Most tracks will recover and disappear in one season, evidenced by the difficulty in locating drill sites from the early 1993 program. Some softer areas will take longer to naturally recover, however no lasting impact is expected.

Most drill cuttings from the air-core program were bagged to enable the samples to be easily returned to the holes or removed from site. This is currently in progress as and when time is available. Bags used are photo-degradable, and will rapidly break down in disposal sites.

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KEYWORDS

TASMANIA, ORDOVICIAN, CARBONATE-HOSTED, GORDON LIMESTONE,  
LITERATURE REVIEW, MINERALOGY, AIR-CORE DRILLING, ZINC,  
LEAD, SILVER.

LOCATION

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PIEMAN	7914	1:100000
ZEEHAN	7914-S	1:50000

LIST OF DPOs

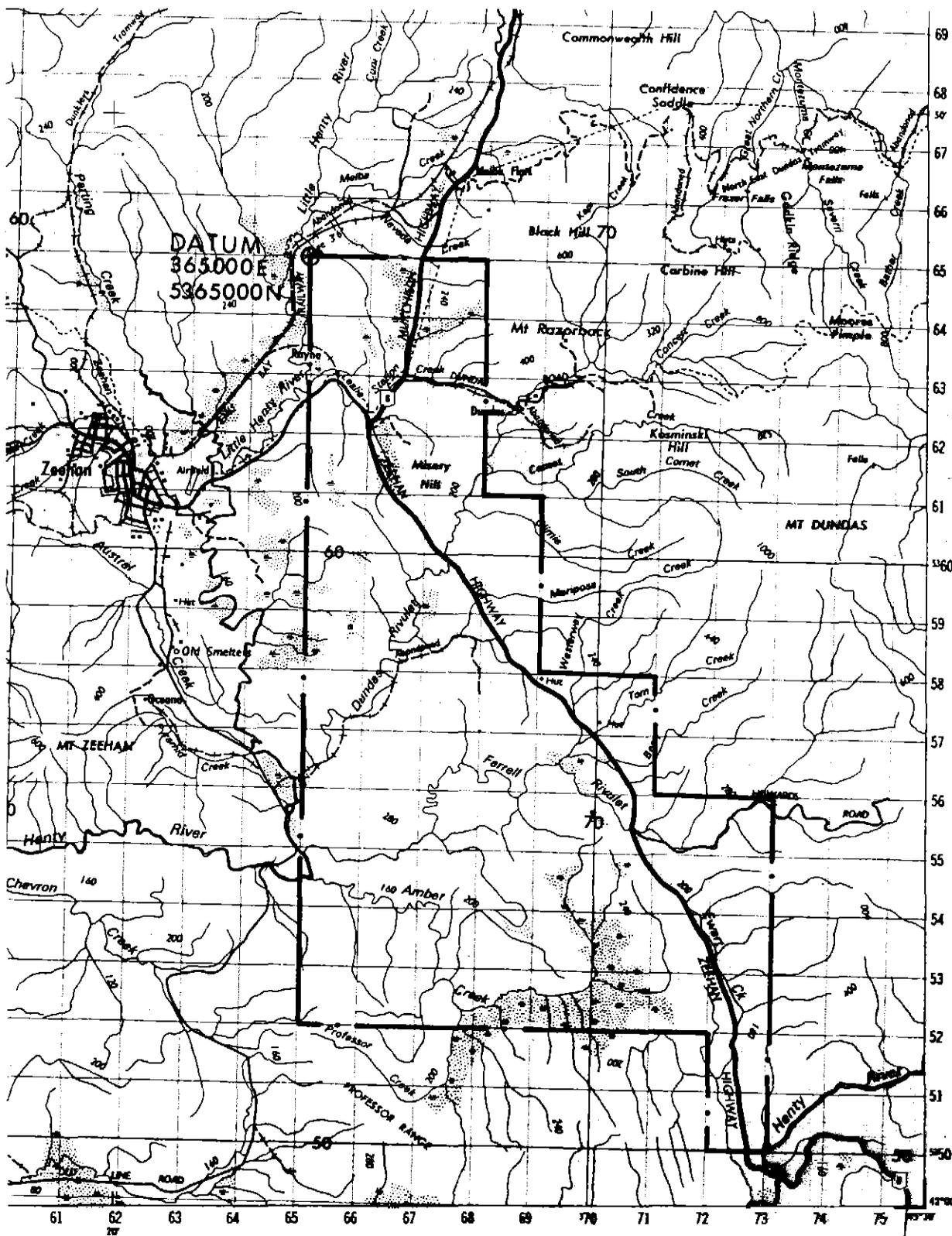
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LIST OF APPENDICES

APPENDIX 1: Drillhole locational data  
APPENDIX 2: CRAE air-core drill logs and geochemistry  
APPENDIX 3: Relogged EZ Diamond drill hole logs  
APPENDIX 4: Mineralogical reports, and specialised geochemical studies

LIST OF PLANS

<u>Plan no.</u>	<u>Title:</u>	<u>Scale:</u>
Tv 498	Application for EL - "Zeehan 5"	1:10,000
Tv 628	Zeehan Project - Regional Geology	1:100,000
Tv 670	Mariposa Prospect Amoco-CSR Costean Summary	1:5,000
Tv 665	Mount Dundas EL 45/92 - Sunny Corner - Bannock Burn Costean Summary	1:5,000
Tv 542	Zeehan Project - Gordon Limestone Prospect Location Plan	1:5,000
Tv 671	Mariposa Prospect Geological Plan	1:25,000
Tv 666	Mount Dundas EL 45/92 - Mariposa Prospect - Drillhole Location Plan	1:2,500
Tv 664	Mount Dundas EL 45/92 - Sunny Corner - Bannock Burn Geological Plan	1:5,000
Tv 672	Mount Dundas EL 45/92 - Sunny Corner Drillhole Location Plan	1:2,500
Tv 598	Mount Dundas EL 45/92 - Blackjacks Prospect Aircore Drillhole Locations	1:5,000



**94-3551**

0 1 2 3 4 5 km

5 cm

**CRA EXPLORATION PTY. LIMITED**

**APPLICATION FOR EXPLORATION LICENCE**

**"ZEEHAN 5"**

70 km<sup>2</sup>

331028

Ref.: SK 55-5

Scale: 1:100 000

Author: R. Parkinson

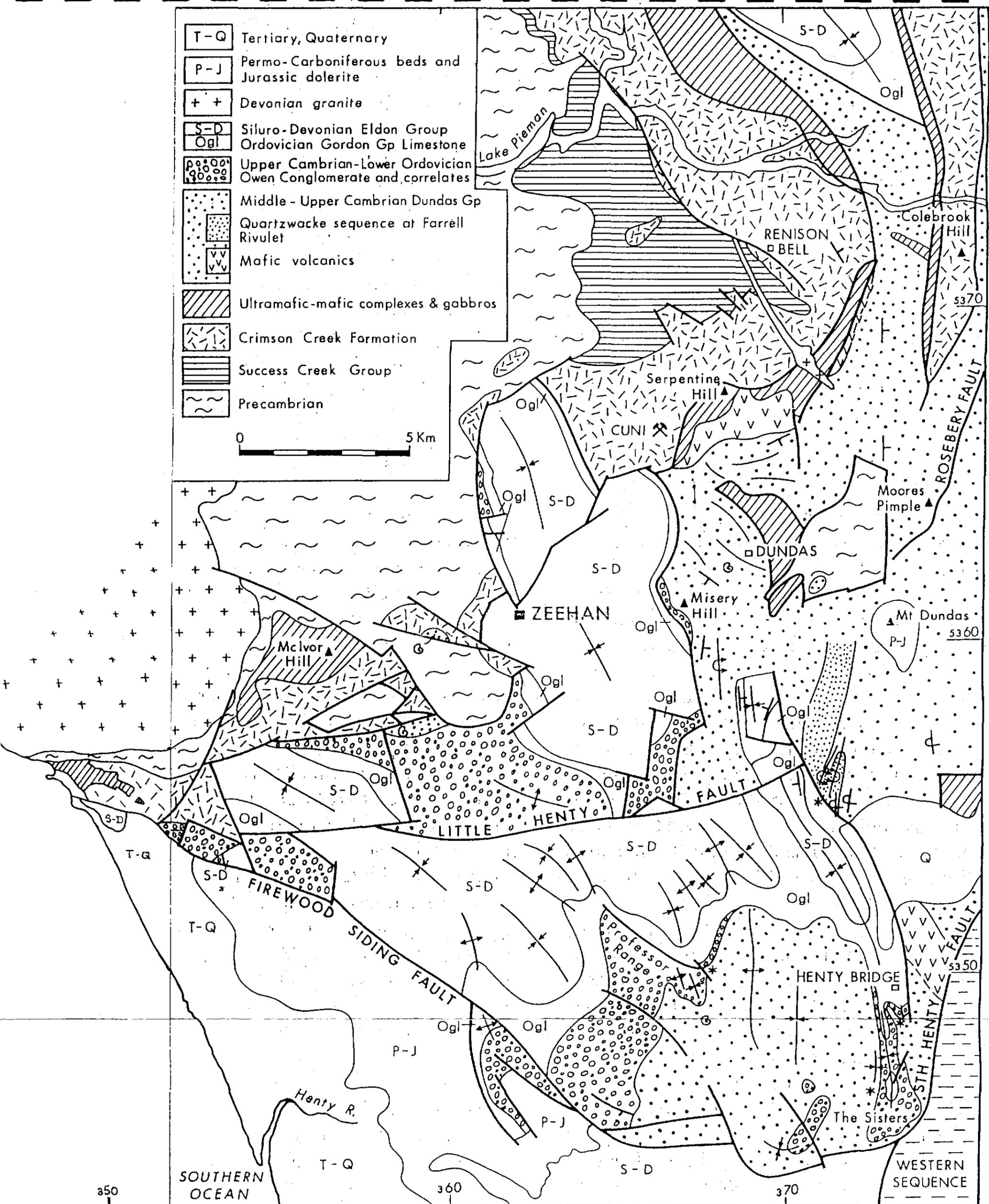
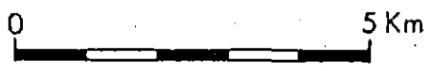
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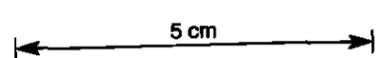
Plan No.: Tv 498

Oct. 1992

- T-Q Tertiary, Quaternary
- P-J Permo-Carboniferous beds and Jurassic dolerite
- + + Devonian granite
- S-D Siluro-Devonian Eldon Group
- Ogl Ordovician Gordon Gp Limestone
- Upper Cambrian-Lower Ordovician Owen Conglomerate and correlates
- Middle - Upper Cambrian Dundas Gp
- Quartzwacke sequence at Farrell Rivulet
- VVVV Mafic volcanics
- ▨▨▨▨ Ultramafic-mafic complexes & gabbros
- ▩▩▩▩ Crimson Creek Formation
- ▬▬▬▬ Success Creek Group
- ~~~~~ Precambrian

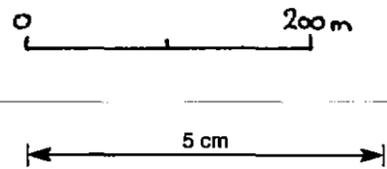
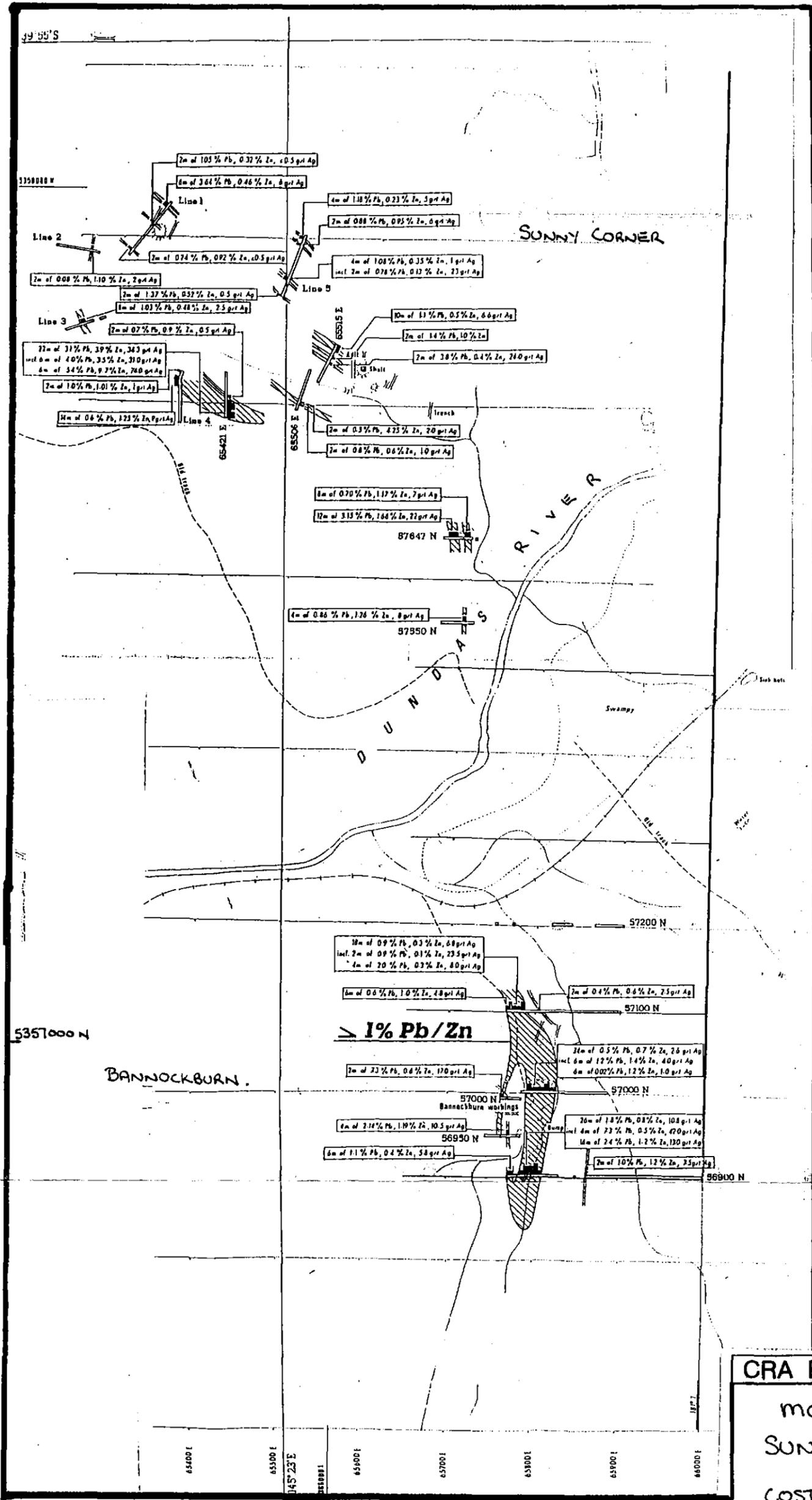


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CRA EXPLORATION PTY. LIMITED	
ZEEHAN PROJECT	
REGIONAL GEOLOGY	
Ref.: SK55-5	Scale: 1:100 000
Author: RGP	Report No.: 19675
Drawn: RGP	Plan No.: Tv 628

031020



**CRA EXPLORATION PTY. LIMITED**  
 MOUNT DUNDAS EL 45/92  
 SUNNY CORNER - BANNOCKBURN  
 COSTEAN SUMMARY

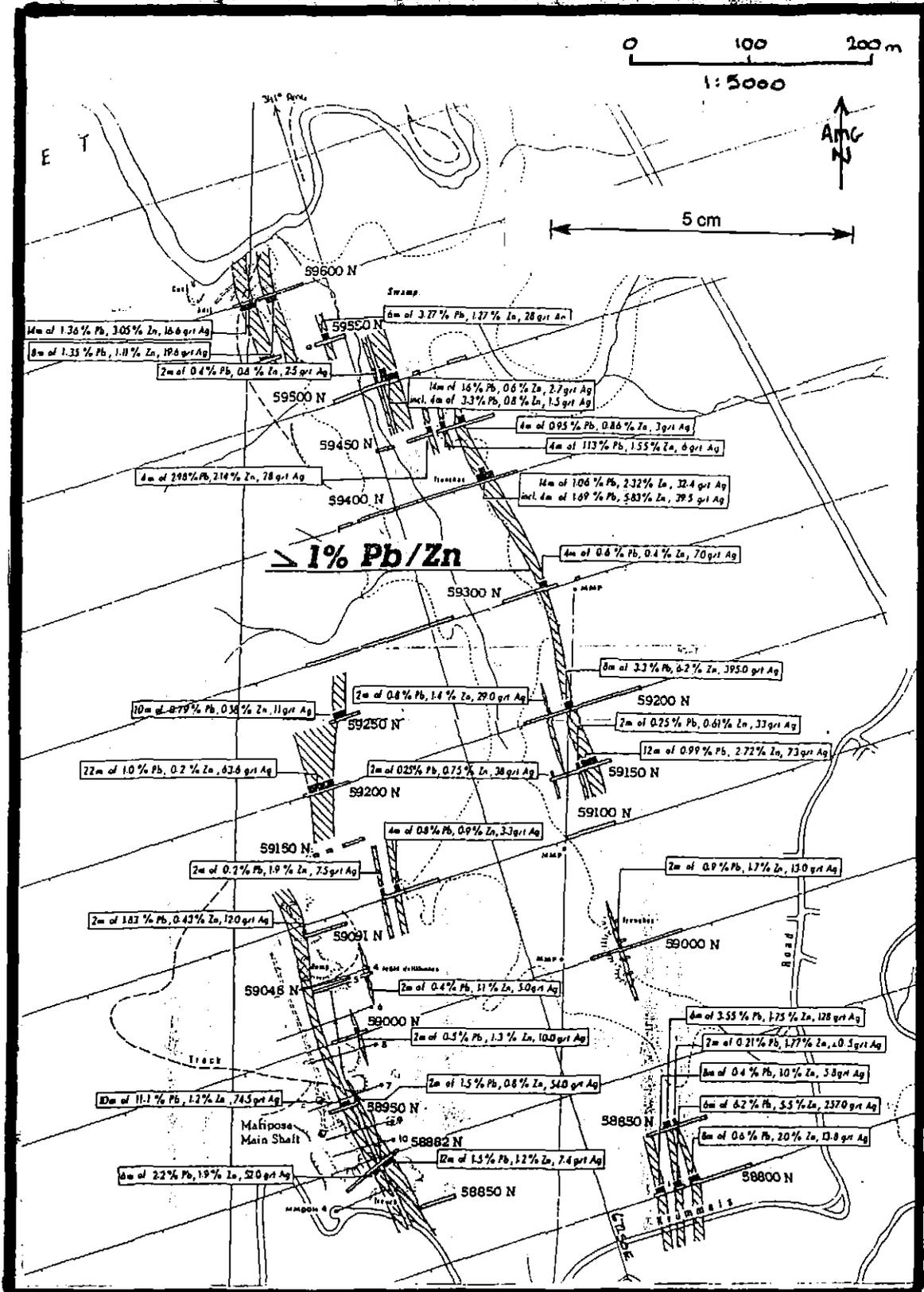
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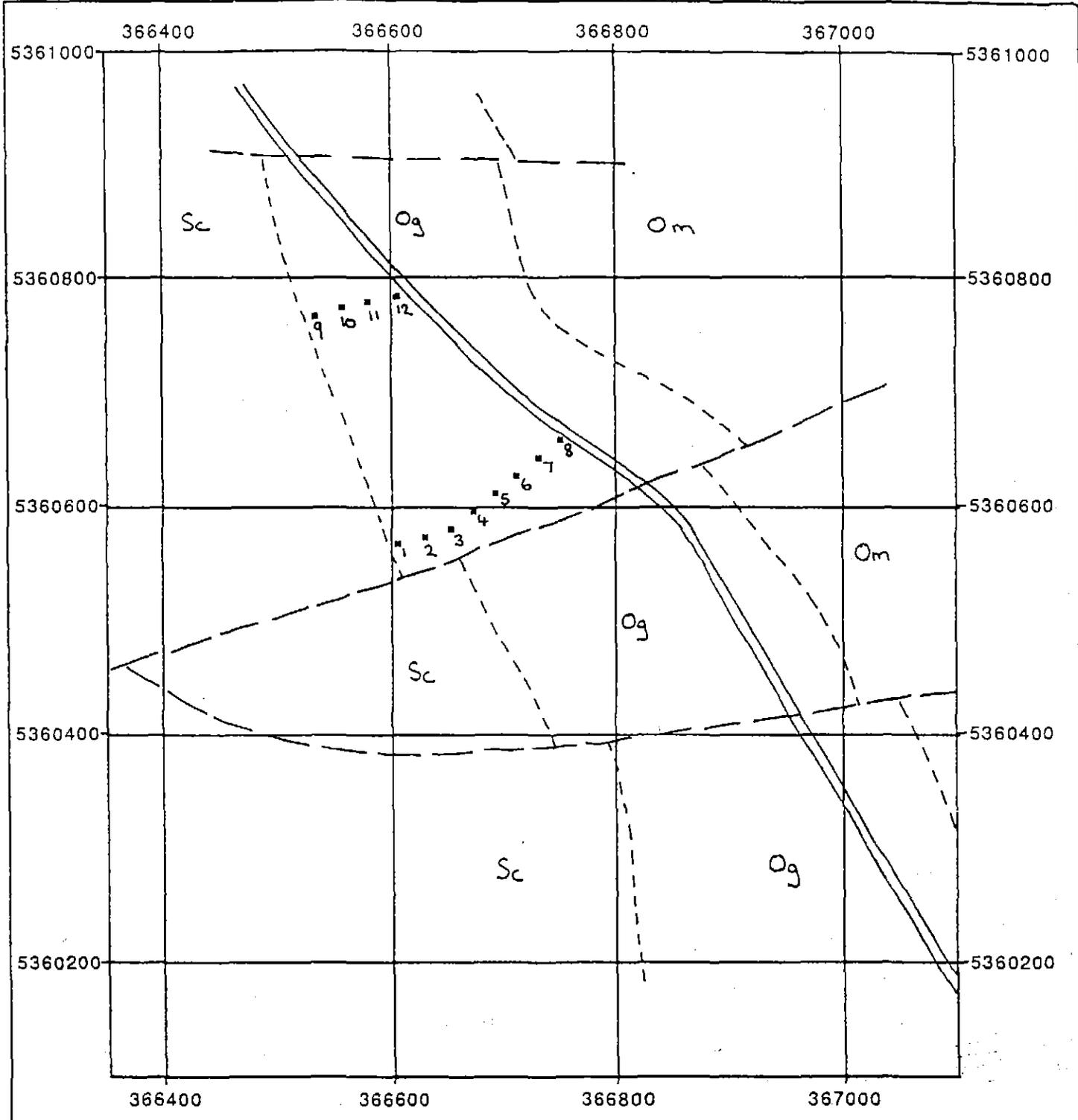
931030  
 COPY OF AMOCO-CSR PLAN

**94-3551**

# 94-3551

FIGURE : MARIPOSA PROSPECT, AMOCO-CSR COSTEAN SUMMARY.





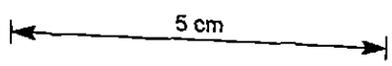
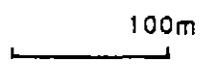
931032

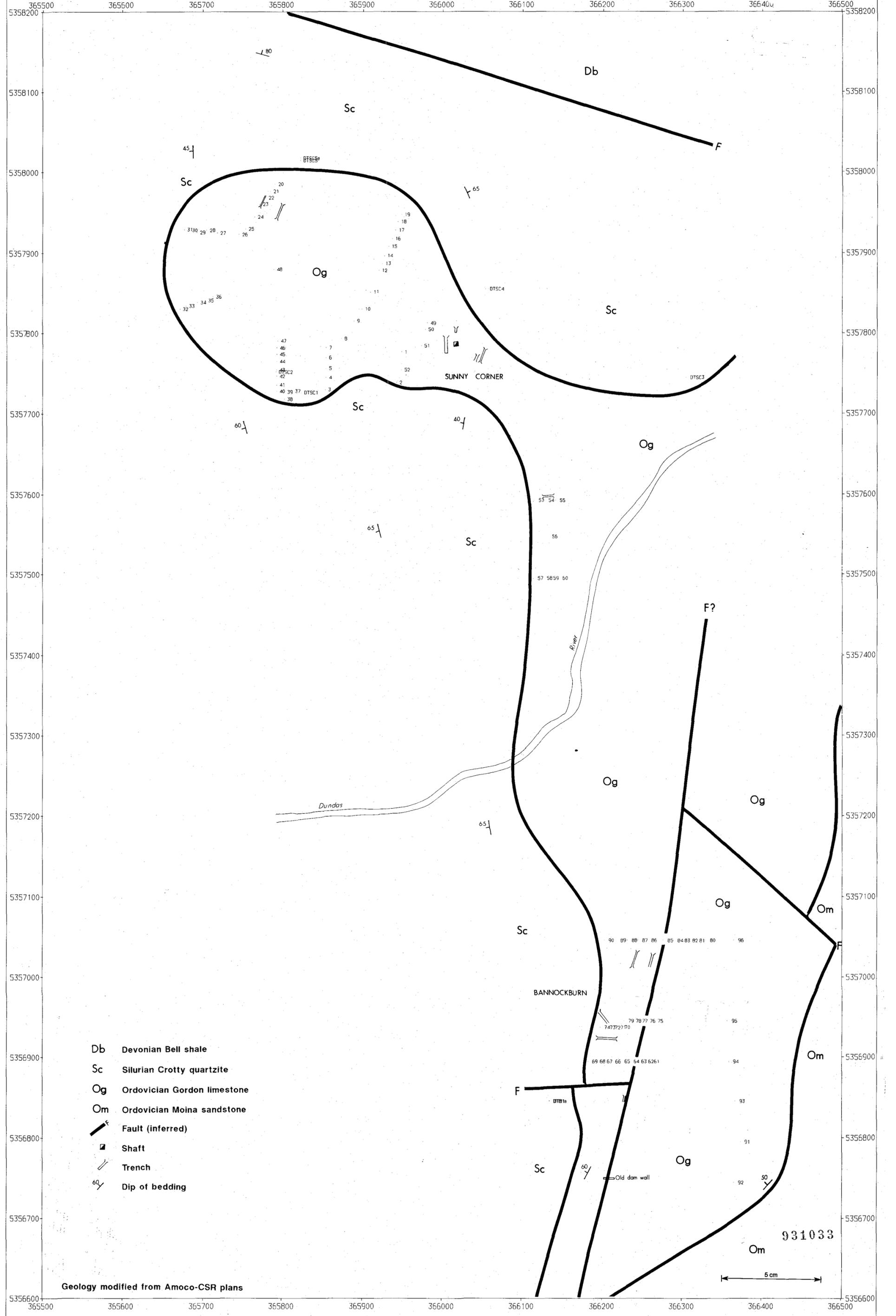
# 94-3551

"CRA EXPLORATION PTY. LIMITED"		
MT DUNDAS EL45/92 - "BLACKJACKS"		
AIR-CORE DRILL-HOLE LOCATIONS		
Geol: RGP	Scale: 1:5000	Report: 19675
Drawn: RGP	Date: 13/5/1993	Plan: TV 598

HOLE PREFIX DB--

jmap





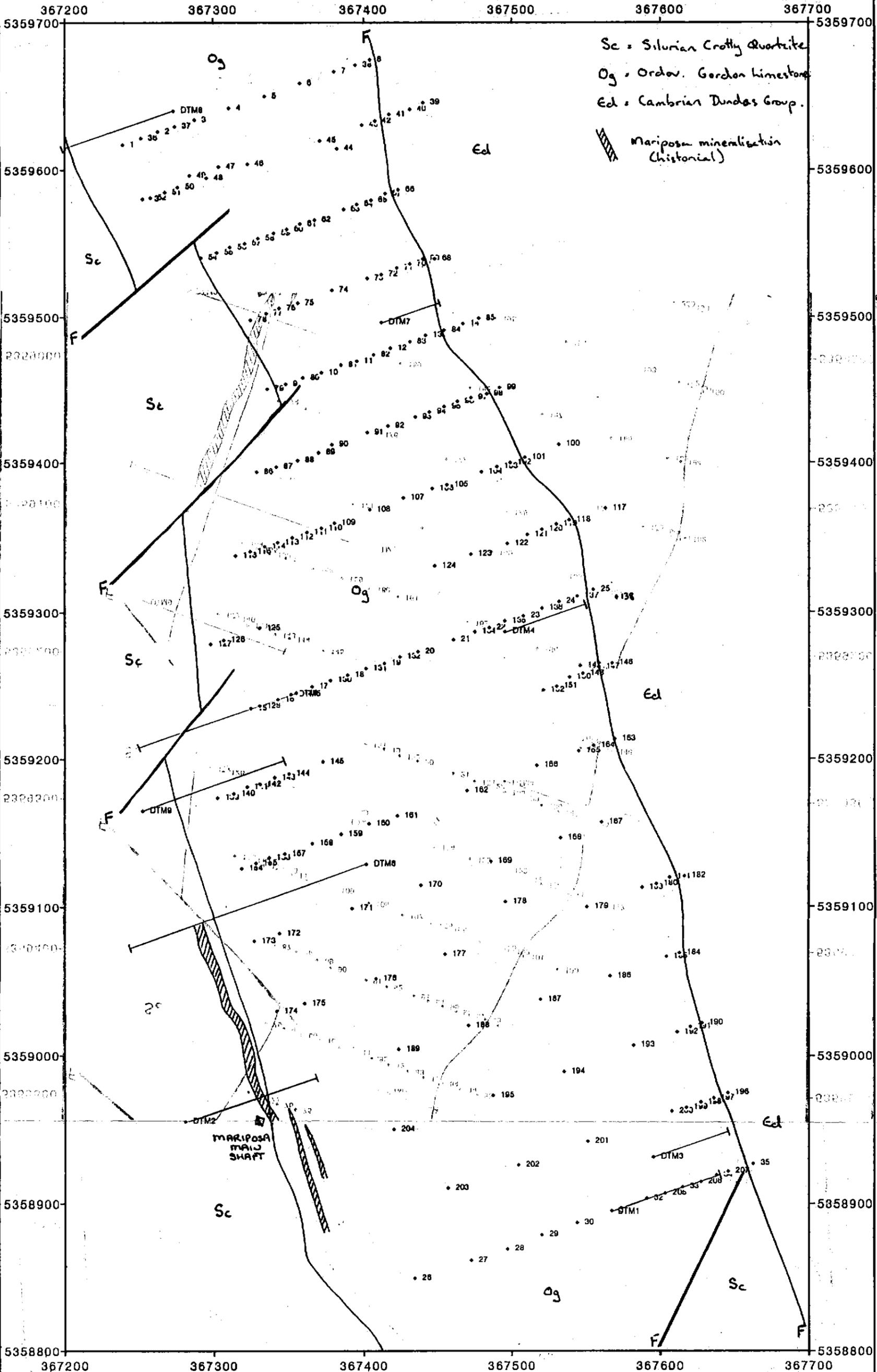
- Db Devonian Bell shale
- Sc Silurian Crotty quartzite
- Og Ordovician Gordon limestone
- Om Ordovician Moina sandstone
- Fault (inferred)
- Shaft
- Trench
- Dip of bedding

Geology modified from Amoco-CSR plans

**94-3551**

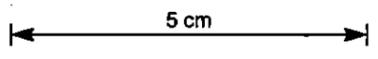
CRA Exploration Pty Limited		
MOUNT DUNDAS EL45/92 - SUNNY CORNER		
DRILLHOLE LOCATION PLAN		
Geo: RGP	Scale: 1:2500	Report: 19675
Drawn: RGP	Date: 2/3/1994	Plan: Tv 672





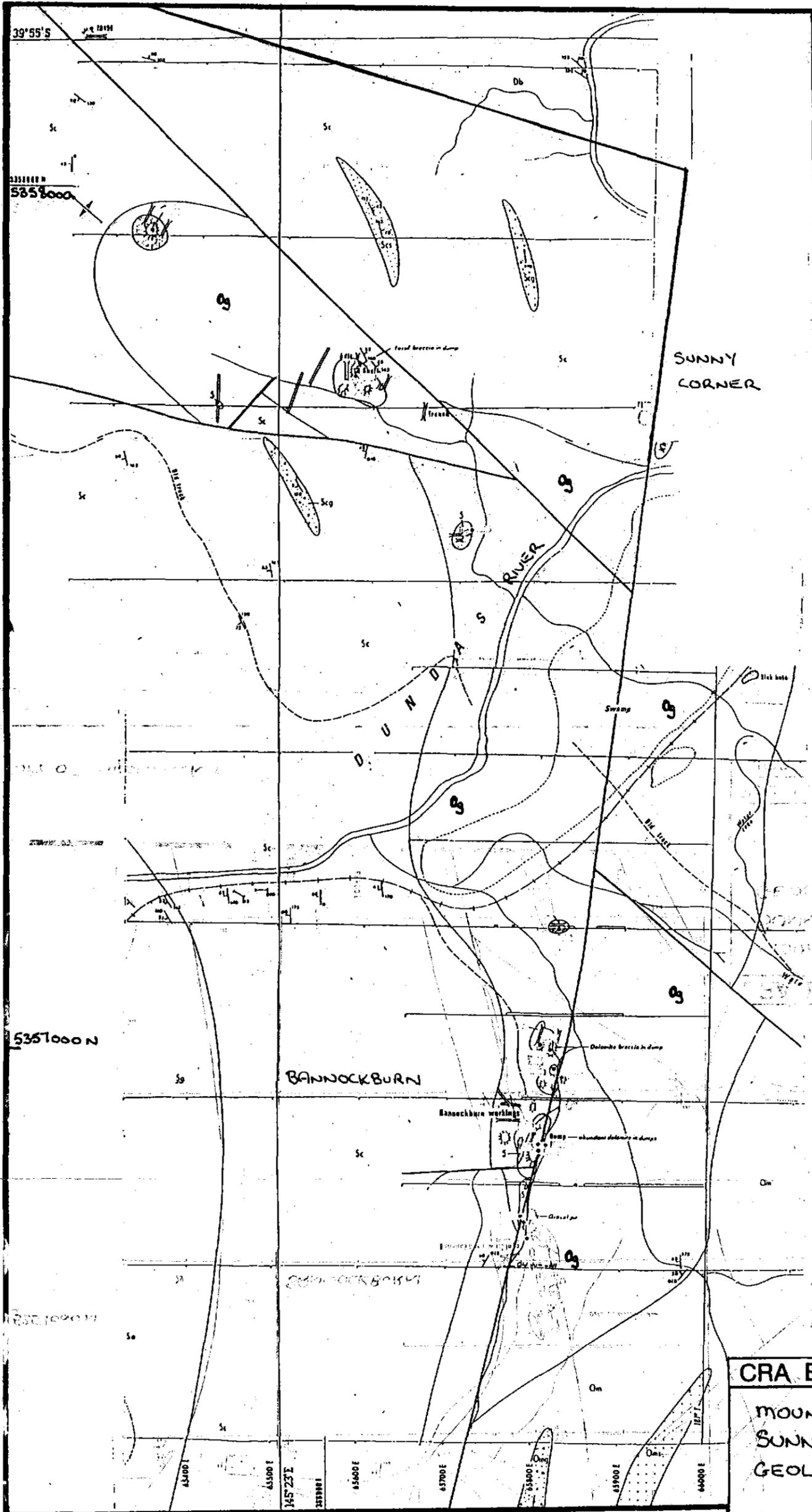
**94-3551**

All CRAE and CSR-Amoco holes.  
 CRAE HOLES PREFIXED DM  
 10m  
 jmap



CRA Exploration Pty Limited		
MT DUNDAS EL45/92 - MARIPOSA PROSPECT		
DRILLHOLE LOCATION PLAN		
Geol: RGP	Scale: 1:2500	Report: 19875
Drawn: RGP	Date: 18/2/1994	Plan: Tv 666

931033



- Db = Devonian Bell Shale
- Sa Silurian Amber State
- Sc Crotty Quartzite
- Og Ordovician Gordon Limestone
- Om Moina Sandstone

~ Lithological boundary  
 ~ Fault

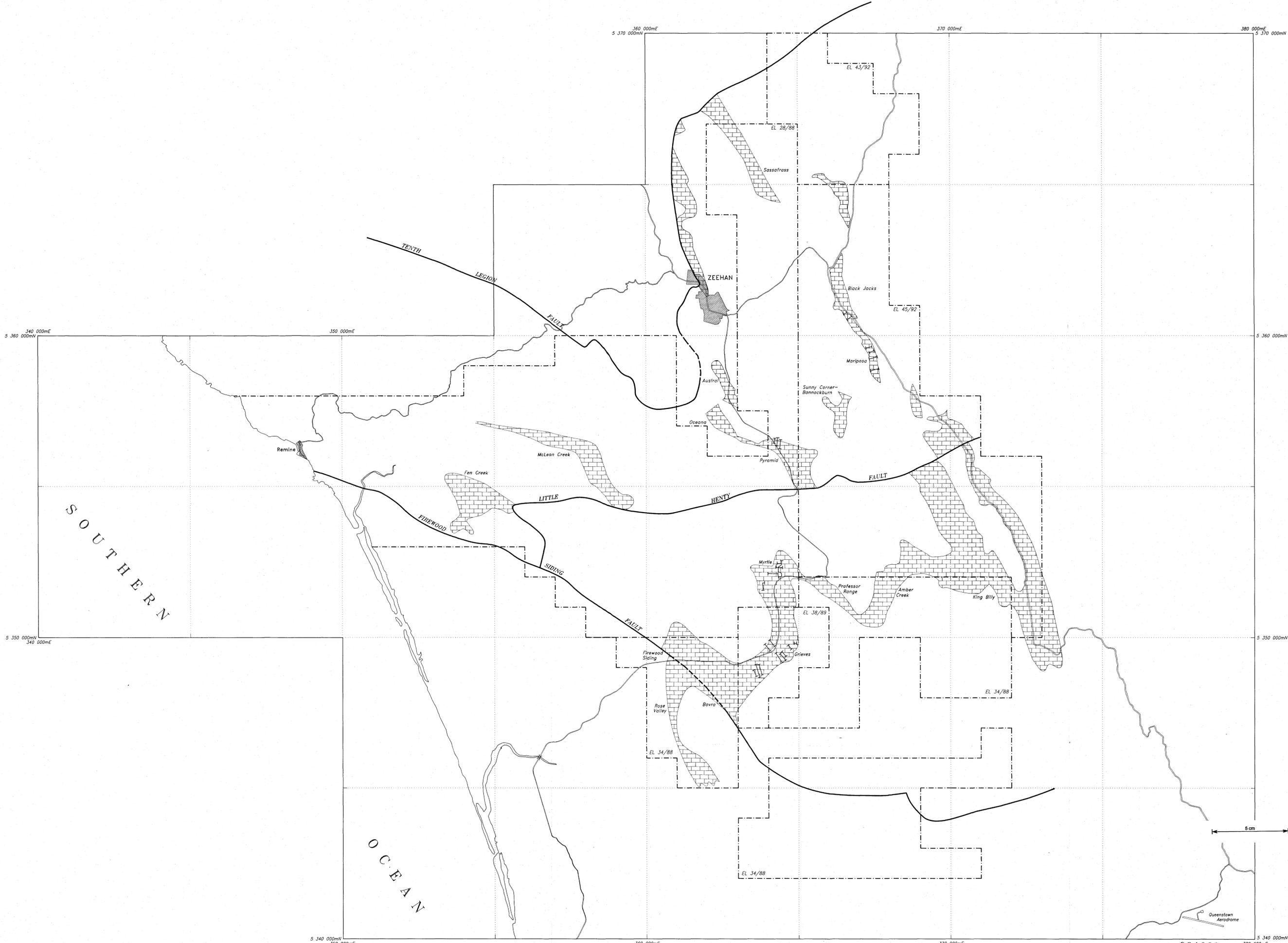
CRA EXPLORATION PTY. LIMITED

MOUNT DUNDAS EL 45/92  
 SUNNY CORNER - BANNOCKBURN  
 GEOLOGICAL PLAN

931036 94-3551

COPY OF AMOLO-CSR PLAN

Ref.: SK55-5	Scale: 1:5000
Author: RGP	Report No.: 19675
Drawn: RGP	Plan No.: Tv 664



-  Ordovician Gordon Limestone  
(usually covered by peat and gravels)
-  Major Faults
-  Air-Core Drilling Traverse
-  CRAE Tenement Boundaries



931037  
**94-3551**

CRA EXPLORATION PTY. LIMITED

**ZEEHAN PROJECT  
Gordon Limestone  
Prospect Location Plan**

Ref.: SK55 - 5	File: ZEEHAN_542
Scale: 1 : 50000	Date: November 1991
Author: T.W. Dickson	Report No.: 19675
Drawn: R. Traverso	Plan No.: Tv 542

APPENDIX 1

DRILLHOLE LOCATION DATA

APPENDIX 1: MOUNT DUNDAS EL45/92. DRILLHOLE COLLAR INFORMATION.											
HOLE	HOLE	PROSPECT	COMPANY	EL	LOCALE	LOCALN	EAST	NORTH	DEPTH	AZIM. (AMG)	DIP
DTM-84-1	DTM1	MARIPOSA	AMOCO	EL15/76	67248	58800	367566	5358895	124.6	72	-52
DTM-84-2	DTM2	MARIPOSA	AMOCO	EL15/76	66999	58950	367281	5358956	186.0	72	-60
DTM-84-3	DTM3	MARIPOSA	AMOCO	EL15/76	67288	58825	367595	5358932	70.0	72	-40
DTM-84-4	DTM4	MARIPOSA	AMOCO	EL15/76	67310	59193	367496	5359287	77.3	72	-40
DTM-84-5	DTM5	MARIPOSA	AMOCO	EL15/76	67160	59200	367352	5359245	145.7	252	-40
DTM-84-6	DTM6	MARIPOSA	AMOCO	EL15/76	67170	59075	367402	5359130	238.0	252	-45
DTM-84-7	DTM7	MARIPOSA	AMOCO	EL15/76	67300	59419	367413	5359497	65.5	72	-45
DTM-84-8	DTM8	MARIPOSA	AMOCO	EL15/76	67214	59600	367273	5359641	112.0	252	-45
DTM-84-9	DTM9	MARIPOSA	AMOCO	EL15/76	67040	59158	367252	5359166	200.0	72	-60
AC93DM1	DM1	MARIPOSA	CRAE	EL45/92	67175	59590	367239	5359618	22.5	0	-90
AC93DM2	DM2	MARIPOSA	CRAE	EL45/92	67200	59590	367263	5359627	20.0	0	-90
AC93DM3	DM3	MARIPOSA	CRAE	EL45/92	67225	59590	367287	5359635	12.2	0	-90
AC93DM4	DM4	MARIPOSA	CRAE	EL45/92	67250	59590	367310	5359643	12.4	0	-90
AC93DM5	DM5	MARIPOSA	CRAE	EL45/92	67275	59590	367334	5359651	10.0	0	-90
AC93DM6	DM6	MARIPOSA	CRAE	EL45/92	67300	59590	367358	5359659	14.0	0	-90
AC93DM7	DM7	MARIPOSA	CRAE	EL45/92	67325	59590	367381	5359667	14.0	0	-90
AC93DM8	DM8	MARIPOSA	CRAE	EL45/92	67350	59590	367405	5359675	24.0	0	-90
AC93DM9	DM9	MARIPOSA	CRAE	EL45/92	67225	59400	367348	5359455	41.5	0	-90
AC93DM10	DM10	MARIPOSA	CRAE	EL45/92	67250	59400	367372	5359463	41.1	0	-90
AC93DM11	DM11	MARIPOSA	CRAE	EL45/92	67275	59400	367396	5359471	18.1	0	-90
AC93DM12	DM12	MARIPOSA	CRAE	EL45/92	67300	59400	367419	5359479	20.0	0	-90
AC93DM13	DM13	MARIPOSA	CRAE	EL45/92	67325	59400	367443	5359488	26.0	0	-90
AC93DM14	DM14	MARIPOSA	CRAE	EL45/92	67350	59400	367467	5359496	6.0	0	-90
AC93DM15	DM15	MARIPOSA	CRAE	EL45/92	67130	59200	367324	5359235	48.0	0	-90
AC93DM16	DM16	MARIPOSA	CRAE	EL45/92	67150	59200	367348	5359241	22.0	0	-90
AC93DM17	DM17	MARIPOSA	CRAE	EL45/92	67175	59200	367366	5359250	16.5	0	-90
AC93DM18	DM18	MARIPOSA	CRAE	EL45/92	67200	59200	367390	5359258	3.6	0	-90
AC93DM19	DM19	MARIPOSA	CRAE	EL45/92	67225	59200	367414	5359266	1.0	0	-90
AC93DM20	DM20	MARIPOSA	CRAE	EL45/92	67250	59200	367437	5359274	1.0	0	-90
AC93DM21	DM21	MARIPOSA	CRAE	EL45/92	67275	59200	367461	5359282	0.8	0	-90
AC93DM22	DM22	MARIPOSA	CRAE	EL45/92	67300	59200	367485	5359290	1.1	0	-90
AC93DM23	DM23	MARIPOSA	CRAE	EL45/92	67325	59200	367508	5359298	28.7	0	-90
AC93DM24	DM24	MARIPOSA	CRAE	EL45/92	67350	59200	367532	5359307	32.0	0	-90
AC93DM25	DM25	MARIPOSA	CRAE	EL45/92	67375	59200	367555	5359315	6.0	0	-90
AC93DM26	DM26	MARIPOSA	CRAE	EL45/92	67110	58800	367435	5358850	2.0	0	-90
AC93DM27	DM27	MARIPOSA	CRAE	EL45/92	67150	58800	367473	5358863	1.0	0	-90
AC93DM28	DM28	MARIPOSA	CRAE	EL45/92	67175	58800	367497	5358871	2.3	0	-90
AC93DM29	DM29	MARIPOSA	CRAE	EL45/92	67200	58800	367520	5358880	1.1	0	-90
AC93DM30	DM30	MARIPOSA	CRAE	EL45/92	67225	58800	367544	5358888	4.7	0	-90
AC93DM31	DM31	MARIPOSA	CRAE	EL45/92	67250	58800	367567	5358896	0.5	0	-90
AC93DM32	DM32	MARIPOSA	CRAE	EL45/92	67275	58800	367591	5358904	0.7	0	-90
AC93DM33	DM33	MARIPOSA	CRAE	EL45/92	67300	58800	367615	5358912	20.0	0	-90
AC93DM34	DM34	MARIPOSA	CRAE	EL45/92	67325	58800	367638	5358920	12.9	0	-90
AC93DM35	DM35	MARIPOSA	CRAE	EL45/92	67350	58800	367662	5358928	12.0	0	-90
AC93DM36	DM36	MARIPOSA	CRAE	EL45/92	67187	59590	367251	5359622	5.9	0	-90
AC93DM37	DM37	MARIPOSA	CRAE	EL45/92	67212	59590	367274	5359630	16.0	0	-90
AC93DM38	DM38	MARIPOSA	CRAE	EL45/92	67340	59590	367395	5359672	32.0	0	-90
AC93DM39	DM39	MARIPOSA	CRAE	EL45/92	67375	59550	367441	5359646	6.0	0	-90
AC93DM40	DM40	MARIPOSA	CRAE	EL45/92	67365	59550	367432	5359642	60.0	0	-90
AC93DM41	DM41	MARIPOSA	CRAE	EL45/92	67350	59550	367418	5359638	41.0	0	-90
AC93DM42	DM42	MARIPOSA	CRAE	EL45/92	67340	59550	367408	5359634	20.1	0	-90
AC93DM43	DM43	MARIPOSA	CRAE	EL45/92	67330	59550	367399	5359631	32.5	0	-90
AC93DM44	DM44	MARIPOSA	CRAE	EL45/92	67310	59540	367383	5359615	12.3	0	-90
AC93DM45	DM45	MARIPOSA	CRAE	EL45/92	67300	59550	367371	5359621	10.2	0	-90
AC93DM46	DM46	MARIPOSA	CRAE	EL45/92	67250	59550	367323	5359605	14.0	0	-90
AC93DM47	DM47	MARIPOSA	CRAE	EL45/92	67230	59555	367303	5359603	43.0	0	-90
AC93DM48	DM48	MARIPOSA	CRAE	EL45/92	67220	59550	367295	5359595	19.3	0	-90
AC93DM49	DM49	MARIPOSA	CRAE	EL45/92	67210	59555	367284	5359597	18.8	0	-90
AC93DM50	DM50	MARIPOSA	CRAE	EL45/92	67200	59550	367276	5359589	30.0	0	-90
AC93DM51	DM51	MARIPOSA	CRAE	EL45/92	67190	59550	367267	5359585	19.4	0	-90
AC93DM52	DM52	MARIPOSA	CRAE	EL45/92	67180	59550	367257	5359582	9.7	0	-90
AC93DM53	DM53	MARIPOSA	CRAE	EL45/92	67175	59550	367252	5359581	16.0	0	-90
AC93DM54	DM54	MARIPOSA	CRAE	EL45/92	67200	59500	367292	5359541	22.0	0	-90
AC93DM55	DM55	MARIPOSA	CRAE	EL45/92	67210	59500	367302	5359545	26.0	0	-90
AC93DM56	DM56	MARIPOSA	CRAE	EL45/92	67220	59500	367311	5359548	37.4	0	-90
AC93DM57	DM57	MARIPOSA	CRAE	EL45/92	67230	59500	367321	5359551	48.7	0	-90
AC93DM58	DM58	MARIPOSA	CRAE	EL45/92	67240	59500	367330	5359554	29.0	0	-90

HOLE	HOLE	PROSPECT	COMPANY	EL	LOCALE	LOCALN	EAST	NORTH	DEPTH	AZIM. (AMG)	DIP
AC93DM59	DM59	MARIPOSA	CRAE	EL45/92	67250	59500	367340	5359558	39.7	0	-90
AC93DM60	DM60	MARIPOSA	CRAE	EL45/92	67260	59500	367349	5359561	41.0	0	-90
AC94DM61	DM61	MARIPOSA	CRAE	EL45/92	67270	59500	367358	5359564	50.0	0	-90
AC94DM62	DM62	MARIPOSA	CRAE	EL45/92	67280	59500	367368	5359567	16.0	0	-90
AC94DM63	DM63	MARIPOSA	CRAE	EL45/92	67300	59500	367387	5359574	20.2	0	-90
AC94DM64	DM64	MARIPOSA	CRAE	EL45/92	67310	59500	367396	5359577	31.0	0	-90
AC94DM65	DM65	MARIPOSA	CRAE	EL45/92	67320	59500	367406	5359580	23.5	0	-90
AC94DM66	DM66	MARIPOSA	CRAE	EL45/92	67339	59500	367424	5359587	6.3	0	-90
AC94DM67	DM67	MARIPOSA	CRAE	EL45/92	67330	59500	367415	5359584	3.0	0	-90
AC94DM68	DM68	MARIPOSA	CRAE	EL45/92	67348	59448	367449	5359540	6.0	0	-90
AC94DM69	DM69	MARIPOSA	CRAE	EL45/92	67340	59450	367441	5359540	50.0	0	-90
AC94DM70	DM70	MARIPOSA	CRAE	EL45/92	67331	59450	367432	5359537	44.5	0	-90
AC94DM71	DM71	MARIPOSA	CRAE	EL45/92	67321	59450	367423	5359534	30.1	0	-90
AC94DM72	DM72	MARIPOSA	CRAE	EL45/92	67310	59450	367413	5359530	45.3	0	-90
AC94DM73	DM73	MARIPOSA	CRAE	EL45/92	67300	59450	367403	5359527	16.5	0	-90
AC94DM74	DM74	MARIPOSA	CRAE	EL45/92	67275	59450	367379	5359519	13.8	0	-90
AC94DM75	DM75	MARIPOSA	CRAE	EL45/92	67250	59450	367356	5359510	28.0	0	-90
AC94DM76	DM76	MARIPOSA	CRAE	EL45/92	67238	59450	367344	5359507	11.8	0	-90
AC94DM77	DM77	MARIPOSA	CRAE	EL45/92	67228	59450	367335	5359503	5.0	0	-90
AC94DM78	DM78	MARIPOSA	CRAE	EL45/92	67216	59450	367324	5359499	4.8	0	-90
AC94DM79	DM79	MARIPOSA	CRAE	EL45/92	67212	59400	367336	5359451	48.9	0	-90
AC94DM80	DM80	MARIPOSA	CRAE	EL45/92	67237.5	59400	367360	5359459	35.7	0	-90
AC94DM81	DM81	MARIPOSA	CRAE	EL45/92	67283.5	59400	367385	5359468	14.8	0	-90
AC94DM82	DM82	MARIPOSA	CRAE	EL45/92	67287	59400	367407	5359475	26.2	0	-90
AC94DM83	DM83	MARIPOSA	CRAE	EL45/92	67313	59400	367432	5359484	22.5	0	-90
AC94DM84	DM84	MARIPOSA	CRAE	EL45/92	67337.5	59400	367455	5359492	32.5	0	-90
AC94DM85	DM85	MARIPOSA	CRAE	EL45/92	67362.5	59400	367478	5359500	12.0	0	-90
AC94DM86	DM86	MARIPOSA	CRAE	EL45/92	67187	59350	367329	5359395	30.0	0	-90
AC94DM87	DM87	MARIPOSA	CRAE	EL45/92	67200	59348	367342	5359398	31.8	0	-90
AC94DM88	DM88	MARIPOSA	CRAE	EL45/92	67215	59348	367356	5359403	32.2	0	-90
AC94DM89	DM89	MARIPOSA	CRAE	EL45/92	67230	59349	367370	5359408	23.2	0	-90
AC94DM90	DM90	MARIPOSA	CRAE	EL45/92	67240	59350	367379	5359413	12.8	0	-90
AC94DM91	DM91	MARIPOSA	CRAE	EL45/92	67265	59350	367403	5359421	16.2	0	-90
AC94DM92	DM92	MARIPOSA	CRAE	EL45/92	67280	59350	367417	5359426	22.0	0	-90
AC94DM93	DM93	MARIPOSA	CRAE	EL45/92	67300	59350	367436	5359432	57.0	0	-90
AC94DM94	DM94	MARIPOSA	CRAE	EL45/92	67310	59350	367445	5359435	13.1	0	-90
AC94DM95	DM95	MARIPOSA	CRAE	EL45/92	67320	59350	367455	5359439	55.2	0	-90
AC94DM96	DM96	MARIPOSA	CRAE	EL45/92	67330	59350	367464	5359442	43.8	0	-90
AC94DM97	DM97	MARIPOSA	CRAE	EL45/92	67340	59350	367473	5359445	38.5	0	-90
AC94DM98	DM98	MARIPOSA	CRAE	EL45/92	67350	59350	367483	5359448	55.1	0	-90
AC94DM99	DM99	MARIPOSA	CRAE	EL45/92	67360	59350	367492	5359452	14.0	0	-90
AC94DM100	DM100	MARIPOSA	CRAE	EL45/92	67385	59300	367532	5359413	14.0	0	-90
AC94DM101	DM101	MARIPOSA	CRAE	EL45/92	67360	59300	367509	5359404	40.7	0	-90
AC94DM102	DM102	MARIPOSA	CRAE	EL45/92	67350	59300	367499	5359401	27.2	0	-90
AC94DM103	DM103	MARIPOSA	CRAE	EL45/92	67340	59300	367490	5359398	10.0	0	-90
AC94DM104	DM104	MARIPOSA	CRAE	EL45/92	67330	59300	367480	5359395	5.2	0	-90
AC94DM105	DM105	MARIPOSA	CRAE	EL45/92	67305	59300	367457	5359386	20.2	0	-90
AC94DM106	DM106	MARIPOSA	CRAE	EL45/92	67295	59300	367447	5359383	20.8	0	-90
AC94DM107	DM107	MARIPOSA	CRAE	EL45/92	67275	59300	367428	5359377	1.5	0	-90
AC94DM108	DM108	MARIPOSA	CRAE	EL45/92	67250	59300	367405	5359369	2.0	0	-90
AC94DM109	DM109	MARIPOSA	CRAE	EL45/92	67225	59300	367381	5359360	20.0	0	-90
AC94DM110	DM110	MARIPOSA	CRAE	EL45/92	67215	59300	367372	5359357	29.0	0	-90
AC94DM111	DM111	MARIPOSA	CRAE	EL45/92	67205	59300	367362	5359354	57.0	0	-90
AC94DM112	DM112	MARIPOSA	CRAE	EL45/92	67195	59300	367353	5359351	47.8	0	-90
AC94DM113	DM113	MARIPOSA	CRAE	EL45/92	67185	59300	367343	5359347	39.0	0	-90
AC94DM114	DM114	MARIPOSA	CRAE	EL45/92	67175	59300	367334	5359344	41.0	0	-90
AC94DM115	DM115	MARIPOSA	CRAE	EL45/92	67165	59300	367324	5359341	23.5	0	-90
AC94DM116	DM116	MARIPOSA	CRAE	EL45/92	67155	59300	367315	5359338	30.9	0	-90
AC94DM117	DM117	MARIPOSA	CRAE	EL45/92	67400	59250	367563	5359370	8.0	0	-90
AC94DM118	DM118	MARIPOSA	CRAE	EL45/92	67375	59250	367539	5359362	57.0	0	-90
AC94DM119	DM119	MARIPOSA	CRAE	EL45/92	67365	59250	367530	5359359	26.5	0	-90
AC94DM120	DM120	MARIPOSA	CRAE	EL45/92	67355	59250	367520	5359356	19.9	0	-90
AC94DM121	DM121	MARIPOSA	CRAE	EL45/92	67345	59250	367511	5359352	19.7	0	-90
AC94DM122	DM122	MARIPOSA	CRAE	EL45/92	67330	59249	367497	5359346	8.0	0	-90
AC94DM123	DM123	MARIPOSA	CRAE	EL45/92	67305	59250	367473	5359339	9.5	0	-90
AC94DM124	DM124	MARIPOSA	CRAE	EL45/92	67280	59250	367449	5359331	1.2	0	-90
AC94DM125	DM125	MARIPOSA	CRAE	EL45/92	67155	59250	367331	5359290	1.0	0	-90
AC94DM126	DM126	MARIPOSA	CRAE	EL45/92	67130	59250	367307	5359282	12.5	0	-90

HOLE	HOLE	PROSPECT	COMPANY	EL	LOCALE	LOCALN	EAST	NORTH	DEPTH	AZIM. (AMG)	DIP
AC94DM127	DM127	MARIPOSA	CRAE	EL45/92	67120	59250	367298	5359279	7.0	0	-90
AC94DM128	DM128	MARIPOSA	CRAE	EL45/92	67137.5	59200	367331	5359237	29.0	0	-90
AC94DM129	DM129	MARIPOSA	CRAE	EL45/92	67162.5	59200	367355	5359246	19.8	0	-90
AC94DM130	DM130	MARIPOSA	CRAE	EL45/92	67187.5	59200	367378	5359254	14.5	0	-90
AC94DM131	DM131	MARIPOSA	CRAE	EL45/92	67212.5	59200	367402	5359262	2.5	0	-90
AC94DM132	DM132	MARIPOSA	CRAE	EL45/92	67237.5	59200	367425	5359270	1.2	0	-90
AC94DM133	DM133	MARIPOSA	CRAE	EL45/92	67162.5	59200	367355	5359246	1.0	0	-90
AC94DM134	DM134	MARIPOSA	CRAE	EL45/92	67290	59200	367475	5359287	1.0	0	-90
AC94DM135	DM135	MARIPOSA	CRAE	EL45/92	67312.5	59200	367496	5359294	1.3	0	-90
AC94DM136	DM136	MARIPOSA	CRAE	EL45/92	67337.5	59200	367520	5359303	18.5	0	-90
AC94DM137	DM137	MARIPOSA	CRAE	EL45/92	67362.5	59200	367544	5359311	45.5	0	-90
AC94DM138	DM138	MARIPOSA	CRAE	EL45/92	67387.5	59190	367570	5359310	15.0	0	-90
AC94DM139	DM139	MARIPOSA	CRAE	EL45/92	67090	59150	367302	5359175	37.0	0	-90
AC94DM140	DM140	MARIPOSA	CRAE	EL45/92	67101	59150	367313	5359178	16.0	0	-90
AC94DM141	DM141	MARIPOSA	CRAE	EL45/92	67111	59150	367322	5359182	36.0	0	-90
AC94DM142	DM142	MARIPOSA	CRAE	EL45/92	67120	59150	367331	5359184	38.0	0	-90
AC94DM143	DM143	MARIPOSA	CRAE	EL45/92	67130	59150	367340	5359188	16.6	0	-90
AC94DM144	DM144	MARIPOSA	CRAE	EL45/92	67140	59150	367350	5359191	4.0	0	-90
AC94DM145	DM145	MARIPOSA	CRAE	EL45/92	67165	59150	367373	5359199	2.0	0	-90
AC94DM146	DM146	MARIPOSA	CRAE	EL45/92	67370	59150	367567	5359266	15.0	0	-90
AC94DM147	DM147	MARIPOSA	CRAE	EL45/92	67360	59150	367558	5359263	13.0	0	-90
AC94DM148	DM148	MARIPOSA	CRAE	EL45/92	67350	59150	367548	5359259	10.0	0	-90
AC94DM149	DM149	MARIPOSA	CRAE	EL45/92	67350	59155	367546	5359264	57.0	0	-90
AC94DM150	DM150	MARIPOSA	CRAE	EL45/92	67340	59150	367539	5359256	57.0	0	-90
AC94DM151	DM151	MARIPOSA	CRAE	EL45/92	67330	59147	367530	5359250	4.7	0	-90
AC94DM152	DM152	MARIPOSA	CRAE	EL45/92	67320	59147	367521	5359247	1.0	0	-90
AC94DM153	DM153	MARIPOSA	CRAE	EL45/92	67275	59150	367477	5359235	1.0	0	-90
AC94DM154	DM154	MARIPOSA	CRAE	EL45/92	67089	59100	367318	5359127	4.6	0	-90
AC94DM155	DM155	MARIPOSA	CRAE	EL45/92	67100	59100	367328	5359131	5.7	0	-90
AC94DM156	DM156	MARIPOSA	CRAE	EL45/92	67110	59100	367337	5359134	9.5	0	-90
AC94DM157	DM157	MARIPOSA	CRAE	EL45/92	67120	59100	367347	5359137	36.0	0	-90
AC94DM158	DM158	MARIPOSA	CRAE	EL45/92	67140	59100	367366	5359144	33.9	0	-90
AC94DM159	DM159	MARIPOSA	CRAE	EL45/92	67160	59100	367385	5359150	28.0	0	-90
AC94DM160	DM160	MARIPOSA	CRAE	EL45/92	67180	59100	367404	5359157	16.7	0	-90
AC94DM161	DM161	MARIPOSA	CRAE	EL45/92	67200	59100	367423	5359163	0.9	0	-90
AC94DM162	DM162	MARIPOSA	CRAE	EL45/92	67250	59100	367470	5359179	1.0	0	-90
AC94DM163	DM163	MARIPOSA	CRAE	EL45/92	67355	59100	367569	5359214	27.1	0	-90
AC94DM164	DM164	MARIPOSA	CRAE	EL45/92	67340	59100	367555	5359209	11.5	0	-90
AC94DM165	DM165	MARIPOSA	CRAE	EL45/92	67330	59100	367545	5359206	5.7	0	-90
AC94DM166	DM166	MARIPOSA	CRAE	EL45/92	67300	59100	367517	5359196	1.5	0	-90
AC94DM167	DM167	MARIPOSA	CRAE	EL45/92	67328	59050	367560	5359158	2.8	0	-90
AC94DM168	DM168	MARIPOSA	CRAE	EL45/92	67300	59050	367533	5359148	1.0	0	-90
AC94DM169	DM169	MARIPOSA	CRAE	EL45/92	67250	59050	367486	5359132	2.5	0	-90
AC94DM170	DM170	MARIPOSA	CRAE	EL45/92	67200	59050	367439	5359116	1.2	0	-90
AC94DM171	DM171	MARIPOSA	CRAE	EL45/92	67150	59050	367392	5359100	1.1	0	-90
AC94DM172	DM172	MARIPOSA	CRAE	EL45/92	67100	59050	367344	5359083	1.8	0	-90
AC94DM173	DM173	MARIPOSA	CRAE	EL45/92	67082	59050	367327	5359078	2.2	0	-90
AC94DM174	DM174	MARIPOSA	CRAE	EL45/92	67080	59000	367342	5359030	2.1	0	-90
AC94DM175	DM175	MARIPOSA	CRAE	EL45/92	67100	59000	367361	5359036	1.2	0	-90
AC94DM176	DM176	MARIPOSA	CRAE	EL45/92	67150	59000	367408	5359052	1.0	0	-90
AC94DM177	DM177	MARIPOSA	CRAE	EL45/92	67200	59000	367455	5359069	1.5	0	-90
AC94DM178	DM178	MARIPOSA	CRAE	EL45/92	67250	59020	367496	5359104	1.3	0	-90
AC94DM179	DM179	MARIPOSA	CRAE	EL45/92	67300	59000	367550	5359101	1.0	0	-90
AC94DM180	DM180	MARIPOSA	CRAE	EL45/92	67350	59000	367597	5359117	23.8	0	-90
AC94DM181	DM181	MARIPOSA	CRAE	EL45/92	67360	59000	367606	5359121	30.5	0	-90
AC94DM182	DM182	MARIPOSA	CRAE	EL45/92	67370	58998	367616	5359122	14.0	0	-90
AC94DM183	DM183	MARIPOSA	CRAE	EL45/92	67340	59000	367587	5359114	7.0	0	-90
AC94DM184	DM184	MARIPOSA	CRAE	EL45/92	67350	58950	367613	5359070	31.1	0	-90
AC94DM185	DM185	MARIPOSA	CRAE	EL45/92	67340	58950	367604	5359067	7.5	0	-90
AC94DM186	DM186	MARIPOSA	CRAE	EL45/92	67300	58950	367566	5359054	1.2	0	-90
AC94DM187	DM187	MARIPOSA	CRAE	EL45/92	67250	58950	367519	5359038	0.5	0	-90
AC94DM188	DM188	MARIPOSA	CRAE	EL45/92	67200	58950	367471	5359021	1.0	0	-90
AC94DM189	DM189	MARIPOSA	CRAE	EL45/92	67150	58950	367424	5359005	1.0	0	-90
AC94DM190	DM190	MARIPOSA	CRAE	EL45/92	67348	58900	367628	5359022	31.8	0	-90
AC94DM191	DM191	MARIPOSA	CRAE	EL45/92	67340	58900	367620	5359020	16.8	0	-90
AC94DM192	DM192	MARIPOSA	CRAE	EL45/92	67330	58900	367611	5359016	6.0	0	-90
AC94DM193	DM193	MARIPOSA	CRAE	EL45/92	67300	58900	367582	5359007	1.2	0	-90
AC94DM194	DM194	MARIPOSA	CRAE	EL45/92	67250	58900	367535	5358990	0.9	0	-90

## Appendix 1: Mount Dundas EL45/92. Drillhole locational data.

HOLE	HOLE	PROSPECT	COMPANY	EL	LOCALE	LOCALN	EAST	NORTH	DEPTH	AZIM. (AMG)	DIP
AC94DM195	DM195	MARIPOSA	CRAE	EL45/92	67200	58900	367488	5358974	0.8	0	-90
AC94DM196	DM196	MARIPOSA	CRAE	EL45/92	67350	58850	367646	5358976	15.0	0	-90
AC94DM197	DM197	MARIPOSA	CRAE	EL45/92	67340	58850	367636	5358972	20.9	0	-90
AC94DM198	DM198	MARIPOSA	CRAE	EL45/92	67330	58850	367627	5358969	30.1	0	-90
AC94DM199	DM199	MARIPOSA	CRAE	EL45/92	67320	58850	367617	5358966	26.0	0	-90
AC94DM200	DM200	MARIPOSA	CRAE	EL45/92	67310	58850	367608	5358963	6.3	0	-90
AC94DM201	DM201	MARIPOSA	CRAE	EL45/92	67250	58850	367551	5358943	1.0	0	-90
AC94DM202	DM202	MARIPOSA	CRAE	EL45/92	67200	58850	367504	5358927	1.1	0	-90
AC94DM203	DM203	MARIPOSA	CRAE	EL45/92	67150	58850	367457	5358911	1.0	0	-90
AC94DM204	DM204	MARIPOSA	CRAE	EL45/92	67130	58900	367421	5358951	1.2	0	-90
AC94DM205	DM205	MARIPOSA	CRAE	EL45/92	67287.5	58800	367603	5358908	10.8	0	-90
AC94DM206	DM206	MARIPOSA	CRAE	EL45/92	67312.5	58800	367627	5358916	12.5	0	-90
AC94DM207	DM207	MARIPOSA	CRAE	EL45/92	67333	58800	367646	5358923	7.3	0	-90
DTBJ-84-1	DTBJ1	BLACKJACKS	AMOCO	EL15/76	67225	60830	367225	5360830	102.5	91	-40
DTBJ-84-2	DTBJ2	BLACKJACKS	AMOCO	EL15/76	67160	61050	367160	5361050	98.5	75	-45
AC93DB1	DB1	BLACKJACKS	CRAE	EL45/92	67200	60800	366606	5360567	26.0	0	-90
AC93DB2	DB2	BLACKJACKS	CRAE	EL45/92	67225	60800	366630	5360573	19.7	0	-90
AC93DB3	DB3	BLACKJACKS	CRAE	EL45/92	67250	60800	366654	5360580	17.3	0	-90
AC93DB4	DB4	BLACKJACKS	CRAE	EL45/92	67275	60800	366673	5360596	9.8	0	-90
AC93DB5	DB5	BLACKJACKS	CRAE	EL45/92	67300	60800	366693	5360612	20.0	0	-90
AC93DB6	DB6	BLACKJACKS	CRAE	EL45/92	67325	60800	366712	5360628	10.5	0	-90
AC93DB7	DB7	BLACKJACKS	CRAE	EL45/92	67350	60800	366731	5360644	32.0	0	-90
AC93DB8	DB8	BLACKJACKS	CRAE	EL45/92	67375	60800	366750	5360660	18.0	0	-90
AC93DB9	DB9	BLACKJACKS	CRAE	EL45/92	67200	61000	366532	5360767	8.0	0	-90
AC93DB10	DB10	BLACKJACKS	CRAE	EL45/92	67225	61000	366556	5360774	14.2	0	-90
AC93DB11	DB11	BLACKJACKS	CRAE	EL45/92	67250	61000	366580	5360780	22.6	0	-90
AC93DB12	DB12	BLACKJACKS	CRAE	EL45/92	67275	61000	366604	5360787	26.7	0	-90
DTSC-84-1	DTSC1	SUNNY CORNER	AMOCO	EL15/76	65388	57781	365823	5357726	7.0	40	-45
DTSC-84-2	DTSC2	SUNNY CORNER	AMOCO	EL15/76	65356	57807	365791	5357752	70.2	30	-45
DTSC-84-3	DTSC3	SUNNY CORNER	AMOCO	EL15/76	65870	57800	366305	5357745	72.1	91	-45
DTSC-84-4	DTSC4	SUNNY CORNER	AMOCO	EL15/76	65620	57910	366055	5357855	105	215	-45
DTSC-84-5	DTSC5	SUNNY CORNER	AMOCO	EL15/76	65387	58070	365822	5358015	54	222	-45
DTSC-84-5a	DTSC5a	SUNNY CORNER	AMOCO	EL15/76	65387	58072	365822	5358017	142	222	-50
DTB-84-1	DTB1	BANNOCKBURN	AMOCO	EL15/76	65700	56900	366135	5356845	101.5	91	-50
DTB-84-1a	DTB1a	BANNOCKBURN	AMOCO	EL15/76	65699	56900	366134	5356845	212.7	91	-50
AC94DS1	DS1	SUNNY CORNER	CRAE	EL45/92	65513	57832	365948	5357777	11.5	0	-90
AC94DS2	DS2	SUNNY CORNER	CRAE	EL45/92	65507	57794	365942	5357739	57	0	-90
AC94DS3	DS3	SUNNY CORNER	CRAE	EL45/92	65418	57785	365853	5357730	11.5	0	-90
AC94DS4	DS4	SUNNY CORNER	CRAE	EL45/92	65419	57800	365854	5357745	17.8	0	-90
AC94DS5	DS5	SUNNY CORNER	CRAE	EL45/92	65419	57811	365854	5357756	36.5	0	-90
AC94DS6	DS6	SUNNY CORNER	CRAE	EL45/92	65419	57825	365854	5357770	57	0	-90
AC94DS7	DS7	SUNNY CORNER	CRAE	EL45/92	65419	57837	365854	5357782	25.5	0	-90
AC94DS8	DS8	SUNNY CORNER	CRAE	EL45/92	65438	57848	365873	5357793	14.1	0	-90
AC94DS9	DS9	SUNNY CORNER	CRAE	EL45/92	65454	57870	365889	5357815	45.5	0	-90
AC94DS10	DS10	SUNNY CORNER	CRAE	EL45/92	65464	57885	365899	5357830	27	0	-90
AC94DS11	DS11	SUNNY CORNER	CRAE	EL45/92	65474	57907	365909	5357852	28.8	0	-90
AC94DS12	DS12	SUNNY CORNER	CRAE	EL45/92	65485	57933	365920	5357878	9	0	-90
AC94DS13	DS13	SUNNY CORNER	CRAE	EL45/92	65489	57942	365924	5357887	16	0	-90
AC94DS14	DS14	SUNNY CORNER	CRAE	EL45/92	65492	57952	365927	5357897	13.8	0	-90
AC94DS15	DS15	SUNNY CORNER	CRAE	EL45/92	65497	57963	365932	5357908	30	0	-90
AC94DS16	DS16	SUNNY CORNER	CRAE	EL45/92	65502	57973	365937	5357918	8	0	-90
AC94DS17	DS17	SUNNY CORNER	CRAE	EL45/92	65506	57983	365941	5357928	17.3	0	-90
AC94DS18	DS18	SUNNY CORNER	CRAE	EL45/92	65509	57994	365944	5357939	29.2	0	-90
AC94DS19	DS19	SUNNY CORNER	CRAE	EL45/92	65513	58003	365948	5357948	9.4	0	-90
AC94DS20	DS20	SUNNY CORNER	CRAE	EL45/92	65355	58041	365790	5357986	17.4	0	-90
AC94DS21	DS21	SUNNY CORNER	CRAE	EL45/92	65349	58032	365784	5357977	33	0	-90
AC94DS22	DS22	SUNNY CORNER	CRAE	EL45/92	65343	58024	365778	5357969	16	0	-90
AC94DS23	DS23	SUNNY CORNER	CRAE	EL45/92	65336	58016	365771	5357961	24.5	0	-90
AC94DS24	DS24	SUNNY CORNER	CRAE	EL45/92	65330	58000	365765	5357945	33	0	-90
AC94DS25	DS25	SUNNY CORNER	CRAE	EL45/92	65318	57985	365753	5357930	33	0	-90
AC94DS26	DS26	SUNNY CORNER	CRAE	EL45/92	65310	57978	365745	5357923	10.6	0	-90
AC94DS27	DS27	SUNNY CORNER	CRAE	EL45/92	65283	57980	365718	5357925	23.5	0	-90
AC94DS28	DS28	SUNNY CORNER	CRAE	EL45/92	65270	57983	365705	5357928	9.9	0	-90
AC94DS29	DS29	SUNNY CORNER	CRAE	EL45/92	65257	57981	365692	5357926	15.4	0	-90
AC94DS30	DS30	SUNNY CORNER	CRAE	EL45/92	65248	57983	365683	5357928	12.1	0	-90
AC94DS31	DS31	SUNNY CORNER	CRAE	EL45/92	65241	57984	365676	5357929	12.2	0	-90
AC94DS32	DS32	SUNNY CORNER	CRAE	EL45/92	65236	57885	365671	5357830	8.1	0	-90
AC94DS33	DS33	SUNNY CORNER	CRAE	EL45/92	65244	57889	365679	5357834	6.4	0	-90

HOLE	HOLE	PROSPECT	COMPANY	EL	LOCALE	LOCALN	EAST	NORTH	DEPTH	AZIM. (AMG)	DIP
AC94DS34	DS34	SUNNY CORNER	CRAE	EL45/92	65258	57893	365693	5357838	3.7	0	-90
AC94DS35	DS35	SUNNY CORNER	CRAE	EL45/92	65268	57896	365703	5357841	5.2	0	-90
AC94DS36	DS36	SUNNY CORNER	CRAE	EL45/92	65278	57900	365713	5357845	3.7	0	-90
AC94DS37	DS37	SUNNY CORNER	CRAE	EL45/92	65376	57783	365811	5357728	42	0	-90
AC94DS38	DS38	SUNNY CORNER	CRAE	EL45/92	65367	57773	365802	5357718	42	0	-90
AC94DS39	DS39	SUNNY CORNER	CRAE	EL45/92	65367	57782	365802	5357727	26.5	0	-90
AC94DS40	DS40	SUNNY CORNER	CRAE	EL45/92	65357	57783	365792	5357728	22	0	-90
AC94DS41	DS41	SUNNY CORNER	CRAE	EL45/92	65357	57791	365792	5357736	16.6	0	-90
AC94DS42	DS42	SUNNY CORNER	CRAE	EL45/92	65357	57802	365792	5357747	19.1	0	-90
AC94DS43	DS43	SUNNY CORNER	CRAE	EL45/92	65357	57810	365792	5357755	17.9	0	-90
AC94DS44	DS44	SUNNY CORNER	CRAE	EL45/92	65357	57820	365792	5357765	15.5	0	-90
AC94DS45	DS45	SUNNY CORNER	CRAE	EL45/92	65357	57829	365792	5357774	14.6	0	-90
AC94DS46	DS46	SUNNY CORNER	CRAE	EL45/92	65357	57837	365792	5357782	15.1	0	-90
AC94DS47	DS47	SUNNY CORNER	CRAE	EL45/92	65359	57846	365794	5357791	4.6	0	-90
AC94DS48	DS48	SUNNY CORNER	CRAE	EL45/92	65353	57935	365788	5357880	30	0	-90
AC94DS49	DS49	SUNNY CORNER	CRAE	EL45/92	65546	57868	365981	5357813	8.8	0	-90
AC94DS50	DS50	SUNNY CORNER	CRAE	EL45/92	65543	57860	365978	5357805	30	0	-90
AC94DS51	DS51	SUNNY CORNER	CRAE	EL45/92	65538	57840	365973	5357785	6.8	0	-90
AC94DS52	DS52	SUNNY CORNER	CRAE	EL45/92	65513	57810	365948	5357755	30	0	-90
AC94DS53	DS53	SUNNY CORNER	CRAE	EL45/92	65681	57647	366116	5357592	7.1	0	-90
AC94DS54	DS54	SUNNY CORNER	CRAE	EL45/92	65693	57647	366128	5357592	2.5	0	-90
AC94DS55	DS55	SUNNY CORNER	CRAE	EL45/92	65707	57647	366142	5357592	6.1	0	-90
AC94DS56	DS56	SUNNY CORNER	CRAE	EL45/92	65697	57602	366132	5357547	8	0	-90
AC94DS57	DS57	SUNNY CORNER	CRAE	EL45/92	65680	57550	366115	5357495	7.9	0	-90
AC94DS58	DS58	SUNNY CORNER	CRAE	EL45/92	65691	57550	366126	5357495	11.2	0	-90
AC94DS59	DS59	SUNNY CORNER	CRAE	EL45/92	65699	57550	366134	5357495	5.3	0	-90
AC94DS60	DS60	SUNNY CORNER	CRAE	EL45/92	65711	57550	366146	5357495	11.4	0	-90
AC94DS61	DS61	BANNOCKBURN	CRAE	EL45/92	65825	56950	366260	5356895	4.4	0	-90
AC94DS62	DS62	BANNOCKBURN	CRAE	EL45/92	65818	56950	366253	5356895	7.3	0	-90
AC94DS63	DS63	BANNOCKBURN	CRAE	EL45/92	65809	56950	366244	5356895	17	0	-90
AC94DS64	DS64	BANNOCKBURN	CRAE	EL45/92	65800	56950	366235	5356895	3.8	0	-90
AC94DS65	DS65	BANNOCKBURN	CRAE	EL45/92	65788	56950	366223	5356895	3.1	0	-90
AC94DS66	DS66	BANNOCKBURN	CRAE	EL45/92	65777	56950	366212	5356895	4	0	-85
AC94DS67	DS67	BANNOCKBURN	CRAE	EL45/92	65766	56950	366201	5356895	15	0	-90
AC94DS68	DS68	BANNOCKBURN	CRAE	EL45/92	65757	56950	366192	5356895	30	0	-90
AC94DS69	DS69	BANNOCKBURN	CRAE	EL45/92	65748	56950	366183	5356895	12.4	0	-90
AC94DS70	DS70	BANNOCKBURN	CRAE	EL45/92	65788	56992	366223	5356937	20.7	0	-90
AC94DS71	DS71	BANNOCKBURN	CRAE	EL45/92	65783	56992	366218	5356937	2.5	0	-90
AC94DS72	DS72	BANNOCKBURN	CRAE	EL45/92	65776	56992	366211	5356937	4.9	0	-90
AC94DS73	DS73	BANNOCKBURN	CRAE	EL45/92	65770	56992	366205	5356937	11.8	0	-90
AC94DS74	DS74	BANNOCKBURN	CRAE	EL45/92	65763	56992	366198	5356937	15.3	0	-90
AC94DS75	DS75	BANNOCKBURN	CRAE	EL45/92	65830	57000	366265	5356945	22	0	-90
AC94DS76	DS76	BANNOCKBURN	CRAE	EL45/92	65820	57000	366255	5356945	16	0	-90
AC94DS77	DS77	BANNOCKBURN	CRAE	EL45/92	65810	57000	366245	5356945	23.2	0	-90
AC94DS78	DS78	BANNOCKBURN	CRAE	EL45/92	65802	57000	366237	5356945	33.7	0	-90
AC94DS79	DS79	BANNOCKBURN	CRAE	EL45/92	65793	57000	366228	5356945	47.3	0	-90
AC94DS80	DS80	BANNOCKBURN	CRAE	EL45/92	65895	57100	366330	5357045	15.5	0	-90
AC94DS81	DS81	BANNOCKBURN	CRAE	EL45/92	65882	57100	366317	5357045	2.5	0	-90
AC94DS82	DS82	BANNOCKBURN	CRAE	EL45/92	65873	57100	366308	5357045	20.9	0	-90
AC94DS83	DS83	BANNOCKBURN	CRAE	EL45/92	65863	57100	366298	5357045	2.7	0	-90
AC94DS84	DS84	BANNOCKBURN	CRAE	EL45/92	65854	57100	366289	5357045	21.7	0	-90
AC94DS85	DS85	BANNOCKBURN	CRAE	EL45/92	65842	57100	366277	5357045	31	0	-90
AC94DS86	DS86	BANNOCKBURN	CRAE	EL45/92	65822	57100	366257	5357045	36	0	-90
AC94DS87	DS87	BANNOCKBURN	CRAE	EL45/92	65810	57100	366245	5357045	8.3	0	-90
AC94DS88	DS88	BANNOCKBURN	CRAE	EL45/92	65797	57100	366232	5357045	7.1	0	-90
AC94DS89	DS89	BANNOCKBURN	CRAE	EL45/92	65783	57100	366218	5357045	13.1	0	-90
AC94DS90	DS90	BANNOCKBURN	CRAE	EL45/92	65768	57100	366203	5357045	12.7	0	-90
AC94DS91	DS91	BANNOCKBURN	CRAE	EL45/92	65938	56850	366373	5356795	14.2	0	-90
AC94DS92	DS92	BANNOCKBURN	CRAE	EL45/92	65930	56800	366365	5356745	12.8	0	-90
AC94DS93	DS93	BANNOCKBURN	CRAE	EL45/92	65932	56900	366367	5356845	3.2	0	-90
AC94DS94	DS94	BANNOCKBURN	CRAE	EL45/92	65924	56950	366359	5356895	25.1	0	-90
AC94DS95	DS95	BANNOCKBURN	CRAE	EL45/92	65922	57000	366357	5356945	30	0	-90
AC94DS96	DS96	BANNOCKBURN	CRAE	EL45/92	65930	57100	366365	5357045	15.8	0	-90

APPENDIX 2

CRAE AIR-CORE DRILL LOGS AND GEOCHEMISTRY

## BMLITH

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

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

## FIELD ID

Field term for rock type  
Broad groupings are:-

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

## SEDIMENTARY

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

## METAMORPHIC

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

## INTRUSIVE IGNEOUS

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

## EXTRUSIVE IGNEOUS

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

## SURFICIAL (COVER) MATERIAL

Ca	Alluvium	Clf	Laterite	Csg	Gossan
Cop	Colluvium	Cao	Pisolites	Coy	Clay
Ca	Sand	Csf	Ironstone	Cv	Vegetation/peat
Cbs	Black soil	Csr	Silcrete		
Cg	Gravel	Cd	Calcrete		

## OTHERS

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

## TEXTURAL CODES

## WEATHERING/SURFICIAL FEATURES

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

## MINERALISATION/ALTERATION FEATURES

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

## GEOLOGICAL FEATURES

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

## DIAGNOSTIC MINERALOGY

## PRIMARY MINERALISATION

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

## SECONDARY MINERALISATION

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

## ALTERATION/DIAGNOSTIC MINERALS

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

## COLOUR CODES

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

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

MARIPOSA AIR-CORE DRILLING DATABASE - DRILLING LOGS AND ASSAYS																		
Results in ppm (Fe, S in %)																		
HOLE	DFROM	DTO	SAMPNO	BMLLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%	
DM1	0.0	2.0	3527625	Qha	CgCsCoy			LB		71533	3	42	30	-1	0.33	22		
DM1	2.0	4.0	3527626	Qha	CgCsCoy			LB		71533	-2	47	21	-1	0.28	24		
DM1	4.0	6.0	3527627	Og	Ccy			DG		71533	47	1888	4029	4	2.14	48		
DM1	6.0	8.0	3527628	Og	CcySls			NEG		71533	65	5600	9200	11	2.69	46		
DM1	8.0	10.0	3527629	Og	Ccy			DG		71533	64	6000	14800	8	3.71	45		
DM1	10.0	12.0	3527630	Og	Ccy			DG		71533	60	8700	12200	7	4.15	55		
DM1	12.0	14.0	3527631	Og	Ccy			DG		71533	74	6600	10900	7	4.48	67		
DM1	14.0	16.0	3527632	Og	Ccy			DG		71533	71	5500	12800	7	3.91	50		
DM1	16.0	18.0	3527633	Og	Ccy			DG		71533	80	9100	18100	10	4.41	65		
DM1	18.0	20.0	3527634	Og	Ccy			DG		71533	62	7200	13700	7	4.04	73		
DM1	20.0	22.0	3527635	Og	Ccy			DG		71533	53	12200	15700	11	3.66	116		
DM1	22.0	22.5	3527636	Og	SlsCcy	Vn	Oc	GNB		71533	29	6600	7700	6	3.21	472		
DM2	0.0	4.0		Qha	Cg													
DM2	4.0	6.0	3527637	Qha	Cg					71533	42	830	832	1	7.74	984		
DM2	6.0	8.0		Ox														
DM2	8.0	10.0	3527638	Og	Ccy			N		71533	24	511	8100	-1	3.14	82		
DM2	10.0	12.0	3527639	Og	CcySls			DG		71533	16	277	3206	1	2.89	494		
DM2	12.0	15.0	3527640	Og	CcySls	We		DGN		71533	18	404	6700	-1	3.16	342		
DM2	15.0	16.0	3527641	Og	Sls	We		DG		71533	18	521	5800	-1	2.58	211		
DM2	16.0	18.0	3527642	Og	Sls	Ma		DG		71533	15	479	4645	-1	2.59	303		
DM2	18.0	20.0	3527643	Og	Sls	Ma		G		71533	11	288	1435	-1	1.46	424		
DM3	0.0	2.0		Qha	Cg													
DM3	2.0	4.0	3527644	Qha	CgCvCoy					71533	35	717	870	-1	4.04	335		
DM3	4.0	6.0	3527645	Qha?	Cg?					71533	30	2292	4253	-1	1.8	98		
DM3	6.0	8.0	3527646	Og	Ccy			DG	Gravel contam	71533	21	366	850	-1	2.05	87		
DM3	8.0	10.0	3527647	Og	Ccy			DG		71533	16	270	705	-1	2.18	77		
DM3	10.0	12.0	3527648	Og	Sls			G		71533	12	89	246	-1	2.93	721		
DM3	12.0	12.2	3527649	Og	Sls			G		71533	8	68	177	-1	1.89	599		
DM4	0.0	2.0		Qha	Cg													
DM4	2.0	3.0	3527650	Qha	Cg					71533	28	343	203	-1	3.21	216		
DM4	3.0	4.0	3527650	Og	Ccy			LBG		71533	28	343	203	-1	3.21	216		
DM4	4.0	6.0	3527651	Og	Ccy			LBG		71533	15	115	89	-1	1.01	54		
DM4	6.0	8.0	3527652	Og	CcySls	Vu		G		71533	17	93	361	-1	1.71	48		
DM4	8.0	10.0	3527653	Og	CcySls	We		DG		71533	15	70	288	-1	2.35	189		
DM4	10.0	12.0	3527654	Og	Sls	We		DG		71533	15	57	52	-1	2.83	135		
DM4	12.0	12.4	3527655	Og	Sls	Vu		G		71533	16	55	107	-1	2.58	133		
DM5	0.0	2.0	3527656	Qha	CvCgCoy			LB		71533	32	110	119	-1	2.93	149		
DM5	2.0	4.0	3527657	Og	Ccy			DG		71533	27	202	754	-1	1.86	31		
DM5	4.0	6.0	3527658	Og	Ccy			DG		71533	29	111	718	-1	2.42	227		
DM5	6.0	8.0	3527659	Og	CcySls	We		DG		71533	20	57	204	-1	2.49	140		
DM5	8.0	10.0	3527660	Og	Sls	Vn		DG		71533	5	25	89	-1	1.69	457		
DM6	0.0	2.0	3527661	Qha	CvCgCoy			LB		71533	36	72	79	-1	2.28	115		
DM6	2.0	6.0	3527662	Qha	Cg					71533	35	97	144	-1	4.03	216		
DM6	6.0	7.0	3527663	Qha	Cg					71533	45	314	415	-1	3.65	184		
DM6	7.0	8.0	3527663	Og	Ccy			WG		71533	45	314	415	-1	3.65	184		
DM6	8.0	10.0	3527664	Og	Ccy			DG		71533	60	1032	837	1	4.32	530		
DM6	10.0	12.0	3527665	Og	CcySls	We		DG		71533	28	637	1203	1	10.7	2890		
DM6	12.0	14.0	3527666	Og	SlsCcy	VnVu		DG		71533	17	331	1004	-1	12.11	4269		

031040

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM7	0.0	2.0		Qha	Cg												
DM7	2.0	4.0	3527667	QhaOg	CgCcy			DG		71533	60	325	2159	1	1.95	81	
DM7	4.0	6.0	3527668	Og	Ccy			DG		71533	31	369	1644	-1	1.4	105	
DM7	6.0	8.0	3527669	Og	CcySlis	We		DG		71533	9	95	329	-1	1.44	450	
DM7	8.0	10.0	3527670	Og	Ccy			G		71533	5	42	314	-1	2.47	1141	
DM7	10.0	12.0	3527671	Og	Slis			G		71533	11	30	408	-1	2.72	1134	
DM7	12.0	14.0	3527672	Og	Slis	VnVu		G		71533	4	75	530	-1	1.91	1131	
DM8	0.0	2.0	3527673	Qha	CvCgCcy			LB		71533	25	66	101	-1	2.69	157	
DM8	2.0	4.0	3527674	Og	Ccy			DG		71533	86	2500	10200	10	3.84	115	
DM8	4.0	6.0	3527675	Og	Ccy			DG		71533	71	4300	18300	24	2.64	63	
DM8	6.0	8.0	3527676	Og	CcySlis	We		DG		71533	57	3000	12200	18	7.9	2148	
DM8	8.0	10.0	3527677	Og	Slis	Vu		DG		71533	53	457	3477	3	17.7	9500	
DM8	10.0	12.0	3527678	Og	Slis	Vu		DG		71533	18	137	1041	-1	6.27	3003	
DM8	12.0	14.0	3527679	Og	Slis	Vu		DG		71533	11	65	719	1	3.84	2335	
DM8	14.0	16.0	3527680	Og	Slis	Vu		DG		71533	9	68	1055	1	6.51	2953	
DM8	16.0	18.0	3527681	Og	Slis	Vu		DG		71533	12	29	650	-1	4.99	3490	
DM8	18.0	20.0	3527682	Og	Slis	Vu		DG		71533	8	22	399	-1	4.54	3368	
DM8	20.0	22.0	3527683	Og	Slis	Vu		DG		71533	25	40	316	1	6.57	2950	
DM8	22.0	24.0	3527684	Og	Slis	Vu		DG		71533	19	28	218	-1	3.11	1749	
DM9	0.0	2.0	3527685	Qha	Ccy			LWB		71533	6	793	63	4	0.43	69	
DM9	2.0	4.0	3527686	Qha	Ccy			LG		71533	15	214	53	23	0.3	37	
DM9	4.0	6.0	3527687	QhaOg	Ccy			GB		71533	180	4425	2619	40	1.53	23	
DM9	6.0	8.0	3527688	Og	Ccy			DB		71533	85	9200	18100	10	3.41	32	
DM9	8.0	10.0	3527689	Og	Ccy			DG		71533	56	8800	25500	15	3.87	36	
DM9	10.0	12.0	3527690	Og	Ccy			DG		71533	50	7300	17800	16	3.49	36	
DM9	12.0	14.0	3527691	Og	Ccy			DG		71533	26	633	18300	6	13.2	217	
DM9	14.0	16.0	3527692	Og	Ccy			DG		71533	40	154	1593	2	3.19	113	
DM9	16.0	18.0	3527693	Og	Ccy			DG		71533	40	429	3313	2	3.67	61	
DM9	18.0	20.0	3527694	Og	Ccy			DG		71533	22	222	2101	1	1.93	50	
DM9	20.0	22.0	3527695	Og	CcySlis	We		DG		71533	13	321	2988	4	1.95	55	
DM9	22.0	24.0	3527696	Og	Ccy		Gr	DG		71533	14	290	4692	4	2.01	88	
DM9	24.0	26.0	3527697	Og	SlisCcy	We		DG		71533	20	430	4395	4	2.55	124	
DM9	26.0	28.0	3527698	Og	Ccy		Gr	DG		71533	30	1016	4940	3	4.29	232	
DM9	28.0	30.0	3527699	Og	Ccy		Gr	DG		71533	22	60	714	-1	1.98	46	
DM9	30.0	32.0	3527700	Og	Slis	We		G		71533	37	161	617	-1	1.15	38	
DM9	32.0	34.0	3527701	Og	CcySlis	We		G		71533	23	81	965	-1	2.13	40	
DM9	34.0	36.0	3527702	Og	Ccy		Gr	G		71533	20	51	426	-1	1.58	30	
DM9	36.0	38.0	3527703	Og	CcySlis	We		G		71533	24	125	544	1	3.06	84	
DM9	38.0	40.0	3527704	Og	Slis	Ma		DG		71533	15	157	1211	-1	1.72	218	
DM9	40.0	41.5	3527705	Og	Slis	Ma		DG		71533	11	118	919	-1	1.44	262	
DM10	0.0	2.0	3527706	Qha	CcyCv			LBG		71533	15	152	195	-1	0.77	39	
DM10	2.0	4.0	3527707	Og	Ccy			LG		71533	102	6500	24300	92	4.47	58	
DM10	4.0	6.0	3527708	Og	Ccy			GB		71533	236	27100	49000	241	9.87	38	
DM10	6.0	8.0	3527709	Og	Ccy			DG		71533	66	4000	7900	29	4.12	29	
DM10	8.0	10.0	3527710	Og	Ccy			DG		71533	86	9600	30500	51	16.8	32	
DM10	10.0	12.0	3527711	Og	Ccy			DG		71533	140	6400	13800	77	4.76	40	
DM10	12.0	14.0	3527712	Og	Ccy			DG		71533	184	18500	36000	145	4.56	917	
DM10	14.0	16.0	3527713	Og	Ccy			DG		71533	274	13700	20400	122	3.21	72	
DM10	16.0	18.0	3527714	Og	Ccy			DG		71533	149	10400	27000	99	2.91	61	
DM10	18.0	20.0	3527715	Og	Ccy			DG		71533	241	8000	14400	65	5.93	101	
DM10	20.0	22.0	3527716	Og	Ccy			DG		71533	100	4300	8000	-1	2.82	762	

931043

APPENDIX 2: Marpoşa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM10	22.0	24.0	3527717	Og	SlsCcy	We		DG		71533	25	913	2370	8	8.69	4029	
DM10	24.0	26.0	3527718	Og	Ccy			G		71533	22	1025	2757	7	2.13	1468	
DM10	26.0	28.0	3527719	Og	Ccy			G		71533	31	1371	2914	9	2.85	1646	
DM10	28.0	30.0	3527720	Og	SlsCcy			DDG		71533	12	712	1794	3	2.82	1658	
DM10	30.0	32.0	3527721	Og	Sls			G		71533	14	426	1213	7	2.48	1502	
DM10	32.0	34.0	3527722	Og	Sls			G		71533	206	3500	6900	166	2.89	4139	
DM10	34.0	36.0	3527723	Og	Sls	Vn	Cc	DG		71533	159	2500	5300	204	3.08	7600	
DM10	36.0	38.0	3527724	Og	Ccy			LG		71533	102	2420	3555	23	1.44	955	
DM10	38.0	40.0	3527725	Og	Ccy			LGO		71533	150	2375	2860	9	1.2	556	
DM10	40.0	41.1	3527726	Og	Ccy			OB		71533	244	6800	4176	7	1.78	414	
DM11	0.0	2.0	3527727	Qha	CcyCv			LBG		71533	31	86	168	-1	2.03	97	
DM11	2.0	4.0	3527728	Qha	Cg					71533	28	96	148	-1	3.36	176	
DM11	4.0	6.0	3527729	Qha	CgCcy			B		71533	31	126	988	1	1.83	71	
DM11	6.0	8.0	3527730	Og	CcySls	We		B		71533	26	64	684	-1	1.6	35	
DM11	8.0	10.0	3527731	Og	Sls	We		G		71533	24	63	729	-1	1.85	45	
DM11	10.0	12.0	3527732	Og	Sls	We		DG		71533	25	64	419	-1	1.94	42	
DM11	12.0	14.0	3527733	Og	CcySls	We		DG		71533	26	121	505	1	2.44	35	
DM11	14.0	16.0	3527734	Og	Ccy			DG		71533	30	284	1151	1	3.48	151	
DM11	16.0	18.0	3527735	Og	CcySls	Vn	Cc	G		71533	11	117	138	-1	2.31	728	
DM11	18.0	18.1	3527736	Og	Sls	Vn	Cc	LG		71533	8	18	55	-1	1.52	555	
DM12	0.0	2.0	3527737	Qha	CcyCv			OB		71533	29	72	75	-1	2.26	105	
DM12	2.0	4.0	3527738	QhaOg	CgCcy			ODG		71533	41	752	1227	1	2.87	107	
DM12	4.0	6.0	3527739	Og	Ccy			ODG		71533	63	2900	7100	3	2.45	350	
DM12	6.0	8.0	3527740	Og	CcySls	We		G		71533	26	2233	1819	2	8.22	5500	
DM12	8.0	10.0	3527741	Og	CcySls	We		G		71533	19	1120	1083	1	2.24	1306	
DM12	10.0	12.0	3527742	Og	Sls	We		DG		71533	7	26	142	-1	4.84	3603	
DM12	12.0	14.0	3527743	Og	Sls	Ma		DG		71533	9	66	394	-1	10.2	6800	
DM12	14.0	16.0	3527744	Og	CcyOvq			G		71533	17	682	2269	1	7.43	4144	
DM12	16.0	18.0	3527745	Og	CcyOvq			G		71533	7	306	370	-1	7.42	3479	
DM12	18.0	20.0	3527746	Og	Sls	Ma		DG		71533	3	20	96	-1	3.13	1519	
DM13	0.0	2.0	3527747	Qha	CcyCv			LB		71533	23	55	99	-1	1.64	69	
DM13	2.0	4.0	3527748	Qha	Ccy			LBLG		71533	37	113	93	1	1.65	81	
DM13	4.0	6.0	3527749	Og	Ccy			WLG		71533	203	2817	2720	31	1.75	41	
DM13	6.0	8.0	3527750	Og	CcySls	Vn		G		71533	554	13200	15800	41	2.48	50	
DM13	8.0	10.0	3527751	Og	Sls	VnVu		DG		71533	90	24100	89000	4	11.2	42	
DM13	10.0	12.0	3527752	Og	Ccy			DG		71533	35	6700	19300	2	3.4	54	
DM13	12.0	14.0	3527753	Og	Ccy			DG		71533	47	2300	9900	1	3.59	129	
DM13	14.0	16.0	3527754	Og	Sls	VnVu		DG		71533	27	1291	3009	1	19.3	10100	
DM13	16.0	18.0	3527755	Og	Sls	VnVu		DG	Fault?	71533	15	437	2082	-1	10.4	5600	
DM13	18.0	20.0	3527756	Og	Sls	VnVu		DG	Fault?	71533	15	151	1119	-1	20.7	10200	
DM13	20.0	22.0	3527757	Og	Sls			DG		71533	12	84	606	-1	16.4	8500	
DM13	22.0	24.0	3527758	Og	Sls			DG		71533	14	499	2078	3	8.8	6300	
DM13	24.0	26.0	3527759	Og	Sls	Vn	Cc	DG		71533	12	294	1279	1	7.56	4505	
DM14	0.0	2.0	3527760	Ed	Ssi	We		Y		71533	27	30	44	-1	2.3	49	
DM14	2.0	4.0	3527761	Ed	Ssi	We		YO		71533	44	23	39	-1	2.72	36	
DM14	4.0	6.0	3527762	Ed	Ssi	We		O		71533	38	26	43	-1	1.95	39	
DM15	0.0	2.0	3527763	QhaOg	CvCcy			LKBN		71533	103	2757	951	19	1.11	35	
DM15	2.0	4.0	3527764	Og	Ccy			N		71533	26	3551	1851	4	1.86	58	
DM15	4.0	6.0	3527765	Og	Ccy			DGN		71533	22	2420	1246	1	2.12	59	
DM15	6.0	8.0	3527766	Og	Ccy			N		71533	35	2526	2683	8	2	52	
DM15	8.0	10.0	3527767	Og	Ccy			N		71533	18	225	1652	1	2.05	53	

931048

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM15	10.0	12.0	3527768	Og	Coy			DGN		71533	25	7400	11400	9	2.48	37	
DM15	12.0	14.0	3527769	Og	CoySls	WeVu		DG		71533	11	551	7000	1	2.03	31	
DM15	14.0	16.0	3527770	Og	Sls	WeVu		DBG		71533	12	525	7800	1	1.92	33	
DM15	16.0	18.0	3527771	Og	Sls	WeVu		DBG		71533	12	235	7800	1	2.87	29	
DM15	18.0	20.0	3527772	Og	Sls	WeVu		DBG		71533	12	641	10900	3	3.55	28	
DM15	20.0	22.0	3527773	Og	Sls	WeVu		DBG		71533	19	880	7700	-1	1.58	40	
DM15	22.0	24.0	3527774	Og	Coy		Gl	G		71533	20	732	4689	4	1.63	42	
DM15	24.0	26.0	3527775	Og	Coy		Gl	G		71533	25	4062	4545	7	2.78	47	
DM15	26.0	28.0	3527776	Og	CoyOv		Cc	DG		71533	17	946	3464	2	2.81	47	
DM15	28.0	30.0	3527777	Og	Coy			DG		71533	14	1900	1630	1	2.1	49	
DM15	30.0	32.0	3527778	Og	Coy			DG		71533	14	324	1205	1	1.94	49	
DM15	32.0	34.0	3527779	Og	CoySls	Ds	Sp	DG		71533	20	910	23900	7	1.89	51	
DM15	34.0	36.0	3527780	Og	SlsCoy			DG		71533	12	108	2903	-1	4.26	47	
DM15	36.0	38.0	3527781	Og	CoySls			DG		71533	15	283	1762	-1	2.28	54	
DM15	38.0	40.0	3527782	Og	CoySls			DG		71533	16	231	2396	1	1.67	51	
DM15	40.0	42.0	3527783	Og	CoyOv		Cc	G		71533	17	232	2574	1	1.87	44	
DM15	42.0	44.0	3527784	Og	Sls	Vu		DG		71533	16	216	1400	1	1.94	38	
DM15	44.0	46.0	3527785	Og	Sls	Vu		DG		71533	20	294	1981	1	1.79	44	
DM15	46.0	48.0	3527786	Og	Sls	Vu		DG		71533	20	202	969	-1	1.52	45	
DM16	0.0	2.0	3527787	Qha	CoyCgCv			B		71533	-2	73	23	-1	0.4	23	
DM16	2.0	4.0	3527788	Qha	CoyCg			B		71533	5	92	27	1	0.38	23	
DM16	4.0	6.0	3527789	Qha	CoyCg			B		71533	10	71	42	9	0.44	24	
DM16	6.0	8.0	3527790	Qha	CoyCg			B		71533	30	140	107	3	0.44	28	
DM16	8.0	10.0	3527791	Og	Coy			DBG		71533	65	1413	2021	2	0.47	16	
DM16	10.0	12.0	3527792	Og	Coy			DG		71533	30	2900	7000	5	1.8	30	
DM16	12.0	14.0	3527793	Og	Coy			DG		71533	43	3700	8000	9	3.28	42	
DM16	14.0	16.0	3527794	Og	Coy			DG		71533	40	1265	2628	3	2.45	46	
DM16	16.0	18.0	3527795	Og	CoySls			DG		71533	35	427	1362	2	2.75	46	
DM16	18.0	20.0	3527796	Og	CoySls			DG		71533	26	952	2248	2	1.75	196	
DM16	20.0	22.0	3527797	Og	Sls	VuVn	Cc	DG		71533	10	578	1029	1	1.21	461	
DM17	0.0	2.0	3527798	Qha	Coy			B		71533	16	78	34	1	0.23	17	
DM17	2.0	4.0	3527799	Qha	Coy			B		71533	42	91	36	1	0.29	22	
DM17	4.0	6.0	3527800	Qha	Coy			QGB		71533	17	144	139	-1	0.34	25	
DM17	6.0	8.0	3527801	Og	Coy			QGB		71533	36	456	328	1	0.83	19	
DM17	8.0	10.0	3527802	Og	CoySls	WeVu		DG		71533	43	447	409	-1	0.78	27	
DM17	10.0	12.0	3527803	Og	SlsCoy	We		G		71533	16	55	241	-1	1.41	36	
DM17	12.0	14.0	3527804	Og	Sls			LG		71533	18	30	72	-1	1.07	30	
DM17	14.0	16.0	3527805	Og	Sls	Vu		LG		71533	13	30	220	-1	0.94	30	
DM17	16.0	16.5	3527806	Og	Sls	Vu		LG		71533	8	29	128	-1	1.14	110	
DM18	0.0	2.0	3527807	Qha	CoyCv			B		71533	8	26	19	-1	0.3	21	
DM18	2.0	3.6	3527808	Og	Sls	Al	Sd	QGB		71533	12	93	79	1	0.43	36	
DM19	0.0	1.0	3527809	Qha	CoyCv			LG		71533	6	29	85	-1	0.63	73	
DM20	0.0	1.0	3527810	Qha	CoyCv			LG		71533	9	91	73	-1	0.57	39	
DM21	0.0	0.8	3527811	Qha	CgCv			LG		71533	15	29	181	-1	1.03	141	
DM22	0.0	1.1	3527812	Qha	CoyCv			LG		71533	18	153	279	1	1.35	94	
DM23	0.0	2.0	3527813	Og	Coy			WYN		71533	59	925	39	-1	2.11	19	
DM23	2.0	4.0	3527814	Og	Coy			LG		71533	113	1078	98	3	2.35	15	
DM23	4.0	6.0	3527815	Og	Coy			DGN		71533	123	4098	3842	2	2.3	36	
DM23	6.0	8.0	3527816	Og	Coy			DGN		71533	28	1106	2452	1	2.35	39	
DM23	8.0	10.0	3527817	Og	Coy			DGN		71533	24	190	1496	1	2.21	31	
DM23	10.0	12.0	3527818	Og	Coy			DG		71533	29	152	1069	-1	1.87	32	

031049

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM23	12.0	14.0	3527819	Og	Ccy			DG		71533	23	168	1536	-1	2.09	29	
DM23	14.0	16.0	3527820	Og	Ccy			DG		71533	31	255	1362	1	2.18	36	
DM23	16.0	18.0	3527821	Og	Ccy			DG		71533	33	718	1930	3	2.3	583	
DM23	18.0	20.0	3527822	Og	CcyOv	Vs	CoGa	DG		71533	243	37300	42300	56	9.83	9700	
DM23	20.0	22.0	3527823	Og	SisCcy			DG		71533	286	10000	10100	21	4.05	1584	
DM23	22.0	24.0	3527824	Og	SisCcy			DG		71533	37	971	1276	2	2.9	979	
DM23	24.0	26.0	3527825	Og	CcyOv	Vn	Cc	W		71533	38	892	3494	2	3.13	985	
DM23	26.0	28.0	3527826	Og	Sis	Vn	Cc	DGW		71533	17	141	753	-1	2.43	1214	
DM23	28.0	28.7	3527827	Og	Sis	Vn	Cc	DGN		71533	13	717	960	1	1.97	1035	
DM24	0.0	2.0	3527828	Og?	Ccy			WLG		71533	6	47	42	-1	0.22	14	
DM24	2.0	4.0	3527829	Og?	Ccy			WLG		71533	78	42	25	1	0.23	17	
DM24	4.0	6.0	3527830	Og	Ccy			DG		71533	799	724	664	11	0.77	23	
DM24	6.0	8.0	3527831	Og	SisCcy			DG		71533	177	2447	1302	4	1.53	32	
DM24	8.0	10.0	3527832	Og	SisCcy			DG		71533	29	456	969	1	1.58	34	
DM24	10.0	12.0	3527833	Og	Sis	Ma		DG		71533	16	223	1584	1	1.65	41	
DM24	12.0	14.0	3527834	Og	Ccy			DGN		71533	22	519	1560	1	1.77	37	
DM24	14.0	16.0	3527835	Og	Ccy			N		71533	18	171	1345	-1	1.62	39	
DM24	16.0	18.0	3527836	Og	Ccy			N		71533	18	565	1179	1	1.63	32	
DM24	18.0	20.0	3527837	Og	SisCcy			DGN		71533	14	115	840	-1	1.17	35	
DM24	20.0	22.0	3527838	Og	Sis	Ma		DG		71533	11	83	808	-1	1.11	39	
DM24	22.0	24.0	3527839	Og	Sis	Ma		DG		71533	13	66	668	-1	1.75	37	
DM24	24.0	26.0	3527840	Og	Sis	Ma		DG		71533	16	416	1905	1	1.87	39	
DM24	26.0	28.0	3527841	Og	Sis	Ma		DG		71533	38	2254	3551	2	1.7	34	
DM24	28.0	30.0	3527842	Og	Ssh	Fi		DG		71533	61	1623	2653	2	1.89	47	
DM24	30.0	32.0	3527843	Og	Sh	Fi		DG	Still soft.	71533	151	4600	30700	19	2.56	56	
DM25	0.0	3.0	3527844	Ed	Ssi	We		Y		71533	14	68	49	1	0.72	19	
DM25	3.0	6.0	3527845	Ed	Ssi	We		Y		71533	38	602	88	3	1.46	25	
DM26	0.0	1.8	3527846	Oha	Cg					71533	26	78	129	1	1.62	460	
DM26	1.8	2.0	3527846	Og	Sis			DG	EOH in Sis	71533	26	78	129	1	1.62	460	
DM27	0.0	1.0	3527847	Oha	CcyCv			DG	EOH in Sis	71533	28	663	69	2	0.6	102	
DM28	0.0	2.0	3527848	Oha	CcyCv			LBG		71533	15	119	92	1	0.6	47	
DM28	2.0	2.3	3527849	Oha	CcyCv				EOH in Sis	71533	17	75	75	-1	1.36	130	
DM29	0.0	1.1	3527850	Oha	CcyCv			DG	EOH in Sis	71533	17	113	98	-1	0.44	44	
DM30	0.0	2.0	3527851	Oha	CcyCv			LBG		71533	25	212	646	-1	1.86	112	
DM30	2.0	4.0	3527852	Og	Ccy			LG		71533	15	48	233	-1	1.46	414	
DM30	4.0	4.7	3527853	Og	SisCcy			LG		71533	5	17	55	-1	0.52	333	
DM31	0.0	0.5		Oha	CcyCv												
DM32	0.0	0.7	3527854	Oha	CcyCv				EOH in Sis	71533	9	30	83	-1	0.59	156	
DM33	0.0	2.0	3527855	Oha	CgCcyCv					71533	20	70	160	-1	0.96	122	
DM33	2.0	4.0	3527856	Oha	CgCcy					71533	29	119	325	4	1.68	145	
DM33	4.0	6.0	3527857	Og	Ccy			G		71533	91	6100	14300	3	1.84	375	
DM33	6.0	8.0	3527858	Og	CcyOv	Vn	Cc	G		71533	24	673	3498	-1	7.07	7900	
DM33	8.0	10.0	3527859	Og	CcySis	We		DG		71533	6	60	354	-1	2.17	2561	
DM33	10.0	12.0	3527860	Og	CcySis	We		DG		71533	11	58	222	-1	1.58	930	
DM33	12.0	14.0	3527861	Og	Ccy			LG		71533	7	40	139	-1	3.71	2776	
DM33	14.0	16.0	3527862	Og	SisSch	Ma		DG		71533	9	319	392	-1	1.62	951	
DM33	16.0	18.0	3527863	Og	SisSch	Ma		DG		71533	32	553	733	-1	1.7	1010	
DM33	18.0	20.0	3527864	Og	Sis			DG		71533	28	148	505	-1	4.57	3518	
DM34	0.0	2.0	3527865	Oha	Ccy			LB		71533	12	76	91	-1	0.77	70	
DM34	2.0	4.0	3527866	Oha	CgCcy			LB		71533	18	82	102	-1	1.06	81	
DM34	4.0	5.0	3527867	Oha	Cg					71533	254	2500	9500	6	1.9	129	

931050

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM34	5.0	6.0	3527867	Og				DG		71533	254	2500	9500	6	1.9	129	
DM34	6.0	8.0	3527868	Og				DG		71533	164	7700	24000	6	1.72	54	
DM34	8.0	10.0	3527869	Og				DG		71533	122	5500	32200	5	3.75	58	
DM34	10.0	12.0	3527870	Og				DG		71533	170	1200	7500	6	9.91	3680	
DM34	12.0	12.9	3527871	Og				G		71533	42	331	2619	1	9.61	6300	
DM35	0.0	2.0	3527872	Og?				Y		71533	135	1116	928	-1	6.66	729	
DM35	2.0	4.0	3527873	Og?				Y		71533	170	1078	1482	3	13.7	1595	
DM35	4.0	6.0	3527874	Og?				LYG		71533	251	1227	607	3	4.19	430	
DM35	6.0	8.0	3527875	Og?				LB		71533	161	746	568	1	3.48	326	
DM35	8.0	10.0	3527876	Og?				LG		71533	184	477	631	1	2.92	249	
DM35	10.0	12.0	3527877	Om?				W		71533	10	412	115	-1	0.56	27	
DM36	0.0	2.0	3913872	Oha				Cg		77136	6	50	35	-1	0.36	26	
DM36	2.0	3.0	3913873	Oha				Cg		77136	110	1067	4569	7	3.02	477	
DM36	3.0	4.0	3913873	Og			Vc	Sls	line calc-arenite	77136	110	1067	4569	7	3.02	477	
DM36	4.0	5.8	3913874	Og			Vc	Sls	line calc-arenite, healed hydraulic breccia	77136	13	844	1589	1	3.04	1677	
DM37	0.0	3.5		Oha				Cg									
DM37	3.5	6.0	3913875	Og				DG	lesser DG calc-arenite	77136	22	649	4059	5	2.56	68	
DM37	6.0	8.0	3913876	Og				DG	lesser DG calc-arenite	77136	21	411	3749	-1	2.25	89	
DM37	8.0	10.0	3913877	Og				DG	lesser DG granular calc-arenite	77136	22	742	5300	4	2.42	82	
DM37	10.0	12.0	3913878	Og				DG	minor DG granular calc-arenite	77136	30	5800	13100	3	4.16	61	5.1
DM37	12.0	14.0	3913879	Og				DG	plastic	77136	50	12800	23700	30	5.79	507	7.2
DM37	14.0	16.0	3913880	Og				G	calc-arenite, also DG clay	77136	95	12500	29200	54	9.63	922	12.4
DM38	0.0	2.5		Oha				Cg									
DM38	2.5	6.0	3913881	Og				Ccy		77136	32	367	1422	2	5.81	2353	
DM38	6.0	8.0	3913882	Og				CcySls	lesser G calc-arenite	77136	27	275	927	2	11.7	7200	
DM38	8.0	10.0	3913883	Og				CcySls	lesser G calc-arenite	77136	20	319	823	1	10.4	6300	
DM38	10.0	12.0	3913884	Og				SlsCcy	minor DG clay	77136	11	174	705	1	13.7	8800	
DM38	12.0	14.0	3913885	Og				Sls	calc-arenite	77136	10	84	485	1	15.1	8900	
DM38	14.0	16.0	3913886	Og				CcySls	lesser LG Sls	77136	10	76	411	1	18.4	12000	
DM38	16.0	18.0	3913887	Og				CcySls	lesser G calc-arenite	77136	8	78	277	1	18.6	14200	
DM38	18.0	20.0	3913888	Og				Sls		77136	15	206	678	1	5.78	2877	
DM38	20.0	22.0	3913889	Og			Vc	Sls		77136	8	22	464	-1	7.56	4035	
DM38	22.0	24.0	3913890	Og			Vc	Sls		77136	9	30	581	-1	6.29	3323	
DM38	24.0	26.0	3913891	Og			Vc	Sls		77136	9	18	390	-1	5.7	2897	
DM38	26.0	28.0	3913892	Og			Vc	Sls		77136	6	16	421	-1	5.1	2580	
DM38	28.0	30.0	3913893	Og			Vc	Sls		77136	7	14	910	-1	3.58	1732	
DM38	30.0	32.0	3913894	Og			Vc	Sls		77136	8	14	153	-1	5.06	2644	
DM39	0.0	2.0	3913895	Ed				Ccy	plastic	77136	32	34	38	-1	1.6	64	
DM39	2.0	4.0	3913896	Ed				Ccy		77136	69	23	63	-1	3.92	61	
DM39	4.0	6.0	3913897	Ed				CcySsl	friable, lesser slaty siltstone	77136	79	20	59	-1	5.15	57	
DM40	0.0	3.7		Oha				Cg									
DM40	3.7	6.0	3913898	Og				Ccy	kaolinite - retrograde shear?	77136	11	23	28	-1	1.34	42	
DM40	6.0	8.0	3913899	Og				Ccy	kaolinite - retrograde shear?	77136	13	27	28	-1	1.44	43	
DM40	8.0	10.0	3913900	Og				Ccy	kaolinite - retrograde shear?	77136	13	25	26	-1	1.49	42	
DM40	10.0	12.0	3913901	Oha				Ccy	weathered + fresh clay	77136	33	20	34	-1	2.89	50	
DM40	12.0	14.0	3913902	Oha				CcyCg	clay some rounded rock frags	77136	64	21	49	-1	3.44	51	
DM40	14.0	16.0	3913903	Oha				CcyCg	clay some qtz frags	77136	78	16	49	-1	4.95	54	
DM40	16.0	18.0	3913904	Oha				CcySsl	clay + siltstone frags	77136	76	19	54	-1	4.48	53	
DM40	18.0	20.0	3913905	Oha				CcySsl	clay + siltstone frags	77136	89	18	52	-1	4.97	52	
DM40	20.0	22.0	3913906	Oha				CcySsl	clay + siltstone frags	77136	107	18	63	-1	5.81	54	
DM40	22.0	24.0	3913907	Oha				CcySsl	clay + siltstone frags	77136	95	13	53	-1	4.75	55	

931021

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM40	24.0	26.0	3913908	Qha	Ccy			R	clay + yellow siltstone frags	77136	94	9	55	-1	4.97	53	
DM40	26.0	28.0	3913909	Ed	Ssi			YR	increased Y-R siltstone frags	77136	98	3	59	-1	5.04	49	
DM40	28.0	30.0	3913910	Ed	Ssi			R	increased red greywacke frags	77136	102	7	53	-1	5.46	47	
DM40	30.0	32.0	3913911	Ed	Ssi			R	mostly red siltstone frags	77136	106	19	56	-1	4.96	49	
DM40	32.0	34.0	3913912	Ed	Ssi			R	mostly red siltstone frags	77136	91	9	47	-1	4.56	45	
DM40	34.0	36.0	3913913	Ed	Ssi			R	mostly red siltstone frags	77136	93	11	56	-1	4.98	50	
DM40	36.0	38.0	3913914	Ed	Ssi			R	mostly red siltstone frags	77136	88	19	55	-1	3.85	50	
DM40	38.0	40.0	3913915	Ed	Ssi			R	mostly red siltstone frags	77136	52	13	42	-1	3.22	46	
DM40	40.0	42.0	3913916	Ed	Ssi			RG	siltstone some LG clay	77136	75	12	57	-1	3.14	37	
DM40	42.0	44.0	3913917	Ed	Ssi			RG	siltstone some LG clay	77136	92	11	57	-1	2.48	66	
DM40	44.0	46.0	3913918	Ed	Ssi			RG	siltstone some LG clay	77136	64	10	55	-1	2.56	54	
DM40	46.0	48.0	3913919	Ed	Ssi			LG	LG siltstone dom.	77136	37	7	52	-1	2.42	49	
DM40	48.0	50.0	3913920	Ed	Ssi			LG	LG siltstone dom.	77136	65	25	152	-1	2.42	65	
DM40	50.0	52.0	3913921	Ed	Ssi			LG	LG siltstone dom.	77136	66	11	111	-1	2.45	65	
DM40	52.0	54.0	3913922	Ed	SsiCcy			LG	LG clay + siltstone frags	77136	45	7	97	-1	2.15	49	
DM40	54.0	56.0	3913923	Ed	SsiCcy			LG	LG clay + siltstone frags, plus silt	77136	510	306	663	15	2.16	50	
DM40	56.0	58.0	3913924	Ed	SsiCcy			LG	LG clay + siltstone frags, plus silt	77136	18	16	115	1	1.81	49	
DM40	58.0	60.0	3913925	Ed	SsiCcy			LG	LG clay + siltstone frags, plus silt No more rods	77136	15	11	132	-1	1.85	47	
DM41	0.0	2.0		Qha	Cg			LG	siltstone gravels + mottled clays								
DM41	2.0	4.2		Qha	Cg			LG	siltstone gravels + mottled clays								
DM41	4.2	6.0	3913926	Ed	Ccy			LG	dom. clay	77136	34	25	69	-1	1.97	86	
DM41	6.0	8.0	3913927	Ed	Ccy			LG	dom. clay, + rounded frags of siltstone	77136	43	15	128	-1	2.63	94	
DM41	8.0	10.0	3913928	Ed	CcySsi			LG	fine LG silts + clays, some similar frags of siltstone	77136	86	11	235	-1	3.07	102	
DM41	10.0	12.0	3913929	Ed	CcySai			LG	fine LG silts + clays, some similar frags of siltstone	77136	159	16	106	-1	2.46	88	
DM41	12.0	14.0	3913930	Ed	CcySsi			LG	fine LG silts + clays, some similar frags of siltstone	77136	75	16	91	-1	2.18	78	
DM41	14.0	16.0	3913931	Ed	CcySsi			LG	fine LG silts + clays, some similar frags of siltstone	77136	113	13	155	-1	2.29	77	
DM41	16.0	18.0	3913932	Ed	CcySai			LG	fine LG silts + clays, some similar frags of siltstone	77136	147	12	204	-1	2.81	76	
DM41	18.0	20.0	3913933	Ed	CcySsi			LG	fine LG silts + clays, some frags of purple siltstone	77136	109	14	327	-1	2.95	69	
DM41	20.0	22.0	3913934	Ed	CcySai			LG	fine LG silts + clays, some frags of purple siltstone	77136	83	14	344	-1	2.2	58	
DM41	22.0	24.0	3913935	Ed	CcySsi			LG	fine LG silts + clays, increased frags	77136	74	21	445	-1	1.96	44	
DM41	24.0	26.0	3913936	Ed	Ssh			LG	shale	77136	20	20	177	-1	1.33	34	
DM41	26.0	28.0	3913937	Ed	Ssh			LG	shale	77136	29	13	143	-1	1.31	33	
DM41	28.0	30.0	3913938	Ed	Ssh			LG	shale	77136	37	16	183	-1	1.52	30	
DM41	30.0	32.0	3913939	Ed	SshCcy			LG	shale, lesser clay	77136	46	24	142	-1	1.3	30	
DM41	32.0	34.0	3913940	Ed	SshCcy			LG	shale, lesser clay	77136	36	34	108	1	1.47	34	
DM41	34.0	36.0	3913941	Ed	SshCcy			MLG	shale, lesser clay	77136	32	132	348	2	1.02	30	
DM41	36.0	38.0	3913942	Ed	SshCcy			MLG	shale, lesser clay + calc-arenite (Og)	77136	117	1696	2320	23	1.22	36	
DM41	38.0	40.0	3913943	Og	CcySisSsh	Vq		DG	lesser calc-arenite, LG shale	77136	86	902	4523	6	6.06	2223	
DM41	40.0	41.0	3913944	Og	Sis	VqVc		DG	LG shale	77136	53	555	1655	4	7.36	2855	
DM42	0.0	3.5		Qha	Cg					77136							
DM42	3.5	6.0	3913945	Og	CcySis			DG	lesser calc-arenite	77136	113	198	3444	1	3.94	646	
DM42	6.0	8.0	3913946	Og	CcySis			DG	lesser calc-arenite	77136	33	270	3261	2	9.28	4759	
DM42	8.0	10.0	3913947	Og	CcySis	Vc		DG	lesser calc-arenite	77136	39	337	4480	2	4.71	1737	
DM42	10.0	12.0	3913948	Og	CcySis	Vc		DG	lesser calc-arenite	77136	19	77	942	-1	1.28	300	
DM42	12.0	14.0	3913949	Og	CcySis	Vc		MDGLB	lesser calc-arenite	77136	25	750	2223	2	1.39	172	
DM42	14.0	16.0	3913950	Og	Ccy			DG		77136	72	4300	11100	9	12.3	8300	3.7
DM42	16.0	18.0	3913951	Og	Sis	Vc			calc-arenite	77136	16	269	2380	2	21.1	21200	
DM42	18.0	20.1	3913952	Og	Sis				granular calc-arenite	77136	13	576	3996	2	11.9	11600	
DM43	0.0	5.0		Qha	Cg					77136							
DM43	5.0	8.0	3913953	Og	CcySis			DG	lesser calc-arenite	77136	92	8000	1619	2	1.3	88	
DM43	8.0	10.0	3913954	Og	Ccy			DG		77136	93	4887	2045	2	1.43	57	

931052

APPENDIX 2. Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM43	10.0	12.0	3913955	Og				DG		77136	103	1085	1713	2	0.98	56	
DM43	12.0	14.0	3913956	Og				DG		77136	54	436	2153	2	2.73	106	
DM43	14.0	16.0	3913957	Og				DG	minor calc-arenite	77136	50	272	3724	2	2.1	56	
DM43	16.0	18.0	3913958	Og				DG	minor calc-arenite	77136	41	258	4221	1	2.65	633	
DM43	18.0	20.0	3913959	Og	Sls	Vc			calc-arenite	77136	13	133	8100	-1	4.96	2416	
DM43	20.0	22.0	3913960	Og	Sls	Sh	Sd		calc-arenite, carbonate veining along strong foliation	77136	10	50	3249	-1	6.95	4335	
DM43	22.0	24.0	3913961	Og	Sls	BnVc			calc-arenite	77136	15	34	405	-1	3.27	1702	
DM43	24.0	26.0	3913962	Og	Sls	Vc	Sd		calc-arenite	77136	8	118	610	-1	7.06	4875	
DM43	26.0	28.0	3913963	Og	Sls	Vc	Sd		calc-arenite	77136	10	134	1028	-1	5.11	2914	
DM43	28.0	30.0	3913981	Og	Sls	Vc	Sd		calc-arenite	77136	16	247	1306	-1	3.89	1558	
DM43	30.0	32.0	3913982	Og	Sls	Vc	Sd		calc-arenite	77136	19	240	1390	-1	3.24	1059	
DM43	32.0	32.5	3913983	Og	Sls	Vc	Sd		calc-arenite	77136	19	178	938	-1	2.48	856	
DM44	0.0	4.0		Oha	Og												
DM44	4.0	6.0	3913984	Og	Ccy			DG		77139	47	340	1385	-1	1.76	61	
DM44	6.0	8.0	3913985	Og	Ccy			DG		77139	41	115	488	-1	1.47	34	
DM44	8.0	10.0	3913986	Og	Sls	FIVc		DG	calc-arenite	77139	37	85	298	-1	1.74	53	
DM44	10.0	12.3	3913987	Og	SlsCcy	FIVc		DG	calc-arenite, lesser LB clay	77139	18	64	219	-1	3.53	1512	
DM45	0.0	4.0		Oha	Og												
DM45	4.0	6.0	3913988	Og	CcySls	Fi		DG	lesser calc-arenite	77139	28	194	468	-1	3.05	600	
DM45	6.0	8.0	3913989	Og	CcySls	Fi	Sd	MG	lesser calc-arenite	77139	52	1642	2495	3	4.34	3657	
DM45	8.0	10.2	3913990	Og	CcySls		Sd?	MGLB	lesser LB Sd? granular Sls	77139	62	1256	2724	4	3.57	10900	
DM46	0.0	5.8		Oha	Og												
DM46	5.8	8.0	3913991	Og	SlsCg			DG	calc-arenite, diluted by gravel contamination	77139	34	198	254	-1	4.82	273	
DM46	8.0	10.0	3913992	Og	Sls	Fi		DG	calc-arenite	77139	51	715	1801	-1	2.48	98	
DM46	10.0	12.0	3913993	Og	Sls	Fi		DG	calc-arenite	77139	63	641	945	-1	1.45	33	
DM46	12.0	14.3	3913994	Og	Ccy		Py	DG	calc-arenite	77139	27	175	994	-1	1.31	38	
DM47	0.0	4.1		Oha	Og												
DM47	4.1	6.0	3913995	Og	Sls	Ds	PyGa		granular calc-arenite, 2% Ga, <1% Py	77139	777	111000	16500	97	0.51	72	3.9
DM47	6.0	8.0	3913996	Og	Sls	Ds	PyGa		granular calc-arenite, <1% Ga, <1% Py	77139	149	57800	41300	36	0.38	64	4.5
DM47	8.0	10.0	3913997	Og	Sls	Ds	PyGa		granular calc-arenite, 1-2% Ga, <1% Py	77139	1154	234000	79200	149	0.29	56	8.85
DM47	10.0	12.0	3913998	Og	Sls	Ds	PyGaSd		granular calc-arenite, 1-2% Ga, <1% Py	77139	493	294000	30000	152	0.56	36	8.7
DM47	12.0	14.0	3913999	Og	Sls	Ds	GaSd		granular calc-arenite, minor Ga, lesser LB clay	77139	1581	83200	86800	148	1.64	42	13.5
DM47	14.0	16.0	3914000	Og	Sls		PySd?	DG	calc-arenite	77139	408	24200	60200	42	0.6	31	7.1
DM47	16.0	18.0	3914001	Og	Sls	Vc	GaPy	DG	calc-arenite	77139	318	64800	46800	74	0.66	77	7.9
DM47	18.0	21.0	3914002	Og	Sls	Vc	GaPy	DG	calc-arenite	77139	494	89400	113000	121	1.08	87	13.7
DM47	21.0	22.0	3914003	Og	Sls	Vc	GaPy	DG	calc-arenite, minor silicified material?	77139	199	38000	54600	52	0.72	99	5.3
DM47	22.0	24.0	3914004	Og	Ccy	Vq	Ga	DG	lesser DG calc-arenite	77139	56	5600	9500	9	1	46	
DM47	24.0	26.0	3914005	Og	Sls	VcFi		DG	calc-arenite	77139	27	1868	2814	2	1.09	46	
DM47	26.0	28.0	3914006	Og	Sls	We?		LBG	soft decomposed	77139	51	2947	4727	5	1.31	46	
DM47	28.0	30.0	3914007	Og	Sls	We?		LG	soft decomposed	77139	36	1331	2182	3	1.52	44	
DM47	30.0	32.0	3914008	Og	Sls	We?	Py	LG	soft decomposed	77139	19	234	455	-1	2.13	130	
DM47	32.0	34.0	3914009	Og	Sls	We?		LG	soft decomposed	77139	18	510	801	1	1.96	183	
DM47	34.0	36.0	3914010	Og	Sls	We?		LG	soft decomposed	77139	16	471	1337	2	1.75	395	
DM47	36.0	38.0	3914011	Og	Sls	Fi	Py		calc-arenite	77139	16	369	4917	2	2.18	1026	
DM47	38.0	40.0	3914012	Og	Sls	FiVc	Py		calc-arenite	77139	19	195	988	3	1.85	512	
DM47	40.0	42.0	3914013	Og	Sls	We?		DG	calc-arenite - variably decomposed	77139	13	45	158	2	1.42	81	
DM47	42.0	43.0	3914014	Og	Sls	BnFi		LDB	calc-arenite	77139	19	60	121	-1	1.73	343	
DM48	0.0	4.0		Oha	Og												
DM48	4.0	6.0	3914015	Og	SlsCcy			DG	calc-arenite, lesser DG clay	77139	21	142	1253	-1	1.45	73	
DM48	6.0	8.0	3914016	Og	Ccy			DG	gritty	77139	27	211	2068	-1	1.49	66	
DM48	8.0	10.0	3914017	Og	CcySls	Vc		DG	gritty, lesser DG calc-arenite	77139	25	111	1556	-1	1.24	254	

091023

APPENDIX 2. Mariposa prospect. Drillhole logs and assays

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM48	10.0	12.0	3914018	Og	Sls	Vc		DG	calc-arenite	77139	10	23	270	-1	1.42	271	
DM48	12.0	14.0	3914019	Og	Sls	Vc		DG	calc-arenite	77139	12	41	567	-1	1.89	444	
DM48	14.0	16.0	3914020	Og	Sls	Vc	Py	G	granular calc-arenite	77139	10	76	1315	-1	1.55	404	
DM48	16.0	18.0	3914021	Og	Sls	Vc		G	granular calc-arenite, also decomposed Sls	77139	15	81	2268	-1	1.44	372	
DM48	18.0	19.3	3914022	Og	Sls	Vc		DG	calc-arenite	77139	10	88	932	-1	1.35	256	
DM49	0.0	2.0	3914023	Qha	Ccy			LB	pealy	77139	25	132	80	-1	0.96	58	
DM49	2.0	4.1		Qha	Cg												
DM49	4.1	6.0	3914024	Og	CcySls			DG	minor DG calc-arenite	77139	26	131	1733	-1	1.28	51	
DM49	6.0	8.0	3914025	Og	CcySls	Fi		DG	minor DG calc-arenite	77139	30	170	930	-1	1.42	54	
DM49	8.0	11.0	3914026	Og	CcySls			DGV	/decomposed Sls	77139	22	298	1552	-1	1.07	59	
DM49	11.0	12.0	3914027	Og	Sls			DG	calc-arenite	77139	21	50	121	1	1.57	69	
DM49	12.0	14.0	3914028	Og	Sls		Py	DG	calc-arenite + V altered/sulphidic intervals	77139	21	44	704	-1	1.86	69	
DM49	14.0	16.0	3914029	Og	Sls		Py	DG	calc-arenite + kaki sulphidic clay intervals	77139	23	53	1018	1	1.53	69	
DM49	16.0	18.0	3914030	Og	Sls		Py	DG	calc-arenite + kaki fine Py seams	77139	28	90	815	1	1.36	74	
DM49	18.0	18.8	3914031	Og	Sls	Vc		MG	granular	77139	23	389	348	-1	1.93	278	
DM50	0.0	2.0		Qha	Cg												
DM50	2.0	4.0	3914032	Qha	Ccy			LB	pealy, very smelly	77139	14	96	287	-1	0.74	33	
DM50	4.0	6.0	3914033	Og	Ccy			DG	gritty	77139	30	13200	18700	2	1.63	44	9.05
DM50	6.0	8.0	3914034	Og	Sls			DG	calc-arenite	77139	26	3000	9900	1	1.71	86	
DM50	8.0	10.0	3914035	Og	Sls	Vc		DG	calc-arenite	77139	13	130	877	-1	1.93	289	
DM50	10.0	12.0	3914036	Og	Sls			DG	calc-arenite	77139	11	133	602	-1	1.59	227	
DM50	12.0	14.0	3914037	Og	Sls			DG	calc-arenite	77139	11	22	178	-1	1.49	233	
DM50	14.0	16.0	3914038	Og	Sls	Vc		DG	calc-arenite	77139	8	31	299	-1	1.4	340	
DM50	16.0	18.0	3914039	Og	Sls	Vc		DG	calc-arenite	77139	9	18	235	-1	1.42	238	
DM50	18.0	20.0	3914040	Og	Sls			DG	skeletal calc-arenite - gastropod & bivalve	77139	6	13	175	-1	1.11	233	
DM50	20.0	22.0	3914041	Og	Sls	Vc		DG	calc-arenite	77139	10	13	150	-1	1.51	410	
DM50	22.0	24.0	3914042	Og	Sls	Vc		DG	calc-arenite	77139	7	10	119	-1	1.79	512	
DM50	24.0	26.0	3914043	Og	Sls	Vc		DG	calc-arenite	77139	9	18	264	-1	1.29	251	
DM50	26.0	28.0	3914044	Og	Sls	Vc		DG	calc-arenite, trace O [alter sulphide material?]	77139	7	36	224	-1	0.99	289	
DM50	28.0	30.0	3914045	Og	Sls	Vc		DG	calc-arenite	77139	6	39	496	-1	0.97	318	
DM51	0.0	2.0	3914046	Qha	Ccy			B	pealy	77139	6	18	31	-1	0.28	24	
DM51	2.0	4.0	3914047	Qha	Ccy			B	pealy	77139	40	1892	4983	3	2.22	49	
DM51	4.0	6.0	3914048	Og	Ccy			DG		77139	40	2200	8500	3	1.99	52	
DM51	6.0	8.0	3914049	Og	SlsCcy			DG	calc-arenite, minor DG clay	77139	13	330	2109	-1	1.83	581	
DM51	8.0	10.0	3914050	Og	SlsCcy			DG	calc-arenite, minor DG clay	77139	198	25000	49800	71	0.94	284	8.35
DM51	10.0	12.0	3914051	Og	Ccy			DG	plastic	77139	47	3400	12300	6	2.29	157	8.35
DM51	12.0	14.0	3914052	Og	Ccy			DG	plastic	77139	53	624	4540	5	1.9	83	
DM51	14.0	16.0	3914053	Og	Ccy		Sp	DG	plastic, LB-O sp? along partings, minor DG clay	77139	20	122	3013	-1	1.86	62	
DM51	16.0	18.0	3914054	Og	Ccy		Sp	DG	plastic, LB-O sp? along partings, minor DG clay	77139	22	59	1417	-1	1.45	51	
DM51	18.0	19.4	3914055	Og	CcySls			DG	plastic, minor DG clay	77139	14	32	355	-1	1.95	184	
DM52	0.0	2.0		Qha	Cg												
DM52	2.0	4.0	3914056	Qha	Ccy			LB		77139	7	117	31	-1	0.37	28	
DM52	4.0	6.0	3914057	Og	CcySls	Vc	Py	G	lesser LG calc-arenite	77139	56	17300	15900	9	1.27	267	8.9
DM52	6.0	8.0	3914058	Og	CcySls	VcVq	Py	G	lesser LG calc-arenite	77139	51	5300	10200	6	1.58	220	11.8
DM52	8.0	9.7	3914059	Og	CcySls	Vc		G	lesser LG calc-arenite	77139	19	701	1750	2	2.01	510	
DM53	0.0	4.0		Qha	Cco												
DM53	4.0	6.0	3914060	Sc	MqCcy			LB	lesser LB clay	77139	5	46	48	1	0.37	37	
DM53	6.0	8.0	3914061	Sc	MqCcy			LB	lesser LB & DG (Og) clay	77139	40	1000	1206	2	0.93	37	
DM53	8.0	10.0	3914062	Sc	MqCcy			LB	lesser LB & DG (Og) clay + calc-arenite (Og)	77139	31	2100	6100	3	1.35	37	
DM53	10.0	12.0	3914063	Og	CcySls	Vc		DG	plastic, lesser LG calc-arenite	77139	34	2143	3737	3	2.14	384	
DM53	12.0	14.0	3914064	Og	Sls	Vc	Ga	LG		77139	19	1511	3579	3	1.87	1006	

991054

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM53	14.0	16.0	3914065	Og	Sls	VcDs	Py	LG	calc-arenite	77139	43	2500	7900	4	1.17	506	
DM54	0.0	2.0		Qha	Cg												
DM54	2.0	4.0	3914066	Sc	Mq					77139	5	28	44	-1	0.23	31	
DM54	4.0	6.0	3914067	Sc	Mq					77139	25	242	315	-1	0.69	35	
DM54	6.0	8.0	3914068	Og	Sls					77139	22	1068	1868	1	1.63	40	
DM54	8.0	10.0	3914069	Og	SlsCcy			DG	calc-arenite, minor DG clay	77139	26	882	1997	2	1.15	50	
DM54	10.0	12.0	3914070	Og	CcySls			DG	minor DG calc-arenite	77139	30	495	1199	1	1.33	50	
DM54	12.0	14.0	3914071	Og	CcySls			DG	minor DG calc-arenite	77139	37	594	1848	1	1.21	46	
DM54	14.0	16.0	3914072	Og	Ccy			DG	plastic	77139	35	420	1148	2	1.94	45	
DM54	16.0	18.0	3914073	Og	CcySls	Vc	Py	DG	plastic, minor LG calc-arenite	77139	37	1779	4543	7	1.24	111	
DM54	18.0	20.0	3914074	Og	CcySls	Vc	Py	DG	plastic, minor LG calc-arenite	77139	124	1755	3907	6	1.34	349	
DM54	20.0	22.0	3914075	Og	Sls	Vc	Py	LG	fine calc-arenite	77139	18	1381	2815	2	1.93	813	
DM55	0.0	2.0		Qha	Cg												
DM55	2.0	4.0	3914076	Qha	Cg					77139	7	30	45	-1	0.33	24	
DM55	4.0	6.0	3914077	Qha	Cg					77139	29	197	303	1	2.63	125	
DM55	6.0	8.0	3914078	Og	Ccy			DG	carbonaceous	77139	37	2800	11700	4	1.84	48	7.25
DM55	8.0	10.0	3914079	Og	Ccy			DG	carbonaceous	77139	39	2600	10600	4	2.16	44	6.85
DM55	10.0	12.0	3914080	Og	Ccy		Py	DG	carbonaceous	77139	53	13400	21500	20	1.76	43	12.2
DM55	12.0	14.0	3914081	Og	Ccy		Py	DG	carbonaceous, 1-2% Py	77139	44	4200	11400	6	1.66	26	14.7
DM55	14.0	16.0	3914082	Og	Ccy		Py	DG	carbonaceous, 1-2% Py	77139	41	2100	16100	4	1.36	33	15.3
DM55	16.0	18.0	3914083	Og	Ccy		Py	DG	carbonaceous, trace Py	77139	27	622	8200	2	1.88	65	
DM55	18.0	20.0	3914084	Og	Ccy		Py	DG	carbonaceous, trace Py, gritty	77139	35	2200	8700	7	0.9	306	
DM55	20.0	22.0	3914085	Og	CcySls	Vc		DG	lesser LG calc-arenite	77139	18	1600	5800	5	1.3	1391	
DM55	22.0	24.0	3914086	Og	Sls	Vc		LG		77139	9	640	6100	3	2.38	4780	
DM55	24.0	26.0	3914087	Og	Sls	Vc	Sd	LG	intervals + weak Sd alteration	77139	6	1400	10300	3	3.67	12100	0.96
DM56	0.0	4.0		Qha	Ccy												
DM56	4.0	6.0	3914088	Og	Ccy			DG		77139	32	648	5100	2	2.16	76	
DM56	6.0	8.0	3914089	Og	Ccy			DG	gritty	77139	36	824	7400	2	2.32	96	
DM56	8.0	10.0	3914090	Og	CcySls			DG	lesser MG granular Sls	77139	32	291	4495	1	1.91	158	
DM56	10.0	12.0	3914091	Og	CcySls			DG	lesser MG granular Sls	77139	24	289	1818	1	1.48	149	
DM56	12.0	14.0	3914092	Og	CcySls			DG	lesser MG granular Sls	77139	25	85	1105	1	1.51	87	
DM56	14.0	16.0	3914093	Og	Sls			DG		77139	20	69	615	-1	1.65	75	
DM56	16.0	18.0	3914094	Og	SlsCcy			G	calc-arenite, lesser DG clay	77139	21	148	893	-1	1.42	186	
DM56	18.0	20.0	3914095	Og	Sls	Vc		DG		77139	11	60	242	-1	2	558	
DM56	20.0	22.0	3914096	Og	Sls	Vc		DG		77139	10	76	481	-1	1.78	557	
DM56	22.0	24.0	3914097	Og	Sls	Vc		DG		77139	9	98	381	1	2.38	1014	
DM56	24.0	26.0	3914098	Og	Sls		Sp?	G	granular, medium Sls, + trace Sp? lining partings	77139	19	75	2628	1	1.63	292	
DM56	26.0	28.0	3914099	Og	Sls	Vc	Sp?	G	granular, medium Sls, + trace Sp? lining partings	77139	26	373	3950	1	1.75	60	
DM56	28.0	30.0	3914100	Og	Sls	Vc		G	granular, medium Sls	77139	30	327	5400	1	2.38	62	
DM56	30.0	32.0	3914101	Og	Sls	Vq	Sp?	G	Sp associated + prominent qtz veining	77139	24	3000	5700	1	1.52	44	
DM56	32.0	34.0	3914102	Og	Sls	Vq	Sp?	G	Sp associated + prominent qtz veining	77139	24	55	4144	1	1.27	121	
DM56	34.0	36.0	3914103	Og	Sls	Vc		MG		77139	7	15	586	-1	1.8	508	
DM56	36.0	37.4	3914104	Og	Sls	Vc		DG	calc-arenite	77139	8	29	322	-1	1.85	494	
DM57	0.0	4.0		Qha	Cg												
DM57	4.0	6.0	3914105	Og	Ccy			DG	+ peaty clay	77139	17	63	2087	-1	2.15	60	
DM57	6.0	8.0	3914106	Og	Ccy			DGB		77139	19	87	4543	-1	1.16	59	
DM57	8.0	10.0	3914107	Og	Ccy			DG		77139	20	125	2204	1	1.97	61	
DM57	10.0	12.0	3914108	Og	CcySls			DG	/weathered Sls	77139	16	343	1272	1	1.18	336	
DM57	12.0	14.0	3914109	Og	Ccy			DG		77139	22	228	1247	1	1.89	118	
DM57	14.0	16.0	3914110	Og	Ccy			DG		77139	25	94	1163	1	3.52	58	
DM57	16.0	18.0	3914111	Og	CcySls			DG	/weathered Sls	77139	23	103	1365	1	2.42	180	

031055

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMLRTH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM57	18.0	20.0	3914112	Og	SlsCcy	Vc			minor DG clay	77139	13	32	922	-1	1.55	407	
DM57	20.0	22.0	3914113	Og	SlsCcy			DG	calc-arenite, minor clay	77139	16	878	2576	1	1.41	430	
DM57	22.0	24.0	3914114	Og	SlsCcy			DG	calc-arenite, minor DG clay	77139	43	1913	3710	2	1.38	88	
DM57	24.0	26.0	3914115	Og	Sls			DG	calc-arenite	77139	19	75	2396	1	2	70	
DM57	26.0	28.0	3914116	Og	SlsCcy			DG	minor Ccy	77139	20	87	741	1	1.69	43	
DM57	28.0	30.0	3914117	Og	Sls			DG	calc-arenite	77139	19	35	484	-1	1.62	41	
DM57	30.0	32.0	3914118	Og	Sls			DG		77139	15	29	468	1	1.44	40	
DM57	32.0	34.0	3914119	Og	Sls	Vc		DG		77139	15	27	377	1	1.24	32	
DM57	34.0	36.0	3914120	Og	SlsCcy			DG	minor DG clay	77139	21	34	235	-1	2.08	37	
DM57	36.0	38.0	3914121	Og	Sls			DG		77139	18	21	52	-1	1.79	175	
DM57	38.0	40.0	3914122	Og	SlsCcy			DG	lesser DG clay	77139	18	43	424	1	1.36	88	
DM57	40.0	42.0	3914123	Og	SlsCcy			DG	lesser DG clay	77139	17	69	498	1	1.56	40	
DM57	42.0	44.0	3914124	Og	Sls			DG	fine calc-arenite	77139	19	42	807	1	1.64	39	
DM57	44.0	46.0	3914125	Og	Sls			DG		77139	17	42	769	1	1.61	37	
DM57	46.0	48.0	3914126	Og	Sls			DG		77139	14	33	326	-1	1.99	102	
DM57	48.0	48.7	3914127	Og	Sls			DG	fine calc-arenite, minor skeletal frags	77139	9	144	955	1	1.41	133	
DM58	0.0	3.0		Oha	Cg												
DM58	3.0	6.0	3914128	Og	Sls	Fi		GB	granular	77139	20	189	4070	1	1.64	57	
DM58	6.0	8.0	3914129	Og	Sls	Fi		GB	granular	77139	16	35	2247	-1	1.72	35	
DM58	8.0	10.0	3914130	Og	Sls	Fi		GB	granular	77139	18	33	2201	-1	1.54	37	
DM58	10.0	12.0	3914131	Og	SlsCcy	Fi		GB	granular, minor MLB-O clay	77139	13	45	2137	1	1.7	31	
DM58	12.0	14.0	3914132	Og	CcySls	Fi	Sd?	MLGB	lesser MG banded Fi Sd? Sls	77139	20	40	420	1	2.29	302	
DM58	14.0	16.0	3914133	Og	CcySls	Fi		LG	lesser G Fi Sls	77139	13	47	249	-1	2.9	628	
DM58	16.0	18.0	3914134	Og	CcySls			DG	minor DG line Sls	77139	16	97	583	-1	2.31	357	
DM58	18.0	20.0	3914135	Og	CcySls			DG	minor DG line Sls	77139	20	591	2134	1	2.76	43	
DM58	20.0	22.0	3914136	Og	CcySls			DG	minor DG line Sls	77139	18	114	1367	-1	1.45	42	
DM58	22.0	24.0	3914137	Og	CcySls	Py		DG	minor DG line Sls	77139	17	111	1361	1	1.28	44	
DM58	24.0	26.0	3914138	Og	Sls			LGDG	granular	77139	14	797	1457	1	1.59	37	
DM58	26.0	28.0	3914139	Og	Sls			LGDG	granular	77139	15	19	58	-1	1.78	180	
DM58	28.0	29.0	3914140	Og	Sls	Vq		DG	granular	77139	18	141	562	-1	1.75	79	
DM59	0.0	2.0	3914141	Oha	Ccy			LB	pealy	77139	26	134	95	1	1.09	53	
DM59	2.0	4.0	3914142	Og	Ccy			GB		77139	22	426	2903	1	1.32	32	
DM59	4.0	6.0	3914143	Og	CcySls		Py	LB	minor DG granular Sls	77139	17	64	883	1	1.88	34	
DM59	6.0	8.0	3914144	Og	SlsCcy			G	granular, minor kaki clay	77139	20	35	387	-1	1.65	30	
DM59	8.0	10.0	3914145	Og	Sls	Vq	Py	DG	granular	77139	19	25	483	-1	1.71	33	
DM59	10.0	12.0	3914146	Og	CcySls	Vq	Py	DG	minor DG granular Sls	77139	21	35	426	1	1.96	32	
DM59	12.0	14.0	3914147	Og	Sls	Vq	Py	DG	granular	77139	19	102	1481	-1	1.89	30	
DM59	14.0	16.0	3914148	Og	Sls			DG	granular	77139	20	80	643	1	1.79	34	
DM59	16.0	18.0	3914149	Og	Sls			DG	granular	77139	18	26	358	-1	1.53	31	
DM59	18.0	20.0	3914150	Og	Sls			DG	lesser DG granular Sls	77139	20	75	532	1	1.28	31	
DM59	20.0	22.0	3914151	Og	Sls		Py	DG	granular Sls + 1-2% coarse Py & minor G clay	77139	26	672	7000	1	0.73	22	
DM59	22.0	24.0	3914152	Og	Sls			DG	granular Sls	77139	12	784	1181	1	1.64	23	
DM59	24.0	26.0	3914153	Og	Sls	Fi	Py	DG	granular Sls	77139	16	415	1541	-1	1.35	24	
DM59	26.0	28.0	3914154	Og	Sls	Fi	Py	DG	granular Sls	77139	21	236	932	-1	1.31	27	
DM59	28.0	30.0	3914155	Og	Sls	Fi	Py	DG	granular Sls	77139	18	185	665	1	1.13	25	
DM59	30.0	32.0	3914156	Og	Sls	Fi	Py	DG	granular Sls	77139	18	376	619	1	1.16	27	
DM59	32.0	34.0	3914157	Og	Sls	Fi	Py	DG	granular Sls	77139	16	604	1372	1	1.1	23	
DM59	34.0	36.0	3914158	Og	Sls	Fi	Py	DG	granular Sls	77139	21	71	698	-1	1.67	57	
DM59	36.0	38.0	3914159	Og	Sls	Fi	Py	DG	granular Sls, Py 3%	77139	22	634	4066	2	1.25	32	
DM59	38.0	39.7	3914160	Og	Sls	Fi	Py	DG	granular Sls, Py 3%	77139	24	90	650	-1	1.89	156	
DM60	0.0	3.0		Og													

931026

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM60	3.0	6.0	3914161	Og	SlsCcy			G	granular, minor LG clay	77139	17	382	1421	1	1.77	22	
DM60	6.0	8.0	3914162	Og	SlsCcy			G	granular, minor LG clay	77139	18	200	965	-1	1.19	25	
DM60	8.0	10.0	3914163	Og	SlsCcy			G	granular, minor LG clay	77139	18	1510	1977	1	1.24	25	
DM60	10.0	12.0	3914164	Og	SlsCcy	Fr		G	granular, minor LG clay	77139	18	1146	1183	1	1.22	27	
DM60	12.0	14.0	3914165	Og	SlsCcy	Fr		G	granular, minor LG clay	77139	22	1655	1681	1	1.18	24	
DM60	14.0	16.0	3914166	Og	CcySls			DG	lesser G granular Sls	77139	22	1028	1141	1	1.05	22	
DM60	16.0	18.0	3914167	Og	CcySls			DG	lesser G granular Sls	77139	22	1317	1234	2	1.63	64	
DM60	18.0	20.0	3914168	Og	CcySls			DG	lesser G granular Sls	77139	25	674	1710	1	1.85	58	
DM60	20.0	22.0	3914169	Og	Ccy			DG		77139	61	1690	3012	2	1.35	64	
DM60	22.0	24.0	3914170	Og	CcySls		Py	DG	minor DG granular Sls	77139	150	26500	23200	14	1.14	83	8.6
DM60	24.0	26.0	3914171	Og	CcySls		Py	DG	minor DG granular Sls	77139	1639	89100	37700	127	0.87	1628	6.55
DM60	26.0	28.0	3914172	Og	CcySls	Vc	Py	DG	minor DG granular Sls	77139	61	2724	4556	6	4.94	4577	
DM60	28.0	30.0	3914173	Og	CcySls	Vc	Py	DG	minor DG granular Sls	77139	39	2700	3825	4	6.08	4613	
DM60	30.0	32.0	3914174	Og	Ccy		Py	DG		77139	41	17100	16200	6	1.29	1194	4.1
DM60	32.0	34.0	3914175	Og	Sls	Vc		G	fine granular Sls	77139	55	5900	8700	5	3.83	1682	
DM60	34.0	36.0	3914176	Og	Sls	Vc		G	fine granular Sls	77139	10	1233	2694	1	2.48	1389	
DM60	36.0	38.0	3914177	Og	Sls	VcVq		G	fine granular Sls	77139	9	695	2225	1	2.21	999	
DM60	38.0	40.0	3914178	Og	Sls	VcVq		G	fine granular Sls	77139	12	1497	2828	1	1.88	1122	
DM60	40.0	41.0	3914179	Og	Sls	VcVq		DG	brecciated granular Sls - Interstitial carbonate + Qtz	77139	6	152	412	1	2.32	1255	
DM61	0.0	3.0		Qha	Cg				gravels								
DM61	3.0	6.0	3914180	Og	Ccy			DGDB	mottled clays	77140							
DM61	6.0	8.0	3914181	Og	Ccy			DG	minor carbonate frags	77140							
DM61	8.0	10.0	3914182	Og	Ccy			DG	minor carbonate frags	77140							
DM61	10.0	12.0	3914183	Og	CcySls	Fr		DG	lesser fissile carbonate frags	77140							
DM61	12.0	14.0	3914184	Og	Sls		Py	DG	frags, py veining	77140							
DM61	14.0	16.0	3914185	Og	Sls	Vc		DG	carbonate some calcite veining	77140							
DM61	16.0	18.0	3914186	Og	Sls	Vc	Sd	DG	carbonate some calcite veining	77140							
DM61	18.0	20.0	3914187	Og	Sls	VcVq	Sd	DG	carbonate some calcite veining	77140							
DM61	20.0	22.0	3914188	Og	Sls	Vc	Sd	DG	carbonate, abundant calcite veining	77140							
DM61	22.0	24.0	3914189	Og	Sls	VcVq	Sd	DG	carbonate, abundant calcite veining	77140							
DM61	24.0	26.0	3914190	Og	SlsCcy			DG	fine calc-arenite, minor clay	77140							
DM61	26.0	28.0	3914191	Og	Sls	VcVq	Sd	LG	brecciated carbonate	77140							
DM61	28.0	30.0	3914192	Og	Ccy			B	clay dom.	77140							
DM61	30.0	32.0	3914193	Og	Ccy			LGLB	dom. clays	77140							
DM61	32.0	34.0	3914194	Og	Ccy	Vc		LGLB	dom. clays, some calcite veined carbonate	77140							
DM61	34.0	36.0	3914195	Og	CcySls			LGLB	dom. clays, some calc-arenite frags	77140							
DM61	36.0	38.0	3914196	Og	Ccy	Vc		LG	clay some vein calcite	77140							
DM61	38.0	40.0	3914197	Og	CcySls			LGDG	clay, some DG carbonate frags	77140							
DM61	40.0	42.0	3914198	Og	CcySls			LGDG	clay, some DG carbonate frags	77140							
DM61	42.0	44.0	3914199	Og	Ccy			DG	dom. clay	77140							
DM61	44.0	46.0	3914200	Og	SlsCcy	VcVq		LG	fine calc-arenite, some clay	77140							
DM61	46.0	48.0	3914201	Og	Ccy			DG	dom. clay	77140							
DM61	48.0	50.0	3914202	Og	Sls			DG	only fine calc-arenite frags	77140							
DM62	0.0	4.0		Qha	Cg				gravels								
DM62	4.0	6.0	3914203	Og	Ccy	Vq		DG	dom. ly clay	77140							
DM62	6.0	8.0	3914204	Og	Ccy	Vq		DG	dom. ly clay	77140							
DM62	8.0	10.0	3914205	Og	Ccy			LG	poor sample, clay, some calc-arenite frags	77140							
DM62	10.0	12.0	3914206	Og	Sls	Vc	Sd	LG	granular calc-arenite	77140							
DM62	12.0	14.0	3914207	Og	Sls	Vc		LG	fine calc-arenite abundant vine calcite	77140							
DM62	14.0	16.0	3914208	Og	Sls	Vc		LG	fine calc-arenite abundant vine calcite	77140							
DM63	0.0	6.0		Qha	Cg				Gravels								

931021

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM63	6.0	8.0	3914209	Og	Sls			DG	intensely altered carbonate	77140							
DM63	8.0	10.0	3914210	Og	CcySls	Al	Sd	DG	clay, minor altered carbonate	77140							
DM63	10.0	12.0	3914211	Og	CcySls	Al	Sd	DG	clay, minor intensely altered carbonate	77140							
DM63	12.0	14.0	3914212	Og	CcySls	Al	Sd	DG	clay, minor sandy carbonate	77140							
DM63	14.0	16.0	3914213	Og	Sls	Al	Sd	LG	no clay, Intensely altered carbonate	77140							
DM63	16.0	18.0	3914214	Og	Sls	Vc		DG	calc-arenite, frags	77140							
DM63	18.0	20.2	3914215	Og	Sls	Vc		DG	calc-arenite, frags	77140							
DM64	0.0	5.9		Qha	Cg				gravels								
DM64	5.9	8.0	3914216	Og	Ccy	Ds	Ga	DG	dom.ly clay, disseminated ga	77140							
DM64	8.0	10.0	3914217	Og	Ccy	Ds	Ga	DG	dom.ly clay, disseminated ga	77140							
DM64	10.0	12.0	3914218	Og	Ccy		Py	DG	clay, some carbonate frags	77140							
DM64	12.0	14.0	3914219	Og	Ccy			DG	just clay	77140							
DM64	14.0	16.0	3914220	Og	Ccy			DG	just clay	77140							
DM64	16.0	18.0	3914221	Og	Ccy		Py	LGDG	mottled clay	77140							
DM64	18.0	20.0	3914222	Og	Ccy	Vc		LGDG	mottled clay, carbonate frags	77140							
DM64	20.0	22.0	3914223	Og	SlsCcy	F	Py	DG	calc-arenite, some LG clay	77140							
DM64	22.0	24.0	3914224	Og	Sls	Vc		DG	calc-arenite frags	77140							
DM64	24.0	26.0	3914225	Og	Sls	VcBx	SdGaSp	DG	brecciated calc-arenite	77140							
DM64	26.0	28.0	3914226	Og	Sls	VcLm	Sd	DG	fine laminated calc-arenite	77140							
DM64	28.0	30.0	3914227	Og	Sls	VcLm	SoGa	DG	fine laminated calc-arenite	77140							
DM64	30.0	31.0	3914228	Og	Sls	VcLm		DG	fine laminated calc-arenite	77140							
DM65	0.0	6.0		Qha	Cg				gravels								
DM65	6.0	8.0		Og	Ccy			DG	clay, poor recovery not sampled								
DM65	8.0	10.0	3914229	Og	CcySls			DG	clay, some carbonate, poor sample possible cavity	77140							
DM65	10.0	12.0	3914230	Og	CcySls			DG	clay, some carbonate	77140							
DM65	12.0	14.0	3914231	Og	CcySls			DG	clay, some granular carbonate, poor sampe	77140							
DM65	14.0	16.0	3914232	Og	CcySls			DG	clay, some granular carbonate	77140							
DM65	16.0	18.0	3914233	Og	CcySls			DG	clay, some granular carbonate	77140							
DM65	18.0	20.0		Og					no sample, cavity??								
DM65	20.0	22.0	3914234	Og	Sls	Vc	SoGa	DG	carbonate + massive ga	77140							
DM65	22.0	23.5	3914235	Og	Sls	Vc	GaPy	W	vein clacile dom.	77140							
DM66	0.0	4.0		Ed	Ssi			VP	siltstones								
DM66	4.0	6.3	3914236	Ed	Ssi			VP	siltstones	77141							
DM67	0.0	3.0		Ed	Ssi			VP	siltstones								
DM68	0.0	6.0		Ed	Sss			VP	coarse arenites								
DM69	0.0	2.0		Qha	Cg				gravels								
DM69	2.0	4.0	3914237	Og	Ccy			DG	just clay	77141							
DM69	4.0	6.0	3914238	Og	Ccy			DG	just clay	77141							
DM69	6.0	8.0	3914239	Og	CcySls			DG	clay, some calc-arenite frags	77141							
DM69	8.0	10.0	3914240	Og	CcySls		Py	DGLG	clay, some calc-arenite frags	77141							
DM69	10.0	12.0	3914241	Og	CcySls			DGLG	clay, some calc-arenite frags	77141							
DM69	12.0	14.0	3914242	Og	CcySls			DGLG	clay, some calc-arenite frags	77141							
DM69	14.0	16.0	3914243	Og	CcySls		Py	DGLG	clay, some calc-arenite frags	77141							
DM69	16.0	18.0	3914244	Og	CcySls		Sd	DGLG	clay, some calc-arenite frags	77141							
DM69	18.0	20.0	3914245	Og	CcySls		Sd	DGLG	clay, some calc-arenite frags	77141							
DM69	20.0	22.0	3914246	Og	CcySls		Sd	DGLG	increased carbonate frags	77141							
DM69	22.0	24.0	3914247	Og	Sls		Sd	DG	dom. carbonate frags	77141							
DM69	24.0	26.0	3914248	Og	Ccy			DGLG	mottled clays	77141							
DM69	26.0	28.0	3914249	Og	Ccy			DGLG	mottled clays	77141							
DM69	28.0	30.0	3914250	Og	CcySls		PyGa	DGLG	mottled clays, some carbonate frags	77141							
DM69	30.0	32.0	3914251	Og	CcySls		Py	DGLG	mottled clays, some carbonate frags	77141							

931058

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM69	32.0	34.0	3914252	Og	CcySls		Sd	DGLG	mottled clays, some carbonate frags	77141							
DM69	34.0	36.0	3914253	Og	CcySls		SdPy	DGLG	mottled clays, some carbonate frags	77141							
DM69	36.0	38.0	3914254	Og	CcySls		SdPy	DGLG	mottled clays, some granular carbonate frags	77141							
DM69	38.0	40.0	3914255	Og	Sls	Vq	PyGa	LG	carbonate fragments dom.	77141							
DM69	40.0	42.0	3914256	Og	Sls	Vq	PyGa	LG	carbonate fragments dom., lesser Py Ga	77141							
DM69	42.0	44.0	3914257	Og	SlsOvqOvc	VqVc	Py	W	mainly vein calcite + qtz	77141							
DM69	44.0	46.0	3914258	Og	Sls	VqVc		W	dom. calcite veining	77141							
DM69	46.0	48.0	3914259	Og	Sls	VqVc	Ga	W	dom. calcite veining	77141							
DM69	48.0	50.0	3914260	Og	Sls	VqVc	Ga	W	dom. calcite veining	77141							
DM70	0.0	3.5		Qha	Cg				gravels								
DM70	3.5	4.0	3914261	Og	Ccy			DG	clay only	77141							
DM70	4.0	6.0	3914262	Og	CcySls	Al	Sd	DG	ankerite in carbonate frags	77141							
DM70	6.0	8.0	3914263	Og	CcySls	Al	Sd	DG	ankerite in carbonate frags	77141							
DM70	8.0	10.0	3914264	Og	CcySls	Al	SdGa	DG	ankerite in carbonate frags	77141							
DM70	10.0	12.0	3914265	Og	CcySls			DG	clay minor carbonate frags	77141							
DM70	12.0	14.0	3914266	Og	CcySls	Fi		DG	clay minor carbonate frags, poor recovery	77141							
DM70	14.0	16.0	3914267	Og	CcySls	Fi		DG	clay minor carbonate frags, poor recovery	77141							
DM70	16.0	18.0	3914268	Og	CcySls	Fi		DG	clay minor carbonate frags, poor recovery	77141							
DM70	18.0	20.0	3914269	Og	SlsCcy			DG	calc-arenite frags, some DG clay	77141							
DM70	20.0	22.0	3914270	Og	CcySls	Al	Sd	DG	clay, ankerite in carbonate frags	77141							
DM70	22.0	24.0	3914271	Og	CcySls	Al	Sd	DG	clay, ankerite in carbonate frags	77141							
DM70	24.0	26.0	3914272	Og	Sls			LG	granular carbonate	77141							
DM70	26.0	28.0	3914273	Og	Sls		Sd	LG	granular carbonate	77141							
DM70	28.0	30.0	3914274	Og	Ccy	Vq		DG	clay, some vein qtz	77141							
DM70	30.0	32.0	3914275	Og	Ccy	Vq	Py	DG	clay, some vein qtz, carbonate fragments	77141							
DM70	32.0	34.0	3914276	Og	Sls	Vq		W	vein qtz dom.	77141							
DM70	34.0	36.0	3914277	Og	CcySls	Al		DG	clay, calc-arenite frags	77141							
DM70	36.0	38.0	3914278	Og	Sls	VqVc		W	vein qtz + calcite + calc-arenite frags + DG clay	77141							
DM70	38.0	40.0	3914279	Og	Sls	Vc		W	vein calcite, some brecciated carbonate	77141							
DM70	40.0	42.0	3914280	Og	Sls	Vc		W	vein calcite, some brecciated carbonate	77141							
DM70	42.0	44.0	3914281	Og	Sls	VcVq	Py	WDG	vein qtz-calcite + foliated calc-arenite frags	77141							
DM70	44.0	44.5	3914282	Og	Sls	Vc		DG	calc-arenite frags, vein calcite	77141							
DM71	0.0	4.2		Qha	Cg				gravels								
DM71	4.2	6.0	3914283	Og	CcySls	Al		DG	clay, minor carbonate	77141							
DM71	6.0	8.0	3914284	Og	CcySls	Al		DG	clay, minor carbonate	77141							
DM71	8.0	10.0	3914285	Og	CcySls	Al		DG	clay, minor carbonate	77141							
DM71	10.0	12.0	3914286	Og	CcySls	Al		DG	clay, minor carbonate some coralline	77141							
DM71	12.0	14.0	3914287	Og	CcySls	Al		DG	clay, few frags	77141							
DM71	14.0	16.0	3914288	Og	CcySls	Al	Sd	DG	clay, carbonate frags + ankerite	77141							
DM71	16.0	18.0	3914289	Og	CcySls	Al	Sd	DG	clay, carbonate frags + ankerite	77141							
DM71	18.0	20.0	3914290	Og	CcySls	Al	Sd	DG	clay, carbonate frags + ankerite	77141							
DM71	20.0	22.0	3914291	Og	CcySls	AlVq	Sd	DG	clay, lots of vein qtz, carbonate frags + ankerite	77141							
DM71	22.0	24.0	3914292	Og	Sls	AlVq	Sd	DG	carbonate frags + ankerite, some vein qtz	77141							
DM71	24.0	26.0	3914293	Og	Sls	AlVq	SdGa	DG	carbonate frags + ankerite, some vein qtz	77141							
DM71	26.0	28.0	3914294	Og	Sls	AlVc	SdGa	DG	lots of Ovc, carbonate frags + ankerite	77141							
DM71	28.0	30.1	3914295	Og	Sls	AlVc	SdGa	DG	carbonate frags + ankerite, some Ovc	77141							
DM72	0.0	5.0		Qha	Cg				gravels								
DM72	5.0	6.0	3914296	Og	Ccy			DGDB	clay, small carbonate frags	77141							
DM72	6.0	8.0	3914297	Og	CcySls	Vq		DG	clay, some carbonate frags	77141							
DM72	8.0	10.0	3914298	Og	CcySls	Vq		DG	clay, some carbonate frags	77141							
DM72	10.0	12.0	3914299	Og	Ccy	Al	Sd	DG	clay, ankerite in carbonate frags	77141							

931059

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM72	12.0	14.0	3914300	Og	Ccy			DG	clay only	77141							
DM72	14.0	16.0	3914301	Og	Ccy		Py	DG	clay only	77140							
DM72	16.0	18.0	3914302	Og	CcySls			DG	clay, granular carbonate frags	77140							
DM72	18.0	20.0	3914303	Og	CcySls	Vg	Py	DG	clay, granular carbonate frags	77140							
DM72	20.0	22.0	3914304	Og	CcySls	Vg	Py	DG	clay, granular carbonate frags	77140							
DM72	22.0	24.0	3914305	Og	Ccy		Py	DG	clay, minor carbonate frags	77140							
DM72	24.0	26.0	3914306	Og	Sls	Vc	Sd	W	vein calcite dom., some carbonate + DG clay	77140							
DM72	26.0	28.0	3914307	Og	Sls	Vc	SdGa	W	vein calcite dom., some carbonate + DG clay	77140							
DM72	28.0	30.0	3914308	Og	Sls	Vc		DGW	vein calcite + carbonate	77140							
DM72	30.0	32.0	3914309	Og	OvcSls	Vc		W	dom.ly Ovc, some calc-arenite	77140							
DM72	32.0	34.0	3914310	Og	OvcSls	Vc		W	dom.ly Ovc, some calc-arenite	77140							
DM72	34.0	36.0	3914311	Og	OvcSls	Vc		W	dom.ly Ovc, some calc-arenite	77140							
DM72	36.0	38.0	3914312	Og	OvcSls	Vc		W	dom.ly Ovc, some calc-arenite, poor recovery	77140							
DM72	38.0	40.0	3914313	Og	Sls	Vc		Dg	carbonate frags dom., poor recovery	77140							
DM72	40.0	42.0	3914314	Og	Sls	Vc		Dg	carbonate frags dom.	77140							
DM72	42.0	44.0	3914315	Og	Sls	Vc		Dg	carbonate frags dom.	77140							
DM72	44.0	45.3	3914316	Og	Sls	Vc		Dg	carbonate frags dom.	77140							
DM73	0.0	3.0		Qha	Cg				gravels								
DM73	3.0	6.0	3914317	Og	CcySls	Fr	Py	DG	clay, calc-arenite frags foliated	77140							
DM73	6.0	8.0	3914318	Og	CcySls		PyGa	DG	clay minor carbonate	77140							
DM73	8.0	10.0	3914319	Og	CcySls		PyGa	DG	clay minor carbonate	77140							
DM73	10.0	12.0	3914320	Og	CcySls			DG	clay increased carbonate	77140							
DM73	12.0	14.0	3914321	Og	SlsCcy		Ga	LG	carbonate + DG clay	77140							
DM73	14.0	16.5	3914322	Og	SlsCcy		Ga	LG	carbonate + DG clay	77140							
DM74	0.0	4.5		Qha	Cg				Gravels								
DM74	4.5	6.0	3914323	Og	CcySls			DGLB	mottled clays, carbonate frags	77140							
DM74	6.0	8.0	3914324	Og	CcySls			DGLBLG	mottled clays, carbonate frags	77140							
DM74	8.0	10.0	3914325	Og	CcySls			DGLG	mottled clays, carbonate frags	77140							
DM74	10.0	12.0	3914326	Og	Sls	Vc		LG	carbonate, no clay	77140							
DM74	12.0	13.8	3914327	Og	Sls	Vc		LG	carbonate, some vein calcite	77140							
DM75	0.0	3.0		Qha	Cg				Gravels								
DM75	3.0	6.0	3914328	Og	Sls	Al		DG	altered carbonate frags	77140							
DM75	6.0	8.0	3914329	Og	Sls	Al		DG	altered carbonate frags	77140							
DM75	8.0	10.0	3914330	Og	Sls	Al	Sd	DG	altered carbonate frags	77140							
DM75	10.0	12.0	3914331	Og	Sls	Al	Sd	DG	altered carbonate frags	77140							
DM75	12.0	14.0	3914332	Og	Sls	Al	SdPy	DG	altered carbonate frags	77140							
DM75	14.0	16.0	3914333	Og	Sls	Al	SdPy	DG	altered carbonate frags	77140							
DM75	16.0	18.0	3914334	Og	Sls	AlFe	SdPy	DG	altered carbonate frags, some Fe staining	77140							
DM75	18.0	20.0	3914335	Og	Sls	AlFe	SdPy	DG	altered carbonate frags, some Fe staining	77140							
DM75	20.0	22.0	3914336	Og	Sls	Vg	Sd	DG	granular carbonate	77140							
DM75	22.0	24.0	3914337	Og	Sls		Sd	DG	granular carbonate	77140							
DM75	24.0	26.0	3914338	Og	Sls		SdPy	DG	granular carbonate	77140							
DM75	26.0	28.0	3914339	Og	Sls		SdPy	DG	granular carbonate	77140							
DM76	0.0	5.0		Qha	Cg				gravels								
DM76	5.0	6.0	3914340	Og	Ccy			DG	clay only	77140							
DM76	6.0	8.0	3914341	Og	SlsCcy			DG	carbonate minor DG clay	77140							
DM76	8.0	10.0	3914342	Og	CcySls			DG	clay some carbonate	77140							
DM76	10.0	11.8	3914343	Og	CcySls			DG	clay + carbonate at EOH	77140							
DM77	0.0	3.0		Qha	Ccy				peaty soil								
DM77	3.0	5.0		Qha	Cg				gravels Inpenetrable								
DM78	0.0	4.5		Qha	Cg				gravel								

931060

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM78	4.5	4.8	3914344	Sc	Sss			GLG	sandstone	77140							
DM79	0.0	3.0		Qha	CbsCs				also unconsolidated sand								
DM79	3.0	5.0	3914345	Qha	Cs				sand minor clay	77140							
DM79	5.0	6.0	3914346	Qha	Ccy			LB	mottled clay	77140							
DM79	6.0	8.0	3914347	Qha	Ccy			WB		77140							
DM79	8.0	10.0	3914348	QhaSc	CcySss			LBW	LB clay, W sandstone	77140							
DM79	10.0	12.0	3914349	Sc	SssCcy			LB	Ssl minor clay	77140							
DM79	12.0	14.0	3914350	Sc	SssCcy			WLB	minor LB clay	77140							
DM79	14.0	16.0	3914351	Sc	Sss			BW		77140							
DM79	16.0	18.0	3914352	Og	Ccy			DG		77140							
DM79	18.0	20.0	3914353	Og	Ccy			DG		77140							
DM79	20.0	22.0	3914354	Og	Ccy			DG		77141							
DM79	22.0	24.0	3914355	Og	Ccy			DG		77141							
DM79	24.0	26.0	3914356	Og	Ccy			DBN		77141							
DM79	26.0	28.0	3914357	Og	Ccy			DG		77141							
DM79	28.0	30.0	3914358	Og	Ccy			DG		77141							
DM79	30.0	32.0	3914359	Og	Ccy			DG		77141							
DM79	32.0	34.0	3914360	Og	SlsCcy			DG	carbonate + clay	77141							
DM79	34.0	36.0	3914361	Og	SlsCcy	Vc		DG	carbonate + clay	77141							
DM79	36.0	38.0	3914362	Og	CcySls			DG	clay minor carbonate	77141							
DM79	38.0	40.0	3914363	Og	CcySls			DG	clay minor carbonate	77141							
DM79	40.0	42.0	3914364	Og	Sls			DG		77141							
DM79	42.0	44.0	3914365	Og	Sls			DG		77141							
DM79	44.0	46.0	3914366	Og	Sls			DG		77141							
DM79	46.0	48.0	3914367	Og	Sls	Vc		DG		77141							
DM79	48.0	48.9	3914368	Og	Sls			DG		77141							
DM80	0.0	4.0		Qha	Cbs				minor clay								
DM80	4.0	6.0	3914369	Qha	CcySss			LB	clay + W,B sandstone	77141							
DM80	6.0	8.0	3914370	Og	Sls			DGLG	granular carbonate	77141							
DM80	8.0	10.0	3914371	Og	Sls			DGLG	granular carbonate	77141							
DM80	10.0	12.0	3914372	Og	Sls			DGLG	granular carbonate, minor LG Ccy	77141							
DM80	12.0	14.0	3914373	Og	CcySls			DGBO	clay, calc-arenite frags	77141							
DM80	14.0	16.0	3914374	Og	CcySls			DG	clay, lesser carbonate	77141							
DM80	16.0	18.0	3914375	Og	CcySls			DG	clay, lesser carbonate	77141							
DM80	18.0	20.0	3914376	Og	Ccy			LGDG	mottled clays	77141							
DM80	20.0	22.0	3914377	Og	CcySls			DGDB	mottled clays, minor DG calc-arenite	77141							
DM80	22.0	24.0	3914378	Og	SlsCcy			DG	calc-arenite frags dom., minor Ccy	77141							
DM80	24.0	26.0	3914379	Og	CcySls			DG	clay, minor calc-arenite	77141							
DM80	26.0	28.0	3914380	Og	SlsCcy	Vq		DG	calc-arenite, some DG Clay	77141							
DM80	28.0	30.0	3914381	Og	SlsCcy	VqVc		DG	calc-arenite, some DG Clay	77141							
DM80	30.0	32.0	3914382	Og	SlsCcy	VqVc		DG	calc-arenite, minor DG Clay	77141							
DM80	32.0	34.0	3914383	Og	CcySls			DG	clay, calc-arenite frags	77141							
DM80	34.0	35.7	3914384	Og	Sls	Vc		DG	calc-arenite, minor Ovc	77141							
DM81	0.0	5.0		Qha	Cg				gravels								
DM81	5.0	6.0	3914385	Og	CcyCg			DG	clay, some gravel	77141							
DM81	6.0	8.0	3914386	Og	CcyCg			DG	clay, some gravel	77141							
DM81	8.0	10.0	3914387	Og	CcySls			DG	clay, some calc-arenite frags	77141							
DM81	10.0	12.0	3914388	Og	CcySls			DG	clay, some calc-arenite frags	77141							
DM81	12.0	14.0	3914389	Og	CcySls	Vc		LG	clay, inc calc-arenite frags	77141							
DM81	14.0	14.8	3914390	Og	SlsCcy			DG	calc-arenite, minor LG Ccy	77141							
DM82	0.0	4.0		Qha	Cg				gravels								

031061

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM82	4.0	6.0	3914391	Og	Ccy			LB DG	mottled clays	77141							
DM82	6.0	8.0	3914392	Og	Ccy			LB DG	mottled clays	77141							
DM82	8.0	10.0	3914393	Og	SlsCcy			DG	clay + fine silt, poor sample	77141							
DM82	10.0	12.0	3914394	Og	SlsCcy			DG	clay, carbonate + fine silt, poor sample	77141							
DM82	12.0	14.0	3914395	Og	SlsCcy	Vq		DG	clay, carbonate + fine silt, poor sample	77141							
DM82	14.0	16.0	3914396	Og	SlsCcy	Vq	Py	DG	clay, calc-arenite + fine silt, poor sample	77141							
DM82	16.0	18.0	3914397	Og	SlsCcy	Vc		DG	clay, calc-arenite + fine silt, poor sample	77141							
DM82	18.0	20.0	3914398	Og	SlsCcy	Vc		DG	clay, fine silt + incr calc-arenite	77141							
DM82	20.0	22.0	3914399	Og	SlsCcy	Vc		DG	DB clay, fine silt + lesser calc-arenite	77141							
DM82	22.0	24.0	3914400	Og	SlsCcy		Py	DG	calc-arenite, DG Ccy	77141							
DM82	24.0	26.2	3914401	Og	CcySls	Vc		DG	clay, Sls + Ovc at EOH	77141							
DM83	0.0	4.0		Cha	Cg				gravels								
DM83	4.0	6.0	3914402	Og	Ccy			DG	clay, poor sample	77141							
DM83	6.0	8.0	3914403	Og	Ccy		Sd	DG	clay, some carbonate, poor sample	77141							
DM83	8.0	10.0	3914404	Og	Ccy			DG	clay, some carbonate	77141							
DM83	10.0	12.0	3914405	Og	Ccy			DG	clay, some carbonate, poor sample	77141							
DM83	12.0	14.0	3914406	Og	Sls	Vc		DG	calc-arenite frags, poor sample	77141							
DM83	14.0	16.0	3914407	Og	Sls	Vc	Ga	DG	calc-arenite frags, poor sample	77141							
DM83	16.0	18.0	3914408	Og	Sls	Vc		DG	calc-arenite frags, Ovc abundant	77141							
DM83	18.0	20.0	3914409	Og	Sls	Vc		DG	calc-arenite frags, Ovc abundant	77141							
DM83	20.0	22.0	3914410	Og	Sls	Vc		DG	calc-arenite frags, Ovc abundant	77141							
DM83	22.0	22.5	3914411	Og	Sls	Vc	Sd	DG	calc-arenite frags, Ovc abundant	77141							
DM84	0.0	9.0		Ed	Ssl				Ed clays + gravels								
DM84	9.0	12.0	3914412	Og	CcySls		Ga	DG	clay, minor Calc-arenite	77141							
DM84	12.0	14.0	3914413	Og	CcySls			DG	clay, minor Calc-arenite	77141							
DM84	14.0	16.0	3914414	Og	CcySls	Vc		DG	clay, minor Calc-arenite	77141							
DM84	16.0	18.0	3914415	Og	Sls	Vc	Sd	DG	calc-arenite	77141							
DM84	18.0	20.0	3914416	Og	CcySls	Vc	Sd	DG	clay, some calc-arenite	77141							
DM84	20.0	22.0	3914417	Og	OvcSls	Vc	Ga	WDG	Ovc dom., some clay + calc-arenite	77141							
DM84	22.0	24.0	3914418	Og	OvcSls	Vc	Ga	WDG	Ovc dom., some clay + calc-arenite	77141							
DM84	24.0	26.0	3914419	Og	OvcSls	Vc	Ga	WDG	Ovc dom., incr calc-arenite, minor Ccy	77141							
DM84	26.0	28.0	3914420	Og	OvcSls	Vc	GaSdPy	WDG	Ovc dom., incr calc-arenite, minor Ccy, abundant Ga	77141							
DM84	28.0	30.0	3914421	Og	OvcSls	Vc	GaSd	WDG	Ovc dom., incr calc-arenite, minor Ccy, abundant Ga	77141							
DM84	30.0	32.0	3914422	Og	OvcSls	Vc	GaSd	WDG	Ovc dom., incr calc-arenite, minor Ccy, abundant Ga	77141							
DM84	32.0	32.5	3914423	Og	OvcSls	Vc	GaSd	WDG	Ovc dom., incr calc-arenite, minor Ccy, abundant Ga	77141							
DM85	0.0	12.0		Ed	Ssl			P	shales + siltstones								
DM86	0.0	4.0	3914424	Og	Ccy			LG	only clay	77141							
DM86	4.0	6.0	3914425	Og	Ccy			LG	only clay	77141							
DM86	6.0	8.0	3914426	Og	CcySls			LG DG	mottled clay, calc-arenite frags	77141							
DM86	8.0	10.0	3914427	Og	CcySls			LG DG	mottled clay, calc-arenite frags	77141							
DM86	10.0	12.0	3914428	Og	CcySls			LG DG	mottled clay, calc-arenite frags	77141							
DM86	12.0	14.0	3914429	Og	Sls		Sd	DGLG	calc-arenite frags, minor LG clay	77141							
DM86	14.0	16.0	3914430	Og	Sls		Sd	DGLG	calc-arenite frags	77141							
DM86	16.0	18.0	3914431	Og	CcySls		SdPy	DG	clay, calc-arenite frags	77141							
DM86	18.0	20.0	3914432	Og	CcySls		SdPy	DG	clay, lesser calc-arenite frags	77141							
DM86	20.0	22.0	3914433	Og	CcySls		Sd	DG	clay, lesser calc-arenite frags	77141							
DM86	22.0	24.0	3914434	Og	CcySls		SdPy	DG	clay, lesser calc-arenite frags	77141							
DM86	24.0	26.0	3914435	Og	CcySls		SdPy	DG	clay, lesser calc-arenite frags	77141							
DM86	26.0	28.0	3914436	Og	Ccy			DG	clay only	77141							
DM86	28.0	30.0	3914437	Og	CcySls	Vc		DG	clay, calc-arenite at EOH + Ovc	77141							
DM87	0.0	4.0	3914438	?	Ccy			LG	clay	77141							

031062

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM87	4.0	6.0	3914439	?	Ccy			LGBV	clay	77141							
DM87	6.0	8.0	3914440	Og	Ccy			DGLGV	mottled clays, minor carbonate	77141							
DM87	8.0	10.0	3914441	Og	CcySls			DG	clay, calc-arenite frags	77141							
DM87	10.0	12.0	3914442	Og	CcySls			DG	clay, calc-arenite frags	77141							
DM87	12.0	14.0	3914443	Og	CcySls	Vq		DG	clay, calc-arenite frags	77141							
DM87	14.0	16.0	3914444	Og	CcySls	Vq	Py	DG	clay, calc-arenite frags	77141							
DM87	16.0	18.0	3914445	Og	Sls		SdGaPy	DG	calc-arenite, minor DG, LG clay	77141							
DM87	18.0	20.0	3914446	Og	CcySls			DG	clay, calc-arenite frags	77141							
DM87	20.0	22.0	3914447	Og	CcySls			DG	clay, calc-arenite frags	77141							
DM87	22.0	24.0	3914448	Og	SlsCcy		SdPy	DG	calc-arenite + clay	77141							
DM87	24.0	26.0	3914449	Og	SlsCcy			DG	calc-arenite + clay	77141							
DM87	26.0	28.0	3914450	Og	SlsCcy		SdPy	DG	calc-arenite + minor clay	77141							
DM87	28.0	30.0	3914451	Og	Sls			DGLG	DG calc-arenite + LG carbonate	77141							
DM87	30.0	31.8	3914452	Og	Sls		Sd	DGLG	DG calc-arenite + LG carbonate	77141							
DM88	0.0	10.0		Qha	Cg				sandstone gravels								
DM88	10.0	12.0	3914453	Og	Sls		Sd	DG	calc-arenite frags	77141							
DM88	12.0	14.0	3914454	Og	Sls	Vc	Sd	DG	calc-arenite frags	77141							
DM88	14.0	16.0	3914455	Og	Sls			DG	calc-arenite frags	77141							
DM88	16.0	18.0	3914456	Og	Sls			DG	calc-arenite frags	77141							
DM88	18.0	20.0	3914457	Og	Sls			DG	calc-arenite frags, some G clay	77141							
DM88	20.0	22.0	3914458	Og	Sls			DG	calc-arenite frags	77141							
DM88	22.0	24.0	3914459	Og	Sls			DG	calc-arenite frags, some DG clay	77141							
DM88	24.0	26.0	3914460	Og	Sls			DG	calc-arenite frags	77141							
DM88	26.0	28.0	3914461	Og	Sls		Py	DG	calc-arenite frags, some DG clay	77141							
DM88	28.0	30.0	3914462	Og	CcySls	Fi		DG	clay, foliated carbonate	77141							
DM88	30.0	32.2	3914463	Og	CcySls	Fi		DG	clay, foliated carbonate	77141							
DM89	0.0	5.7		Qha	Ss			LB	silt + clay								
DM89	5.7	8.0	3914464	Og	Ccy			DGDB	mottled clays	77141							
DM89	8.0	10.0	3914465	Og	Ccy			DGY	mottled clays	77141							
DM89	10.0	12.0	3914466	Og	Ccy			DGLB	clays	77141							
DM89	12.0	14.0	3914467	Og	Ccy			DGDB	mottled clays	77141							
DM89	14.0	16.0	3914468	Og	CcySls			DGDB	mottled clays, calc-arenite frags	77141							
DM89	16.0	18.0	3914469	Og	SlsCcy			DGDB	calc-arenite + mottled clays	77141							
DM89	18.0	20.0	3914470	Og	SlsCcy		Sd	DGDB	calc-arenite + mottled clays	77141							
DM89	20.0	22.0	3914471	Og	SlsCcy		SdPy	DGDB	calc-arenite + mottled clays	77141							
DM89	22.0	23.2	3914472	Og	Sls	Vq	SdGa	DG	calc-arenite	77141							
DM90	0.0	4.2		Qha	Cg				gravels								
DM90	4.2	6.0	3914473	Og	SlsCcy			DG	calc-arenite, some DG, LG clay	77141							
DM90	6.0	8.0	3914474	Og	CcySls		Sd	DG	clay, calc-arenite frags	77141							
DM90	8.0	10.0	3914475	Og	CcySls		Sd	DG	clay, calc-arenite frags	77141							
DM90	10.0	12.0	3914476	Og	CcySls		Sd	DG	clay, calc-arenite frags	77141							
DM90	12.0	12.8	3914477	Og	CcySls			DG	clay, calc-arenite frags	77141							
DM91	0.0	5.7		Qha	Cg				gravels								
DM91	5.7	8.0	3914478	Og	CcySls			DG	clay, calc-arenite fragments	77141							
DM91	8.0	10.0	3914479	Og	Sls	Al		DG	altered calc-arenite	77141							
DM91	10.0	12.0	3914480	Og	Sls	Al		DG	altered calc-arenite	77141							
DM91	12.0	14.0	3914481	Og	Sls	Al		DG	altered calc-arenite	77141							
DM91	14.0	16.2	3914482	Og	Sls	Al	Sd	DG	altered calc-arenite, some fine shaley carbonate	77141							
DM92	0.0	4.0		Qha	Cg				gravels								
DM92	4.0	6.0	3914483	Og	Ccy			DGO	mottled clay	77141							
DM92	6.0	8.0	3914484	Og	CcyOvc	Vc	Sd	DGLGO	mottled clay, abundant Ovc	77141							

001003

APPENDIX 2: Mariposa prospect Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM92	8.0	10.0	3914485	Og	CcyOvc	Vc	Sd	DGLGO	mottled clay, abundant Ovc	77141							
DM92	10.0	12.0	3914486	Og	CcyOvc	Vc	Sd	DGLGO	mottled clay, abundant Ovc	77141							
DM92	12.0	14.0	3914487	Og	CcyOvc	Vc	Sd	LG	mottled clay, abundant Ovc	77141							
DM92	14.0	16.0	3914488	Og	CcyOvc	Vc	Sd	LG	mottled clay, abundant Ovc	77141							
DM92	16.0	18.0	3914489	Og	OvcSls	Vc		LGWO	dom. Ovc, clay	77141							
DM92	18.0	20.0	3914490	Og	CcyOvc	Vc	Sd	LGWO	clay + Sd altered Ovc	77141							
DM92	20.0	22.0	3914491	Og	CcyOvc	Vc	Sd	O	clay + Sd altered Ovc	77141							
DM93	0.0	2.0		Qha	Cg				gravels + soils								
DM93	2.0	4.0	3914492	Og	CcySls			LG	clay some DG carbonate	77141							
DM93	4.0	6.0	3914493	?	CcyCg			DB	clay + qtz gravels	77141							
DM93	6.0	8.0	3914494	Og	CcySls			LG	clay + DG carbonate + qtz frags	77141							
DM93	8.0	10.0	3914495	Og	SlsCcy	Vq	Sd	DG	carbonate, some DG clay	77141							
DM93	10.0	12.0	3914496	Og	SlsCcy		Sd	DG	carbonate, some DG clay	77141							
DM93	12.0	14.0	3914497	Og	SlsCcy	Vq	SdPy	DG	carbonate, some DG clay	77141							
DM93	14.0	16.0	3914498	Og	CcySls	Vq	SdPy	DG	clay, some carbonate	77141							
DM93	16.0	18.0	3914499	Og	CcySls	Vc	SdPy	DG	clay, some carbonate	77141							
DM93	18.0	20.0	3914500	Og	SlsOvc	Vc	Sd	DG	fine carbonate, abundant Ovc	77141							
DM93	20.0	22.0	3915701	Og	SlsOvc	Vq	Sd	DG	fine carbonate, abundant Ovc	77141							
DM93	22.0	24.0	3915702	Og	CcySls	Vq		DG	clay minor calc-arenite	77141							
DM93	24.0	26.0	3915703	Og	CcySls	Vq	Py	DG	clay minor calc-arenite	77141							
DM93	26.0	28.0	3915704	Og	Ccy	Vq		DG	lesser clay minor calc-arenite	77141							
DM93	28.0	30.0	3915705	Og	Sls			DG	calc-arenite frags + silt	77141							
DM93	30.0	32.0	3915706	Og	Sls		Py	DG	calc-arenite frags + silt	77141							
DM93	32.0	34.0	3915707	Og	Sls			DG	calc-arenite frags + silt	77141							
DM93	34.0	36.0	3915708	Og	Sls		Py	DG	calc-arenite frags + silt	77141							
DM93	36.0	38.0	3915709	Og	Sls			DG	calc-arenite frags + silt, poor sample	77141							
DM93	38.0	40.0	3915710	Og	Sls	Vc		DG	calc-arenite frags only	77141							
DM93	40.0	42.0	3915711	Og	Sls	Vc		DG	calc-arenite frags only	77141							
DM93	42.0	44.0	3915712	Og	Sls	Vc		DG	calc-arenite frags only	77141							
DM93	44.0	46.0	3915713	Og	Sls	Vc		DG	calc-arenite frags, some carbonate breccia frags	77141							
DM93	46.0	48.0	3915714	Og	Sls	Vc		DG	calc-arenite frags, some carbonate breccia frags	77141							
DM93	48.0	50.0	3915715	Og	SlsOvc	Vc		DG	calc-arenite frags, abundant Ovc	77141							
DM93	50.0	52.0	3915716	Og	Sls	Vc		DG	carbonate frags + Ovc	77141							
DM93	52.0	54.0	3915717	Og	Sls	Vc	Sd	DG	calc-arenite frags	77141							
DM93	54.0	56.0	3915718	Og	Sls	Vc		DG	calc-arenite frags some foliated carbonate	77141							
DM93	56.0	57.0	3915719	Og	Sls	Vc		DG	calc-arenite frags some foliated carbonate	77141							
DM94	0.0	2.0	3915720	Qha	Ccy			LGLB	clays	77141							
DM94	2.0	4.0	3915721	Qha	CcyCg			LG	clay + gravels	77141							
DM94	4.0	6.0	3915722	Og	Ccy			DG	clay only	77141							
DM94	6.0	8.0	3915723	Og	Ccy	Ds	Py	DG	clay disseminated Py + minor frags	77141							
DM94	8.0	10.0	3915724	Og	Ccy	Vc	PySd	DG	clay disseminated Py + minor frags	77141							
DM94	10.0	12.0	3915725	Og	Ccy			DG	clay only	77141							
DM94	12.0	13.1	3915726	Og	Sls	Vc		DG	calc-arenite	77141							
DM95	0.0	2.0		Qha	Cg			LB	clay + gravel								
DM95	2.0	4.0	3915727	Qha	CcyCg			LG	clay + qtz pebbles	77141							
DM95	4.0	6.0	3915728	Og	Ccy			LG	clay only	77141							
DM95	6.0	8.0	3915729	Og	Ccy			DGLG	mottled clays	77141							
DM95	8.0	10.0	3915730	Og	Ccy			DGLG	mottled clays	77141							
DM95	10.0	12.0	3915731	Og	Ccy			DGLG	mottled clays	77141							
DM95	12.0	14.0	3915732	Og	CcySls			DGLG	mottled clays, minor calc-arenite some Fe carbonate	77141							
DM95	14.0	16.0	3915733	Og	Sls	Vc		DG	calc-arenite + Fe carbonate	77141							

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM95	16.0	18.0	3915734	Og	CcySls	Vc		DG	clay, calc-arenite frags	77141							
DM95	18.0	20.0	3915735	Og	Sls	Vc		WLG	Ovc dom. minor Carbonate	77141							
DM95	20.0	22.0	3915736	Og	Sls	Vc	Ga	WLG	Ovc dom. minor Carbonate	77141							
DM95	22.0	24.0	3915737	Og	CcySls	Vc		G	clay some calc-arenite	77141							
DM95	24.0	26.0	3915738	Og	CcySls	Vc		LG	clay some calc-arenite	77141							
DM95	26.0	28.0	3915739	Og	CcySls	Vc	Ga	LG	clay some calc-arenite	77141							
DM95	28.0	30.0	3915740	Og	CcySls	Vc	Ga	LG	clay some calc-arenite	77141							
DM95	30.0	32.0	3915741	Og	Sls	Vc		LG	carbonate some Fe carbonate	77141							
DM95	32.0	34.0	3915742	Og	CcySls	Vc		LG	clay, calc-arenite some Fe carbonate	77141							
DM95	34.0	36.0	3915743	Og	CcySls	Vc		LG	clay, calc-arenite some Fe carbonate	77141							
DM95	36.0	38.0	3915744	Og	CcySls	Vc		LG	gelatinous mud, calc-arenite	77141							
DM95	38.0	40.0	3915745	Og	CcySls	Vc		LG	gelatinous mud, calc-arenite	77141							
DM95	40.0	42.0	3915746	Og	CcySls	Vc		DG	gelatinous clay, calc-arenite	77141							
DM95	42.0	44.0	3915747	Og	Sls			DG	carbonate, minor DG clay	77141							
DM95	44.0	46.0	3915748	Og	Ccy	Vc		DG	clay, minor carbonate	77141							
DM95	46.0	48.0	3915749	Og	SlsCcy	Vc		DG	fine carbonate, DG clay	77141							
DM95	48.0	50.0	3915750	Og	OvcSls	Vc	GaPy	WDG	dom. Ovc, DG carbonate	77141							
DM95	50.0	52.0	3915751	Og	OvcSls	Vc		WDG	dom. Ovc, DG carbonate	77141							
DM95	52.0	54.0	3915752	Og	SlsOvc	Vc		DG	calc-arenite, abundant Ovc, Fe carbonate	77141							
DM95	54.0	55.2	3915753	Og	SlsOvc	Vc		DG	calc-arenite, abundant Ovc, Fe carbonate	77141							
DM96	0.0	2.0		Oha				LB	gravel + clay								
DM96	2.0	4.0	3915754	Og	Ccy			LGOV	mottled clays	77141							
DM96	4.0	6.0	3915755	Og	Ccy			DGLGO	mottled clays, minor calc-arenite	77141							
DM96	6.0	8.0	3915756	Og	Ccy			DGLG	mottled clays	77141							
DM96	8.0	10.0	3915757	Og	CcySls			DG	clay, minor calc-arenite	77141							
DM96	10.0	12.0	3915758	Og	CcySls			DG	clay, minor calc-arenite	77141							
DM96	12.0	14.0	3915759	Og	CcySls			DG	clay, minor calc-arenite, Fe carbonate	77141							
DM96	14.0	16.0	3915760	Og	CcySls			DG	clay, minor calc-arenite, Fe carbonate	77141							
DM96	16.0	18.0	3915761	Og	Ccy			DG	clay, minor rock frags	77141							
DM96	18.0	20.0	3915762	Og	CcySls			DG	clay, increased rock frags	77141							
DM96	20.0	22.0	3915763	Og	Sls	Vc		DG	altered clac-arenite	77141							
DM96	22.0	24.0	3915764	Og	Sls	Vc		DG	altered clac-arenite, some Fe carbonate	77141							
DM96	24.0	26.0	3915765	Og	Sls			DG	altered clac-arenite, some Fe carbonate	77141							
DM96	26.0	28.0	3915766	Og	Sls		Py	DG	clac-arenite, some Fe carbonate	77141							
DM96	28.0	30.0	3915767	Og	Sls	Vc		DG	calc-arenite	77141							
DM96	30.0	32.0	3915768	Og	Sls	Vc	Py	DG	calc-arenite, Fe carbonate also	77141							
DM96	32.0	34.0	3915769	Og	Sls	Vc		DG	calc-arenite, Fe carbonate also	77141							
DM96	34.0	36.0	3915770	Og	Sls	Vc		DG	calc-arenite, Fe carbonate also	77141							
DM96	36.0	38.0	3915771	Og	Sls	Vc		DG	calc-arenite, Fe carbonate also	77141							
DM96	38.0	40.0	3915772	Og	Sls	Vc		DG	calc-arenite, Fe carbonate also	77141							
DM96	40.0	42.0	3915773	Og	Sls	Vc	Py	DG	calc-arenite, Fe carbonate also	77141							
DM96	42.0	43.8	3915774	Og	Sls	Vc	Py	DG	calc-arenite, Fe carbonate also	77141							
DM97	0.0	2.0		Oha				LB	gravel + clay								
DM97	2.0	5.0	3915775	Og	Ccy			LV	clay	77141							
DM97	5.0	6.0	3915776	Og	Ccy			DG	clay	77141							
DM97	6.0	8.0	3915777	Og	CcySls			DGDB	mottled clay, minor calc-arenite	77141							
DM97	8.0	10.0	3915778	Og	CcySls		PyGa	DG	clay, calc-arenite, Fe carbonate	77141							
DM97	10.0	12.0	3915779	Og	CcySls		PyGa	DG	clay, calc-arenite, Fe carbonate	77141							
DM97	12.0	14.0	3915780	Og	CcySls		PyGa	DG	clay, minor calc-arenite + Fe carbonate	77141							
DM97	14.0	16.0	3915781	Og	CcySls			DG	clay, minor DG calc-arenite	77141							
DM97	16.0	18.0	3915782	Og	Sls	Al		DG	calc-arenite, very altered	77141							

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDIO	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM97	18.0	20.0	3915783	Og	CcySls	AI		DG	clay + altered calc-arenite	77141							
DM97	20.0	22.0	3915784	Og	Sls			DG	calc-arenite and Fe carbonate	77141							
DM97	22.0	24.0	3915785	Og	Sls	FI	Py	DG	fine carbonate + DG clay	77141							
DM97	24.0	26.0	3915786	Og	Sls	FI	Py	DG	fine carbonate + DG clay + Fe carbonate	77141							
DM97	26.0	28.0	3915787	Og	Sls	AI		DG	altered carbonate + Fe carbonate	77141							
DM97	28.0	30.0	3915788	Og	Sls	AI		DG	altered carbonate + Fe carbonate, poor sample	77141							
DM97	30.0	32.0	3915789	Og	Sls	AI		DG	altered carbonate + Fe carbonate, poor sample	77141							
DM97	32.0	34.0	3915790	Og	Sls	AIFI		DG	altered carbonate + Fe carbonate, poor sample	77141							
DM97	34.0	36.0	3915791	Og	Sls	AIFIVc		DG	altered carbonate + Fe carbonate, poor sample	77141							
DM97	36.0	38.0	3915792	Og	Sls	AIFIVc		DG	altered carbonate + Fe carbonate, poor sample	77141							
DM97	38.0	38.5	3915793	Og	Sls	AIFIVc		DG	altered carbonate + Fe carbonate, poor sample	77141							
DM98	0.0	3.5		Qha	Cg			O	gravels + clay								
DM98	3.5	4.0	3915794	Og	Ccy			DG	clays	77141							
DM98	4.0	6.0	3915795	Og	Ccy			DG	clays	77141							
DM98	6.0	8.0	3915796	Og	Ccy			DG	clays	77141							
DM98	8.0	10.0	3915797	Og	CcySls			DGLG	mottled clay, calc-arenite frags	77141							
DM98	10.0	12.0	3915798	Og	CcySls			DGLG	mottled clay, calc-arenite frags, some Fe carbonate	77141							
DM98	12.0	14.0	3915799	Og	CcySls		Sd	DG	clay, calc-arenite + Fe carbonate	77141							
DM98	14.0	16.0	3915800	Og	CcySls			DG	clay, incr calc-arenite + Fe carbonate	77141							
DM98	16.0	18.0	3915801	Og	CcySls			DG	clay, incr LG calc-arenite	77141							
DM98	18.0	20.0	3915802	Og	OvcSls	Vc		WDG	Ovc dom., minor clay + calc-arenite	77141							
DM98	20.0	22.0	3915803	Og	Ccy			DG	clay, minor frags	77141							
DM98	22.0	24.0	3915804	Og	Ccy			DG	clay, minor frags	77141							
DM98	24.0	26.0	3915805	Og	Sls		Sd	DG	calc-arenite + Fe carbonate	77141							
DM98	26.0	28.0	3915806	Og	Ccy			DG	clay, minor frags	77141							
DM98	28.0	30.0	3915807	Og	Sls		Sd	DG	calc-arenite + Fe carbonate	77141							
DM98	30.0	32.0	3915808	Og	CcySls		Sd	DGLB	mottled clay, calc-arenite and Fe carbonate frags	77141							
DM98	32.0	34.0	3915809	Og	CcySls		Sd	DGLBLG	mottled clay, calc-arenite and Fe carbonate frags	77141							
DM98	34.0	36.0	3915810	Og	CcySls	Vc	Sd	DGLBLG	mottled clay, calc-arenite and Fe carbonate frags	77141							
DM98	36.0	38.0	3915811	Og	CcySls		Sd	DG	clay, minor calc-arenite + Fe carbonate	77141							
DM98	38.0	40.0	3915812	Og	Sls	Vc	Sd	DG	calc-arenite + Fe carbonate	77141							
DM98	40.0	42.0	3915813	Og	Sls	Vc	Sd	DG	calc-arenite + Fe carbonate, poor sample	77141							
DM98	42.0	44.0	3915814	Og	Sls	Vc	Sd	DG	calc-arenite + Fe carbonate, poor sample	77141							
DM98	44.0	46.0	3915815	Og	Sls	Vc	Sd	DG	calc-arenite + Fe carbonate, poor sample	77141							
DM98	48.0	48.0	3915816	Og	OvcSls	Vc	Sd	WDG	Ovc dom., calc-arenite + Fe carbonate also	77141							
DM98	48.0	50.0	3915817	Og	OvcSls	Vc	Sd	WDG	Ovc dom., calc-arenite + Fe carbonate also	77141							
DM98	50.0	52.0	3915818	Og	OvcSls	Vc	Sd	WDG	Ovc dom., calc-arenite, Fe carbonate + DG clay also	77141							
DM98	52.0	54.0	3915819	Og	OvcSls	Vc	Sd	WDG	Ovc dom., calc-arenite, Fe carbonate + DG clay also	77141							
DM98	54.0	55.1	3915820	Og	Ccy	Vc		DG	clay dom. to EOH, then calc-arenite + Fe carbonate	77141							
DM99	0.0	2.0		Ed	CcyCg			VLG	clay + gravel								
DM99	2.0	4.0	3915821	Ed	Ssi			V	silt + siltstone	77141							
DM99	4.0	6.0	3915822	Ed	Ssi			V	silt + siltstone	77141							
DM99	6.0	8.0	3915823	Ed	Ssi			R	silt + siltstone	77141							
DM99	8.0	10.0	3915824	Ed	Ssl			R	silt + siltstone	77141							
DM99	10.0	12.0	3915825	Ed	Ssl			R	silt + siltstone	77141							
DM99	12.0	14.0	3915826	Ed	Ssi			R	silt + siltstone	77141							
DM100	0.0	2.0		Qha	Cg			LB	gravels + clay								
DM100	2.0	14.0		Ed	Ssi			V	silt + siltstone								
DM101	0.0	9.0		Ed	Ssi			V	silt + siltstone								
DM101	9.0	10.0	3915827	Og	Ccy			DG	clay only	77141							
DM101	10.0	12.0	3915828	Og	CcySls		Sd	DG	clay, minor calc-arenite + Fe carbonate	77141							

031066

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM101	12.0	14.0	3915828	Og	CcySls		Sd	DGOVLG	clay, minor calc-arenite + Fe carbonate	77141							
DM101	14.0	16.0	3915830	Og	Ccy			DGLG	clay, minor frags	77141							
DM101	16.0	18.0	3915831	Og	CcySls			DGO	clay, increased calc-arenite frags	77141							
DM101	18.0	20.0	3915832	Og	CcySls			DGO	clay, increased calc-arenite frags	77141							
DM101	20.0	22.0	3915833	Og	Sls	Fi		DG	fissile carbonate only, poor sample	77141							
DM101	22.0	24.0	3915834	Og	Sls	Fi		DG	fissile carbonate only, poor sample	77141							
DM101	24.0	26.0	3915835	Og	Sls		Sd	DG	calc-arenite + Fe carbonate	77141							
DM101	26.0	28.0	3915836	Og	Sls		Sd	DG	calc-arenite + Fe carbonate	77141							
DM101	28.0	30.0	3915837	Og	Sls		Sd	DG	calc-arenite + Fe carbonate	77141							
DM101	30.0	32.0	3915838	Og	Sls	Fi	Sd	DG	fissile carbonate calc-arenite + Fe carbonate	77141							
DM101	32.0	34.0	3915839	Og	Sls	Fi	Sd	DG	fissile carbonate calc-arenite + Fe carbonate	77141							
DM101	34.0	36.0	3915840	Og	Sls		Sd	DG	calc-arenite + Fe carbonate	77141							
DM101	36.0	38.0	3915841	Og	Sls	Fi	Sd	DG	calc-arenite, some slaty carbonate + Fe carbonate	77141							
DM101	38.0	40.0	3915842	Og	Sls	FiVc	Sd	DG	calc-arenite, some slaty carbonate + Fe carbonate	77141							
DM101	40.0	40.7	3915843	Og	Sls	FiVc	Sd	DG	calc-arenite, some slaty carbonate + Fe carbonate	77141							
DM102	0.0	2.0		Qha	Cg			LGLB	gravels + clay								
DM102	2.0	4.0	3915844	Og	Ccy	Vc		DG	clay, fine carbonate	77141							
DM102	4.0	6.0	3915845	Og	CcySls			DGLG	mottled clay, minor calc-arenite	77141							
DM102	6.0	8.0	3915846	Og	CcySls	Vq	Sd	GLG	mottled clay, minor calc-arenite + Fe carbonate	77141							
DM102	8.0	10.0	3915847	Og	CcySls	Vq	Sd	GLGV	mottled clay, minor calc-arenite + Fe carbonate	77141							
DM102	10.0	12.0	3915848	Og	CcySls	Vq	Sd	GLGV	mottled clay, minor calc-arenite + Fe carbonate	77141							
DM102	12.0	14.0	3915849	Og	CcySls		Sd	DGLG	clay, calc-arenite + Fe carbonate	77141							
DM102	14.0	16.0	3915850	Og	Sls		Sd	DG	calc-arenite + Fe carbonate, minor clay	77141							
DM102	16.0	18.0	3915851	Og	Ccy		Sd	DG	clay, minor Fe carbonate	77141							
DM102	18.0	20.0	3915852	Og	CcySls		CpCaCs	DG	clay, calc-arenite, Fe carbonate + massive ga	77141							
DM102	20.0	22.0	3915853	Og	CcySls		CpCaCs	DG	clay, calc-arenite, Fe carbonate + massive ga	77141							
DM102	22.0	24.0	3915854	Og	SlsCcy		CpCaCs	DG	calc-arenite, clay, Fe carbonate + massive ga	77141							
DM102	24.0	26.0	3915855	Og	Sls	Vc	GalPy	DG	calc-arenite, brecciated Fe carbonate, vn + breccia ga	77141							
DM102	26.0	27.2	3915856	Og	Sls	Vc	GalPy	DG	calc-arenite, brecciated Fe carbonate, vn + breccia ga	77141							
DM103	0.0	4.0		Qha	Cg			LB	gravels + clay								
DM103	4.0	6.0	3915857	Og	Ccy			DGLGO	mottled clays	77141							
DM103	6.0	8.0	3915858	Og	Ccy	Vc		DGLGOV	mottled clays, minor carbonate	77141							
DM103	8.0	10.0	3915859	Og	Sls	LmVcVq		DG	finely laminated carbonate	77141							
DM104	0.0	2.0		Qha	Cg			LB	gravels + clays								
DM104	2.0	4.0	3915860	Og	CcyCg			LGYB	clay, minor gravel	77141							
DM104	4.0	5.2	3915861	Og	Sls			DG	calc-arenite + Fe carbonate	77141							
DM105	0.0	2.0		Qha	CcyCg			LB	clay + gravel								
DM105	2.0	4.0	3915862	Og	Ccy			DGLG	mottled clays	77141							
DM105	4.0	6.0	3915863	Og	Ccy		Sd	DG	clay, frags of Fe carbonate	77141							
DM105	6.0	8.0	3915864	Og	Sls	Al		DG	altered calc-arenite	77141							
DM105	8.0	10.0	3915865	Og	Sls			DG	fine calc-arenite frags	77141							
DM105	10.0	12.0	3915866	Og	Sls	Lm		DG	fine calc-arenite frags	77141							
DM105	12.0	14.0	3915867	Og	Sls	VcLm		DG	fine laminar carbonate	77141							
DM105	14.0	16.0	3915868	Og	Sls		Py	DG	fine carbonate	77141							
DM105	16.0	18.0	3915869	Og	Sls			DG	fine carbonate	77141							
DM105	18.0	20.2	3915870	Og	Sls	VcVq		DG	fine carbonate	77141							
DM106	0.0	2.0		Qha	CcyCg			LB	clay + gravel								
DM106	2.0	4.0	3915871	Og	Ccy			LGDG	clays	77141							
DM106	4.0	6.0	3915872	Og	Ccy			DG	clay, some carbonate frags	77141							
DM106	6.0	8.0	3915873	Og	Sls	Lm		DGLG	fine laminated carbonate	77141							
DM106	8.0	10.0	3915874	Og	Sls	Lm		DGLG	fine laminated carbonate + Fe carbonate	77141							

031067

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMLLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM106	10.0	12.0	3915875	Og	Sls	Lm		DGLG	fine laminated carbonate + DG clay	77141							
DM106	12.0	14.0	3915876	Og	Sls	Lm		DGLG	fine laminated carbonate, calc-arenite + Fe carbonate	77141							
DM106	14.0	16.0	3915877	Og	Sls	LmVc		DGLG	fine laminated carbonate + calc-arenite	77141							
DM106	16.0	18.0	3915878	Og	Sls			LG	calc-arenite only	77141							
DM106	18.0	20.0	3915879	Og	Sls	Vc		LG	calc-arenite only	77141							
DM107	0.0	1.5		Og	Sls	Fi		DG	fine slaty carbonate								
DM108	0.0	2.2	3915880	Qha	CcySls			LBDG	clays + carbonate frags	77141							
DM109	0.0	2.0	3915881	Og	Ccy			DBDG	clays	77141							
DM109	2.0	4.0	3915882	Og	CcySls			DBDG	clay, minor carbonate frags	77141							
DM109	4.0	6.0	3915883	Og	CcySls			DBDG	clay, minor carbonate frags	77141							
DM109	6.0	8.0	3915884	Og	CcySls			DBDG	clay, minor calc-arenite frags	77141							
DM109	8.0	10.0	3915885	Og	CcySls			DBDG	mottled clay, minor calc-arenite frags	77141							
DM109	10.0	12.0	3915886	Og	CcySls			DBDG	mottled clay, minor calc-arenite frags	77141							
DM109	12.0	14.0	3915887	Og	CcySls		Py	DG	mottled clay, minor calc-arenite + Fe carbonate frags	77141							
DM109	14.0	16.0	3915888	Og	CcySls	Al		DG	clay + altered calc-arenite	77141							
DM109	16.0	18.0	3915889	Og	CcySls	Al		DG	clay + altered calc-arenite	77141							
DM109	18.0	20.0	3915890	Og	Sls	Vc		DG	calc-arenite	77141							
DM110	0.0	2.0	3915891	Og	Ccy			OLG	clay	77141							
DM110	2.0	4.0	3915892	Og	Ccy			OLGV	clay	77141							
DM110	4.0	6.0	3915893	Og	Ccy			DGV	clay, minor DG calc-arenite	77141							
DM110	6.0	8.0	3915894	Og	Ccy			DG	clay minor frags	77141							
DM110	8.0	10.0	3915895	Og	Ccy			DG	clay minor frags	77141							
DM110	10.0	12.0	3915896	Og	Ccy			DG	clay minor frags	77141							
DM110	12.0	14.0	3915897	Og	Ccy			DG	clay minor fissile carbonate frags	77141							
DM110	14.0	16.0	3915898	Og	Ccy			DG	clay minor carbonate frags	77141							
DM110	16.0	18.0	3915899	Og	Ccy			DG	clay minor carbonate frags	77141							
DM110	18.0	20.0	3915900	Og	Sls	Al		DG	altered carbonate frags	77141							
DM110	20.0	22.0	3915901	Og	Sls	Al		DG	altered carbonate frags	77141							
DM110	22.0	24.0	3915902	Og	Sls	Al		DG	altered carbonate frags	77141							
DM110	24.0	26.0	3915903	Og	Ccy	Al		DG	clay + altered carbonate frags	77141							
DM110	26.0	28.0	3915904	Og	Ccy	Al		DG	clay + altered carbonate frags	77141							
DM110	28.0	29.0	3915905	Og	Sls			DG	calc-arenite	77141							
DM111	0.0	4.0		Qha	CcyCg				clays + gravels								
DM111	4.0	6.0	3915906	?						77141							
DM111	6.0	8.0	3915907	Og	Ccy			WDG	clay, minor carbonate	77141							
DM111	8.0	10.0	3915908	Og	SlsCcy			DG	carbonate, minor W clay	77141							
DM111	10.0	12.0	3915909	Og	SlsCcy		Sd	DG	carbonate, minor W clay + Fe carbonate	77141							
DM111	12.0	14.0	3915910	Og	CcySls			Y	clay + DG carbonate	77141							
DM111	14.0	16.0	3915911	Og	Sls			DGW	carbonate + W siltstone	77141							
DM111	16.0	18.0	3915912	Og	CcySls			DG	clay + DG carbonate	77141							
DM111	18.0	20.0	3915913	Og	Sls	Fi		DG	carbonate mudstone	77141							
DM111	20.0	22.0	3915914	Og	CcySls			DG	clay, minor carbonate	77141							
DM111	22.0	24.0	3915915	Og	CcySls			DG	clay, minor carbonate	77141							
DM111	24.0	26.0	3915916	Og	SlsCcy	Fi		DG	carbonate, minor clay	77141							
DM111	26.0	28.0	3915917	Og	CcySls			DG	mixed clay + carbonate	77141							
DM111	28.0	30.0	3915918	Og	CcySls			DG	mixed clay + carbonate	77141							
DM111	30.0	32.0	3915919	Og	Sls			DG	carbonate mudstone	77141							
DM111	32.0	34.0	3915920	Og	SlsCcy			DG	carbonate minor clay	77141							
DM111	34.0	36.0	3915921	Og	Ccy			DG	plastic clay	77141							
DM111	36.0	38.0	3915922	Og	SlsCcy	Vc		DG	carbonate + clay	77141							
DM111	38.0	40.0	3915923	Og	SlsCcy	Lm		LG	carbonate mudstone, minor W clay	77141							

931068

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM111	40.0	42.0	3915924	Og	Ccy			W	clay + minor carbonate	77141							
DM111	42.0	44.0	3915925	Og	SlsCcy			DG	carbonate mudstone, minor clay	77141							
DM111	44.0	46.0	3915926	Og	SlsCcy			DG	carbonate mudstone, minor clay	77141							
DM111	46.0	48.0	3915927	Og	Ccy			LGW	clay only	77141							
DM111	48.0	50.0	3915928	Og	Ccy			LGW	mottled clays	77141							
DM111	50.0	52.0	3915929	Og	Ccy			LGW	mottled clays, minor carbonate	77141							
DM111	52.0	54.0	3915930	Og	Sls	VcFi		DG	fissile carbonate mudstone	77141							
DM111	54.0	56.0	3915931	Og	Sls			LGDG	carbonate	77141							
DM111	56.0	58.0	3915932	Og	Sls			DG	carbonate mudstone	77141							
DM112	0.0	2.0		Qha	CcyCg				clay + gravel								
DM112	2.0	4.0	3915933	Og	Ccy			LB	mottled clay	77141							
DM112	4.0	6.0	3915934	Og	Ccy			B	mottled clay	77141							
DM112	6.0	8.0	3915935	Og	Ccy			YB	mottled clay	77141							
DM112	8.0	10.0	3915936	Og	Ccy			B	mottled clay	77141							
DM112	10.0	12.0	3915937	Og	Ccy			LB	mottled clay	77141							
DM112	12.0	14.0	3915938	Og	Ccy				light mottled clay	77141							
DM112	14.0	16.0	3915939	Og	Ccy			DB	mottled clay	77141							
DM112	16.0	18.0	3915940	Og	Ccy			DG		77141							
DM112	18.0	20.0	3915941	Og	Ccy			DGDB		77141							
DM112	20.0	22.0	3915942	Og	Ccy			DG		77141							
DM112	22.0	24.0	3915943	Og	Ccy			DG		77141							
DM112	24.0	26.0	3915944	Og	Ccy			DG		77141							
DM112	26.0	28.0	3915945	Og	Ccy			DG		77141							
DM112	28.0	30.0	3915946	Og	Sls	Fi		DG	fine carbonate	77141							
DM112	30.0	32.0	3915947	Og	SlsCcy			DG	fine carbonate, LG clay	77141							
DM112	32.0	34.0	3915948	Og	Ccy			LG	clay + DG carbonate	77141							
DM112	34.0	36.0	3915949	Og	Sls	Fi		DG	fine carbonate	77141							
DM112	36.0	38.0	3915950	Og	Sls	Fi		DGLG	fine carbonate	77141							
DM112	38.0	40.0	3915951	Og	SlsCcy			DG	carbonate minor clay	77141							
DM112	40.0	42.0	3915952	Og	SlsCcy			DG	carbonate minor clay	77141							
DM112	42.0	44.0	3915953	Og	SlsCcy	Fi		DG	carbonate minor clay	77141							
DM112	44.0	46.0	3915954	Og	Sls			DG		77141							
DM112	46.0	48.0	3915955	Og	Sls			DGLG	some carbonate mudstone	77141							
DM113	0.0	4.0		Qha	Cbs			B									
DM113	4.0	6.0	3915956	Og	SlsCcy			WG	carbonate, minor clay	77141							
DM113	6.0	8.0	3915957	Og	Sls			LG		77141							
DM113	8.0	10.0	3915958	Og	Sls			LG	carbonate mudstone	77141							
DM113	10.0	12.0	3915959	Og	SlsCcy			LGB	carbonate + clay	77141							
DM113	12.0	14.0	3915960	Og	Sls			DG	massive limestone	77141							
DM113	14.0	16.0	3915961	Og	Ccy				dark mottled clay	77141							
DM113	16.0	18.0	3915962	Og	Ccy			DG		77141							
DM113	18.0	20.0	3915963	Og	Ccy			DG		77141							
DM113	20.0	22.0	3915964	Og	Ccy			DG	plastic clay	77141							
DM113	22.0	24.0	3915965	Og	Ccy			DG		77141							
DM113	24.0	26.0	3915966	Og	Ccy			DG		77141							
DM113	26.0	28.0	3915967	Og	SlsCcy			DG	carbonate minor clay	77141							
DM113	28.0	30.0	3915968	Og	SlsCcy			DG	carbonate minor clay	77141							
DM113	30.0	32.0	3915969	Og	Ccy			G		77141							
DM113	32.0	34.0	3915970	Og	Ccy			DG	clay minor carbonate	77141							
DM113	34.0	36.0	3915971	Og	Ccy			DG		77141							
DM113	36.0	38.0	3915972	Og	Sls	Fi		DG	fine carbonate	77141							

931060

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMLLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM113	38.0	39.0	3915973	Og	Sis	F		DG	fine carbonate	77141							
DM114	0.0	2.0		Oha	CgCbs												
DM114	2.0	4.0	3915974	Oha	Ccy			YB		77141							
DM114	4.0	6.0	3915975	Oha	Ccy			YB	mottled clays	77141							
DM114	6.0	8.0	3915976	Og	SisCcy			DG	carbonate minor clay	77141							
DM114	8.0	10.0	3915977	Og	Sis			DG		77141							
DM114	10.0	12.0	3915978	Og	Sis			DG		77141							
DM114	12.0	14.0	3915979	Og	Sis			DG	carbonate mudstone	77141							
DM114	14.0	16.0	3915980	Og	Sis	Fi		DG	fine carbonate	77141							
DM114	16.0	18.0	3915981	Og	Sis			DG	carbonate mudstone	77141							
DM114	18.0	20.0	3915982	Og	SisCcy			DG	carbonate minor clay	77141							
DM114	20.0	22.0	3915983	Og	CcySis			DG	clay + carbonate	77141							
DM114	22.0	24.0	3915984	Og	CcySis			DG	clay + carbonate	77141							
DM114	24.0	26.0	3915985	Og	SisCcy			DG	carbonate + clay	77141							
DM114	26.0	28.0	3915986	Og	SisCcy			DG	carbonate + clay	77141							
DM114	28.0	30.0	3915987	Og	SisCcy	lb		DG	interbedded carbonate + clay	77141							
DM114	30.0	32.0	3915988	Og	SisCcy			DG	carbonate + clay	77141							
DM114	32.0	34.0	3915989	Og	SisCcy			DG	carbonate minor clay	77141							
DM114	34.0	36.0	3915990	Og	CcySis			DG	clay minor carbonate	77141							
DM114	36.0	38.0	3915991	Og	Ccy			DG		77141							
DM114	38.0	40.0	3915992	Og	SisCcy			DG	carbonate + clay	77141							
DM114	40.0	41.0	3915993	Og	Sis	Vc		DG		77141							
DM115	0.0	2.0	3915994	Oha	Ccy			LBW		77141							
DM115	2.0	4.0	3915995	Oha	Ccy			LBV		77141							
DM115	4.0	6.0	3915996	Og	SisCcy	We		DG	carbonate + clay	77141							
DM115	6.0	8.0	3915997	Og	CcySis			DG	mottled clay minor carbonate	77141							
DM115	8.0	10.0	3915998	Og	CcySis			DG	clay minor carbonate	77141							
DM115	10.0	12.0	3915999	Og	Sis			DG		77141							
DM115	12.0	14.0	3916000	Og	Ccy			DG		77141							
DM115	14.0	16.0	3916001	Og	SisCcy			DG	carbonate minor clay	77141							
DM115	16.0	18.0	3916002	Og	Sis			DG		77141							
DM115	18.0	20.0	3916003	Og	SisCcy			DG	carbonate minor clay	77141							
DM115	20.0	22.0	3916004	Og	Sis			DG		77141							
DM115	22.0	23.5	3916005	Og	Sis			DG	massive limestone	77141							
DM116	0.0	2.0		Oha	Cg				gravel minor LB clay								
DM116	2.0	4.0	3916006	Oha	Ccy			LB		77141							
DM116	4.0	6.0	3916007	Oha	Ccy				mottled clay	77141							
DM116	6.0	8.0	3916008	Og	SisCcy	We		DG	carbonate + clay	77141							
DM116	8.0	10.0	3916009	Og	Sis	We		DG		77141							
DM116	10.0	12.0	3916010	Og	Sis			DG		77141							
DM116	12.0	14.0	3916011	Og	SisCcy			DG	carbonate mudstone minor clay	77141							
DM116	14.0	16.0	3916012	Og	SisCcy			DG	carbonate + clay	77141							
DM116	16.0	18.0	3916013	Og	SisCcy			DG	carbonate + clay	77141							
DM116	18.0	20.0	3916014	Og	Sis			DG		77141							
DM116	20.0	22.0	3916015	Og	Sis	Fi		DG		77141							
DM116	22.0	24.0	3916016	Og	Sis			DG		77141							
DM116	24.0	26.0	3916017	Og	SisCcy			DG	carbonate minor clay	77141							
DM116	26.0	28.0	3916018	Og	Sis			DG		77141							
DM116	28.0	30.0	3916019	Og	SisCcy			DG	carbonate minor clay	77141							
DM116	30.0	30.9	3916020	Og	Sis			DG	coraline carbonate mudstone	77141							
DM117	0.0	2.0		Oha	Cg												

031070

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM117	2.0	4.0		Ed	Ss			WG									
DM117	4.0	6.0		Ed	Sss												
DM117	6.0	8.0		Ed	Sss			G	qtz arenite								
DM118	0.0	2.0		Qha	Cbs												
DM118	2.0	3.0			Ccy			W									
DM118	3.0	4.0	3916021	Og	Ccy			DG		77141							
DM118	4.0	6.0	3916022	Og	Ccy			DG		77141							
DM118	6.0	8.0	3916023	Og	CcySls			DG	clay + oolitic limestone?	77141							
DM118	8.0	10.0	3916024	Og	Sls			DG		77141							
DM118	10.0	12.0	3916025	Og	Sls			DG	porous carbonate	77141							
DM118	12.0	14.0	3916026	Og	Sls			DG		77141							
DM118	14.0	16.0	3916027	Og	Sls			DG	calc-arenite, porous	77141							
DM118	16.0	18.0	3916028	Og	Sls			DG	calc-arenite poorly sorted	77141							
DM118	18.0	20.0	3916029	Og	SlsCcy			DG	carbonate minor clay	77141							
DM118	20.0	22.0	3916030	Og	Sls			DG	calc-arenite	77141							
DM118	22.0	24.0	3916031	Og	Sls		PyGa	DG	abundant Ga + Py	77141							
DM118	24.0	26.0	3916032	Og	Sls		PyGa	DG	abundant Ga + Py	77141							
DM118	26.0	28.0	3916033	Og	Sls			DG		77141							
DM118	28.0	30.0	3916034	Og	Sls			DG		77141							
DM118	30.0	32.0	3916035	Og	Sls		PyGa	DG	Ga,Py rich carbonate	77141							
DM118	32.0	34.0	3916036	Og	Sls		Ga	DG	trace ga	77141							
DM118	34.0	36.0	3916037	Og	Sls			DG		77141							
DM118	36.0	38.0	3916038	Og	Sls		PyGa	DG	Py,Ga rich carbonate	77141							
DM118	38.0	40.0	3916039	Og	CcySls		PyGa	DG	Py,Ga rich clay + carbonate	77141							
DM118	40.0	42.0	3916040	Og	CcySls	We		DG	clay + We carbonate	77141							
DM118	42.0	44.0	3916041	Og	Ccy			DG	plastic clay	77141							
DM118	44.0	46.0	3916042	Og	Ccy			N	plastic clay	77141							
DM118	46.0	48.0	3916043	Og	SlsCcy			DG	carbonate minor clay	77141							
DM118	48.0	50.0	3916044	Og	Sls			DG		77141							
DM118	50.0	52.0	3916045	Og	Ccy	Vq		DG		77141							
DM118	52.0	54.0	3916046	Og	SlsCcy	We		DG	carbonate minor clay	77141							
DM118	54.0	57.0	3916047	Og	SlsCcy			DG	fine carbonate minor clay	77141							
DM119	0.0	2.0	3916048	Qha	CcyCg			LBLG	clay + gravels	77141							
DM119	2.0	4.0	3916049	Og	Ccy			DGLG	mottled clay	77141							
DM119	4.0	6.0	3916050	Og	Ccy			DG		77141							
DM119	6.0	8.0	3916051	Og	Ccy			DG		77141							
DM119	8.0	10.0	3916052	Og	CcySls			DG	minor carbonate	77141							
DM119	10.0	12.0	3916053	Og	CcySls			DG	minor carbonate	77141							
DM119	12.0	14.0	3916054	Og	Ccy			DG	mottled clay, fine carbonate	77141							
DM119	14.0	16.0	3916055	Og	CcySls			DGLG	clay minor calc-arenite	77141							
DM119	16.0	18.0	3916056	Og	CcySls			DGLG	clay minor calc-arenite	77141							
DM119	18.0	20.0	3916057	Og	CcySls		Sd	DG	clay minor Fe calc-arenite	77141							
DM119	20.0	22.0	3916058	Og	CcySls		Sd	DG	clay minor Fe calc-arenite	77141							
DM119	22.0	24.0	3916059	Og	CcySls			DG	clay minor calc-arenite + fine carbonate	77141							
DM119	24.0	26.0	3916060	Og	CcySls		Py	DG	clay minor calc-arenite + fine carbonate	77141							
DM119	26.0	26.5	3916061	Og	CcySls		Py	DG	clay minor calc-arenite + fine carbonate	77141							
DM120	0.0	2.0	3916062	Qha	Ccy			O		77141							
DM120	2.0	4.0	3916063	Og	Ccy			LG	plastic clays	77141							
DM120	4.0	6.0	3916064	Og	CcySls			DGDB	clay + calc-arenite	77141							
DM120	6.0	8.0	3916065	Og	CcySls			LGDG	clay minor calc-arenite	77141							
DM120	8.0	10.0	3916066	Og	CcySls			DG	clay minor calc-arenite	77141							

931071

APPENDIX 2. Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM120	10.0	12.0	3916067	Og	CcySls		Sd?	DG	clay minor calc-arenite	77141							
DM120	12.0	14.0	3916068	Og	CcySls		Sd?	DGO	clay minor calc-arenite	77141							
DM120	14.0	16.0	3916069	Og	Sls	Vc		DGLG	calc-arenite	77141							
DM120	16.0	18.0	3916070	Og	CcySls			DG	clay + calc-arenite	77141							
DM120	18.0	19.9	3916071	Og	Sls	Vq	Py	LG	clac-arenite + DG clay	77141							
DM121	0.0	2.0		Qha	CcyCg			O	clay + gravel								
DM121	2.0	4.0	3916072	Qha	Ccy			OLG	mottled clay	77141							
DM121	4.0	6.0	3916073	Og	Ccy			LG		77141							
DM121	6.0	8.0	3916074	Og	Ccy	Vq		LGGOO		77141							
DM121	8.0	10.0	3916075	Og	CcySls			LGDG	clay minor calc-arenite	77141							
DM121	10.0	12.0	3916076	Og	CcySls			LGDG	clay minor calc-arenite	77141							
DM121	12.0	14.0	3916077	Og	CcySls			LGDG	clay minor calc-arenite + fine carbonate	77141							
DM121	14.0	16.0	3916078	Og	Sls	FeFi		DG	calc-arenite + fine carbonate	77141							
DM121	16.0	18.0	3916079	Og	Sls	FeFi	Py	DG	calc-arenite + fine carbonate	77141							
DM121	18.0	19.7	3916080	Og	Sls	FeFi	Py	DG	calc-arenite + fine carbonate	77141							
DM122	0.0	2.0	3916081	Qha	Ccy			OLG		77141							
DM122	2.0	4.0	3916082	Og	CcySls			DGLG	clay minor carbonate	77141							
DM122	4.0	6.0	3916083	Og	CcySls			DGLG	clay minor carbonate	77141							
DM122	6.0	8.0	3916084	Og	CcySls			DG	clay + calc-arenite	77141							
DM123	0.0	2.0		Qha	CcyCg			LB	clay + gravel								
DM123	2.0	4.0	3916085	Qha	CcyCg			LGLB	clay + gravel	77141							
DM123	4.0	6.0	3916086	Og	CcySls			DG	clay minor calc-arenite	77141							
DM123	6.0	8.0	3916087	Og	CcySls			DGDB	clay minor calc-arenite	77141							
DM123	8.0	9.5	3916088	Og	SlsCcy			DGLG	calc-arenite minor clay	77141							
DM124	0.0	1.2		Og	Sls			DG									
DM125	0.0	1.0		Og	Sls			DG									
DM126	0.0	2.0	3916089	Qha	CcyCg			LBLG	minor gravels	77141							
DM126	2.0	4.0	3916090	Og	Ccy			DGLG		77141							
DM126	4.0	6.0	3916091	Og	Ccy			DGLG		77141							
DM126	6.0	8.0	3916092	Og	CcySls			DG	clay + calc-arenite	77141							
DM126	8.0	10.0	3916093	Og	SlsCcy	Vc		DG	some DG clay	77141							
DM126	10.0	12.5	3916094	Og	SlsCcy	Vc		DG	some DG clay	77141							
DM127	0.0	2.0	3916095	Qha	Ccy			DBLG	mottled clay	77141							
DM127	2.0	4.0	3916096	Og	Ccy			LGO	mottled clay	77141							
DM127	4.0	6.0	3916097	Og	Ccy	Vc		LGDG	clay minor carbonate	77141							
DM127	6.0	7.0	3916098	Og	Sls	Fi		DG	fine carbonate	77141							
DM128	0.0	2.0	3916099	Og	Ccy			DGLG	mottled clays	77141							
DM128	2.0	4.0	3916100	Og	CcySls			DG	clay minor calc-arenite	77141							
DM128	4.0	6.0	3916101	Og	CcySls			DG	clay minor calc-arenite	77141							
DM128	6.0	8.0	3916102	Og	CcySls		Py	DG	clay minor calc-arenite	77141							
DM128	8.0	10.0	3916103	Og	CcySls		Py	DG	clay minor calc-arenite	77141							
DM128	10.0	12.0	3916104	Og	Sls	Fe		DG	calc-arenite	77141							
DM128	12.0	14.0	3916105	Og	SlsCcy	Fe		DG	calc-arenite, minor clay	77141							
DM128	14.0	16.0	3916106	Og	SlsCcy	Fe	Py	DG	calc-arenite, minor clay	77141							
DM128	16.0	18.0	3916107	Og	SlsCcy	Fe		DG	calc-arenite, minor clay	77141							
DM128	18.0	20.0	3916108	Og	CcySls			DG	clay minor calc-arenite	77141							
DM128	20.0	22.0	3916109	Og	SlsCcy		Py	DG	calc-arenite minor clay	77141							
DM128	22.0	24.0	3916110	Og	CcySls			DG	clay minor calc-arenite	77141							
DM128	24.0	26.0	3916111	Og	Sls			DG	calc-arenite	77141							
DM128	26.0	28.0	3916112	Og	SlsCcy			DG	calc-arenite + DB,DG clays	77141							
DM128	28.0	29.0	3916113	Og	Sls			DG	calc-arenite	77141							

931072

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMLLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM129	0.0	2.0		Qha	Cbs												
DM129	2.0	4.0	3916114	Qha	Cbs					77141							
DM129	4.0	6.0	3916115	Qha	Cbs					77141							
DM129	6.0	8.0	3916116	Qha	Ccy			DBLB	mottled clay + qtz silt	77141							
DM129	8.0	10.0	3916117	Og	CcySls			DBLG DG	mottled clay minor calc-arenite	77141							
DM129	10.0	12.0	3916118	Og	CcySls			DBDG	mottled clay minor calc-arenite	77141							
DM129	12.0	14.0	3916119	Og	CcySls			DG	mottled clay minor calc-arenite	77141							
DM129	14.0	16.0	3916120	Og	CcySls			DG	mottled clay minor calc-arenite	77141							
DM129	16.0	18.0	3916121	Og	CcySls			DG	mottled clay minor calc-arenite	77141							
DM129	18.0	19.8	3916122	Og	CcySls			DG	mottled clay + fine carbonate	77141							
DM130	0.0	2.0	3916123	Qha	Ccy			DBLG	mottled clays	77141							
DM130	2.0	4.0	3916124	Og	CcySls			DB	clay + DG calc-arenite	77141							
DM130	4.0	6.0	3916125	Og	Sls	FeWe		DGLG		77141							
DM130	6.0	8.0	3916126	Og	Sls	FeWe		DGLG		77141							
DM130	8.0	10.0	3916127	Og	Sls	FeWe		DGLG		77141							
DM130	10.0	12.0	3916128	Og	Sls	FeWe	Py	DGLG		77141							
DM130	12.0	14.0	3916129	Og	Ccy	FeWe	Py	DGLG		77141							
DM130	14.0	14.5	3916130	Og	Sls			DGLG	fine granular carbonate	77141							
DM131	0.0	2.0	3916131	Qha	Ccy			LBOLG		77141							
DM131	2.0	2.5	3916132	Og	CcySls	Vc		LG	clay + carbonate	77141							
DM132	0.0	1.2	3916133	Og	CcySls	Vc		DG	clay + LG carbonate	77141							
DM133	0.0	1.0	3916134	Og	CcySls			DGLG	clay, DG carbonate	77141							
DM134	0.0	1.0		Og	CcySls			DGDB	clay, fine carbonate								
DM135	0.0	1.3	3916135	Og	CcySls			ODG	clay, LG carbonate	77141							
DM136	0.0	2.0	3916136	Qha	Ccy			OLG		77141							
DM136	2.0	4.0	3916137	Og	Ccy			OPDG		77141							
DM136	4.0	6.0	3916138	Og	Ccy			DEBG	plastic clays	77141							
DM136	6.0	8.0	3916139	Og	Ccy			DEBG	plastic clays	77141							
DM136	8.0	10.0	3916140	Og	Ccy			DEBG	plastic clays	77141							
DM136	10.0	12.0	3916141	Og	CcySls	Vq		DEBG	plastic clays minor calc-arenite	77141							
DM136	12.0	14.0	3916142	Og	Ccy	Vq		DG		77141							
DM136	14.0	16.0	3916143	Og	CcySls	Vq	Py	DG	clay + calc-arenite	77141							
DM136	16.0	18.0	3916144	Og	SlsCcy			DGLG	calc-arenite minor DG clay	77141							
DM136	18.0	18.5	3916145	Og	Sls		Py	DG	calc-arenite	77141							
DM137	0.0	2.0	3916146	Qha	Ccy			LBODGDB	mottled clays	77141							
DM137	2.0	4.0	3916147	Og	Ccy			DGO	mottled clays	77141							
DM137	4.0	6.0	3916148	Og	Ccy			DGV		77141							
DM137	6.0	8.0	3916149	Og	CcySls			DGV	minor DG calc-arenite	77141							
DM137	8.0	10.0	3916150	Og	CcySls	We	Py	DGV	minor We, DG calc-arenite	77141							
DM137	10.0	12.0	3916151	Og	CcySls	We		DGV	minor We, DG calc-arenite	77141							
DM137	12.0	14.0	3916152	Og	CcySls	We		DGV	minor We, DG calc-arenite	77141							
DM137	14.0	16.0	3916153	Og	CcySls	We		DGV	minor We, DG calc-arenite	77141							
DM137	16.0	18.0	3916154	Og	CcySls	We		DGV	minor We, DG calc-arenite	77141							
DM137	18.0	20.0	3916155	Og	CcySls	Vc		DGV	minor We, DG calc-arenite	77141							
DM137	20.0	22.0	3916156	Og	CcySls	Vc	Py	DGV	minor We, DG calc-arenite	77141							
DM137	22.0	24.0	3916157	Og	CcySls	Vc	Py	DGV	minor fine carbonate	77141							
DM137	24.0	26.0	3916158	Og	CcySls	Vc	Py	DGV	minor fine carbonate	77141							
DM137	26.0	28.0	3916159	Og	SlsCcy	Fe	Py	DG	calc-arenite minor DG clay	77141							
DM137	28.0	30.0	3916160	Og	CcySls		Py	DG	clay + fine carbonate	77141							
DM137	30.0	32.0	3916161	Og	Sls	We		DG		77141							
DM137	32.0	34.0	3916162	Og	SlsCcy	WeFe	Py	DG	calc-arenite minor clay	77141							

931073

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	5%
DM137	34.0	36.0	3916163	Og	SisCcy	WeFe		DG	calc-arenite minor clay	77141							
DM137	36.0	38.0	3916164	Og	CcySis		Py	DG	clay + calc-arenite	77141							
DM137	38.0	40.0	3916165	Og	SisCcy	Vq	Py	DG	carbonate, minor clay	77141							
DM137	40.0	42.0	3916166	Og	SisCcy	Fe	Py	LG	limestone minor DG clay	77141							
DM137	42.0	44.0	3916167	Og	SisCcy	Vq	Py	LG DG	carbonate + DG clay	77141							
DM137	44.0	45.5	3916168	Og	Sis	Fe	Py	DG	calc-arenite	77141							
DM138	0.0	4.0		Qha	CcyCg			OY	clay + gravel								
DM138	4.0	9.5		Ed	Ssi			V									
DM138	9.5	12.0	3916169	?	Ccy	Vq		OLG	fault rock?	77141							
DM138	12.0	14.0	3916170	Ed	Ssi	Vq		V		77141							
DM138	14.0	15.0	3916171	Ed	Ssi	Vq		V		77141							
DM139	0.0	2.0		Qha	Cg				gravels + clay								
DM139	2.0	4.0		Qha	CcyCg			LB	clay + gravel								
DM139	4.0	6.0	3916172	Og	Ccy			LG DG	mottled clays	77142							
DM139	6.0	8.0	3916173	Og	Ccy			LG DG	mottled clays	77142							
DM139	8.0	10.0	3916174	Og	Ccy			OLG DG	mottled clays	77142							
DM139	10.0	12.0	3916175	Og	Ccy			DGV		77142							
DM139	12.0	14.0	3916176	Og	Ccy			DG	minor calc-arenite	77142							
DM139	14.0	16.0	3916177	Og	Ccy			DG DB	mottled clay	77142							
DM139	16.0	18.0	3916178	Og	SisCcy			DG	carbonate minor clay	77142							
DM139	18.0	20.0	3916179	Og	SisCcy	We		DG	carbonate minor clay	77142							
DM139	20.0	22.0	3916180	Og	SisCcy	We		DG	carbonate minor clay	77142							
DM139	22.0	24.0	3916181	Og	SisCcy	WeFe		DG	carbonate minor clay	77142							
DM139	24.0	26.0	3916182	Og	Sis			LG	carbonate siltstone	77142							
DM139	26.0	28.0	3916183	Og	SisCcy			LG	carbonate siltstone, LG clay	77142							
DM139	28.0	30.0	3916184	Og	SisCcy			LG DG	calc-arenite + LG clay	77142							
DM139	30.0	32.0	3916185	Og	Sis	Fe		LG DG	DG, LG fine carbonate	77142							
DM139	32.0	34.0	3916186	Og	Sis	Fe		LG DG	DG, LG fine carbonate	77142							
DM139	34.0	36.0	3916187	Og	Sis	Fe	Py	LG DG	DG, LG fine carbonate	77142							
DM139	36.0	37.0	3916188	Og	Sis	FeVc		LG DG	DG, LG fine carbonate	77142							
DM140	0.0	2.0		Qha	Ccy			DB									
DM140	2.0	4.0	3916189	Og	Ccy			DGLG		77142							
DM140	4.0	6.0	3916190	Og	Ccy			DGO	mottled clay	77142							
DM140	6.0	8.0	3916191	Og	CcySis			DGO	clay minor calc-arenite	77142							
DM140	8.0	10.0	3916192	Og	CcySis			DGO	clay minor LG calc-arenite	77142							
DM140	10.0	12.0	3916193	Og	CcySis			DG	clay minor DG calc-arenite	77142							
DM140	12.0	14.0	3916194	Og	CcySis			DG	calc-arenite minor O clay	77142							
DM140	14.0	16.0	3916195	Og	Sis	WeFe		DG		77142							
DM141	0.0	2.0		Qha	Ccy			DB									
DM141	2.0	4.0	3916196	Og	Ccy			LG	mottled clay	77142							
DM141	4.0	6.0	3916197	Og	Ccy			LG	mottled clay	77142							
DM141	6.0	8.0	3916198	Og	Ccy			DGLGO	mottled clay	77142							
DM141	8.0	10.0	3916199	Og	Ccy	Al	Sd	DGLGO	mottled clay, Fe altered carbonate	77142							
DM141	10.0	12.0	3916200	Og	Ccy	Al	Sd	DGLGOV	mottled clay, Fe altered carbonate	77142							
DM141	12.0	14.0	3916201	Og	SisCcy	Fi		DG	fine carbonate + clay	77142							
DM141	14.0	16.0	3916202	Og	SisCcy	FiFe		DG	fine carbonate + clay	77142							
DM141	16.0	18.0	3916203	Og	Sis	FiFe		DG	calc-arenite	77142							
DM141	18.0	20.0	3916204	Og	CcySis			DGG	clay minor calc-arenite	77142							
DM141	20.0	22.0	3916205	Og	CcySis			DGG	clay minor calc-arenite	77142							
DM141	22.0	24.0	3916206	Og	SisCcy			DG	calc-arenite + clay	77142							
DM141	24.0	26.0	3916207	Og	SisCcy			DG	DG, LG calc-arenite + clay	77142							

031074

APPENDIX 2. Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM141	26.0	28.0	3916208	Og	SlsCcy	VcFe	Py	DG	DG, LG calc-arenite + clay	77142							
DM141	28.0	30.0	3916209	Og	SlsCcy	VcFe	Py	DG	DG, LG calc-arenite + clay	77142							
DM141	30.0	32.0	3916210	Og	SlsCcy	VcFe		DG	fine carbonate + clay	77142							
DM141	32.0	34.0	3916211	Og	SlsCcy	VcFe		DG	fine carbonate + clay	77142							
DM141	34.0	36.0	3916212	Og	SlsCcy	Vc		DG	fine carbonate + clay	77142							
DM142	0.0	2.0		Qha	Ccy			DBLG									
DM142	2.0	4.0	3916213	Og	CcySls			LGDG	mottled clay minor calc-arenite	77142							
DM142	4.0	6.0	3916214	Og	CcySls			LGDG	mottled clay minor calc-arenite	77142							
DM142	6.0	8.0	3916215	Og	Sls	We		DG	calc-arenite	77142							
DM142	8.0	10.0	3916216	Og	Sls	We		DG	calc-arenite	77142							
DM142	10.0	12.0	3916217	Og	SlsCcy	We		DG	fine carbonate, DG clay	77142							
DM142	12.0	14.0	3916218	Og	SlsCcy	WeFe		DG	fine carbonate, DG clay	77142							
DM142	14.0	16.0	3916219	Og	SlsCcy	WeFeVc		DG	fine carbonate, DG clay	77142							
DM142	16.0	18.0	3916220	Og	SlsCcy	WeFe		DG	fine carbonate, DG clay	77142							
DM142	18.0	20.0	3916221	Og	Sls	WeVc		DG	calc-arenite	77142							
DM142	20.0	22.0	3916222	Og	Sls	FeVc	Py	DG	calc-arenite	77142							
DM142	22.0	24.0	3916223	Og	Sls	FeVc		DG	calc-arenite	77142							
DM142	24.0	26.0	3916224	Og	Sls	Fe		DG	calc-arenite	77142							
DM142	26.0	28.0	3916225	Og	Sls	Fe	Py	DG	calc-arenite	77142							
DM142	28.0	30.0	3916226	Og	Sls	Fe		DG	calc-arenite	77142							
DM142	30.0	32.0	3916227	Og	Sls	Fe		DG	calc-arenite	77142							
DM142	32.0	34.0	3916228	Og	Sls	FeVc		DG	calc-arenite, some coralline	77142							
DM142	34.0	36.0	3916229	Og	Sls	WeVc		DG	calc-arenite	77142							
DM142	36.0	38.0	3916230	Og	Sls	WeVc	Py	DG	calc-arenite	77142							
DM143	0.0	2.0		Qha	Ccy			LBOB									
DM143	2.0	4.0	3916231	Qha	Ccy			LGLBDG		77142							
DM143	4.0	6.0	3916232	Og	CcySls			DGLGO	clay + DG calc-arenite	77142							
DM143	6.0	8.0	3916233	Og	CcySls			DG	clay + fine carbonate	77142							
DM143	8.0	10.0	3916234	Og	CcySls	Fe		DG	clay + fine carbonate	77142							
DM143	10.0	12.0	3916235	Og	Sls	Fr	Py	DG	fine carbonate	77142							
DM143	12.0	14.0	3916236	Og	CcySls			DG	clay + fine carbonate	77142							
DM143	14.0	16.0	3916237	Og	Sls			DG	calc-arenite	77142							
DM143	16.0	16.6	3916238	Og	Sls	Vc	Py	DG	fine granular carbonate	77142							
DM144	0.0	2.0	3916239	Qha	Ccy			DBLBDG		77142							
DM144	2.0	4.0	3916240	Og	CcySls			DGDBO	clay and fine carbonate + Ovc	77142							
DM145	0.0	2.0		Qha	CcySls			DB	clay, minor DG carbonate + Ovc								
DM146	0.0	15.0		Ed	Ssl			RV	silt + siltstone								
DM147	0.0	6.0		Ed	Ssl			LG									
DM147	6.0	8.0	3916241	Ed	OICcy	Vq		LGDG	mottled clay, fault rock	77142							
DM147	8.0	10.0	3916242	Ed	OICcy	Vq		LGDLB	mottled clay, fault rock	77142							
DM147	10.0	12.0	3916243	?	OICcy	Vq		RV	qtz gravels, fault rock	77142							
DM147	12.0	13.0	3916244	?	OICcy	Vq		RV	qtz gravels, fault rock	77142							
DM148	0.0	2.0	3916245	Qha	Ccy			LGLB	clay, minor gravel (diesel pouring out of hole)	77142							
DM148	2.0	4.0	3916246	Og	Ccy			DG		77142							
DM148	4.0	6.0	3916247	Og	Ccy			DG	metal drum frags	77142							
DM148	6.0	10.0		Og	Ccy			DG	hole stopped too much diesel pouring out of hole								
DM149	0.0	2.0	3916248	Qha	CcyCg			LGLB	clay + gravel	77142							
DM149	2.0	4.0	3916249	Og	Ccy			LGDG	mottled clay	77142							
DM149	4.0	6.0	3916250	Og	SlsCcy	Fe		DG	calc-arenite minor clay	77142							
DM149	6.0	8.0	3916251	Og	Sls	Fe		DG	calc-arenite	77142							
DM149	8.0	10.0	3916252	Og	SlsCcy	Fe		DG	calc-arenite minor clay	77142							

931075

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM149	10.0	12.0	3916253	Og	Ccy		GaPy	DG	clay minor calc-arenite	77142							
DM149	12.0	14.0	3916254	Og	Ccy			DG		77142							
DM149	14.0	16.0	3916255	Og	CcySls			DG	clay minor calc-arenite	77142							
DM149	16.0	18.0	3916256	Og	CcySls	Vc		DG	clay minor calc-arenite	77142							
DM149	18.0	20.0	3916257	Og	Sls	Fe	Ga	DG	calc-arenite	77142							
DM149	20.0	22.0	3916258	Og	Sls	Fe		DG	calc-arenite	77142							
DM149	22.0	24.0	3916259	Og	Ccy			DGLG	mottled clay	77142							
DM149	24.0	26.0	3916260	Og	CcySls	VcFe		DGLG	mottled clay, calc-arenite also	77142							
DM149	26.0	28.0	3916261	Og	Ccy		Py	G	clay minor carbonate	77142							
DM149	28.0	30.0	3916262	Og	Ccy	Vc	Py	G	clay minor carbonate	77142							
DM149	30.0	32.0	3916263	Og	Sls	Fe		G	fine carbonate, clay + calc-arenite	77142							
DM149	32.0	34.0	3916264	Og	CcySls			G	clay + fine carbonate	77142							
DM149	34.0	36.0	3916265	Og	CcySls	Fe	Py	DG	clay + calc-arenite	77142							
DM149	36.0	38.0	3916266	Og	CcySls	Fe		DGLG	clay + calc-arenite	77142							
DM149	38.0	40.0	3916267	Og	Ccy	Fe		LGDG	fine calc-arenite in clay	77142							
DM149	40.0	42.0	3916268	Og	Ccy			LGDG	fine LG calc-arenite in clay	77142							
DM149	42.0	44.0	3916269	Og	CcySls			LGDG	mottled clay, calc-arenite + fine carbonate	77142							
DM149	44.0	46.0	3916270	Og	Ccy			DGLG	mottled clay	77142							
DM149	46.0	48.0	3916271	Og	Ccy			OLGDG		77142							
DM149	48.0	50.0	3916272	Og	CcySls			LG	clay minor LG calc-arenite	77142							
DM149	50.0	52.0	3916273	Og	CcySls	Vq		LG	clay minor LG calc-arenite	77142							
DM149	52.0	54.0	3916274	Og	Ccy			LGDG	mottled clay	77142							
DM149	54.0	56.0	3916275	Og	CcySls			LGDG	clay + DG calc-arenite	77142							
DM149	56.0	57.0	3916276	Og	Ccy			LG		77142							
DM150	0.0	2.0	3916277	Og	CcySls			LBDG	clay + DG calc-arenite	77142							
DM150	2.0	4.0	3916278	Og	Ccy			G	peaty clay	77142							
DM150	4.0	6.0	3916279	Og	CcySls			GLG	peaty clay, LG carbonate	77142							
DM150	6.0	8.0	3916280	Og	Ccy			DGLG	mottled clay	77142							
DM150	8.0	10.0	3916281	Og	CcySls			DGLG	mottled clay, minor DG calc-arenite	77142							
DM150	10.0	12.0	3916282	Og	CcySls			DGLG	mottled clay, minor DG calc-arenite	77142							
DM150	12.0	14.0	3916283	Og	CcySls			DGLG	mottled clay, minor DG calc-arenite	77142							
DM150	14.0	16.0	3916284	Og	SlsCcy			DG	calc-arenite + clay	77142							
DM150	16.0	18.0	3916285	Og	CcySls			OVLG	clays + DG calc-arenite, some Fe carbonate	77142							
DM150	18.0	20.0	3916286	Og	Sls	Fe		DG	calc-arenite, some Fe carbonate	77142							
DM150	20.0	22.0	3916287	Og	Sls	Fe		DG	calc-arenite, some Fe carbonate	77142							
DM150	22.0	24.0	3916288	Og	Sls	FeFi		DG	calc-arenite, some fine carbonate	77142							
DM150	24.0	26.0	3916289	Og	Sls	FeFi	Py	DG	calc-arenite, some fine carbonate	77142							
DM150	26.0	28.0	3916290	Og	Sls	Fi	Py	DG	fine carbonate	77142							
DM150	28.0	30.0	3916291	Og	Sls	Fi	Py	DG	fine carbonate	77142							
DM150	30.0	32.0	3916292	Og	CcySls		PyGa	DG	clay minor We carbonate	77142							
DM150	32.0	34.0	3916293	Og	Ccy	Vc	PyGa	DG		77142							
DM150	34.0	36.0	3916294	Og	Ccy		Py	DG		77142							
DM150	36.0	38.0	3916295	Og	Ccy	Vq		DG		77142							
DM150	38.0	40.0	3916296	Og	CcySls		Py	DG	clay + shaley carbonate	77142							
DM150	40.0	42.0	3916297	Og	SlsCcy			DG	calc-arenite minor clay	77142							
DM150	42.0	44.0	3916298	Og	SlsCcy	Vc	Py	DG	calc-arenite minor clay	77142							
DM150	44.0	46.0	3916299	Og	SlsCcy	Vc		DG	calc-arenite minor clay	77142							
DM150	46.0	48.0	3916300	Og	Sls	Vc	Py	DG	calc-arenite + fine carbonate	77142							
DM150	48.0	50.0	3916301	Og	Sls	Vc	Py	DG	calc-arenite + fine carbonate	77142							
DM150	50.0	52.0	3916302	Og	Sls	Vc	Py	DG	fine calc-arenite + fine carbonate	77142							
DM150	52.0	54.0	3916303	Og	Sls	Fi		DG	fine carbonate	77142							

031076

APPENDIX 2. Mariposa prospect. Drillhole logs and assays

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM150	54.0	56.0	3916304	Og	Sls	F	Py	DG	fine carbonate	77142							
DM150	56.0	57.0	3916305	Og	Sls	We	Py	DG	calc-arenite	77142							
DM151	0.0	2.0	3916306	Og	Ccy			BG		77142							
DM151	2.0	4.0	3916307	Og	Ccy			YB	Plastic	77142							
DM151	4.0	4.7	3916308	Og	Ccy			YB	Rare carbonate frags	77142							
DM152	0.0	1.0		Qha	CvCcy			B	Clay + veg								
DM153	0.0	1.0		Qha	CvCcy			B	Clay + veg								
DM154	0.0	2.0	3916309	QhaOg	CgCcy			B	Peaty clay	77142							
DM154	2.0	4.0	3916310	Og	Ccy			DBG		77142							
DM154	4.0	4.6	3916311	Og	Sls			DG		77142							
DM155	0.0	2.0		Qha	Cv				Veg								
DM155	2.0	4.0	3916312	Qha	Os				Sand	77142							
DM155	4.0	5.7	3916313	Og	Ccy			LG	Plastic clay	77142							
DM156	0.0	2.0	3916314	Qha	CvCs					77142							
DM156	2.0	4.0	3916315	Og	Ccy			LGW	Plastic clay	77142							
DM156	4.0	6.0	3916316	Og	Ccy			W	Plastic clay	77142							
DM156	6.0	8.0	3916317	Og	Ccy			W+DG	Plastic clay	77142							
DM156	8.0	9.5	3916318	Og	Sls	Al?	Sd?	G		77142							
DM157	0.0	2.0	3916319	Qha	CvCcy			W+B		77142							
DM157	2.0	4.0	3916320	Og	Sls	We?		DG	Decomposed	77142							
DM157	4.0	6.0	3916321	Og	Sls	We?		DG	Decomposed	77142							
DM157	6.0	8.0	3916322	Og	Sls	We?		DG	Decomposed	77142							
DM157	8.0	10.0	3916323	Og	Sls	FeWe?		DG	Decomposed	77142							
DM157	10.0	12.0	3916324	Og	Sls	FeWe?		DG	Decomposed	77142							
DM157	12.0	14.0	3916325	Og	Sls	FeWe?		DG	Decomposed	77142							
DM157	14.0	16.0	3916326	Og	Sls	FeWe?		DG	Decomposed	77142							
DM157	16.0	18.0	3916327	Og	Sls	FeWe?		DG	Decomposed	77142							
DM157	18.0	20.0	3916328	Og	Sls	FeWe?		DG	Decomposed. Rare clay	77142							
DM157	20.0	22.0	3916329	Og	Sls	We?		DG	Decomposed	77142							
DM157	22.0	24.0	3916330	Og	CcySls			LB+DB		77142							
DM157	24.0	26.0	3916331	Og	Sls			G		77142							
DM157	26.0	28.0	3916332	Og	Sls			G		77142							
DM157	28.0	30.0	3916333	Og	Sls			G		77142							
DM157	30.0	32.0	3916334	Og	Sls			G		77142							
DM157	32.0	34.0	3916335	Og	Sls			G		77142							
DM157	34.0	36.0	3916336	Og	Sls			G	Could have drilled deeper	77142							
DM158	0.0	2.0	3916337	QhaOg	CvCcy			LB		77142							
DM158	2.0	4.0	3916338	Og	Ccy			MBG		77142							
DM158	4.0	6.0	3916339	Og	SlsCcy	We?		G		77142							
DM158	6.0	8.0	3916340	Og	SlsCcy	We?		G		77142							
DM158	8.0	10.0	3916341	Og	SlsCcy	We?		G		77142							
DM158	10.0	12.0	3916342	Og	SlsCcy	We?		G		77142							
DM158	12.0	14.0	3916343	Og	SlsCcy	We?		G		77142							
DM158	14.0	16.0	3916344	Og	Sls	We?		G		77142							
DM158	16.0	18.0	3916345	Og	SlsCcy	We?		G		77142							
DM158	18.0	20.0	3916346	Og	SlsCcy	We?		DG		77142							
DM158	20.0	22.0	3916347	Og	CcySls	We?		DG		77142							
DM158	22.0	24.0	3916348	Og	SlsCcy	We?		DG		77142							
DM158	24.0	26.0	3916349	Og	CcySls	We?		DG		77142							
DM158	26.0	28.0	3916350	Og	CcySls	We?		DG		77142							
DM158	28.0	30.0	3916351	Og	SlsCcy	We?		DG		77142							

931072

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM158	30.0	32.0	3916352	Og	Sls	We?		DG		77142							
DM158	32.0	33.9	3916353	Og	Sls	We?		DG		77142							
DM159	0.0	2.0	3916354	QhaOg	CvCcy			B+G		77142							
DM159	2.0	4.0	3916355	Og	Ccy			MBG		77142							
DM159	4.0	6.0	3916356	Og	Ccy			DG		77142							
DM159	6.0	8.0	3916357	Og	Sls			DG	Calcarenite	77142							
DM159	8.0	10.0	3916358	Og	Sls	Vn	Sd?	DG	Calcarenite	77142							
DM159	10.0	12.0	3916359	Og	Sls	Vn	Sd?	DG	Calcarenite	77142							
DM159	12.0	14.0	3916360	Og	Sls			DG	Calcarenite	77142							
DM159	14.0	16.0	3916361	Og	Sls			DG	Calcarenite	77142							
DM159	16.0	18.0	3916362	Og	Sls			DG	Calcarenite	77142							
DM159	18.0	20.0	3916363	Og	Sls			DG	Calcarenite	77142							
DM159	20.0	22.0	3916364	Og	Sls			DG	Calcarenite	77142							
DM159	22.0	24.0	3916365	Og	Sls			DG	Calcarenite. Some caving downhole	77142							
DM159	24.0	26.0	3916366	Og	Sls	Vn	Cc	DG	Calcarenite	77142							
DM159	26.0	28.0	3916367	Og	Sls	BxDs	Py	MGDG	Carb breccia + lime mudstone	77142							
DM160	0.0	2.0	3916368	Og	CcySls			LB	costean fill?	77142							
DM160	2.0	4.0	3916369	Og	CcySls			LB	costean fill?	77142							
DM160	4.0	6.0	3916370	Og	Sls	We?		DG		77142							
DM160	6.0	8.0	3916371	Og	Sls	We?		DG		77142							
DM160	8.0	10.0	3916372	Og	Sls	We?		DG		77142							
DM160	10.0	12.0	3916373	Og	Sls	We?		DG		77142							
DM160	12.0	14.0	3916374	Og	Sls			LGCG		77142							
DM160	14.0	16.0	3916375	Og	Sls			DG		77142							
DM160	16.0	16.7	3916376	Og	Sls			DG	Almost cherty appearance	77142							
DM161	0.0	0.9		Qha	Cv				Veg								
DM162	0.0	1.0	3916377	QhaOg	CvCcy				Veg + clay	77142							
DM163	0.0	2.0	3916378	Og	Ccy			MYO		77142							
DM163	2.0	4.0	3916379	Og	Ccy			Y+LGW		77142							
DM163	4.0	6.0	3916380	Og	Ccy			LGW		77142							
DM163	6.0	8.0	3916381	Og	Ccy			W		77142							
DM163	8.0	10.0	3916382	Og	Ccy			W+YN		77142							
DM163	10.0	12.0	3916383	Og	Ccy			DGN		77142							
DM163	12.0	14.0	3916384	Og	Ccy			DG+Y		77142							
DM163	14.0	16.0	3916385	Og	Ccy			DG		77142							
DM163	16.0	18.0	3916386	Og	CcySls			DG		77142							
DM163	18.0	20.0	3916387	Og	Sls	Le		G		77142							
DM163	20.0	22.0	3916388	Og	Sls			DG+LG		77142							
DM163	22.0	24.0	3916389	Og	Sls			LG		77142							
DM163	24.0	26.0	3916390	Og	Sls	Le		DG+LG		77142							
DM163	26.0	27.1	3916391	Og	Sls	Le		DG+LG		77142							
DM164	0.0	2.0	3916392	Og	Ccy			LYB		77142							
DM164	2.0	4.0	3916393	Og	Ccy			LYGB		77142							
DM164	4.0	6.0	3916394	Og	Ccy			YO		77142							
DM164	6.0	8.0	3916395	Og	Ccy			YO		77142							
DM164	8.0	10.0	3916396	Og	Ccy			YO+N		77142							
DM164	10.0	11.5	3916397	Og	Ccy			MYON		77142							
DM165	0.0	2.0	3916398	QhaOg	CvCgCcy					77142							
DM165	2.0	4.0	3916399	Og	Ccy			MYBG		77142							
DM165	4.0	5.7	3916400	Og	Sls			DG	Shaley + carbonaceous	77142							
DM166	0.0	1.5	3916401	Og	Ccy			DGO	clay minor carbonate + Ovc	77142							

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM167	0.0	2.8	3916402	Og	Sis	Vc	Py	G	fine carbonate some Fe carbonate	77142							
DM168	0.0	1.0		Qha	CoyCg			LB	clay + gravel								
DM169	0.0	2.5	3916403	Qha	CoySis			LB	clay minor DG carbonate + Ovc	77142							
DM170	0.0	1.2		Qha	CoyCg			DB	clay, gravel, minor DG limestone								
DM171	0.0	1.1	3916404	Og	CoySis			DGDB	clay + DG carbonate	77142							
DM172	0.0	1.8	3916405	Og	CoySis			DGDB	clay minor DG calc-arenite	77142							
DM173	0.0	2.2	3916406	Og	CoySis			ODG	clay + DG carbonate	77142							
DM174	0.0	2.1		Qha	CoySss			DB	clay + W Sst frags								
DM175	0.0	1.2		Qha	CoySss			DEBG	clay + W Sst + shaley carbonate frags								
DM176	0.0	1.0	3916407	Qha	CoySis			DEBG	clay + DG granular carbonate	77142							
DM177	0.0	1.5		Qha	CoySis			DEBG	clay + DG granular carbonate								
DM178	0.0	1.3		Qha	CoySis			DEBG	clay + DG granular carbonate								
DM179	0.0	1.0		Qha	CoySis			DEBG	clay + DG granular carbonate								
DM180	0.0	2.0		Qha	Cg				gravels + clay								
DM180	2.0	4.0	3916408	Og	Coy			LG		77142							
DM180	4.0	6.0	3916409	Og	Coy			ODG		77142							
DM180	6.0	8.0	3916410	Og	CoySis			DG	clay, minor DG calc-arenite	77142							
DM180	8.0	10.0	3916411	Og	CoySis	Vq		DG	clay, minor DG calc-arenite	77142							
DM180	10.0	12.0	3916412	Og	CoySis			DG	clay, minor DG calc-arenite	77142							
DM180	12.0	14.0	3916413	Og	CoySis			DG	plastic clay, minor DG calc-arenite	77142							
DM180	14.0	16.0	3916414	Og	CoySis			DG	plastic clay, minor DG calc-arenite	77142							
DM180	16.0	18.0	3916415	Og	CoySis			DG	plastic clay, minor DG calc-arenite	77142							
DM180	18.0	20.0	3916416	Og	Sis	Vc		DG	line granular carbonate	77142							
DM180	20.0	22.0	3916417	Og	Sis		CaPy	DG	calc-arenite, some Fe carbonate	77142							
DM180	22.0	23.8	3916418	Og	Sis		CaPy	DG	calc-arenite, some Fe carbonate	77142							
DM181	0.0	2.0		Qha	Coy			LB									
DM181	2.0	4.0	3916419	Og	Coy			LGOG	clay, minor DG carbonate	77142							
DM181	4.0	6.0	3916420	Og	CoySis			LGOG	mottled clay, line laminated carbonate	77142							
DM181	6.0	8.0	3916421	Og	CoySis	Vq		LGOG	mottled clay, line laminated carbonate	77142							
DM181	8.0	10.0	3916422	Og	CoySis	Vq		LGOG	mottled clay, line laminated carbonate	77142							
DM181	10.0	12.0	3916423	Og	CoySis	Vq		LGOG	mottled clay, line laminated carbonate	77142							
DM181	12.0	14.0	3916424	Og	Coy			LGLB	mottled clay	77142							
DM181	14.0	16.0	3916425	Og	Coy			LGLB	mottled clay	77142							
DM181	16.0	18.0	3916426	Og	CoySis			LGLBDG	mottled clay, DG carbonate	77142							
DM181	18.0	20.0	3916427	Og	CoySis			DG	clay + calc-arenite	77142							
DM181	20.0	22.0	3916428	Og	CoySis			DG	clay + calc-arenite	77142							
DM181	22.0	24.0	3916429	Og	CoySis			DG	clay + calc-arenite	77142							
DM181	24.0	26.0	3916430	Og	CoySis			DG	clay, calc-arenite + Fe carbonate	77142							
DM181	26.0	28.0	3916431	Og	Sis		Py	DG	calc-arenite minor Fe carbonate + clay	77142							
DM181	28.0	30.5	3916432	Og	Sis	Vc	Py	DG	calc-arenite minor Fe carbonate	77142							
DM182	0.0	2.0		Qha	CoyCg			O	clay + qtz gravels								
DM182	2.0	14.0		Ed	CoySsl			OV	clay + siltstone + qtzite frags								
DM183	0.0	2.0		Qha	Coy			OBLB									
DM183	2.0	4.0	3916433	Og	CoySis			LBDG	clay fissile DG carbonate	77142							
DM183	4.0	6.0	3916434	Og	Sis	F		DG	fine carbonate + calc-arenite	77142							
DM183	6.0	7.0	3916435	Og	Sis	FiWe		DG	fine carbonate	77142							
DM184	0.0	2.0	3916436	Qha	Coy			LBOBLG	mottled clay	77142							
DM184	2.0	4.0	3916437	Og	CoySis			LG	clay + granular carbonate	77142							
DM184	4.0	6.0	3916438	Og	CoySis			LGOG	clay + We calc-arenite	77142							
DM184	6.0	8.0	3916439	Og	CoySis			LGOG	mottled clay + We calc-arenite	77142							
DM184	8.0	10.0	3916440	Og	CoySis			LGOG	mottled clay + We calc-arenite	77142							

APPENDIX 2. Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMLLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM184	10.0	12.0	3916441	Og	Sls			DG	calc-arenite	77142							
DM184	12.0	14.0	3916442	Og	Sls			DG	calc-arenite	77142							
DM184	14.0	16.0	3916443	Og	SlsCcy			DG	calc-arenite, minor DG clay	77142							
DM184	16.0	18.0	3916444	Og	SlsCcy	Fi		DG	calc-arenite, minor DG clay	77142							
DM184	18.0	20.0	3916445	Og	SlsCcy	Fi		DG	calc-arenite, minor DG clay	77142							
DM184	20.0	22.0	3916446	Og	Sls	FIVc		DG	fine carbonate	77142							
DM184	22.0	24.0	3916447	Og	Sls	FIVcFa		DG	fine carbonate	77142							
DM184	24.0	30.0	3916448	Og	Sls			DG	two cavities almost 5m poor sample	77142							
DM184	30.0	31.1	3916449	Og	Sls	Py		DG	.8m cavity but fine granular carbonate	77142							
DM185	0.0	2.0	3916450	Og	CcySls			LBOG	clay + calc-arenite	77142							
DM185	2.0	4.0	3916451	Og	CcySls			LGGB	mottled clay, LG fine carbonate and DG calc-arenite	77142							
DM185	4.0	6.0	3916452	Og	CcySls			DG	clay + fine fissile carbonate	77142							
DM185	6.0	7.5	3916453	Og	Sls			DG	calc-arenite	77142							
DM186	0.0	1.2	3916454	Og	CcySls			DGDB	clay + DG limestone	77142							
DM187	0.0	1.5		Oha	Cbs												
DM188	0.0	1.0		Og	CcySls	Vc		DGDB	clay + DG carbonate + Ovc								
DM189	0.0	1.0		Oha	Cbs												
DM190	0.0	2.0		Og	Ccy			LGOG									
DM190	2.0	4.0	3916455	Og	Ccy			LGOG	mottled clay	77142							
DM190	4.0	6.0	3916456	Og	Ccy			LGOGO	mottled clay	77142							
DM190	6.0	8.0	3916457	Og	Ccy			LGOGO	mottled clay	77142							
DM190	8.0	10.0	3916458	Og	CcySls			DG	clay + calc-arenite	77142							
DM190	10.0	12.0	3916459	Og	CcySls			DG	clay + calc-arenite	77142							
DM190	12.0	14.0	3916460	Og	CcySls			DG	clay, minor calc-arenite	77142							
DM190	14.0	16.0	3916461	Og	CcySls	Vc		DG	clay, minor calc-arenite	77142							
DM190	16.0	18.0	3916462	Og	CcySls	Vc		DG	clay, minor calc-arenite	77142							
DM190	18.0	20.0	3916463	Og	Sls	Vc		DG	calc-arenite	77142							
DM190	20.0	22.0	3916464	Og	CcySls	Vc		DG	clay + calc-arenite some Fe carbonate	77142							
DM190	22.0	24.0	3916465	Og	CcySls	Vc		DG	clay + calc-arenite some Fe carbonate	77142							
DM190	24.0	26.0	3916466	Og	SlsCcy	Fi		DG	fine carbonate minor clay	77142							
DM190	26.0	28.0	3916467	Og	SlsCcy	Fi	Py	DG	fine carbonate minor clay	77142							
DM190	28.0	30.0	3916468	Og	Sls	FiFe	Py	DG	fine carbonate some Fe carbonate	77142							
DM190	30.0	31.8	3916469	Og	Sls	FiFeVc	Py	DG	fine carbonate some Fe carbonate	77142							
DM191	0.0	2.0		Oha	Ccy			DBLB									
DM191	2.0	4.0	3916470	Og	CcySls			DBDG	mottled clay, DG calc-arenite	77142							
DM191	4.0	6.0	3916471	Og	SlsCcy	Vc		DG	calc-arenite, minor clay	77142							
DM191	6.0	8.0	3916472	Og	Sls	Vc	Py	DG	calc-arenite	77142							
DM191	8.0	10.0	3916473	Og	Sls	Vc	Py	DG	calc-arenite	77142							
DM191	10.0	12.0	3916474	Og	Sls	Vc	Py	DG	calc-arenite + fine carbonate	77142							
DM191	12.0	14.0	3916475	Og	Sls	Vc	Py	DG	calc-arenite	77142							
DM191	14.0	16.0	3916476	Og	Sls	VcFe	Py	DG	calc-arenite	77142							
DM191	16.0	16.8	3916477	Og	Sls	VcFe	Py	DG	fine carbonate	77142							
DM192	0.0	2.0		Og	CcySls			DB	clay + DG carbonate								
DM192	2.0	4.0	3916478	Og	Sls			DG	calc-arenite	77142							
DM192	4.0	6.0	3916479	Og	Sls	Fi		DG	fine carbonate	77142							
DM193	0.0	1.2		Oha	CcyCs			DBLB	soil + qtz								
DM194	0.0	0.8	3916480	Og	Ccy			DGLB	mottled clay	77142							
DM195	0.0	0.8		Og	CcySls			DB	clay + DG limestone								
DM196	0.0	2.0	3916481	Ed	Ccy			LBLGDB		77142							
DM196	2.0	4.0	3916482	Ed	Ccy			LBLGDB		77142							
DM196	4.0	6.0	3916483	Ed	Ccy			LBLGDBR	clay + qtz frags	77142							

931080

APPENDIX 2: Mariposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM196	6.0	8.0	3916484	Ed	Ccy			LGO		77142							
DM196	8.0	10.0	3916485	Ed	Of?Ccy			LBDBDG	clay + qtz, fault rock?	77142							
DM196	10.0	12.0	3916486	Ed	Ccy			LBDB		77142							
DM196	12.0	15.0	3916487	Ed	Ccy			LBDB	Ed so cut hole	77142							
DM197	0.0	2.0		Cha	Ccy			LBDB									
DM197	2.0	4.0	3916488	Og	Ccy			LBDB		77142							
DM197	4.0	6.0	3916489	Og	Ccy			LGDG	mottled clay + calc-arenite	77142							
DM197	6.0	8.0	3916490	Og	CcySls	Vq		DG	clay + calc-arenite	77142							
DM197	8.0	10.0	3916491	Og	SlsCcy			DG	calc-arenite, Fe carbonate + clay	77142							
DM197	10.0	12.0	3916492	Og	Sls			DG	calc-arenite, Fe carbonate	77142							
DM197	12.0	14.0	3916493	Og	SlsCcy			DG	calc-arenite, Fe carbonate some clay	77142							
DM197	14.0	16.0	3916494	Og	SlsCcy			DG	calc-arenite, Fe carbonate some clay	77142							
DM197	16.0	18.0	3916495	Og	CcySls			DG	clay + calc-arenite	77142							
DM197	18.0	20.0	3916496	Og	CcySls			DGDB	clay + calc-arenite	77142							
DM197	20.0	20.9	3916497	Og	CcySls			LB LGDG	mottled clay, calc-arenite + Fe carbonate	77142							
DM198	0.0	2.0	3916498	Og	CcySls			DGDB	mottled clay + calc-arenite	77142							
DM198	2.0	4.0	3916499	Og	CcySls			DGDB	mottled clay + calc-arenite	77142							
DM198	4.0	6.0	3916500	Og	Ccy			DG	clay minor calc-arenite	77142							
DM198	6.0	8.0	3916501	Og	Ccy			DG	clay minor fine carbonate	77142							
DM198	8.0	10.0	3916502	Og	Ccy			DGLG	mottled clay	77142							
DM198	10.0	12.0	3916503	Og	Ccy			DG		77142							
DM198	12.0	14.0	3916504	Og	CcySls			DG	clay + fine carbonate	77142							
DM198	14.0	16.0	3916505	Og	Sls			DG	fine carbonate	77142							
DM198	16.0	18.0	3916506	Og	CcySls			DG	clay + fine carbonate	77142							
DM198	18.0	20.0	3916507	Og	Sls			DGLG	DG fine carbonate + LG calc-arenite	77142							
DM198	20.0	22.0	3916508	Og	Sls			DGLG	DG fine carbonate + LG calc-arenite	77142							
DM198	22.0	24.0	3916509	Og	SlsCcy			DG	granular carbonate + clay	77142							
DM198	24.0	26.0	3916510	Og	Sls			DG	granular carbonate	77142							
DM198	26.0	28.0	3916511	Og	Sls		Py	DG	granular carbonate	77142							
DM198	28.0	30.1	3916512	Og	Sls		Py	DG	fine granular carbonate	77142							
DM199	0.0	2.0		Cha	CcyCg			LBDB	clay + gravels								
DM199	2.0	4.0	3916513	Og	Ccy			LBDB	mottled clay	77142							
DM199	4.0	6.0	3916514	Og	CcySls			DG	clay minor DG granular carbonate	77142							
DM199	6.0	8.0	3916515	Og	CcySls			DG	clay WeFe carbonate	77142							
DM199	8.0	10.0	3916516	Og	CcySls			DG	clay Fe carbonate	77142							
DM199	10.0	12.0	3916517	Og	CcySls			DG	clay + calc-arenite	77142							
DM199	12.0	14.0	3916518	Og	Sls	Vc		DG	calc-arenite	77142							
DM199	14.0	16.0	3916519	Og	Sls	Vc	Py	DG	calc-arenite	77142							
DM199	16.0	18.0	3916520	Og	Sls	Vc		DG	calc-arenite, fine carbonate + LG clay	77142							
DM199	18.0	21.0	3916521	Og	Sls	Vc		LG	granular carbonate, 2.8m cavity	77142							
DM199	21.0	24.0	3916522	Og	Sls	Vc		DGLG	fine carbonate + LG calc-arenite	77142							
DM199	24.0	26.0	3916523	Og	Sls	Vc		LG	calc-arenite	77142							
DM200	0.0	2.0	3916524	Og	Ccy			DGDB	mottled clay	77142							
DM200	2.0	4.0	3916525	Og	Ccy			DGDB	mottled clay	77142							
DM200	4.0	6.3	3916526	Og	Sls	Vc	Py	DGLG	carbonate slightly oolitic	77142							
DM201	0.0	1.0		Cha	CcySls			DB	clay + DG limestone at EOH								
DM202	0.0	1.1		Cha	CcySls			DB	clay + DG limestone at EOH								
DM203	0.0	1.0		Cha	CcySls			DB	clay + DG limestone at EOH								
DM204	0.0	1.2		Cha	CgSls				gravel + DG limestone at EOH								
DM205	0.0	2.0		Cha	Ccy			DB									
DM205	2.0	4.0	3916527	Cha	Ccy			DBLBDB	mottled clay	77142							

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APPENDIX 2: Maniposa prospect. Drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	DPO	Cu	Pb	Zn	Ag	Fe%	Mn	S%
DM205	4.0	6.0	3916528	Og	CoySis	Vc		GGG	clay + DG calc-arenite	77142							
DM205	6.0	8.0	3916529	Og	Sis			DG	calc-arenite	77142							
DM205	8.0	10.0	3916530	Og	Sis		Py	DG	calc-arenite	77142							
DM205	10.0	10.8	3916531	Og	Sis		Py	DG	fine carbonate	77142							
DM206	0.0	2.0	3916532	Qha	CoyCg			LBLG	clay + gravels	77142							
DM206	2.0	4.0	3916533	Qha	Cg				gravels	77142							
DM206	4.0	6.0	3916534	Og	CoySis	Al		DG	clay + Fe altered calc-arenite	77142							
DM206	6.0	8.0	3916535	Og	CoySis	Al		DG	clay + Fe altered calc-arenite	77142							
DM206	8.0	10.0	3916536	Og	SisCoy	Vc		LGDG	LG calc-arenite, minor DG clay	77142							
DM206	10.0	12.5	3916537	Og	SisCoy	Vc		LGDG	LG calc-arenite, minor DG clay	77142							
DM207	0.0	2.0		Qha	CoyCg			LBDB	clay + gravel								
DM207	2.0	4.0	3916538	Og	CoySis			LGDGLB	clay + DG calc-arenite	77142							
DM207	4.0	6.0	3916539	Og	CoySis			LGDG	mottled clay, DG calc-arenite	77142							
DM207	6.0	7.3	3916540	Og	CoySis			LGDG	mottled clay, DG calc-arenite	77142							

SUNNY CORNER - BANNOCKBURN PROSPECT. AIR-CORE DRILLING LOGS AND ASSAYS									
Results in ppm (Fe, S in %)									
HOLE	SAMPNO	DFROM	DTO	DPO BMLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS
DS1		0.0	2.0	Og	Cg				
DS1	3916541	2.0	4.0	77143 Og	SlsCcy			DGLG	
DS1	3916542	4.0	6.0	77143 Og	SlsCcy			DG	
DS1	3916543	6.0	8.0	77143 Og	CcySls			DG	
DS1	3916544	8.0	10.0	77143 Og	SlsOvc	Ma		DG	
DS1	3916545	10.0	11.5	77143 Og	Sls			DG	
DS2	3916546	0.0	2.0	77143 Og	CcySls	We		DG	
DS2	3916547	2.0	4.0	77143 Og	CcySls			DG	
DS2	3916548	4.0	6.0	77143 Og	Ccylsls			DG	
DS2	3916549	6.0	8.0	77143 Og	SlsCcy			DG	
DS2	3916550	8.0	10.0	77143 Og	CcySls			DG	
DS2	3916551	10.0	12.0	77143 Og	Ccy			DG	
DS2	3916552	12.0	14.0	77143 Og	Ccy			DG	
DS2	3916553	14.0	16.0	77143 Og	CcySls			DG	
DS2	3916554	16.0	18.0	77143 Og	CcySls	F		DGLG	
DS2	3916555	18.0	20.0	77143 Og	SlsCcy	F	Py	DGDG	
DS2	3916556	20.0	22.0	77143 Og	SlsCcy			G	
DS2	3916557	22.0	24.0	77143 Og	CcySls	F		DG	
DS2	3916558	24.0	26.0	77143 Og	CcySls			DG	
DS2	3916559	26.0	28.0	77143 Og	SlsCcy	F		DG	
DS2	3916560	28.0	30.0	77143 Og	CcySls			DG	
DS2	3916561	30.0	32.0	77143 Og	CcySls			DG	
DS2	3916562	32.0	34.0	77143 Og	SlsCcy		Py	DG	
DS2	3916563	34.0	36.0	77143 Og	CcySls			DG	
DS2	3916564	36.0	38.0	77143 Og	SlsCcy	We	Py	DG	
DS2	3916565	38.0	40.0	77143 Og	Ccy			DG	
DS2	3916566	40.0	42.0	77143 Og	SlsCcy			DG	
DS2	3916567	42.0	44.0	77143 Og	Ccy			DG	
DS2	3916568	44.0	46.0	77143 Og	CcySls			DG	
DS2	3916569	46.0	48.0	77143 Og	SlsCcy		Py	DG	
DS2	3916570	48.0	50.0	77143 Og	SlsCcy		Py	DG	
DS2	3916571	50.0	52.0	77143 Og	CcySls	Lm		DG	
DS2	3916572	52.0	54.0	77143 Og	SlsCcy			DG	
DS2	3916573	54.0	56.0	77143 Og	SlsCcy		Py	DG	
DS2	3916574	56.0	57.0	77143 Og	SlsCcy			DG	
DS3	3916575	0.0	2.0	77143 Og	CcyCg			M	
DS3	3916576	2.0	4.0	77143 Og	Ccy			M	
DS3	3916577	4.0	6.0	77143 Og	Ccy			M	
DS3	3916578	6.0	8.0	77143 Og	Sls			LGDG	
DS3	3916579	8.0	10.0	77143 Og	Sls			DG	
DS3	3916580	10.0	11.5	77143 Og	SlsCcy		Py	DG	minor pyrite + dark grey clay.
DS4		0.0	2.0	Og	CgObs			DG	
DS4	3916581	2.0	4.0	77143 Og	Ccy			M	
DS4	3916582	4.0	6.0	77143 Og	Ccy			LYGM	
DS4	3916583	6.0	8.0	77143 Og	CcySls			DM	
DS4	3916584	8.0	10.0	77143 Og	CcySls			DG	
DS4	3916585	10.0	12.0	77143 Og	Sls			DG	
DS4	3916586	12.0	14.0	77143 Og	Sls			DG	
DS4	3916587	14.0	16.0	77143 Og	SlsOvc			DG	
DS4	3916588	16.0	17.8	77143 Og	SlsOvc		Py	LGDG	
DS5	3916589	0.0	2.0	77143 Og	CbsCcy			W	
DS5	3916590	2.0	4.0	77143 Og	CcySls			DG	
DS5	3916591	4.0	6.0	77143 Og	CcySls			DG	
DS5	3916592	6.0	8.0	77143 Og	SlsCcy			DG	
DS5	3916593	8.0	10.0	77143 Og	Sls			DG	
DS5	3916594	10.0	12.0	77143 Og	SlsCcy			DG	
DS5	3916595	12.0	14.0	77143 Og	Sls			DG	
DS5	3916596	14.0	16.0	77143 Og	SlsCcy			DG	
DS5	3916597	16.0	18.0	77143 Og	SlsCcy		Py	DG	
DS5	3916598	18.0	20.0	77143 Og	Sls			DG	
DS5	3916599	20.0	22.0	77143 Og	Sls			DG	
DS5	3916600	22.0	24.0	77143 Og	Sls			DG	
DS5	3916601	24.0	26.0	77143 Og	Sls		Py	DG	
DS5	3916602	26.0	28.0	77143 Og	Sls		Py	DG	
DS5	3916603	28.0	30.0	77143 Og	SlsOvc		Py	DG	
DS5	3916604	30.0	32.0	77143 Og	Sls		Py	DG	
DS5	3916605	32.0	34.0	77143 Og	Sls			DG	
DS5	3916606	34.0	36.5	77143 Og	Sls			DG	
DS6	3916607	0.0	2.0	77143 Og	Ccy			LBGM	
DS6	3916608	2.0	4.0	77143 Og	Ccy			LGDG	
DS6	3916609	4.0	6.0	77143 Og	CcySls	We		DG	
DS6	3916610	6.0	8.0	77143 Og	CcySls			DG	
DS6	3916611	8.0	10.0	77143 Og	Sls			DG	
DS6	3916612	10.0	12.0	77143 Og	CcySls		Py	DG	
DS6	3916613	12.0	14.0	77143 Og	SlsCcy			LGW	
DS6	3916614	14.0	16.0	77143 Og	SlsCcy		Py	DG	
DS6	3916615	16.0	18.0	77143 Og	Sls		Py	DG	highly pyritic

HOLE	SAMPNO	DFROM	DTO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS
DS6	3916616	18.0	20.0	77143	Og	Sls		Py	DG	weakly pyritic
DS6	3916617	20.0	22.0	77143	Og	Sls		Py	DG	
DS6	3916618	22.0	24.0	77143	Og	Sls		Py	DG	moderately pyritic
DS6	3916619	24.0	26.0	77143	Og	Sls		Py	DG	moderately pyritic
DS6	3916620	26.0	28.0	77143	Og	Sls			DG	
DS6	3916621	28.0	30.0	77143	Og	Sls		Py	DG	weakly pyritic
DS6	3916622	30.0	32.0	77143	Og	Sls		Py	DG	moderately pyritic
DS6	3916623	32.0	34.0	77143	Og	Sls			DG	
DS6	3916624	34.0	36.0	77143	Og	SlsOvc			DG	
DS6	3916625	36.0	38.0	77143	Og	SlsOvc			DG	
DS6	3916626	38.0	40.0	77143	Og	Sls			DG	
DS6	3916627	40.0	42.0	77143	Og	Sls			DG	
DS6	3916628	42.0	44.0	77143	Og	Sls		Py	DG	mod. pyritic
DS6	3916629	44.0	46.0	77143	Og	Sls		Py	DG	minor pyr.
DS6	3916630	46.0	48.0	77143	Og	Sls			DG	
DS6	3916631	48.0	50.0	77143	Og	Sls		Py	DG	weakly pyr.
DS6	3916632	50.0	52.0	77143	Og	SlsOvc		Py	DG	minor pyr.
DS6	3916633	52.0	54.0	77143	Og	SlsOvc		Py	DG	mod. pyr.
DS6	3916634	54.0	56.0	77143	Og	Sls		Py	DG	abundant vein pyrite
DS6	3916635	56.0	57.0	77143	Og	Sls		Py	DG	mod. pyr.
DS7		0.0	2.0		Og	Cbs				
DS7	3916636	2.0	4.0	77143	Og	Ccy			M	
DS7	3916637	4.0	6.0	77143	Og	SlsCcy			DG	
DS7	3916638	6.0	8.0	77143	Og	Sls			DG	
DS7	3916639	8.0	10.0	77143	Og	Sls			DG	
DS7	3916640	10.0	12.0	77143	Og	Sls			DG	
DS7	3916641	12.0	14.0	77143	Og	Sls			DG	
DS7	3916642	14.0	16.0	77143	Og	Sls			DG	
DS7	3916643	16.0	18.0	77143	Og	Sls			DG	
DS7	3916644	18.0	20.0	77143	Og	Sls			DG	
DS7	3916645	20.0	22.0	77143	Og	SlsCcy			DG	
DS7	3916646	22.0	24.0	77143	Og	SlsCcy			DG	
DS7	3916647	24.0	25.5	77143	Og	Sls	Ma		DG	
DS8		0.0	2.0		Og	CbsCg				
DS8	3916648	2.0	4.0	77143	Og	SlsCgCcy			DG	
DS8	3916649	4.0	6.0	77143	Og	CcySls			DG	
DS8	3916650	6.0	8.0	77143	Og	SlsCcy			DG	
DS8	3916651	8.0	10.0	77143	Og	SlsCcy			DG	
DS8	3916652	10.0	12.0	77143	Og	SlsCcy		Py	DG	weakly pyr.
DS8	3916653	12.0	14.1	77143	Og	Sls	Ma		DG	
DS9	3916654	0.0	2.0	77143	Og	CbsCcy			DG	
DS9	3916655	2.0	4.0	77143	Og	Sls		Py	DG	
DS9	3916656	4.0	6.0	77143	Og	CcySls			DG	
DS9	3916657	6.0	8.0	77143	Og	SlsCcy			DG	
DS9	3916658	8.0	10.0	77143	Og	CcySls			DG	
DS9	3916659	10.0	12.0	77143	Og	CcySls			DG	
DS9	3916660	12.0	14.0	77143	Og	SlsCcy			DG	
DS9	3916661	14.0	16.0	77143	Og	SlsCcy			DG	
DS9	3916662	16.0	18.0	77143	Og	Sls			DG	
DS9	3916663	18.0	20.0	77143	Og	SlsCcy		Py	DG	weakly pyritic
DS9	3916664	20.0	22.0	77143	Og	Ccy			LM	
DS9	3916665	22.0	24.0	77143	Og	Ccy			YGW	
DS9	3916666	24.0	26.0	77143	Og	Sls		Py	DG	weakly pyr.
DS9	3916667	26.0	28.0	77143	Og	Sls			DG	
DS9	3916668	28.0	30.0	77143	Og	Sls			DG	
DS9	3916669	30.0	32.0	77143	Og	Sls			DG	weakly pyritic
DS9	3916670	32.0	34.0	77143	Og	Sls		Py	DG	mod. pyr.
DS9	3916671	34.0	36.0	77143	Og	Sls			DG	
DS9	3916672	36.0	38.0	77143	Og	CcySls			DG	mod. pyr. CO3 mudstone
DS9	3916673	38.0	40.0	77143	Og	CcySls		Py	DG	mod. pyr.
DS9	3916674	40.0	42.0	77143	Og	SlsCcy			DGLG	
DS9	3916675	42.0	44.0	77143	Og	Sls		Py	DG	weakly pyritic
DS9	3916676	44.0	45.5	77143	Og	Sls			DG	
DS10	3916677	0.0	2.0	77143	Og	Ccy			LG	
DS10	3916678	2.0	4.0	77143	Og	Ccy			G	
DS10	3916679	4.0	6.0	77143	Og	Ccy			DG	
DS10	3916680	6.0	8.0	77143	Og	Ccy			DG	
DS10	3916681	8.0	10.0	77143	Og	Ccy			DG	
DS10	3916682	10.0	12.0	77143	Og	Ccy			DG	
DS10	3916683	12.0	14.0	77143	Og	CcySls			DG	
DS10	3916684	14.0	16.0	77143	Og	SlsCcy			DG	
DS10	3916685	16.0	18.0	77143	Og	Sls			DG	
DS10	3916686	18.0	20.0	77143	Og	SlsCcy			DG	white kaolin present in small amounts.
DS10	3916687	20.0	22.0	77143	Og	Ccy			LGW	
DS10	3916688	22.0	24.0	77143	Og	Sls			DG	
DS10	3916689	24.0	26.0	77143	Og	SlsOvc		Py	DG	minor pyr.
DS10	3916690	26.0	27.0	77143	Og	SlsOvc		Py	DG	minor pyr.
DS11		0.0	2.0		Og	CbsCcy				
DS11	3916691	2.0	4.0	77143	Og	Ccy			DG	
DS11	3916692	4.0	6.0	77143	Og	Ccy			DGW	mixed clays

HOLE	SAMPNO	DFROM	DTO	DPO	BMR LITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS
DS11	3916693	6.0	8.0	77143	Og	Ccy			DG	
DS11	3916694	8.0	10.0	77143	Og	SisCcy			DG	
DS11	3916695	10.0	12.0	77143	Og	Sis			DG	
DS11	3916696	12.0	14.0	77143	Og	Sis	Ma		DG	
DS11	3916697	14.0	16.0	77143	Og	Sis			DG	
DS11	3916698	16.0	18.0	77143	Og	Sis		Py	DG	trace pyr.
DS11	3916699	18.0	20.0	77143	Og	SisOvc		Py	DG	trace pyr.
DS11	3916700	20.0	22.0	77143	Og	Sis			DG	
DS11	3916701	22.0	24.0	77143	Og	Sis	Ma		DG	
DS11	3916702	24.0	26.0	77143	Og	Sis		Py	DG	moderately pyr.
DS11	3916703	26.0	28.0	77143	Og	SisOvc		Py	DG	mod. pyr.
DS11	3916704	28.0	28.8	77143	Og	SisOvc			DG	
DS12		0.0	2.0		Og	CgCcy			LB	lesser LB clay.
DS12	3916705	2.0	4.0	77143	Og	Ccy			DGW	mixed clays
DS12	3916706	4.0	6.0	77143	Og	Ccy			LM	
DS12	3916707	6.0	8.0	77143	Og	SisOvc			LG	
DS12	3916708	8.0	9.0	77143	Og	SisOvc			LG	
DS13	3916709	0.0	2.0	77143	Og	CgCcy			LB	
DS13	3916710	2.0	4.0	77143	Og	Ccy			DENM	
DS13	3916711	4.0	6.0	77143	Og	Ccy			DG	
DS13	3916712	6.0	8.0	77143	Og	Ccy			DG	
DS13	3916713	8.0	10.0	77143	Og	CcySis			DG	
DS13	3916714	10.0	12.0	77143	Og	SisOvc			LG	
DS13	3916715	12.0	14.0	77143	Og	SisOvc			LG	
DS13	3916716	14.0	16.0	77143	Og	SisOvc			LG	
DS14		0.0	2.0		Og	CgCcy			DG	
DS14	3916717	2.0	4.0	77143	Og	Ccy			LBG	
DS14	3916718	4.0	6.0	77143	Og	Ccy			DG	
DS14	3916719	6.0	8.0	77143	Og	Ccy			DG	
DS14	3916720	8.0	10.0	77143	Og	Ccy			DG	
DS14	3916721	10.0	12.0	77143	Og	Ccy			DG	
DS14	3916722	12.0	13.8	77143	Og	CcySisOvc			LG	
DS15		0.0	2.0		Og	CgObs				
DS15	3916723	2.0	4.0	77143	Om	Sss			LBW	
DS15	3916724	4.0	6.0	77143	Om	SssSis			WDG	
DS15	3916725	6.0	8.0	77143	Og	Ccy			LGDG	
DS15	3916726	8.0	10.0	77143	Og	Ccy			DG	
DS15	3916727	10.0	12.0	77143	Og	Ccy			DG	
DS15	3916728	12.0	14.0	77143	Og	Ccy			DG	
DS15	3916729	14.0	16.0	77143	Og	Ccy			DG	
DS15	3916730	16.0	18.0	77143	Og	Ccy			DG	
DS15	3916731	18.0	20.0	77143	Og	Ccy		Py	DG	mod. pyr. clay
DS15	3916732	20.0	22.0	77143	Og	SisCcy			DG	
DS15	3916733	22.0	24.0	77143	Og	Sis			DG	
DS15	3916734	24.0	26.0	77143	Og	SisOvc			DG	
DS15	3916735	26.0	28.0	77143	Og	SisOvc			DG	
DS15	3916736	28.0	30.0	77143	Og	SisOvc			DG	minor vein calcite
DS16		0.0	2.0		Og	Cg			LBO	
DS16	3916737	2.0	4.0	77143	Og	Ccy			LGDG	
DS16	3916738	4.0	6.0	77143	Og	CcySis			DG	
DS16	3916739	6.0	8.0	77143	Og	Sis			DG	
DS17		0.0	2.0		Og	CgObs				
DS17	3916740	2.0	4.0	77143	Om	SssSis	We		WDG	
DS17	3916741	4.0	6.0	77143	Og	Ccy			DGV	
DS17	3916742	6.0	8.0	77143	Og	SisCcy	We		DGLG	
DS17	3916743	8.0	10.0	77143	Og	Ccy			LG	
DS17	3916744	10.0	12.0	77143	Og	Ccy			LG	
DS17	3916745	12.0	14.0	77143	Og	SisOvc		Py	DG	mod. pyr.
DS17	3916746	14.0	16.0	77143	Og	SisCcy		Py	DG	mod. pyr.
DS17	3916747	16.0	17.3	77143	Og	Sis			LG	
DS18		0.0	2.0		Og	CgObs			DG	
DS18	3916748	2.0	4.0	77143	Og	Ccy			LBG	
DS18	3916749	4.0	6.0	77143	Og	Ccy			LBG	
DS18	3916750	6.0	8.0	77143	Og	SisCcy			LGDG	
DS18	3916751	8.0	10.0	77143	Og	CcySis	We		DG	
DS18	3916752	10.0	12.0	77143	Og	Ccy			DG	
DS18	3916753	12.0	14.0	77143	Og	CcySis			DG	
DS18	3916754	14.0	16.0	77143	Og	CcySis			LG	
DS18	3916755	16.0	18.0	77143	Og	Ccy			LG	
DS18	3916756	18.0	20.0	77143	Og	Ccy			LG	
DS18	3916757	20.0	22.0	77143	Og	SisCcy			LG	
DS18	3916758	22.0	24.0	77143	Og	SisCcy			LG	
DS18	3916759	24.0	26.0	77143	Og	SisOvc			LG	
DS18	3916760	26.0	28.0	77143	Og	Sis		Py	LG	mod. pyritic.
DS18	3916761	28.0	29.2	77143	Og	SisOvc			LG	
DS19		0.0	2.0		Og	ObsCg				
DS19	3916762	2.0	4.0	77143	Og	SisCcy			LG	
DS19	3916763	4.0	6.0	77143	Om	SssSis			LGW	
DS19	3916764	6.0	8.0	77143	Og	SisOvc		Ga	DG	very fine-grained disseminated galena (trace).
DS19	3916765	8.0	9.4	77143	Og	Sis			DGW	interbedded lime siltstone + sandstone.

HOLE	SAMPNO	DFROM	DTO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS
DS20	3916766	0.0	2.0	77143	Og	Ccy			DG	
DS20	3916767	2.0	4.0	77143	Og	Ccy			DG	
DS20	3916768	4.0	6.0	77143	Og	Ccy			DG	
DS20	3916769	6.0	8.0	77143	Og	Ccy			DGN	
DS20	3916770	8.0	10.0	77143	Og	Ccy			N	
DS20	3916771	10.0	12.0	77143	Og	Ccy			N	
DS20	3916772	12.0	14.0	77143	Og	Ccy			WM	
DS20	3916773	14.0	16.0	77143	Og	Ccy			LYB	
DS20	3916774	16.0	17.4	77143	Og	Sls	Ma		DG	
DS21	3916775	0.0	2.0	77143	Og	CcyCg			M	
DS21	3916776	2.0	4.0	77143	Og	Ccy	Fe		YB	limonitic clay
DS21	3916777	4.0	6.0	77143	Og	SlsCag	Fe		YB	cellular limonitic limestones.
DS21	3916778	6.0	8.0	77143	Og	SlsCcy	Fe	He	OY	limonitic + hematitic Sls.
DS21	3916779	8.0	10.0	77143	Og	CcySls	Fe		OY	
DS21	3916780	10.0	12.0	77143	Og	SlsCcy	Fe	He	OR	hematite-limonite altered Sls/lesser black clay.
DS21	3916781	12.0	14.0	77143	Og	Ccy			DG	
DS21	3916782	14.0	16.0	77143	Og	Ccy			N	
DS21	3916783	16.0	18.0	77143	Og	Ccy			DGN	
DS21	3916784	18.0	20.0	77143	Og	CcySls	We		DG	
DS21	3916785	20.0	22.0	77143	Og	CcySls		Py	DG	weakly pyritic
DS21	3916786	22.0	24.0	77143	Og	Ccy			DGW	mixed clays
DS21	3916787	24.0	26.0	77143	Og	SlsCcy			DG	
DS21	3916788	26.0	28.0	77143	Og	Ccy			DG	
DS21	3916789	28.0	30.0	77143	Og	Ccy			DG	some contamination: rig out of water.
DS21	3916790	30.0	32.0	77143	Og	Ccy			DG	contaminated sample.
DS21		32.0	33.0		Og	Ccy			DG	no return, end of hole (still within clay).
DS22	3916791	0.0	2.0	77143	Og	Ccy	Fe		DGM	
DS22	3916792	2.0	4.0	77143	Og	CcySls	FeWe		DG	
DS22	3916793	4.0	6.0	77143	Og	Ccy	Fe		YB	limonitic clay + cellular limonite
DS22	3916794	6.0	8.0	77143	Og	Ccy			DG	
DS22	3916795	8.0	10.0	77143	Og	Ccy			DG	
DS22	3916796	10.0	12.0	77143	Og	CcySls	Fe		YG	
DS22	3916797	12.0	14.0	77143	Og	CcySls	Fe		DG	
DS22	3916798	14.0	16.0	77143	Og	SlsCcy	Fe		DG	
DS23		0.0	3.0		Og	Ccy	Fe		DG	(3m runs). Limonitic mottled Ccy, gossanous frags.
DS23	3916799	3.0	6.0	77143	Og	Ccy	Fe		YB	
DS23	3916800	6.0	9.0	77143	Og	Ccy	Fe		YB	gossanous/cellular limonite frags present.
DS23	3916801	9.0	12.0	77143	Og	Ccy			DG	limonitic frags present
DS23	3916802	12.0	15.0	77143	Og	Ccy			DG	
DS23	3916803	15.0	18.0	77143	Og	CcySls	Fe		DG	limonitic, cellular Sls present.
DS23	3916804	18.0	21.0	77143	Og	Sls	Fe		DG	
DS23	3916805	21.0	24.0	77143	Og	SlsCcy			DGW	bivalve fossils present.
DS23	3916806	24.0	24.5	77143	Og	SlsOvc			DG	
DS24	3916807	0.0	3.0	77143	Og	Ccy			YB	
DS24	3916808	3.0	6.0	77143	Og	Ccy	Fe		YBM	cellular limonite/mottled clays
DS24	3916809	6.0	9.0	77143	Og	Ccy	Fe		DG	
DS24	3916810	9.0	12.0	77143	Og	CcySls			DG	
DS24	3916811	12.0	15.0	77143	Og	Sls	Ma		DG	
DS24	3916812	15.0	18.0	77143	Og	Sls			DG	
DS24	3916813	18.0	21.0	77143	Og	SlsCcy			DG	
DS24	3916814	21.0	24.0	77143	Og	Sls			DG	
DS24	3916815	24.0	27.0	77143	Og	Sls	Ma		DG	
DS24	3916816	27.0	30.0	77143	Og	SlsCcy			DG	
DS24	3916817	30.0	33.0	77143	Og	Sls		Py	DG	weakly pyritic.
DS25	3916818	0.0	3.0	77143	Og	Ccy			LB	pale brown sandy clay/lesser dk gy clay.
DS25	3916819	3.0	6.0	77143	Og	Ccy			DG	
DS25	3916820	6.0	9.0	77143	Og	CcySls			DG	
DS25	3916821	9.0	12.0	77143	Og	SlsCcy			DG	
DS25	3916822	12.0	15.0	77143	Og	CcySls			DG	
DS25	3916823	15.0	18.0	77143	Og	SlsCcy			DG	
DS25	3916824	18.0	21.0	77143	Og	Sls		Py	DG	moderately pyritic.
DS25	3916825	21.0	24.0	77143	Og	SlsOvc		Py	DG	weakly pyritic.
DS25	3916826	24.0	27.0	77143	Og	Sls		Py	DG	trace of pyrte.
DS25	3916827	27.0	30.0	77143	Og	SlsCcy		Py	DG	mod. pyr.
DS25	3916828	30.0	33.0	77143	Og	Sls		Py	DG	minor pyrite
DS26	3916829	0.0	3.0	77143	Og	CcyCcy			LB	
DS26	3916830	3.0	6.0	77143	Og	Ccy			DG	
DS26	3916831	6.0	9.0	77143	Og	CcySls			DG	
DS26	3916832	9.0	10.6	77143	Og	Sls	Ma		DG	
DS27		0.0	3.0		Og	CgObs				
DS27	3916833	3.0	6.0	77143	Og	CgCcy			M	
DS27	3916834	6.0	9.0	77143	Og	Sls			LGN	"wispy" lime mudstone unit.
DS27	3916835	9.0	12.0	77143	Og	CcySls	We		DG	
DS27	3916836	12.0	15.0	77143	Og	SlsCcy			DG	
DS27	3916837	15.0	18.0	77143	Og	SlsCcy			DG	
DS27	3916838	18.0	21.0	77143	Og	SlsCcy			DG	gastropod fossil present
DS27	3916839	21.0	23.5	77143	Og	SlsOvc		Py	DG	weakly pyr.
DS28	3916840	0.0	3.0	77143	Og	Ccy			LBDG	
DS28	3916841	3.0	6.0	77143	Og	Ccy			YB	limonitic clay + granules.
DS28	3916842	6.0	9.0	77143	Og	CcySls			BG	

HOLE	SAMPNO	DFROM	DTO	DPO	BMLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS
DS28	3916843	9.0	9.9	77143	Og	SlS			DG	"wispy" lime mudstone unit.
DS29	3916844	0.0	3.0	77143	Og	CcyCg			DG	
DS29	3916845	3.0	6.0	77143	Og	Ccy			N	
DS29	3916846	6.0	9.0	77143	Og	CcySlS			DG	
DS29	3916847	9.0	12.0	77143	Og	SlScy			DG	
DS29	3916848	12.0	15.4	77143	Og	SlSOvc	Fe		DG	
DS30	3916849	0.0	3.0	77143	Og	Ccy			NB	
DS30	3916850	3.0	6.0	77143	Og	Ccy			N	
DS30	3916851	6.0	9.0	77143	Og	Ccy			N	
DS30	3916852	9.0	12.1	77143	Og	CcySlS		Ca	DG	very fine-grained disseminated galena (<1%) visible.
DS31	3916853	0.0	3.0	77143	Og	Ccy			LGY	
DS31	3916854	3.0	6.0	77143	Og	Ccy			LMOG	mixed clays.
DS31	3916855	6.0	9.0	77143	Og	Ccy			N	
DS31	3916856	9.0	12.2	77143	Og	Ccy			N	no EOH sample possible; straight from Ccy->SlS?
DS32	3916857	0.0	3.0	77143	Og	Ccy			DGN	
DS32	3916858	3.0	6.0	77143	Og	Ccy			N	
DS32	3916859	6.0	8.1	77143	Og	CcySlS			LGDG	
DS33	3916860	0.0	3.0	77143	Og	Ccy			M	
DS33	3916861	3.0	6.0	77143	Og	Ccy	Fe	He	DGY	mixed limonitic + hematitic clays.
DS33		6.0	6.4		Og	SlSOvc			DGLG	
DS34	3916862	0.0	3.0	77143	Og	CcyCg			DBN	
DS34	3916863	3.0	3.7	77143	Og	SlSOvc			LGDG	
DS35	3916864	0.0	3.0	77143	Og	CcyCg	Fe		Y	
DS35	3916865	3.0	5.2	77143	Og	SlS			DG	
DS36	3916866	0.0	3.0	77143	Og	Ccy			DG	
DS36	3916867	3.0	3.7	77143	Og	SlS			DG	
DS37	3916868	0.0	3.0	77143	Og	Ccy			DGY	
DS37	3916869	3.0	6.0	77143	Og	Ccy	Fe		YW	
DS37	3916870	6.0	9.0	77143	Om	SsaCcy			W	minor black clay.
DS37	3916871	9.0	12.0	77143	Og	Ccy			N	
DS37	3916872	12.0	15.0	77143	Og	Ccy			N	
DS37	3916873	15.0	18.0	77143	Og	Ccy			N	
DS37	3916874	18.0	21.0	77143	Og	Ccy			N	
DS37	3916875	21.0	24.0	77143	Og	Ccy			N	
DS37	3916876	24.0	27.0	77143	Og	SlS	We		DG	
DS37	3916877	27.0	30.0	77143	Og	Ccy			N	
DS37	3916878	30.0	33.0	77143	Og	SlScy	VuWe		DG	porous lime mudstone
DS37	3916879	33.0	36.0	77143	Og	SlSOvc		Py	DG	minor pyr.
DS37	3916880	36.0	39.0	77143	Og	SlScy	We	Py	DG	moderately pyritic.
DS37	3916881	39.0	42.0	77143	Og	SlScy			DG	
DS38	3916882	0.0	3.0	77143	Og	CcyCg			YB	
DS38	3916883	3.0	6.0	77143	Og	SsaCcy	We		YW	decomposed sandstone
DS38	3916884	6.0	9.0	77143	Og	Ccy			M	
DS38	3916885	9.0	12.0	77143	Og	Ccy			DGN	
DS38	3916886	12.0	15.0	77143	Og	Ccy		Py	N	weakly pyritic
DS38	3916887	15.0	18.0	77143	Og	CcySlS			DG	
DS38	3916888	18.0	21.0	77143	Og	CcySlS			DGN	
DS38	3916889	21.0	24.0	77143	Og	SlScy	We		DG	
DS38	3916890	24.0	27.0	77143	Og	CcySlS			DGN	
DS38	3916891	27.0	30.0	77143	Og	Ccy			DG	
DS38	3916892	30.0	33.0	77143	Og	Ccy			DG	
DS38	3916893	33.0	36.0	77143	Og	Ccy			N	
DS38	3916894	36.0	39.0	77143	Og	SlS	Ma		DG	
DS38	3916895	39.0	42.0	77143	Og	SlS			DG	
DS39	3916896	0.0	3.0	77143	Og	Ccy			NW	
DS39	3916897	3.0	6.0	77143	Og	Ccy			N	
DS39	3916898	6.0	9.0	77143	Og	Ccy			N	
DS39	3916899	9.0	12.0	77143	Og	Ccy			N	
DS39	3916900	12.0	15.0	77143	Og	Ccy			DGN	
DS39	3916901	15.0	18.0	77143	Og	Ccy			DGN	
DS39	3916902	18.0	21.0	77143	Og	Ccy			N	
DS39	3916903	21.0	24.0	77143	Og	Ccy			N	
DS39	3916904	24.0	26.5	77143	Og	SlS	Vu		LG	
DS40	3916905	0.0	3.0	77143	Og	CgCcy			LB	
DS40	3916906	3.0	6.0	77143	Og	Ccy			DEG	
DS40	3916907	6.0	9.0	77143	Og	Ccy			NDB	
DS40	3916908	9.0	12.0	77143	Og	Ccy			N	
DS40	3916909	12.0	15.0	77143	Og	Ccy			N	
DS40	3916910	15.0	18.0	77143	Og	Ccy			NM	
DS40	3916911	18.0	21.0	77143	Og	Ccy			M	
DS40	3916912	21.0	22.0	77143	Og	SlS			DG	
DS41	3916913	0.0	3.0	77143	Og	Ccy			N	
DS41	3916914	3.0	6.0	77143	Og	Ccy			N	
DS41	3916915	6.0	9.0	77143	Og	Ccy		Py	N	minor pyr.
DS41	3916916	9.0	12.0	77143	Og	Ccy			M	mixed + mottled clays.
DS41	3916917	12.0	15.0	77143	Og	Ccy			MN	
DS41	3916918	15.0	16.6	77143	Og	SlS			DGLG	
DS42	3916919	0.0	3.0	77143	Og	CcyCg			N	
DS42	3916920	3.0	6.0	77143	Og	Ccy			NM	
DS42	3916921	6.0	9.0	77143	Og	Ccy			YBWM	

HOLE	SAMPNO	DFROM	DTO	DPO	BMR/LITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS
DS42	3916922	9.0	12.0	77143	Og	Ccy	Fe	He	M	weakly limonitic + hematitic mottled clays.
DS42	3916923	12.0	15.0	77143	Og	Ccy	Fe	He	M	mod. lim./hem. mottled clays.
DS42	3916924	15.0	18.0	77143	Og	Ccy	Fe	He	M	As above, mottled to granular texture.
DS42	3916925	18.0	19.1	77143	Og	Sis			DGLG	
DS43		0.0	3.0		Og	Ccy			BY	cyclone blocked, sample not taken.
DS43	3916926	3.0	6.0	77143	Og	CcySls	We		DG	
DS43	3916927	6.0	9.0	77143	Og	Ccy			M	mixed + mottled clays.
DS43	3916928	9.0	12.0	77143	Og	SlsCcy		He	LGDG	CO3 sandstone (oolitic?), minor hematite alteration.
DS43	3916929	12.0	15.0	77143	Og	Ccy			M	
DS43	3916901	15.0	17.8	77143	Og	Ccy			M	
DS43		17.8	17.9		Og	Ss			DG	not enough sample for end of hole specimen.
DS44	3916902	0.0	3.0	77143	Og	SlsCg			DG	
DS44	3916903	3.0	6.0	77143	Og	CcySls	We		MDG	
DS44	3916904	6.0	9.0	77143	Og	Ccy	Fe	He	M	mixed + mottled clays
DS44	3916905	9.0	12.0	77143	Og	Ccy			M	as above
DS44	3916906	12.0	15.0	77143	Og	CcySls			DG	
DS44	3916907	15.0	15.4	77143	Og	Ccy			LB	
DS44		15.4	15.5		Og	Ss			LG	highly indurated Sls, black graphitic lam. visible.
DS45	3916908	0.0	3.0	77143	Og	Ccy			LBOG	
DS45	3916909	3.0	6.0	77143	Og	Ccy			LGW	
DS45	3916910	6.0	9.0	77143	Og	Ccy	Fe	He	M	weakly hematitic/limonitic mixed + mottled clays.
DS45	3916911	9.0	12.0	77143	Og	SlsCcy			DG	
DS45	3916912	12.0	14.8	77143	Og	Ss		Py	DG	weakly pyritic
DS46	3916913	0.0	3.0	77143	Og	CcySls	We		DGN	
DS46	3916914	3.0	6.0	77143	Og	Ccy			NW	
DS46	3916915	6.0	9.0	77143	Og	SlsCcy			DG	
DS46	3916916	9.0	12.0	77143	Og	Ss			DG	
DS46	3916917	12.0	15.1	77143	Og	SlsOvc			DG	graphitic laminations
DS47	3916918	0.0	3.0	77143	Og	Ccy			DG	
DS47	3916919	3.0	4.5	77143	Og	Ccy			DG	
DS47		4.5	4.6		Og	Ss			DG	
DS48	3916920	0.0	3.0	77143	Og	Ccy			WG	
DS48	3916921	3.0	6.0	77143	Og	Ccy			DGN	
DS48	3916922	6.0	9.0	77143	Og	CcySls			DG	vein calcite.
DS48	3916923	9.0	12.0	77143	Og	Ss	We		DG	
DS48	3916924	12.0	15.0	77143	Og	SlsCcy			DG	
DS48	3916925	15.0	18.0	77143	Og	Ss			DG	
DS48	3916926	18.0	21.0	77143	Og	Ss		Py	DG	moderately pyritic (2-5%)
DS48	3916927	21.0	24.0	77143	Og	Ss		Py	DG	weakly pyr.
DS48	3916928	24.0	27.0	77143	Og	Ss		Py	DG	minor pyr.
DS48	3916929	27.0	30.0	77143	Og	Ss		Py	DG	trace pyr.
DS49	3916930	0.0	3.0	77143	Og	Ccy			BN	
DS49	3916931	3.0	6.0	77143	Og	SlsCcy			LG	
DS49	3916932	6.0	8.8	77143	Og	SlsOvc			DG	
DS50	3916933	0.0	3.0	77143	Og	SlsCcy			LGDG	notable 1mm calcite veining.
DS50	3916934	3.0	6.0	77143	Og	SlsOvc			LG	
DS50	3916935	6.0	9.0	77143	Og	SlsCcy		Py	LG	weakly pyritic
DS50	3916936	9.0	12.0	77143	Og	SlsCcy			DG	
DS50	3916937	12.0	15.0	77143	Og	SlsCcy			DG	
DS50	3916938	15.0	18.0	77143	Og	SlsCcy			DG	
DS50	3916939	18.0	21.0	77143	Og	SlsCcy	Ma		DG	
DS50	3916940	21.0	24.0	77143	Og	CcySls			DG	
DS50	3916941	24.0	27.0	77143	Og	Ss		Py	DG	minor pyrite.
DS50	3916942	27.0	30.0	77143	Og	Ss			DG	
DS51	3916943	0.0	3.0	77143	Og	SlsCcy			LG	
DS51	3916944	3.0	6.0	77143	Og	Ss			LG	
DS51	3916945	6.0	6.8	77143	Og	Ss			G	
DS52		0.0	3.0		Og	CgObs				
DS52	3916946	3.0	6.0	77143	Og	SlsCcy			LGDG	
DS52	3916947	6.0	9.0	77143	Og	SlsCcy			DG	
DS52	3916948	9.0	12.0	77143	Og	SlsCcy		Py	DG	weakly pyr. clay.
DS52	3916949	12.0	15.0	77143	Og	SlsCcy			DG	
DS52	3916950	15.0	18.0	77143	Og	SlsCcy			LGDG	
DS52	3916951	18.0	21.0	77143	Og	Ss			G	
DS52	3916952	21.0	24.0	77143	Og	CcySls			LG	
DS52	3916953	24.0	27.0	77143	Og	SlsCcy		Py	G	mod. pyr.
DS52	3916954	27.0	30.0	77143	Og	Ss	Ma		G	
DS53	3916955	0.0	3.0	77143	Og	CbsCcy			M	
DS53	3916956	3.0	6.0	77143	Og	SlsOvc			LG	
DS53	3916957	6.0	7.1	77143	Og	SlsOvc			DG	1mm calcite veining.
DS54	3916958	0.0	2.5	77143	Og	SlsOvc			DG	
DS55	3916959	0.0	3.0	77143	Og	CbsCcySls			GB	
DS55	3916960	3.0	6.1	77143	Og	SlsOvcCcy		Ca	LG	trace of galena particles.
DS56	3916961	0.0	3.0	77143	Og	Ccy			DB	peaty clay
DS56	3916962	3.0	6.0	77143	Og	SlsOvc			LG	
DS56	3916963	6.0	8.0	77143	Og	Ss	Bx		DG	angular Sls clasts, c.gr. calcite cement.
DS57	3916964	0.0	3.0	77143	Og	CgCcy			DG	
DS57	3916965	3.0	6.0	77143	Og	SlsOvcCcy			DG	
DS57	3916966	6.0	7.9	77143	Og	Ss		Py	G	trace pyr., brachiopod casts.
DS58	3916967	0.0	3.0	77143	Og	CbsCcy			B	

HOLE	SAMPNO	DFROM	DTO	DPO	BMLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS
DS58	3916968	3.0	6.0	77143	Og	CcySls			BLG	gastropod bearing Sls.
DS58	3916969	6.0	9.0	77143	Og	SlsCcy	We		DG	
DS58	3916970	9.0	11.2	77143	Og	SlsOvc	Bx		DG	hint of brecciation of Sls/calcite veining.
DS59	3916971	0.0	3.0	77143	Og	CcyCg			LG	
DS59	3916972	3.0	5.3	77143	Og	SlsOvc			DG	abundant calcite veining.
DS60	3916973	0.0	3.0	77143	Og	CcySlsOvc			LG	
DS60	3916974	3.0	6.0	77143	Og	SlsOvc			DG	abundant calcite veining
DS60	3916975	6.0	9.0	77143	Og	SlsOvc			DG	as above
DS60	3916976	9.0	11.4	77143	Og	OvcSls			DG	final Sunny Corner hole in current program.
<b>BANNOCKBURN</b>										
DS61	3916977	0.0	3.0	77143	Og	Ccy			GB	
DS61	3916978	3.0	6.0	77143	Og	CcySls			DGN	
DS61	3916979	6.0	9.0	77143	Og	Ccy			DG	
DS61	3916980	9.0	12.0	77143	Og	SlsCcy			DG	
DS61	3916981	12.0	15.0	77143	Og	Sls		Py	DG	weakly pyritic
DS61	3916982	15.0	18.0	77143	Og	Sls	Ma		DG	
DS61	3916983	18.0	21.0	77143	Og	SlsOvc		Py	DG	trace pyr.
DS61	3916984	21.0	24.0	77143	Og	Sls			DG	
DS61	3916985	24.0	27.0	77143	Og	SlsCcy			DG	
DS61	3916986	27.0	30.0	77143	Og	Sls		Py	DG	mod. pyr. (disseminated).
DS61	3916987	30.0	33.0	77143	Og	Sls		Ga	DG	very f.g. galena disseminations.
DS61	3916988	33.0	36.0	77143	Og	Sls		PyGa	DG	very f.g. dissem.
DS61	3916989	36.0	39.0	77143	Og	Sls		Py	DG	mod. pyr.
DS61	3916990	39.0	42.0	77143	Og	Sls		PyGa	DG	very f.g. dissem.
DS61	3916991	42.0	44.0	77143	Og	Sls			DG	
DS62	3916992	0.0	3.0	77143	Og	CcyCg			LY	
DS62	3916993	3.0	6.0	77143	Og	CcySls			N	
DS62	3916994	6.0	7.3	77143	Og	SlsOvc			DG	gastropod fossils present.
DS63	3916995	0.0	3.0	77143	Og	SlsOvc			LG	
DS63	3916996	3.0	6.0	77143	Og	SlsOvc			G	
DS63	3916997	6.0	9.0	77143	Og	Sls			G	
DS63	3916998	9.0	12.0	77143	Og	Sls			DG	
DS63	3916999	12.0	15.0	77143	Og	Sls		Py	DG	trace diss. pyr.
DS63	3917000	15.0	17.0	77143	Og	Sls			LGDG	"wispy" graphitic Sls.
DS64	3917030	0.0	3.0	77143	Og	SlsOvc			LG	
DS64	3917031	3.0	3.8	77143	Og	SlsOvc			LG	
DS65		0.0	1.5		Og	Cg				hole abandoned; could not penetrate gravels.
DS65	3917032	0.0	3.1	77143	Og	CgSlsOvc			G	
DS66	3917033	0.0	3.0	77143	Og	SlsOvcCcy		Ga	G	1-2mm gal. frags.
DS66	3917034	3.0	4.0	77143	Og	Sls			G	
DS67	3917035	0.0	3.0	77143	Og	Ccy			DG	
DS67	3917036	3.0	6.0	77143	Og	Ccy			G	
DS67	3917037	6.0	9.0	77143	Og	Ccy			G	
DS67	3917038	9.0	12.0	77143	Og	SlsCcy	Ma		DG	
DS67	3917039	12.0	15.0	77143	Og	SlsOvc			DGG	very fine calcite veining (<1mm).
DS68	3917040	0.0	3.0	77143	Og	Ccy			G	
DS68	3917041	3.0	6.0	77143	Og	Ccy			DG	
DS68	3917042	6.0	9.0	77143	Og	Ccy			N	
DS68	3917043	9.0	12.0	77143	Og	CcySlsOvc		Ga	N	abundant calcite veining, minor galena crystals.
DS68	3917044	12.0	15.0	77143	Og	Ccy			G	
DS68	3917045	15.0	18.0	77143	Og	CcySls			DG	
DS68	3917046	18.0	21.0	77143	Og	SlsCcyOvc			DG	abundant vein calcite
DS68	3917047	21.0	24.0	77143	Og	SlsCcy	We		DG	
DS68	3917048	24.0	27.0	77143	Og	Sls		Py	DG	trace pyr.
DS68	3917049	27.0	30.0	77143	Og	Sls			DG	
DS69	3917050	0.0	3.0	77143	Og	Ccy			GB	mullock heap underlying drill site.
DS69	3917051	3.0	6.0	77143	Og	Ccy			DGN	
DS69	3917052	6.0	9.0	77143	Og	Ccy			DG	
DS69	3917053	9.0	12.0	77143	Og	Ccy		PyGa	DG	dark grey clay containing v.f. gr. pyr. + gal.
DS69		12.0	12.4		Og	SlsOvc		Ga	DG	coarse gr. gal. crystals present.
DS70	3917054	0.0	3.0	77143	Og	SlsCcy			DG	
DS70	3917055	3.0	6.0	77143	Og	Sls			DG	
DS70	3917056	6.0	9.0	77143	Og	Sls			G	
DS70	3917057	9.0	12.0	77143	Og	Sls		Py	DG	moderately pyritic.
DS70	3917058	12.0	15.0	77143	Og	SlsCcy			DG	
DS70	3917059	15.0	18.0	77143	Og	SlsOvc			DG	gastropod fossil present
DS70	3917060	18.0	20.7	77143	Og	SlsOvc			DGG	
DS71	3917061	0.0	2.5	77143	Og	SlsOvc			G	
DS72	3917062	0.0	3.0	77143	Og	SlsCg			DG	
DS72	3917063	3.0	4.9	77143	Og	SlsOvc			LG	abundant vein calcite.
DS73	3917064	0.0	3.0	77143	Og	CgCcy	Fe		Y	limonitic sandy clay present in small proportion.
DS73	3917065	3.0	6.0	77143		CcySss			YW	sandy clay, lesser quartzarenite frags.
DS73	3917066	6.0	9.0	77143		SssCcy			WOG	
DS73	3917067	9.0	11.7	77143	Og	Ccy			G	
DS73		11.7	11.8		Og	SlsOvc			G	
DS74	3917068	0.0	3.0	77143		SssCcy	Fe		YW	lesser grey/green clay.
DS74	3917069	3.0	6.0	77143		SssCcySls	Fe		YW	cellular limonite present.
DS74	3917070	6.0	9.0	77143	Og	Ccy	Fe		DGY	

HOLE	SAMPNO	DFROM	DTO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS
DS74	3917071	9.0	12.0	77143	Og	Ccy	Fe		YG	mixed yellow limonitic + grey clays.
DS74	3917072	12.0	15.0	77143	Og	CcySisSss	Fe	He	PY	limonitic + hematitic clay, limonitic, gossanous frags.
DS74		15.0	15.3			Sss			LG	
DS75	3917073	0.0	3.0	77143	Og	Ccy			LM	
DS75	3917074	3.0	6.0	77143	Og	SisCcy			DG	
DS75	3917075	6.0	9.0	77143	Og	CcySis	We		DG	
DS75	3917076	9.0	12.0	77143	Og	CcySis	We		DG	
DS75	3917077	12.0	15.0	77143	Og	CcySis	FeWe		DBN	feruginous clays
DS75	3917078	15.0	18.0	77143	Og	CcySis	We		DCB	
DS75	3917079	18.0	21.0	77143	Og	SisCcy	We		DG	
DS75	3917080	21.0	22.0	77143	Og	Ss			DG	hole abandoned: 2 drill-rods left down hole.
DS76	3917081	0.0	3.0	77143	Og	CcyCg			DBG	
DS76	3917082	3.0	6.0	77143	Og	Ccy			DBN	
DS76	3917083	6.0	9.0	77143	Og	Ccy			DGN	
DS76	3917084	9.0	12.0	77143	Og	Ccy			DGN	
DS76	3917085	12.0	15.0	77143	Og	Ccy		Ga	G	trace of very fine gr. galena.
DS76	3917086	15.0	16.0	77143	Og	SisOvc			DG	
DS77	3917087	0.0	3.0	77143	Og	CcyCg			LBW	
DS77	3917088	3.0	6.0	77143	Og	CcySis			WG	
DS77	3917089	6.0	9.0	77143	Og	Ccy			DGLG	
DS77	3917090	9.0	12.0	77143	Og	CcySis	We		GW	
DS77	3917091	12.0	15.0	77143	Og	Ccy			DGLG	
DS77	3917092	15.0	18.0	77143	Og	Ccy			DG	
DS77	3917093	18.0	21.0	77143	Og	SisCcy	We		DG	
DS77	3917094	21.0	23.2	77143	Og	Ss	Fi		DG	
DS78	3917095	0.0	3.0	77143	Og	Ccy	Fe		YG	
DS78	3917096	3.0	6.0	77143	Og	CcyCg			LGW	
DS78	3917097	6.0	9.0	77143	Og	CcySis	We		LGW	
DS78	3917098	9.0	12.0	77143	Og	SisCcy	We		DG	
DS78	3917099	12.0	15.0	77143	Og	Ss		Ga	DG	very finely diss. galena.
DS78	3917100	15.0	18.0	77143	Og	SisOvc			DG	
DS78	3917101	18.0	21.0	77143	Og	Ccy		Ga	GY	very finely diss. gal.
DS78	3917102	21.0	24.0	77143	Og	Ccy		Ga	LGW	trace of gal.
DS78	3917103	24.0	27.0	77143	Og	Ccy		PyGa	GDG	trace of pyr., gal.
DS78	3917104	27.0	30.0	77143	Og	Ss		Py	DG	mod. pyr.
DS78	3917105	30.0	33.0	77143	Og	Ss	WeFe	Ak	DG	minor ankerite & limonite within We Sis.
DS78	3917106	33.0	33.7	77143	Og	Ss		Py	LGDG	weakly pyritic
DS79	3917107	0.0	3.0	77143	Og	Ss			DG	
DS79	3917108	3.0	6.0	77143	Og	Ss			DG	
DS79	3917109	6.0	9.0	77143	Og	Ss	Ma		DG	
DS79	3917110	9.0	12.0	77143	Og	SisCcy			DG	
DS79	3917111	12.0	15.0	77143	Og	Ccy		GaPy	N	trace of very fine gr. dissem. sulphides.
DS79	3917112	15.0	18.0	77143	Og	CcySis			LGW	
DS79	3917113	18.0	21.0	77143	Og	SisCcy			LGW	
DS79	3917114	21.0	24.0	77143	Og	Ss		Ga	DG	minor v.f. gr. galena dissem.
DS79	3917115	24.0	27.0	77143	Og	Ss		GaPy	DG	coarse gr. gal. pyr. (<1%).
DS79	3917116	27.0	30.0	77143	Og	Ccy		Ga	G	very f.g. galena dissem.
DS79	3917117	30.0	33.0	77143	Og	SisCcy	We	GaPy	G	trace pyr., gal.
DS79	3917118	33.0	36.0	77143	Og	SisCcy		Ga	GDG	very f.g. galena dissem.
DS79	3917119	36.0	39.0	77143	Og	SisCcy			DG	as above
DS79	3917120	39.0	42.0	77143	Og	Ss		PyGa	G	very fine gr. pyr., gal. dissem.
DS79	3917121	42.0	45.0	77143	Og	Ccy		Ga	G	trace of gal. dissem.
DS79	3917122	45.0	47.3	77143	Og	Ss		Ga	DG	as above
DS80	3917123	0.0	3.0	77143	Og	CbsCcy			B	
DS80	3917124	3.0	6.0	77143	Og	CcySis	We		N	
DS80	3917125	6.0	9.0	77143	Og	Ccy			N	
DS80	3917126	9.0	12.0	77143	Og	SisCcy	We		DG	
DS80	3917127	12.0	15.0	77143	Og	Ss	Fi		LGDG	
DS80	3917128	15.0	15.5	77143	Og	Ss			DGLG	
DS81	3917129	0.0	2.5	77143	Og	SisOvcCg			G	
DS82		0.0	3.0		Og	CbsCg			DG	
DS82	3917130	3.0	6.0	77143	Og	SisOvc			DG	
DS82	3917131	6.0	9.0	77143	Og	CcySis			GDG	
DS82	3917132	9.0	12.0	77143	Og	Ss			DG	
DS82	3917133	12.0	15.0	77143	Og	SisOvc			DG	
DS82	3917134	15.0	18.0	77143	Og	SisOvc			GDG	
DS82	3917135	18.0	20.9	77143	Og	Ss			DG	"wispy" textured graphitic bands. Brachiopod casts.
DS83	3917136	0.0	2.7	77143	Og	Ss			LGDG	
DS84	3917137	0.0	3.0	77143	Og	Ccy			GB	
DS84	3917138	3.0	6.0	77143	Og	CcySis	We		N	
DS84	3917139	6.0	9.0	77143	Og	Ccy			G	
DS84	3917140	9.0	12.0	77143	Og	CcySis			DG	
DS84	3917141	12.0	15.0	77143	Og	SisCcy			DG	
DS84	3917142	15.0	18.0	77143	Og	CcySis	We		DG	
DS84	3917143	18.0	21.0	77143	Og	SisOvc		Py	DG	minor pyr. frags
DS84		21.0	21.7		Og	Ss			DGLG	"wispy" textured Sls.
DS85	3917144	0.0	3.0	77143	Og	CcyCg			LG	
DS85	3917145	3.0	6.0	77143	Og	Ccy			G	
DS85	3917146	6.0	9.0	77143	Og	Ccy			G	
DS85	3917147	9.0	12.0	77143	Og	Ccy			G	

HOLE	SAMPNO	DFROM	DTO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS
DS85	3917148	12.0	15.0	77143	Og	Sls	We	Py	DG	trace pyr. + brachiopod fossils
DS85	3917149	15.0	18.0	77143	Og	Sls		Py	DG	weakly pyritic
DS85	3917150	18.0	21.0	77143	Og	Sls	We		DG	
DS85	3917151	21.0	24.0	77143	Og	SlsCcy		Py	DG	weakly pyritic.
DS85	3917152	24.0	27.0	77143	Og	Sls		Py	DG	moderately pyr.
DS85	3917153	27.0	30.0	77143	Og	Sls			DG	
DS85	3917154	30.0	31.0	77143	Og	Sls	Ma		DG	
DS86	3917155	0.0	3.0	77143	Og	CgCcy			DG	
DS86	3917156	3.0	6.0	77143	Og	Ccy			N	
DS86	3917157	6.0	9.0	77143	Og	Ccy			DGN	
DS86	3917158	9.0	12.0	77143	Og	Ccy			DGN	
DS86	3917159	12.0	15.0	77143	Og	Ccy			DG	
DS86	3917160	15.0	18.0	77143	Og	Ccy		Py	N	weakly pyr.
DS86	3917161	18.0	21.0	77143	Og	CcySls		Py	GLG	pyritic, medium-grey clay.
DS86	3917162	21.0	24.0	77143	Og	CcySls		Py	G	mod. pyr. clay.
DS86	3917163	24.0	27.0	77143	Og	Sls	We		DG	
DS86	3917164	27.0	30.0	77143	Og	SlsCcy	We	Py	DG	trace dissem. pyr.
DS86	3917165	30.0	33.0	77143	Og	SlsCcy			GLG	
DS86	3917166	33.0	36.0	77143	Og	Sls		Py	DG	trace of pyr.
DS87	3917167	0.0	3.0	77143	Og	CgSlsCbs				
DS87	3917168	3.0	6.0	77143	Og	SlsCcy			G	
DS87	3917169	6.0	8.3	77143	Og	Sls		Py	DG	weakly pyritic, bivalve fossil present.
DS88	3917170	0.0	3.0	77143	Og	CcyCbsCg			LB	
DS88	3917171	3.0	6.0	77143	Og	SlsOvc			G	
DS88	3917172	6.0	7.1	77143	Og	SlsOvc	Bx		G	calcite cemented Sls breccia.
DS89	3917173	0.0	3.0	77143	Og	CcyCbsCg			LB	
DS89	3917174	3.0	6.0	77143	Og	Ccy			M	
DS89	3917175	6.0	9.0	77143	Og	Ccy			N	
DS89	3917176	9.0	12.0	77143	Og	CcySls			NDG	
DS89	3917177	12.0	13.1	77143	Og	SlsOvc		Py	G	minor vein pyrite.
DS90	3917178	0.0	3.0	77143	Og	CcyCg			LBG	
DS90	3917179	3.0	6.0	77143	Og	Ccy			WG	
DS90	3917180	6.0	9.0	77143	Og	CcySls			G	
DS90	3917181	9.0	12.0	77143	Og	CcySls		Ga	G	disseminated, very f.g. galena.
DS90		12.0	12.5		Og	Ccy	Fe	He	M	weakly hematitic + limonitic clay.
DS90		12.5	12.7		Og	Sls		Ga	LG	(<1mm) f. gr. dissem. galena.
DS91	3917182	0.0	3.0	77143	Og	CcyCg			YG	
DS91	3917183	3.0	6.0	77143	Og	Ccy			NOB	
DS91	3917184	6.0	9.0	77143	Og	Ccy			N	
DS91	3917185	9.0	12.0	77143	Og	Ccy	Fe		YB	highly limonitic plastic clay.
DS91	3917186	12.0	14.2	77143	Og	SlsOvc			G	
DS92	3917187	0.0	3.0	77143	Og	Ccy			DGLGY	
DS92	3917188	3.0	6.0	77143	Og	Ccy			N	
DS92	3917189	6.0	9.0	77143	Og	Ccy			NW	minor white kaolin intercalations.
DS92	3917190	9.0	12.0	77143	Og	CcySls			N	
DS92	3917191	12.0	12.8	77143	Og	Sls		Ak	DG	ankeritic frags (<2%) present.
DS93	3917192	0.0	3.2	77143	Og	CcySls			OVM	
DS94	3917193	0.0	3.0	77143	Og	Ccy			LYBM	
DS94	3917194	3.0	6.0	77143	Og	Ccy			LYB	
DS94	3917195	6.0	9.0	77143	Og	SlsCcy			DG	
DS94	3917196	9.0	12.0	77143	Og	Sls		Ga	DG	minor f.gr. disseminated galena.
DS94	3917197	12.0	15.0	77143	Og	CcySls	We		G	
DS94	3917198	15.0	18.0	77143	Og	Ccy			G	
DS94	3917199	18.0	21.0	77143	Og	Ccy		PyGa	G	dissem. f.gr. galena + pyrite bearing clay.
DS94	3917200	21.0	24.0	77143	Og	Sls			DG	
DS94	3917201	24.0	25.1	77143	Og	SlsOvc			DG	
DS95	3917202	0.0	3.0	77143	Og	CgCcy			LGB	
DS95	3917203	3.0	6.0	77143	Og	CcySls			MDG	
DS95	3917204	6.0	9.0	77143	Og	Ccy			N	
DS95	3917205	9.0	12.0	77143	Og	Ccy			N	
DS95	3917206	12.0	15.0	77143	Og	CcySls	We		N	
DS95	3917207	15.0	18.0	77143	Og	Sls	Fi	Py	DG	weakly pyritic.
DS95	3917208	18.0	21.0	77143	Og	SlsCcy	We		G	
DS95	3917209	21.0	24.0	77143	Og	SlsCcy			LGG	
DS95	3917210	24.0	27.0	77143	Og	SlsCcy			DG	
DS95	3917211	27.0	30.0	77143	Og	Sls			DG	
DS96	3917212	0.0	3.0	77143	Og	CcyCg			LBN	
DS96	3917213	3.0	6.0	77143	Og	Ccy			G	
DS96	3917214	6.0	9.0	77143	Og	SlsCcy	We		DG	
DS96	3917215	9.0	12.0	77143	Og	CcySls			DG	
DS96	3917216	12.0	15.0	77143	Og	CcySls			DGG	
DS96	3917217	15.0	15.8	77143	Og	Sls			DG	

APPENDIX 2: Blackjacks drillhole logs and assays.

BLACKJACKS AIR-CORE DRILLING DATABASE - DRILLING LOGS AND ASSAYS																
Database last updated 25/5/93																
Results in ppm (Fe in %)																
HOLE	DFROM	DTO	SAMPNO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	Cu	Pb	Zn	Ag	Fe%	Mn
DB1	0.0	2.0	3527878	71533	Qha	CsCv			B		47	52	83	-1	0.38	20
DB1	2.0	4.0	3527879	71533	Og	Ccy			DG		63	509	1209	1	1.45	32
DB1	4.0	6.0	3527880	71533	Og	Ccy			DGN		20	131	388	-1	1.17	41
DB1	6.0	8.0	3527881	71533	Og	Ccy		Gf	DG	Silvery	20	120	301	-1	1.92	52
DB1	8.0	10.0	3527882	71533	Og	Ccy		Gf	DG	Silvery	19	259	2535	-1	2.03	44
DB1	10.0	12.0	3527883	71533	Og	Ccy		Gf	DG	Silvery	19	227	1306	-1	2.41	46
DB1	12.0	14.0	3527884	71533	Og	Ccy		Gf	DG	Silvery	29	269	1057	1	2.58	46
DB1	14.0	16.0	3527885	71533	Og	Ccy		Gf	DG	Silvery	19	177	401	-1	2.5	57
DB1	16.0	18.0	3527886	71533	Og	Ccy		Gf	DG	Silvery	18	75	130	-1	2.47	59
DB1	18.0	20.0	3527887	71533	Og	Ccy		Gf	DG	Silvery	19	115	223	-1	2.51	63
DB1	20.0	22.0	3527888	71533	Og	CcySlS			DG		12	335	1603	1	1.91	311
DB1	22.0	24.0	3527889	71533	Og	SlS	Ma		DG		4	133	544	-1	1.28	263
DB1	24.0	26.0	3527890	71533	Og	SlS	Ma		G		4	48	309	-1	1.24	270
DB2	0.0	2.0	3527891	71533	QhaOg	CcyCv			DGN		18	730	734	1	2.52	61
DB2	2.0	4.0	3527892	71533	Og	Ccy			DGN		18	228	902	-1	2.43	39
DB2	4.0	6.0	3527893	71533	Og	Ccy			DGN		18	42	505	-1	1.96	43
DB2	6.0	8.0	3527894	71533	Og	Ccy		Gf	DG	Silvery	16	74	510	-1	2.3	47
DB2	8.0	10.0	3527895	71533	Og	Ccy			DG		22	239	2379	-1	2.63	51
DB2	10.0	12.0	3527896	71533	Og	Ccy			DG		17	88	368	-1	3.12	57
DB2	12.0	14.0	3527897	71533	Og	SlS	Ma		DG		7	28	70	-1	1.45	242
DB2	14.0	16.0	3527898	71533	Og	SlS	Ma		DG		5	21	60	-1	1.05	193
DB2	16.0	18.0	3527899	71533	Og	CcySlS			LG DG		7	19	83	-1	0.95	168
DB2	18.0	19.7	3527900	71533	Og	CcySlS			LG DG		4	23	77	-1	0.83	193
DB3	0.0	2.0	3527901	71533	QhaOg	CcyCv			DG		24	639	1492	1	2.24	48
DB3	2.0	4.0	3527902	71533	Og	CcySlS	Vn	Cc	DG		18	590	2359	1	2.74	1443
DB3	4.0	6.0	3527903	71533	Og	SlS	Vn	Cc	DG		4	254	1713	-1	2.02	4180
DB3	6.0	8.0	3527904	71533	Og	CcySlS	Vn	Cc	DG		6	681	2178	1	2.32	1517
DB3	8.0	10.0	3527905	71533	Og	SlS Ccy			LG DG		10	372	1638	-1	1.84	505
DB3	10.0	12.0	3527906	71533	Og	SlS	Ma		DG		6	214	383	-1	1.26	329
DB3	12.0	14.0	3527907	71533	Og	SlS	Ma		DG		7	96	405	-1	1.17	227
DB3	14.0	16.0	3527908	71533	Og	Ccy			G		8	151	617	-1	1.04	232
DB3	16.0	17.3	3527909	71533	Og	CcySlS			DG		5	177	683	-1	0.6	202
DB4	0.0	2.0	3527910	71533	Og	Ccy			DG		15	208	1057	-1	1.49	34
DB4	2.0	4.0	3527911	71533	Og	Ccy			DGN		20	706	4097	1	2.12	49
DB4	4.0	6.0	3527912	71533	Og	Ccy		Gf	DG	Silvery	20	101	920	-1	1.86	53
DB4	6.0	8.0	3527913	71533	Og	CcySlS			LG		10	106	510	-1	1.76	272
DB4	8.0	9.8	3527914	71533	Og	SlS Ccy	Ma		DG		7	48	245	-1	1.74	276

APPENDIX 2: Blackjacks drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	Cu	Pb	Zn	Ag	Fe%	Mn
DB5	0.0	2.0	3527915	71533	QhaOg	CcyCv			G		17	33	184	-1	1.38	52
DB5	2.0	4.0	3527916	71533	Og	Ccy			G		16	50	206	-1	1.49	52
DB5	4.0	6.0	3527917	71533	Og	Ccy		Gf	G	Silvery	20	504	662	1	2.2	50
DB5	6.0	8.0	3527918	71533	Og	SlsCcy			LBG		13	280	952	-1	4.15	45
DB5	8.0	10.0	3527919	71533	Og	Ccy			DG		13	317	5200	1	3.55	53
DB5	10.0	12.0	3527920	71533	Og	Ccy			DG		15	343	1600	1	1.58	88
DB5	12.0	14.0	3527921	71533	Og	Ccy			DG		14	70	444	-1	1.9	43
DB5	14.0	16.0	3527922	71533	Og	Ccy			DG		12	26	402	-1	3.03	42
DB5	16.0	18.0	3527923	71533	Og	CcySls	Ma		DG		12	44	268	-1	1.94	110
DB5	18.0	20.0	3527924	71533	Og	Sls	Lm		ALG		5	10	40	-1	0.83	172
DB6	0.0	2.0	3527925	71533	Og	Ccy			G		25	2584	3621	2	1.04	43
DB6	2.0	4.0	3527926	71533	Og	CcySls	Al	Sd	DG		18	2400	7700	2	1.32	46
DB6	4.0	6.0	3527927	71533	Og	Ccy			G		16	1100	8000	2	2.01	46
DB6	6.0	8.0	3527928	71533	Og	Sls	Ma		DG		22	600	9900	2	1.45	49
DB6	8.0	10.5	3527929	71533	Og	Sls	Da	Py	DG		9	70	4040	-1	1.79	39
DB7	0.0	2.0	3527930	71533	QhaOg	CcyCv			B		4	13	122	-1	0.42	24
DB7	2.0	4.0	3527931	71533	Og	Ccy			YB		25	487	726	2	0.74	22
DB7	4.0	6.0	3527932	71533	Og	CcySls			G		27	1348	3317	2	1.4	27
DB7	6.0	8.0	3527933	71533	Og	CcySls			G		16	234	2640	-1	1.66	32
DB7	8.0	10.0	3527934	71533	Og	Sls	Ma		DG		14	193	1835	-1	1.69	32
DB7	10.0	12.0	3527935	71533	Og	Sls	Ma		DG		16	226	1872	-1	1.58	36
DB7	12.0	14.0	3527936	71533	Og	Sls	Ma		DG		13	173	2155	1	1.62	38
DB7	14.0	16.0	3527937	71533	Og	CcySls			YGDG		11	155	2046	1	1.71	33
DB7	16.0	18.0	3527938	71533	Og	Ccy			DG		13	318	1851	1	1.7	38
DB7	18.0	20.0	3527939	71533	Og	CcySls			DG		13	191	2594	-1	2.43	44
DB7	20.0	22.0	3527940	71533	Og	Sls			DG		15	161	1302	-1	1.75	46
DB7	22.0	24.0	3527941	71533	Og	CcySls			DG	Silvery	11	117	666	1	1.86	50
DB7	24.0	26.0	3527942	71533	Og	CcySls			DG	Silvery	13	78	306	-1	1.63	53
DB7	26.0	28.0	3527943	71533	Og	CcySls			DG	Silvery	13	144	245	-1	1.49	46
DB7	28.0	30.0	3527944	71533	Og	Sls	Ma		DG		16	39	163	-1	1.56	43
DB7	30.0	32.0	3527945	71533	Og	Sls	Ma		DG		18	62	620	-1	1.59	44
DB8	0.0	2.0	3527946	71533	Qha	CgCsCcy			LB		27	27	20	-1	0.49	81
DB8	2.0	4.0	3527947	71533	Og?	Ccy			LB		11	14	21	-1	0.45	19
DB8	4.0	6.0	3527948	71533	Og?	CcySsi			LB		24	21	29	-1	0.43	19
DB8	6.0	8.0	3527949	71533	Og?	CcySsi			LGBDG		25	397	608	1	1.09	30
DB8	8.0	10.0	3527950	71533	Og	Sls	Vu		DG		17	138	267	-1	1.55	40
DB8	10.0	12.0	3527951	71533	Og	Ccy			G		17	115	939	-1	1.87	38
DB8	12.0	14.0	3527952	71533	Og	Ccy			GLB		13	272	1680	-1	1.51	31
DB8	14.0	16.0	3527953	71533	Og	Sls			DG		15	78	329	-1	1.71	41
DB8	16.0	18.0	3527954	71533	Og	SlsCcy			DGLB		13	158	644	-1	1.84	37

APPENDIX 2: Blackjacks drillhole logs and assays.

HOLE	DFROM	DTO	SAMPNO	DPO	BMRLITH	FIELDID	TEXTURE	ALT/MIN	COLOUR	COMMENTS	Cu	Pb	Zn	Ag	Fe%	Mn
DB9	0.0	2.0	3527955	71533	Qha	CcyCsCv			LY		7	8	26	-1	0.46	22
DB9	2.0	4.0	3527956	71533	Og	Ccy			G	Silvery	27	389	1291	1	1.94	41
DB9	4.0	6.0	3527957	71533	Og	Ccy			G	Silvery	42	671	1296	1	1.72	35
DB9	6.0	8.0	3527958	71533	Og	Ccy			G		24	430	1043	1	2.11	326
DB10	0.0	2.0	3527959	71533	QhaOg	CcyCv			DG		26	930	686	1	1.89	38
DB10	2.0	4.0	3527960	71533	Og	Ccy			DG		70	1492	713	1	2.38	33
DB10	4.0	6.0	3527961	71533	Og	SlsCcy			DGB		170	5700	1466	1	1.79	49
DB10	6.0	8.0	3527962	71533	Og	SlsCcy			DGB		37	4000	6200	1	2.51	52
DB10	8.0	10.0	3527963	71533	Og	CcySls			DG		25	2300	8200	2	0.82	37
DB10	10.0	12.0	3527964	71533	Og	SlsCcy			DG		25	1340	3569	1	6.91	1116
DB10	12.0	14.0	3527965	71533	Og	CcySls			DG		12	316	1026	1	3.42	761
DB10	14.0	14.2	3527966	71533	Og	Sls	Ds	Py	DG		10	349	1158	1	16.1	4860
DB11	0.0	2.0	3527967	71533	QhaOg	CcyCv			LBLG		93	2476	565	4	0.57	96
DB11	2.0	4.0	3527968	71533	Og	SlsCcy			DG		123	31900	19100	3	0.71	61
DB11	4.0	6.0	3527969	71533	Og	Sls			DG		44	22500	15900	1	3.44	37
DB11	6.0	8.0	3527970	71533	Og	Ccy			DG		38	3400	9800	2	2.4	52
DB11	8.0	10.0	3527971	71533	Og	SlsCcy			DG		41	5700	15700	2	2.51	97
DB11	10.0	12.0	3527972	71533	Og	SlsCcy			DG		32	4500	12600	2	2.83	39
DB11	12.0	14.0	3527973	71533	Og	SlsCcy			DG		40	3000	8900	1	0.84	86
DB11	14.0	16.0	3527974	71533	Og	CcySls			DG		36	3600	16400	4	2.21	38
DB11	16.0	18.0	3527975	71533	Og	Ccy			DG		26	384	2775	1	3.52	537
DB11	18.0	20.0	3527976	71533	Og	CcySls			DG		10	122	737	-1	4.58	950
DB11	20.0	22.0	3527977	71533	Og	CcySls			DG		9	79	415	1	4.55	1007
DB11	22.0	22.6	3527978	71533	Og	Sls			DG		13	49	411	-1	8.69	2038
DB12	0.0	2.0	3527979	71533	Qha	CcyCv			LG		8	14	33	1	0.4	39
DB12	2.0	4.0	3527980	71533	QhaOg	Ccy			LGDG		33	144	55	2	0.69	30
DB12	4.0	6.0	3527981	71533	Og	Ccy			N		21	323	275	-1	1.92	25
DB12	6.0	8.0	3527982	71533	Og	Ccy			N		22	48	723	-1	1.96	29
DB12	8.0	10.0	3527983	71533	Og	Sls			DG		20	94	2369	-1	1.78	39
DB12	10.0	12.0	3527984	71533	Og	SlsCcy			DG		21	220	3170	1	1.89	37
DB12	12.0	14.0	3527985	71533	Og	Ccy			DG	Silvery	19	168	1378	1	1.81	44
DB12	14.0	16.0	3527986	71533	Og	Ccy			DG	Silvery	20	127	1336	-1	2.39	40
DB12	16.0	18.0	3527987	71533	Og	Ccy			DGN		22	62	2667	-1	1.8	38
DB12	18.0	20.0	3527988	71533	Og	Sls	Ds	Sp	DG		12	156	6500	1	4.95	21
DB12	20.0	22.0	3527989	71533	Og	Ccy			DG		20	257	3409	1	2.63	39
DB12	22.0	24.0	3527990	71533	Og	CcySls	Ds	Py	DG		20	706	2807	1	2.38	43
DB12	24.0	26.0	3527991	71533	Og	Sls	Ds	Py	DG		17	900	8100	1	3.77	106
DB12	26.0	26.7	3527992	71533	Og	Sls	Ds	Py	LG		7	87	555	-1	2.8	512

APPENDIX 3

RELOGGED EZ DIAMOND DRILLHOLE LOGS



# CRA EXPLORATION PTY. LIMITED

(INC. IN N.S.W.) A.C.N. 000 057 125

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## Memorandum

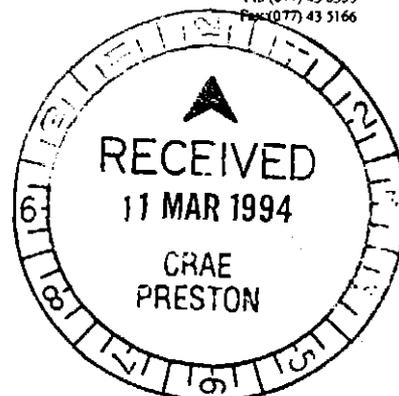
To : D.C. Fielding/J. V. Main/ T.W. Dickson

Copy : XXXXXXXXXX/C.L. Stegman

From : T.C. Moody

Date : 28 February 1994

Subject : **Monthly Report for February, 1994**



### Significant Results:

An alteration pattern has been identified associated with bedrock-Zinc mineralisation at the Carbonate-hosted Zn prospects in the Zeehan area, Tasmania. The characterisation of the alteration pattern/zonation will help direct future exploration and hopefully open-up/enhance the potential of more of the Ordovician limestone's to host significant Zn mineralisation, particularly in areas where surface geochemistry is unable to detect concealed Zn mineralisation.

The alteration is characterised by carbonate, (quartz), galena and/or sphalerite veining and replacement of the limestone's by Fe-carbonate  $\pm$  disseminated pyrite and a broader zone of dolomitisation. Areas of silicification have also been identified although not as useful as an indicator of Zn mineralisation. A core of intensely sideritised-decomposed vuggy limestone containing locally coarse sphalerite/galena and some times barite is typical with high Mn, As and Fe. Character of the alteration varies according to primary lithology, porosity and limestone facies distribution. The alteration style is broadly similar to Irish-type Zn deposits, with the limestones generally being "dirty" with abundant carbonaceous/hydrocarbon residue and detrital material.

Potential in some of the prospects may be upgraded following recognition of altered and mineralised EZ & AMOCO DDH core not previously sampled.

### Exploration Activities Results and Significance:

Whilst on secondment to Zeehan, an examination of alteration associated with Ordovician Gordon Limestone-hosted Zn-mineralisation has been undertaken. This has involved detailed logging/examination of Air-core end-of-hole samples, logging recent CRAE DDH's and re-logging and sampling DDH's completed by EZ and AMOCO and minor reconnaissance field mapping.

The Zeehan work is briefly summarised below and a separate memorandum is also being compiled detailing the results and conclusions.

**Zeehan 1 EL 28/8, Zeehan 2 EL 34, Zeehan 4 EL 38, Mount Dundas:**

Four styles of Zn mineralisation are apparent in association with the Ordovician Gordon limestone, Western Tasmania. These include Zn in surficial/residual clay; pug/decomposed limestone-hosted Zn within or at the base of the limestone sequence, bedrock carbonate-hosted Zn mineralisation and small discordant-fault hosted deposits.

Surficial/residual clay-hosted Zn mineralisation bears a strong correlation to underlying bedrock alteration patterns/Pb-Zn mineralisation. However, displacement of the surficial Zn accumulations from a bedrock source is also apparent in some prospects.

The bedrock limestone alteration is characterised by a core of intense siderite/ankerite replacement (completely obliterating primary textures) with local intense solution brecciation and local colloform banding, Fe-carbonate & rare barite veining, pervasive and vein/open-space sphalerite-galena-(pyrite) mineralisation; a surrounding/adjacent zone of ankerite/dolomite alteration & veining/brecciation (increasing towards the core) associated occasionally with saddle dolomite lined voids, disseminated and vein-hosted pyrite & minor galena-sphalerite (rare chalcopyrite); and a surrounding zone of dolomitised limestone's grading outwards to unaltered-limestone's with rare vein/fracture-hosted Zn-Pb mineralisation. Organic residuum/hydrocarbon material (rarely pyrobitumen) tends to be most apparent in fractures or sweating-out of the limestone's immediately peripheral to the Fe-carbonate alteration zones (although some of the decomposed limestone's may also be strongly carbonaceous). The Pug mineralisation occurring within or at the base/top of the limestone's is also typically associated with Fe carbonate alteration. Intensely altered/replaced partially decomposed limestone relics are common within the pug.

The character of the alteration varies with original composition/texture of the limestone. High levels of Zn (>5%) also occur in some lutites with no alteration apparent in hand-specimen, however these are typically dolomitic or inert to dil. HCl (10%) and heavy.

Recognition and understanding the geometry and nature of the alteration pattern both on a prospect and regional scale should help direct us to the elusive mega Zn deposit or at-least help understand the nature of the mineralising system. The alteration is apparently asymmetric about the intense alteration zones and may correspond to an alteration-mineralising front/migration pathway. Facies variation also appears important as many of the higher energy limestone deposits, fore and back-reef settings are associated with mineralisation. This may be due to composition as well as primary and solution porosity.

Reconnaissance in the Bannockburn Prospect area has revealed a gossan which does not appear to have been sampled previously or covered by recent air core drilling in the prospect. A hill also within the Bannockburn Prospect may also be composed of strongly Fe-carbonate altered limestone's (float from adjacent the hill included pervasive ankerite altered limestone with traces of disseminated/fracture-hosted sphalerite).

AMOCO DDH. DTM-84-3 MARIPOSA.

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

SHEET No. 1 of 2  
No.

TENEMENT NAME.....  
PLAN - MAP REFERENCE.....

CO-ORDINATES 67289E/58825N AZIMUTH 060° DRILLERS..... COMMENCED 19.6.84 DEPTH 70.1 HOLE No. DTM-84-3  
RL COLLAR..... INCLINATION -45° DRILL TYPE..... COMPLETED 23.6.84 CASING LEFT..... DPO No(s).....

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)										
from (M)	To (M)																				
2	10				<p>CALC. SILTITE</p> <p>Mid-dark grey, variably mottled locally brown carbonaceous-stain and wisps/bands of dark grey carbonaceous material; locally stylolitic.</p>	<p>Trace of white carb. vein local pale sphalerite + galena in veinlets.</p> <p>Cleavage 50°-c.a.</p>															
10	11.5				<p>DOL-SILTITE</p> <p>Mid grey + brecciated + carbonaceous, recrystallised with abundant calc-sil Bx fill.</p>	<p>Abundant white calcite + creamy ankerite-sidacite alteration minor sphalerite.</p>	3784280	8.5	10												
11.5	14.4				<p>DOL-SILTITE</p> <p>Mid-dark grey; strongly vuggy; mottled.</p>	<p>Calcite-Ankerite ± galena ± sphalerite veins; minor cream-white clay developed in some fractures &amp; cavities.</p>	281	10	11.5												
							282	11.5	13.0												
							3984273	13	14.4												
							274	14.4	15												
							275	15	18												
14.4	15.0				<p>DOL SPARITE</p> <p>Pale grey-cream coarsely recrystallised carbonate rock.</p>	<p>Minor galena and calcite/ankerite veins + pervasive ankerite flooding.</p>	276	18	21												
							277	59	62.5												
							278	62.5	65.5												
							279	65.5	70.0												
15.0	17.5				<p>ALTERED SILTY LIMESTONE</p> <p>Cream dolomitic, pervasively altered - mottled mid-dark grey; does not react to HCl (10%) or weakly reactive. trace of v. pale. Sphalerite. Locally intensely cracked / calcite veined.</p>																
17.5	17.6				<p>DECOMPOSED LIMESTONE</p> <p>Str. sulphidic dark grey porous, graphitic/carbonaceous.</p>																
17.6	18.0				<p>ALTERED SILTY LIMESTONE</p> <p>As per 15-17.5. local pyritic veins.</p>																
18.0	21.0				<p>CALC LUTITE - ARENITE</p> <p>Irregularly banded dark grey carbonaceous calc siltite + mid grey calcarenite and Calc lutite.</p>																

860166



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

SHEET No. 1 of 2

AMOCO DDH DTM-84-6

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

CO-ORDINATES 62.170.E / 59.075.N AZIMUTH 234° DRILLERS..... COMMENCED 10/8/84 DEPTH 238.5 HOLE No. DTM-84-6

RL COLLAR..... INCLINATION -45° DRILL TYPE..... COMPLETED 23/8/84 CASING LEFT..... DPO No(s).....

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)													
From (M)	To (M)																							
154.5	157.2				<p>CALC-POL LUTITE</p> <p>Irregularly interspersed dark grey locally weakly dolomitised-carbonaceous calc siltite + mid grey calc lutite. May be kerogenous in part. with dark grey stylolites and whorls filled with kerogenous carbonaceous material; minor shell fragments.</p>	<p>156-157 Barite veinlet partly decomposed carbonaceous rubblely siltst-limestone</p> <p>Sharp contact between unaltered H.W. and altered zone at 156 m.</p>	3984283	154.5	156															
157.2	158.0				<p>ALTERED / DECOMPOSED LIMESTONE.</p> <p>Brecciated (solution) barite, siderite, calcite veinlet - rubblely partly decomposed limestone with trace of Galena ± sphalerite + pyrite.</p>		284	156	157															
158	166.5				<p>SIDERITE ALTERED CARBONATE.</p> <p>Totally recrystallised - Brown oxidised siderite altered rock intensely sideritic - red. g. + local very coarse sparry solution/cavern fill calcite-ankerite showing growth banding and minor spotting with py, sph + minor galena. with local disseminated grains of barite / calcite; minor disseminated galena veins + trace of sph. local clay patches.</p>		285	174.5	176.2															
166.5	197				<p>ANKERITE ALTERED SILTITE-LUTITE.</p> <p>Strong-abundant pervasive ankerite (cream) recrystallised or alteration with abundant carbonate crackle veining and breccia cemented by carbonate. local traces dissem, pyrite - vein of galena, sphalerite and minor siderite. Veining and brecciation is most intense adjacent siderite alteration zone (158-166.5); Core is very heavy; minor saddle dolomite; intensely sideritic band at 196.5-196.7m.</p>		286	172	174.5															
197	238.5				<p>CALC-SILTITE =</p> <p>Calcareous, stylolitic, minor dark grey carbonaceous</p>																			

081100



APPENDIX 4

MINERALOGICAL REPORTS, AND SPECIALISED GEOCHEMICAL STUDIES

**CRA  
ADVANCED TECHNICAL DEVELOPMENT**

Melbourne

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**THE MINERALOGY OF A TASMANIAN RESOURCE**

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**PROJECT REPORT PR93/A857A**

Author: R Walker

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

Date: 18 May 1993

Ref: A857A/603ms  
DPO 71546

## PROJECT DETAILS

### BACKGROUND

CRAE commissioned ATD to identify the minerals present in two samples from a Tasmanian Resource. The primary focus for the work was to determine if the zinc present was sphalerite or smithsonite ( $ZnCO_3$ ). The two samples were 3527751 and 3523563.

The techniques used to define the mineralogy were X-ray diffraction (XRD), scanning electron microscopy with energy dispersive X-ray capabilities (SEM/EDX) and chemical assays.

### OUR RESULTS

- \* Neither sample contained smithsonite ( $ZnCO_3$ ).
- \* Sample 3527751 has a simple mineralogy.

Both X-ray diffraction and SEM/EDX identify the sulphide minerals as sphalerite, pyrite and galena. The gangue minerals are quartz and the potassic clay, sericite -  $KAl_3Si_3O_{10}(OH)_2$ .

Table 1 shows the assays, XRD and SEM results for this sample, all of which complement each other.

Table 1

Assay	8.9% Zn, 2.4% Pb, 11.2% Fe, 16.2% S, 1.1% C
XRD	Quartz (Major); Sericite (Minor) Sphalerite (Minor); Pyrite (Minor); Galena (trace)
SEM	Confirms XRD - No other mineral observed

Sample 3527751 Dm13 8-10 m.

The sphalerite in both these samples is a low iron variety.

CRA-ATD powdered samples for bulk  
qualitative XRD phase analysis

La Trobe University-Geology: final XRD report

Date: 19/4/93

*CRA-ATD officer:* Rob Walker  
*Sample identification:* G1850 and G1851  
*Date sample received:* 6/4/93

*Sample information supplied:*  
*Material type:* Zinc ore

*Approximate composition:* not given

*Possible phases:* Sphalerite/Smithsonite

*Sample preparation:*

The powdered (pulverised) sample was placed into a clean agate mortar and any large lumps were broken up. The powder was poured into the XRD sample holder and flattened. A straight glass edge was dragged over the surface of the powdered material before presentation to the XRD.

*XRD information attached:*

uDPSM search/match report with graphical representation.

*Preliminary report submitted:* 8/4/93

Summary/Conclusion:

In order of abundance-

G1850 - 352 7751

5-0490 Quartz SiO<sub>2</sub> 50-100%

5-0566 Sphalerite ZnS 5-50%

5-0032 Muscovite 2M1 KAl<sub>2</sub>Si<sub>3</sub>AlO<sub>10</sub>(OH)<sub>2</sub> ~5%

6-0710 Pyrite FeS<sub>2</sub> ~5%

5-0592 Galena PbS ~5%

25-0284 Graphite C <5%

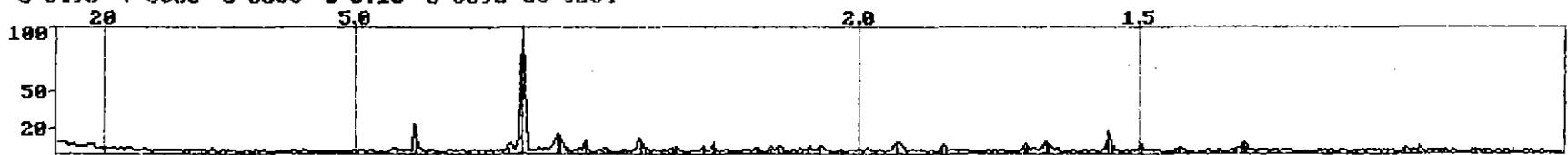
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LSN10807  
G1850  
3527751

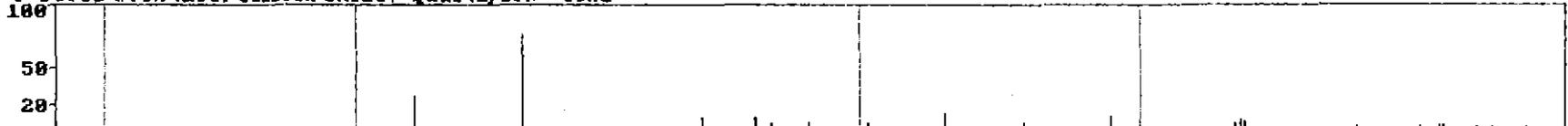
IDENTIFIED PHASES

Intensities: Linear

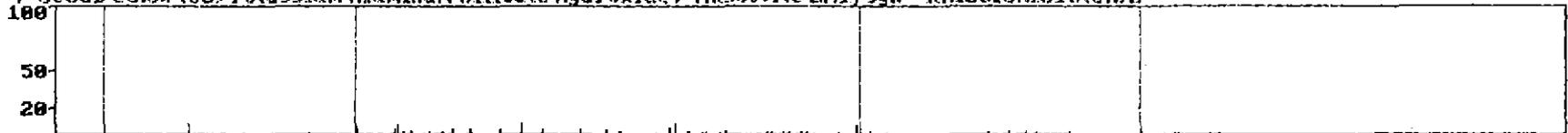
5-0490 7-0032 5-0566 6-0710 5-0592 25-0284



5-0490 (75% (296) Silicon Oxide / Quartz, low = SiO2



7-0032 (8.3% (88) Potassium Aluminum Silicate Hydroxide / Muscovite 2M1, syn = KAl2Si3AlO10(OH)2



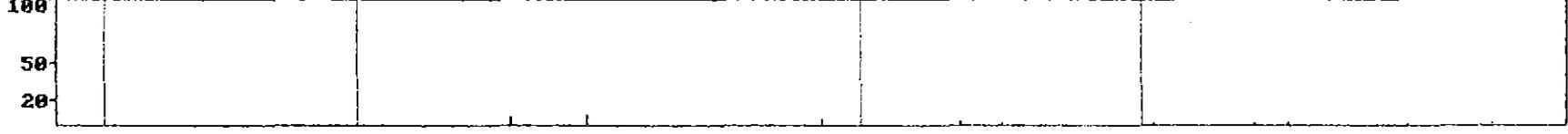
5-0566 (40% (40) \*Zinc Sulfide / Sphalerite, syn = ZnS



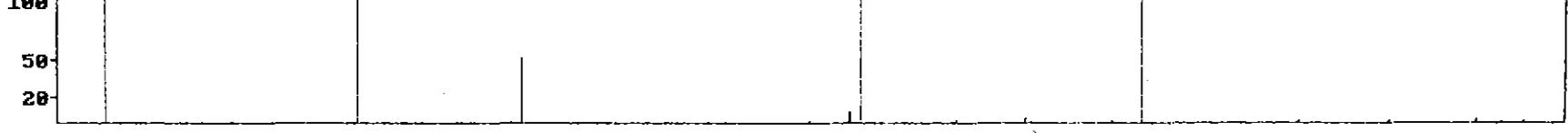
6-0710 (8.7% (43) \*Iron Sulfide / Pyrite, syn = FeS2



5-0592 (7.2% (51) \*Lead Sulfide / Galena, syn = PbS



25-0284 (51% (10) Carbon / Graphite, syn = C



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

Melbourne

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

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**PROJECT REPORT PR93/A857A**

Author: C Halsall/R Walker

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

Date: 18 June 1993

Ref: A857A/639ch

DPo 77101

931109

## PROJECT SUMMARY

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### FOCUS

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

### FINDINGS

- The major Zn-bearing mineral in these samples is sphalerite.
- This sphalerite is a low Fe variety.
- A small amount of Zn is present in the silicate minerals fraipontite and hendricksite (samples 3523430 and 3527708).
- Some Pb may be present as the mineral kegelite (sample 3523430).

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## PROJECT DETAILS

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### BACKGROUND

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

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

### RESULTS

931111

**Sample 3527708 Dm10**

XRD and SEM/EDX identified the sulphide minerals as pyrite, sphalerite and galena. A single grain of chalcopyrite was observed by SEM. The zinc minerals fraipontite and hendricksite were detected in minor amounts (see Table 2). The main gangue minerals are muscovite (sericite) and quartz. EDX analysis of two grains of sphalerite gave Fe values of 0.9 and 1.1 wt%.

Assay	Cu 236ppm, Pb 27100ppm, Zn 49000ppm, Ag 241ppm, Fe 9.87%, Mn 38ppm
XRD	Pyrite (major); Muscovite (minor); Sphalerite (minor); Quartz (minor); Galena (trace); Fraiporitite (trace); Hendricksite (trace)
SEM	Confirms XRD. Suggests that pyrite is only a minor constituent (<50% of sample - visual estimate). A grain of chalcopyrite was also observed.

Table 2. Assay, XRD and SEM results for sample 3527708

CRA-ATD powdered samples for bulk  
qualitative XRD phase analysis

La Trobe University-Geology: final XRD report

Date: 28/5/93

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

Sample information supplied:  
Material type: Zinc minerals

Approximate composition: not given

Possible phases: Dolomite, sphalerite and quartz.

Sample preparation:

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

XRD information attached:

uDPSM search/match report with graphical representation.

Preliminary report submitted: 21/5/93

Summary/Conclusion:

In order of abundance-

G1884

931113

G1885

26-080	Pyrite	FeS <sub>2</sub>	50-100%
6-0263	Muscovite-2M1	KAl <sub>2</sub> (Si <sub>3</sub> Al)O <sub>10</sub> (OH,F) <sub>2</sub>	5-50%
5-0566	Sphalerite	ZnS	5-50%
33-1161	Quartz	SiO <sub>2</sub>	5-50%
5-0592	Galena	PbS	~5%
14-0388	Fraipontite-2M1	(Zn,Al) <sub>3</sub> (Si,Al) <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>	<5%
19-0544	Hendricksite-1M	K(Zn,Mn,Fe) <sub>3</sub> (Si,Al) <sub>4</sub> O <sub>10</sub> (OH) <sub>2</sub>	<5%

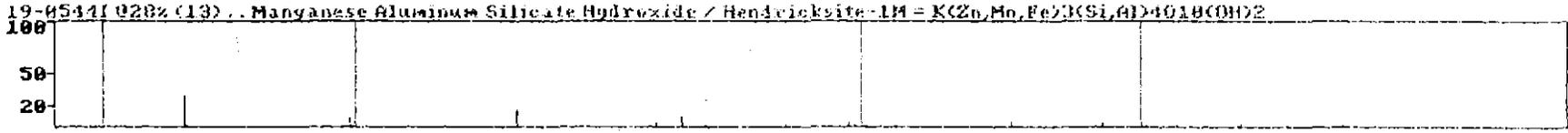
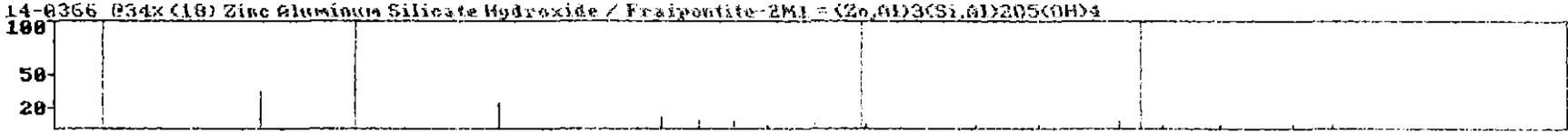
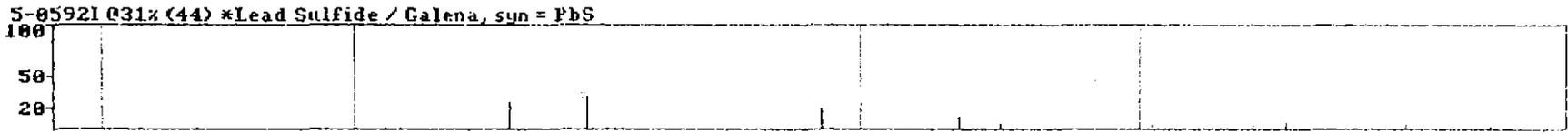
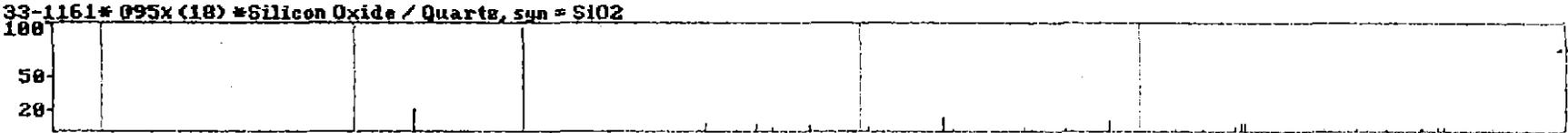
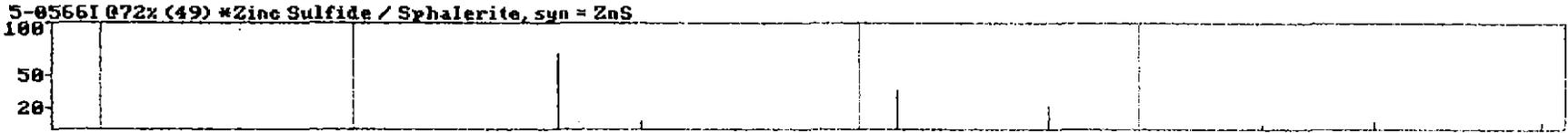
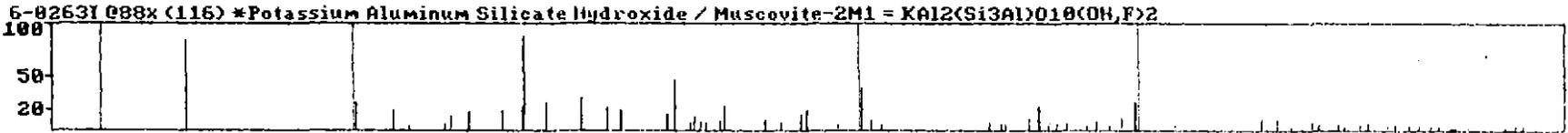
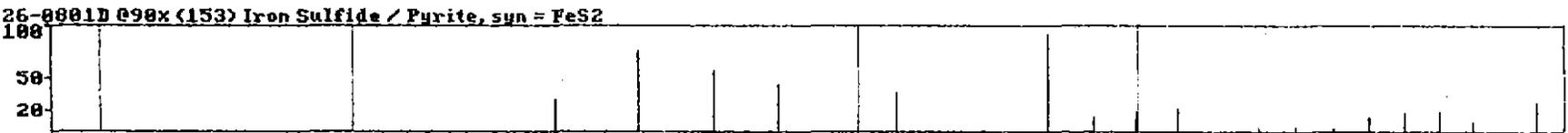
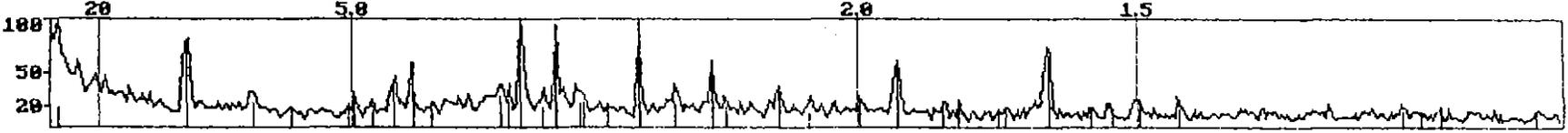
G1886

G1885  
3527708

IDENTIFIED PHASES

Intensities: Linear

26-0801 6-0263 5-0566 33-1161 5-0592 14-0366 19-0544



031114

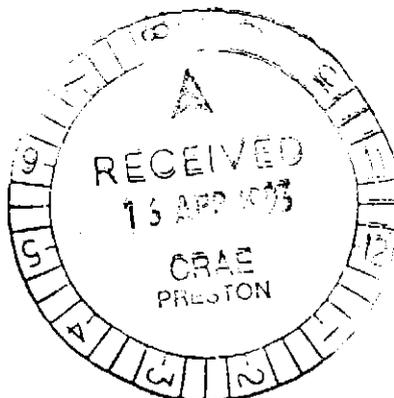
## Central Mineralogical Services

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



13 April 1993

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



### REPORT CMS 93/3/12

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

*H.W. Fander*

H.W. Fander, M.Sc.

### COPIES TO:

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

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

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

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

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

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

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

SAMPLE NO.	ZN MINERALS	OTHERS	
3314 188	Sphalerite; much is coarse (up to 7mm). Pale, zoned; Fe content probably <5%.	Pyrite, galena (some as veinlets in carbonate). Minor ankerite.	ZP19 4-6 4.1% Zn
189	Minor low-Fe, colourless sphalerite.	Abundant fine pyrite, encrusting other minerals. Quartz. Fine fibrous gypsum.	DB11 2-4 1.9%
190	Amber-brown sphalerite (Fe <5%)	Abundant pyrite (some is framboidal); galena. Quartz. Traces ?chalcopyrite.	DM10 4-6 4.9%
191	Very pale sphalerite (Fe <5%).	Abundant ankerite; conspicuous galena, minor pyrite; very minor calcite.	DM10 34-36 200ppm Ag
192	Very pale sphalerite. (Fe <5%) sometimes with submetallic appearance.	Dominant fine-grained pyrite; minor galena. Minor quartz, carbonate.	DM13 8-10 8.9% Zn

Appendix 5: Multi-element geochemistry of air-core samples with over 1% Zn.

Multi-element geochemistry for samples with Zn > 1%																	
Results in ppm unless shown otherwise																	
HOLE	DFROM	DTO	SAMPNO	Cu	Pb	Zn	Ag	Fe%	Mn	Al	As	Ba	Bi	Ca	Cd	Co	Cr
DM1	8.0	10.0	3527629	64	6000	14800	8	3.71	45	96200	155	52	-10	1990	54	84	197
DM1	10.0	12.0	3527630	60	8700	12200	7	4.15	55	89300	107	42	-10	4610	51	65	163
DM1	12.0	14.0	3527631	74	6600	10900	7	4.48	67	111000	126	42	-10	4960	43	50	176
DM1	14.0	16.0	3527632	71	5500	12800	7	3.91	50	126000	152	47	-10	2320	49	64	155
DM1	16.0	18.0	3527633	80	9100	18100	10	4.41	65	107000	166	43	-10	3920	71	58	215
DM1	18.0	20.0	3527634	62	7200	13700	7	4.04	73	104000	154	38	-10	2340	55	53	160
DM1	20.0	22.0	3527635	53	12200	15700	11	3.66	116	92400	110	49	-10	17600	64	45	202
DM8	2.0	4.0	3527674	86	2500	10200	10	3.84	115	110000	98	124	-10	1010	28	98	234
DM8	4.0	6.0	3527675	71	4300	18300	24	2.64	63	131000	85	148	-10	1030	59	81	135
DM8	6.0	8.0	3527676	57	3000	12200	18	7.9	2148	94900	48	199	-10	3180	39	49	141
DM9	6.0	8.0	3527688	85	9200	18100	10	3.41	32	93100	209	113	-10	1420	139	67	284
DM9	8.0	10.0	3527689	56	8800	25500	15	3.87	36	111000	161	46	-10	2360	75	59	167
DM9	10.0	12.0	3527690	50	7300	17800	16	3.49	36	87800	145	45	-10	1440	48	56	205
DM9	12.0	14.0	3527691	26	633	18300	6	13.2	217	41800	165	41	-10	24200	43	94	184
DM10	2.0	4.0	3527707	102	6500	24300	92	4.47	58	132000	84	34	-10	802	110	62	139
DM10	8.0	10.0	3527710	86	9600	30500	51	16.8	32	74800	171	15	-10	984	130	98	103
DM10	10.0	12.0	3527711	140	6400	13800	77	4.76	40	122000	112	46	-10	1430	67	55	152
DM10	12.0	14.0	3527712	184	18500	36000	145	4.56	917	165000	88	44	-10	7620	175	56	180
DM10	14.0	16.0	3527713	274	13700	20400	122	3.21	72	193000	62	64	-10	3070	132	55	189
DM10	16.0	18.0	3527714	149	10400	27000	99	2.91	61	176000	72	139	-10	3430	148	43	142
DM10	18.0	20.0	3527715	241	8000	14400	65	5.93	101	144000	88	83	-10	4100	107	57	127
DM13	6.0	8.0	3527750	554	13200	15800	41	2.48	50	98500	71	217	-10	725	136	56	319
DM13	10.0	12.0	3527752	35	6700	19300	2	3.4	54	127000	81	181	-10	605	60	94	122
DM15	10.0	12.0	3527768	25	7400	11400	9	2.48	37	67500	47	174	-10	719	59	28	91
DM15	18.0	20.0	3527772	12	641	10900	3	3.55	28	87500	166	142	-10	457	9	143	95
DM15	32.0	34.0	3527779	20	910	23900	7	1.89	51	91100	32	209	-10	675	115	30	122
DM23	18.0	20.0	3527822	243	37300	42300	56	9.83	9700	22900	89	151	-10	118000	184	56	47
DM23	20.0	22.0	3527823	286	10000	10100	21	4.05	1584	45200	160	223	-10	45200	51	83	176
DM24	30.0	32.0	3527843	151	4600	30700	19	2.56	56	105000	83	132	-10	616	166	56	116
DM33	4.0	6.0	3527857	91	6100	14300	3	1.84	375	99400	61	296	-10	1550	88	45	168
DM34	6.0	8.0	3527868	164	7700	24000	6	1.72	54	92800	173	180	11	3420	306	119	123
DM34	8.0	10.0	3527869	122	5500	32200	5	3.75	58	73800	304	95	12	2800	205	189	161
DB11	2.0	4.0	3527968	123	31900	19100	3	0.71	61	63900	159	74	10	1340	379	242	224
DB11	4.0	6.0	3527969	44	22500	15900	1	3.44	37	76800	128	125	-10	1230	340	129	200
DB11	8.0	10.0	3527971	41	5700	15700	2	2.51	97	91700	121	203	-10	1830	63	89	176
DB11	10.0	12.0	3527972	32	4500	12600	2	2.83	39	106000	172	101	-10	1270	46	154	132
DB11	14.0	16.0	3527974	36	3600	16400	4	2.21	38	110000	125	74	-10	1780	49	109	135

Appendix 5: Multi-element geochemistry of air-core samples with over 1% Zn.

Multi-element geochemistry for samples with Zn > 1%															
Results in ppm unless shown otherwise															
HOLE	DFROM	DTO	SAMPNO	K	Mg	Mo	Na	NI	P	Sb	V	S%	C%	Au	Sn
DM1	8.0	10.0	3527629	28600	5020	13	473	232	592	23	101	9.5	2.7	-0.008	3
DM1	10.0	12.0	3527630	25800	4930	-10	460	171	317	27	89	9.9	4.7	-0.008	12
DM1	12.0	14.0	3527631	33900	6640	11	561	145	407	32	103	10.4	4.75	0.032	3
DM1	14.0	16.0	3527632	36900	6520	-10	540	175	236	36	93	9.9	2.9	-0.008	17
DM1	16.0	18.0	3527633	32000	5820	10	485	171	444	48	103	10.5	3.6	-0.008	4
DM1	18.0	20.0	3527634	35800	5850	10	511	152	472	34	97	9.9	2.4	-0.008	-3
DM1	20.0	22.0	3527635	21900	10100	-10	335	128	432	30	88	8.4	6.1	-0.008	-3
DM8	2.0	4.0	3527674	34200	8220	-10	1370	193	620	20	112	4.85	0.8	-0.008	12
DM8	4.0	6.0	3527675	45900	8330	-10	541	152	825	26	124	5.4	1.15	-0.008	7
DM8	6.0	8.0	3527676	42600	7220	-10	434	100	662	20	98	3.9	1.9	-0.008	4
DM9	6.0	8.0	3527688	27300	4320	-10	379	172	770	88	211	9	8.5	0.01	-3
DM9	8.0	10.0	3527689	25400	4120	-10	339	176	664	39	154	9.7	6.1	-0.008	-3
DM9	10.0	12.0	3527690	20300	2860	-10	246	178	784	30	106	9.1	3.3	0.008	12
DM9	12.0	14.0	3527691	12800	13700	-10	171	229	462	16	117	13.6	4	-0.008	-3
DM10	2.0	4.0	3527707	30200	7730	-10	992	192	711	18	89	10.6	2.45	0.024	6
DM10	8.0	10.0	3527710	13500	3940	-10	279	322	1580	30	62	21	5.2	0.01	7
DM10	10.0	12.0	3527711	31400	5150	-10	499	168	500	32	83	11.7	2.6	0.016	14
DM10	12.0	14.0	3527712	44800	10100	-10	660	166	1230	56	137	8.4	3.45	0.014	9
DM10	14.0	16.0	3527713	48400	10100	-10	775	189	1230	74	138	6.5	2.35	0.024	18
DM10	16.0	18.0	3527714	58200	11000	-10	818	113	1060	35	145	6.8	1.4	0.04	12
DM10	18.0	20.0	3527715	51500	9130	-10	796	153	1110	58	136	7.7	1.35	0.012	8
DM13	6.0	8.0	3527750	27300	3750	13	393	148	1290	52	89	4.45	0.69	-0.008	-3
DM13	10.0	12.0	3527752	40800	5260	-10	472	267	871	14	107	8.4	0.94	-0.008	7
DM15	10.0	12.0	3527768	31200	5660	-10	348	84	246	17	63	5.15	1.4	0.018	8
DM15	18.0	20.0	3527772	23900	4670	-10	255	369	2120	8	66	7.45	4.4	0.009	11
DM15	32.0	34.0	3527779	38200	6930	-10	418	103	357	8	80	3.7	0.93	-0.008	6
DM23	18.0	20.0	3527822	11300	46400	-10	81	90	170	52	39	7.6	7.3	0.01	7
DM23	20.0	22.0	3527823	24500	24700	-10	232	184	332	37	58	7.75	3.15	-0.008	4
DM24	30.0	32.0	3527843	36600	5580	-10	338	177	366	39	80	6.5	0.76	-0.008	7
DM33	4.0	6.0	3527857	31500	6540	-10	495	100	542	31	104	2.8	1.5	0.078	8
DM34	6.0	8.0	3527868	24900	4210	11	329	396	1080	70	102	5	1.95	-0.008	4
DM34	8.0	10.0	3527869	14800	1850	10	247	730	1270	109	107	13.9	1.8	-0.008	7
DB11	2.0	4.0	3527968	21000	4270	-10	240	656	1490	77	94	10.8	5.3	0.012	-3
DB11	4.0	6.0	3527969	21300	4490	-10	240	375	1600	74	104	9.1	5.2	-0.008	-3
DB11	8.0	10.0	3527971	29200	6560	-10	329	275	761	24	100	6.2	3.7	-0.008	5
DB11	10.0	12.0	3527972	25800	5790	-10	279	485	575	16	103	7.3	4.45	-0.008	5
DB11	14.0	16.0	3527974	27500	6430	-10	290	358	292	23	84	8.4	3.35	-0.008	7