

**EL33/2008 – UNA PLAINS**

**TASMANIA**

**ANNUAL TECHNICAL REPORT**

**5<sup>TH</sup> NOVEMBER 2010 – 4<sup>TH</sup> NOVEMBER 2011**

AUTHOR: P. J. de Vries., - MSc, BAppSc, MAusIMM  
Geological, Educational & Mining Services Pty Ltd

REPORT No: EL332008\_ATR\_OCT\_11

REPORT DATE: 05/10/2011

LICENSEE: **Geological, Educational & Mining Services Pty Ltd**

ABN: 31 066 519 551

<b>TABLE OF CONTENTS</b>	<b>PAGE</b>
TITLE PAGE	i
TABLE OF CONTENTS	ii
LIST OF FIGURES and TABLES	iii
VARIFICATION LISTING	iv
TENEMENT DETAILS	iv
ABSTRACT	v
KEY WORDS	v
<b>1.0 Introduction.....</b>	<b>6</b>
<b>2.0 Exploration Objectives.....</b>	<b>7</b>
<b>3.0 Location and Access.....</b>	<b>9</b>
<b>4.0 Regional Geology.....</b>	<b>10</b>
<b>5.0 Previous Work.....</b>	<b>12</b>
<b>6.0 Exploration Completed During the Reporting Period.....</b>	<b>15</b>
<b>7.0 Discussion and Conclusions.....</b>	<b>15</b>
<b>8.0 Expenditure.....</b>	<b>16</b>
<b>9.0 References.....</b>	<b>17</b>
<b>APPENDIX 1.....</b>	<b>20</b>
<b>APPENDIX 2.....</b>	<b>23</b>
<b>APPENDIX 3.....</b>	<b>26</b>
<b>APPENDIX 4.....</b>	<b>28</b>
<b>APPENDIX 5.....</b>	<b>34</b>

## LIST OF FIGURES AND TABLES

**Figure 1: Location of EL33/2008 – Una Plains..... 9**

**Table 1. Significant Assay Results – Diamond Drilling 2008 – 2009..... 14**

## LIST OF APPENDICES

APPENDIX	DESCRIPTION
APPENDIX 1	Drill Hole Collar Locations
APPENDIX 2	Drill Hole Assay Data
APPENDIX 3	Down Hole Survey
APPENDIX 4	Drill Hole Lithology
APPENDIX 5	Lithology Codes
APPENDIX 6	Assay Standards Data

## VERIFICATION LISTING

Exploration Work	File_name	Type	Format	Description
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### Office Studies

Report	EL332008_201011_01_report	pdf		Report Body
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### Drilling

Drilling_All	EL332008_201011_02_dhlocation	txt		Drill hole collar locations
Drilling_All	EL332008_201011_03_dhassay	txt		Drill hole assay data
Drilling_All	EL332008_201011_04_dhsurvey	txt		Down hole survey
Drilling_All	EL332008_201011_05_lithology	txt		Drill hole lithology
Drilling_All	EL332008_201011_06_lithcode	txt		Lithology Codes
Report	EL332008_201011_02_appendix1	pdf		Drill hole collar locations
Report	EL332008_201011_03_appendix2	pdf		Drill hole assay data
Report	EL332008_201011_04_appendix3	pdf		Down hole survey
Report	EL332008_201011_05_appendix4	pdf		Drill hole lithology
Report	EL332008_201011_06_appendix5	pdf		Lithology Codes

## TENEMENT DETAILS

LICENSEE: **Geological, Educational & Mining Services Pty Ltd**  
Grant date 1: 05/11/2008

ABN: 31 066 519 551

## **ABSTRACT**

Exploration Licence 33/2008 comprises 48 square kilometres located midway between Ringarooma and Mathinna in the states north-east. The licence was granted on 5<sup>th</sup> November 2008 to Geological, Educational and Mining Services Pty Ltd (GEMS).

During the period 2010 – 2011 work has been severely restricted due to ongoing consistent rain events in the north –east of the state. The contracted drilling company; after successfully mobilising to site in late July, has been unable to re-gain access the site due to the need to cross the creek crossing via a natural ford. The drill rig has been ready to drill, however due to the weather and other issues the drilling company has been unable to commence drilling. Earthmoving contractors have also had to re-established access to the site during the reporting period, due to conditions resulting from the unseasonably wet weather rendering the track unpassable.

As a consequence no on-site work was undertaken and vehicular activity has been restricted on the re-established Hinemoa track in order to minimise damage during the wet weather. It is anticipated that drilling will commence in the spring.

## **KEY WORDS**

Location Name:	Una, Dans Rivelet.
Earth Science Related Terms:	Sinstral fault, dextral fault, pre-mineralisation shear, post mineralisation shear, brittle offset.
Environment of Mineralisation:	shear hosted mineralisation, brittle host, quartz vein stockwork.
Commodities:	gold, silver
Exploration Methods:	Historical research, 3D geological modelling, drill testing based on model, rock chip sampling/field mapping, underground mapping.
Mine / prospect name:	Una Reef, Hinemoa Reef.
Stratigraphic Name:	Mathinna Supergroup.
Geological province name:	Lachlan Fold Belt.
Geological age:	Devonian

## **1.0 Introduction.**

Exploration Licence 33/2008 comprises 48 square kilometres located midway between Ringarooma and Mathinna in the states north-east. The licence was granted on 5<sup>th</sup> November 2008 to geological, Educational and Mining Services Pty Ltd (GEMS).

## **2.0 Exploration Objectives.**

The philosophy and objectives of the Exploration undertaken by GEMS is directed to the definition of a significant hard rock gold resource that would be amenable to economic extraction.

Primary exploration has focussed on testing discrete anomalies as defined by independent re-interpretation of historic data.

- Confirm the veracity and extent of previous mapping and anomalous gold mineralisation.
- Inspect and sample any available underground openings
- Drill test below historic underground workings at depth to determine structural controls and geometry of primary source.

### **Una**

The presence of historic mining along several structures was investigated. Surface pitting of high grade gold veining indicates that the licence has proven potential.

The initial exploration target is to test mineralisation to the south of the Una No.1 Adit along the postulated hangingwall shear that controls overall mineralisation.

Five adits and a series of surface trenches have been excavated at the Una Mine, which are located approximately 900 metres north of the Hinemoa workings.

The workings were assessed in 1980 by Mitchell (1980) and by Akerman (1995), with drilling ultimately being undertaken on the northern most workings. All drilling to date has been focused on and under the northern most Adit (No.1). It is proposed that the mineralisation extending to the south be tested

### **Hinemoa:**

The Hinemoa workings have been explored previously by three adits and as series of surface trenches over a 250-metre strike length. The quartz lode is hosted within a

significant north-south striking west dipping (75°) fault zone. The structure had previously been tested by two adits only one of which (the most northerly) is still accessible. The southern access (Rayner's Tunnel) has been buried by scree material resultant for the clear-felling of the coupe immediately above the Adit.

### **Alberton Goldfield.**

The Exploration Licence extends to the north of the Hinemoa and Una Prospects and surrounds the majority of the Alberton Goldfield. The northern portion of the Licence is prospective for both hard-rock and potentially alluvial gold deposits.

The focus in the second year has not been directed to the northern potential of the Licence but on the mineralisation located at the Hinemoa prospect.

### **3.0 Location and Access.**

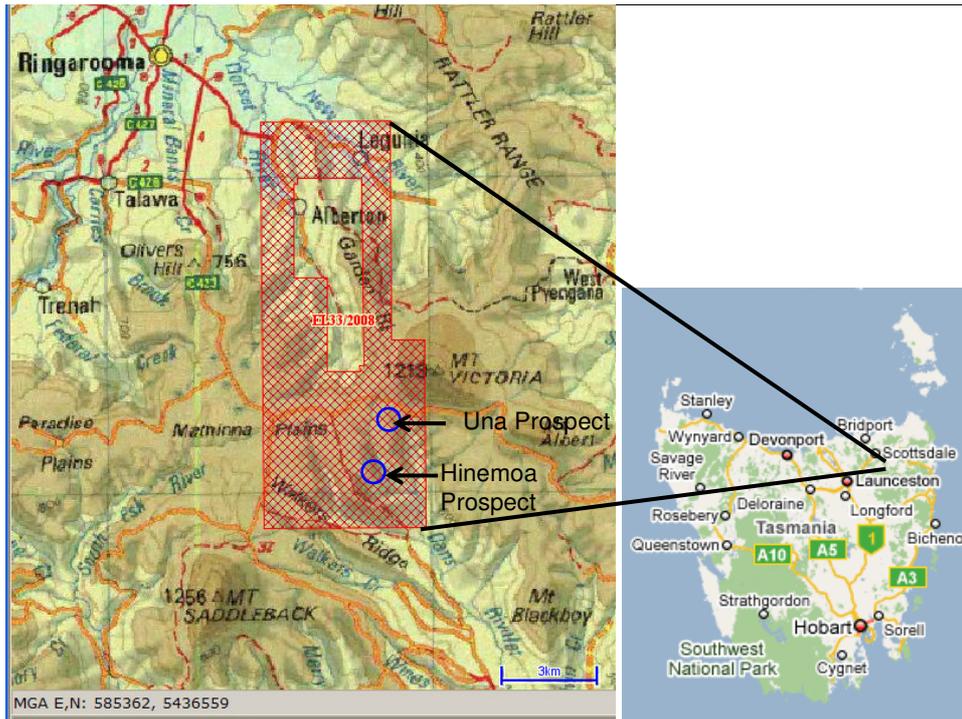
Una Plains Licence EL332008 is located in North East Tasmania, the licence covers 48km<sup>2</sup> commencing approximately 2 kilometres south-east of Ringarooma and extending south for 13 kilometres. Access to the northern portion of the lease is via numerous Crown roads and Forestry Tasmania tracks. .

A Government 'C' class road (C423) bisects the Lease along the Una Plains immediately south of Mont Victoria allowing access to the central portion of the Licence. Access to the southern portion is either via Forestry Tasmania tracks off the C423 or by using additional Forestry Tasmania tracks coming up from Dan's Rivulet.

During December 2010, a local contract was re-engaged to re-establish access to the Himeomoa mine by cleaning off the existing track damaged caused by the unseasonably wet weather.

To gain access to the prospect it is necessary to cross Dan's Rivelet in two locations, unfortunately due to increased water flows (because of the wet weather) it has been impossible to gain safe access to the site due to the high water and shifting nature of the gravels at the crossings.

**Figure 1: Location of EL33/2008 – Una Plains.**



#### **4.0 Regional Geology.**

The regional geology of EL 33/2008 has been extremely well described by MRT geologists and summarised on the 1:50,000 Alberton geological map. Recent publications specific to the economic geology of the area are provided by Taheri (1992 and 1993) and Keele et.al (1994) as part of the Netgold project. The following is gleaned from this work.

The exploration Licence is located within the 70 kilometres long, 2 kilometre wide northwesterly trending Mangana to Lyndhurst gold lineament. Gold mineralisation contained within the lineament is hosted by the Silurian to Devonian Mathinna Beds. The Mathinna Beds comprise an alternating sequence of bedded quartzites, sandstones, siltstones and slates. The quartzites have a lithic component and display graded structures locally.

The Mathinna Beds are unconformably overlain by probable Carboniferous and Permo-Triassic sedimentary sequences of the Parmeener Supergroup. Granites and

granodiorite of Devonian age have intruded the Mathinna Beds. Sporadic tin and tungsten mineralisation is associated with granitic intrusion.

Regionally the Mathinna Beds are folded about northwest trending axes to from small scale and kilometre scale wavelength tight to moderate folds. Axial plane cleavage development takes the form of a slaty cleavage in the pelitic units. A subsequent deformation has produced regional mega kinking about steep, northeast trending kink planes, and numerous steep, northeast trending kink planes, and numerous steep dipping bands with both sinistral and dextral geometry.

The age of the gold mineralisation is uncertain; however it is probable that gold mineralisation was concurrent with folding and cleavage development prior to emplacement of the Devonian granites.

## **5.0 Previous Work.**

Small scale mining of narrow but high grade quartz structures have been reported as early as 1890's. The quartz lodes occurs within a 75m wide shear zone, which is over 550m long extending from Hinemoa in the south of the Licence to the Una Workings in the north. Twelvetreets (1904) reports gold grades to 83.5 g/t in surface trenches.

Mapping of the major producers was undertaken in detail on behalf of Sturt Meadows Prospecting Syndicate NL on EL31/76 (Mitchell 1980) during the period 1979-80. Detailed feature mapping and sampling was undertaken over a large area including the workings located on what is now EL33/2008.

During the period 1994-5 EL1/92 covering the area of Dan's Rivulet and extending to within 50 metres of the Hinemoa workings was subject to exploration by Cuttack Mining and Exploration Pty Ltd under a Joint Venture with Goldstream Mining NL. (Anon 1996). Due to surveying errors Cuttack erroneously sampled the Hinemoa No.1 Adit and proceeded to extract a bulk sample of unknown tonnage estimated to be approximately 31 g/t.

EL23/92 covering the Una section of workings (and extending northward to the Alberton Goldfield) was originally granted to Newcrest Mining Limited in 1992. The exploration licence was part of a large tenement holding. Newcrest's target was large-scale stockwork style gold mineralisation.

During 1993 Mancala purchased the EL from Newcrest with a time limited royalty clause.

During 1994-5 EL23/92 was held by Mancala Pty Ltd (Akerman, 1995) the Una and Hinemoa mines were assessed and exploration programmes proposed.

During 1995-6 (Akerman, 1996) the Una and Hinemoa workings were mapped and sampled in detail. An eight hole (UNA001 - UNA008), 208 metre diamond drilling was completed at the Una No.1 Adit workings only.

All of the holes were drilled below the existing workings at the Una No. 1 Adit. The holes were shallow (maximum depth 40.7 metres) and all holes intersected the lode in the expected position. Three holes intersected the lode with abundant visible gold. The results from these three intersections were surprisingly low. UNA 002 intersected 1m @ 13.2 g/t Au, UNA 006 intersected 0.5m @ 19.7 g/t Au and UNA 003 intersected 0.4m @ 4.55 g/t Au. An error with the assay procedure was queried but re-assay of the other half of the core resulted in even lower assay results.

This exploration programme outlined a small resource of 1,000 tonnes at 12-15 g/t Au (non-JORC compliant) on the narrow lode that varied between 0.5 and 1.8-metre width. The assessed grade was calculated from both surface results and drill results.

During 1998 a joint venture agreement was signed between Hercules Resources and Low Impact Diamond Drilling Specialists (LIDDS). Under the terms of the agreement, LIDDS were required to complete a minimum of 800 metres of diamond drilling within EL 23/92 to earn a fifty (50%) per cent share in the exploration licence.

During 1998-9 (Griffith's, 1999) LIDDS exploration concentrated on the Una workings. Three closely spaced angled holes were drilled totalling 391.7 metres under the workings of the Una No.1 lode below the holes previously drilled by Mancala Pty Ltd. The strategy was to significantly build on the resource outlined in 1995-96 by Akerman. Unfortunately these holes failed to intersect significant mineralisation.

During 2001 (Denwar, K., 2001) a small outcropping fault related sulphide lode was tested by diamond drilling at the Una Prospect. The workings present as a small pit, exposed a narrow <5cm wide zone of pyritic sericite altered sediment containing a massive sulphide matrix. The zone reportedly swells rapidly to be of the order of 1m wide at about 1metres depth. A sample of sphalerite rich material was obtained.

A 47.3m deep diamond drill hole was completed by LIDDS using a Longyear Hydracore 28. The hole was collared at 5422550 mN, 567950 mE, and the collar was set-up at an azimuth of 055 degrees and a declination on 49 degrees. The hole failed to intersect any significant mineralisation. The hole was not logged in any detail.

During 2008 – 09 (de Vries, 2009) two Diamond Drill Holes (UDH001 and UDH002) were drilled into a proposed parallel mineralised structure. UDH001 intersected a broad zone of shearing, alteration and anomalous gold. The best interval in UDH001 was from 40.60 metre to 41.00 metres a distance of 0.40 metres grading 0.34 g/t Au (Table 1). The drilling of UDH002, while intersecting altered and veined material failed to generate any significant results.

**Table 1. Significant Assay Results – Diamond Drilling 2008 - 2009**

<b>HOLE ID</b>	<b>FROM (m)</b>	<b>TO (m)</b>	<b>INTERVAL (m)</b>	<b>AU (g/t)</b>	<b>AG (g/t)</b>	<b>AS (ppm)</b>	<b>COMMENTS</b>
<b>UDH001</b>	40.6	41.6	1.0	0.26	<1.0	1,190	Lode / Shear

The results of both holes indicate the presence of a structural control that is interpreted as being the westerly margin of the controlling structural corridor at the Una Prospect. The bulk of historic production has come from the Una Mine located on the footwall of the structural corridor.

## **6.0 Exploration Completed During the Reporting Period**

Due to the extremely wet conditions, the proposed drilling has not eventuated in order to minimise any potential track damage. The drilling contract mobilised to site during late July with the intention of completing the proposed drill holes, however subsequent rain made access to the rig impossible and the rig remains on site awaiting a favourable gap in weather in which to access and commence drilling.

It is planned that drilling will now occur as soon a favourable weather and manning issues can be resolved by the drilling company. The track will again require re-assessment and any additional remedial work performed before the drilling can commence.

## **7.0 Discussion and Conclusions.**

Due to the delay in receiving formal Work Plan Approval for the Hinemoa Prospect work on the Licence has been restricted to minor literature review.

Site inspections of the Hinemoa workings appears to confirm assumptions by authors such as Mitchell (1980) that the main Hinemoa Vein is not restricted only to the area of historic prospecting and may possibly extend several hundred metres further south-west to at least the crest of the Hinemoa Ridge.

It is planned that drill immediately below the main Hinemoa Adit down plunge from a high grade shoot previously delineated in the adit.

## 8.0 Expenditure.

### Geoscientific Costs

- Geology \$ 4,200
- Geochemistry
- Geophysics
- Remote Sensing

### Drilling & Gridding Costs

- Gridding
- Drilling

### Land Access Costs

### Rehabilitation Costs

### Feasibility Study Costs

Other Items \$ 13,697

Administration Costs \$ 800

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**Total Costs** \$ 18,697

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## 9.0 References

- Akerman, T.E. November 1996.** Annual Report, Exploration Licence 23/92. *Unpublished internal report, Mancala Pty Ltd*
- Anon, May 1996.** Annual Report of Cuttack Mining and Exploration Pty Ltd. *MRT96-3849*
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- Keele, R.A., Taheri, J., and Bottrill, R.R., 1994.** Structural and veining in the Devonian aged Mathinna-Alberton Gold Lineament, northeastern Tasmania. *Report 1994/06, Mineral Resources Tasmania*
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- Reed, A.R., 2004.** Gold mineralisation and the regional Palaeozoic structure of the Mathinna Supergroup, eastern Tasmania. *Record 2004/01, Mineral Resources Tasmania*
- Taheri, J., 1992.** Northeast Goldfields: A summary of the Tower Hill, Mathinna and Dans Rivulet Goldfields. *Report 1992/10, Mineral Resources Tasmania*
- Taheri, J., 1993.** Northeast Goldfields: A summary of the Alberton Goldfield. *Report 1993/34, Mineral Resources Tasmania.*
- Threader, V.M., 1947.** 6. Proposed Drilling at Una Mine. Pp 47 – 49. *Economic and General Geology. TR8\_47-49*

**Twelvetrees, W.H., 1904.** Report on the Mount Victoria Goldfield. *Department of Mines, Tasmania*

## **APPENDICIES**

## **APPENDIX 1**

Surface Location (SL1)

H0001 Exploration Licence Data header file  
H0002 Version 1  
H0003 Generated 10/10/2011  
H0004 Reporting period end\_date 5/10/2011  
H0005 State Tasmania  
H0100 Tenement\_name EL33\_2008  
H0101 Tenement\_holder Geological Educational & Mining Services Pty Ltd  
H0102 Project\_name Una Plains  
H0103 Map\_sheet\_number\_250K K5521; NORTH EAST  
H0113 Map\_sheet\_number\_100K 8415: FORRESTER  
H0123 Map\_sheet\_number\_25K 5642; ALBERTON  
H0123 Map\_sheet\_number\_25K 5642: VICTORIA  
H0200 Start\_of\_data\_acquisiton 1/10/2010  
H0201 End\_of\_data\_acquisiton 30/09/2011  
H0202 Data\_format SG1  
H0203 Number\_of\_data\_records 12  
H0204 Date\_of\_metadata\_update 30/09/2011  
H0300 FileNames  
H0301 downhole\_survey\_data\_file EL332008\_201011\_04\_dhsurvey.txt  
H0302 location\_data\_file EL332008\_201011\_02\_dhlocation.txt  
H0303 assay\_data\_file EL332008\_201011\_03\_dhassay.txt  
H0304 rock\_description\_file EL332008\_201011\_05\_lithology.txt  
H0305 lithology\_code\_file EL332008\_201011\_06\_lithcode.txt  
H0400 Drilling\_code Contractor  
H0401 DD Diamond Bit - Coring Geological Educational & Mining Services Pty Ltd  
H0500 Surveyed\_feature drill hole collars  
H0501 Geodetic\_datum GDA94  
H0502 Vertical\_datum AHD  
H0503 Projection Universal Transverse Mercator (UTM)  
H0504 Coordinate\_system Grid (MGA)  
H0505 Projection\_zone 55  
H0506 Surveying\_instrument GPS - Magellan (Accuracy 10 m)  
H0507 Surveying\_company Low Impact Diamond Drilling Specialists Pty Ltd  
H0900 Remarks Total Station GDA94 AMG Zone 55 Survey  
H1000 Project Prospect Hole\_id GDA\_E GDA\_N AHD\_RL\_  
LENGTH Drilltype Line Start\_Date End\_Date Hole\_Size  
Coll\_Surv Drill\_Company Lab  
H1001 metres metres metres metres  
H1004  
D Project Prospect Hole-ID LocationX\_GDA\_94  
LocationY\_GDA\_94 LocationZ\_GDA\_94 Length DrillType Hole\_Size  
Drill\_Company Line Start\_Date End\_Date Coll\_Surv Lab  
D UNA\_PLAINS UNA U\_GRAB01 5421219 568379 728  
GRAB HINEMOA 30/07/2009 30/07/2009 N  
Bernie Reseach Laboratory  
D UNA\_PLAINS UNA UDH001 5422172.97 568104.33 726.83947.6  
SURF\_DDH NTW Low Impact Diamond Drilling Specialists Pty Ltd  
UNA\_STH 24/07/2009 25/07/2009 N Bernie Reseach Laboratory  
D UNA\_PLAINS UNA UDH002 5422108.95 568133.747 714.33135.8  
SURF\_DDH NTW Low Impact Diamond Drilling Specialists Pty Ltd  
UNA\_STH 26/07/2009 27/07/2009 N Bernie Reseach Laboratory

D	UNA_PLAINS	UNA	UN001	5422362.63	568052.91	732.51	18.2
	SURF_DDH	BQTK	ATD	UNA	N	Bernie Reseach	
Laboratory							
D	UNA_PLAINS	UNA	UN002	5422381.01	568042.97	738.66	21.2
	SURF_DDH	BQTK	ATD	UNA	N	Bernie Reseach	
Laboratory							
D	UNA_PLAINS	UNA	UN003	5422380.93	568042.8	738.6	25.7
	SURF_DDH	BQTK	ATD	UNA	N	Bernie Reseach	
Laboratory							
D	UNA_PLAINS	UNA	UN004	5422391.93	568039.57	740.09	24.3
	SURF_DDH	BQTK	ATD	UNA	N	Bernie Reseach	
Laboratory							
D	UNA_PLAINS	UNA	UN005	5422398.35	568031.27	737.56	25.7
	SURF_DDH	BQTK	ATD	UNA	N	Bernie Reseach	
Laboratory							
D	UNA_PLAINS	UNA	UN006	5422371.21	568043.54	734.88	24.2
	SURF_DDH	BQTK	ATD	UNA	N	Bernie Reseach	
Laboratory							
D	UNA_PLAINS	UNA	UN007	5422358.73	568045.37	730.57	27.2
	SURF_DDH	BQTK	ATD	UNA	N	Bernie Reseach	
Laboratory							
D	UNA_PLAINS	UNA	UN008	5422398.29	568018.62	733.11	40.7
	SURF_DDH	BQTK	ATD	UNA	N	Bernie Reseach	
Laboratory							
EOF							

## **APPENDIX 2**

Downhole Geochemistry (DG1)

H0001 Exploration Licence Data header file  
H0002 Version 1  
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H0004 Reporting period end\_date 5/10/2011  
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H0101 Tenement\_holder Geological Educational & Mining Services Pty Ltd  
H0102 Project\_name Una Plains  
H0103 Map\_sheet\_number\_250K K5521; NORTH EAST  
H0113 Map\_sheet\_number\_100K 8415; FORRESTER  
H0123 Map\_sheet\_number\_25K 5642; ALBERTON  
H0123 Map\_sheet\_number\_25K 5642; VICTORIA  
H0200 Start\_of\_data\_acquisiton 1/10/2010  
H0201 End\_of\_data\_acquisiton 30/09/2011  
H0202 Data\_format SG1  
H0203 Number\_of\_data\_records 12  
H0204 Date\_of\_metadata\_update 30/09/2011  
H0300 FileNames  
H0301 assay\_data\_file EL332008\_201011\_03\_dhassay.txt  
H0600 Sample\_Code Sample\_Type Sample\_Description  
H0601 R Diamond Drill core "Core, Sample interval"  
H0700 Sample\_Processing\_Code Sample\_Processing\_Details  
H0701 FA25\_AAS 12hr Dry @ 80C - Jaw Cruch to 80% <3mm - Total Pulv (LM5) to 90% <75um - 200g Split for assay  
H0702 ScreenFire 12hr Dry @ 80C - Jaw Cruch to 80% <3mm - Total Pulv (LM5) to 90% <75um - 500g Split for assay  
H0800 Assay\_code Assay\_Description Assay\_company  
H0801 FA25\_AAS FA/AAS Fire Assay (25g)/flame Atomic Absorption Spectrometry  
Bernie Research Laboratory Pty Ltd  
H0802 ScreenFire Screen Fire Assay Bernie Research Laboratory Pty Ltd  
H0804 AT/OES 4 Acid Digest in Teflon Tube / Inductively Coupled Plasma Optical  
(Atomic) Emission Spectrometry Bernie Research Laboratory Pty Ltd  
H0900 Remarks Down Hole Geochemistry  
H1000 Project Prospect Hole-ID From To Sample Au\_ppm  
Au\_ppm Au\_Avg Ag\_ppm As\_ppm  
H1001 AT/OES AT/OES Au\_Rp1 (F650) FA25\_AAS  
H1002 metre metre ppm ppm ppm ppm  
H1003 0.10 0.10 -0.99 0.01 0.01 1 50  
D Project Prospect Hole-ID From To Sample Au\_ppm  
Au\_ppm Au\_ppm Ag\_ppm As\_ppm  
D UNA\_PLAINS HINEMOA U\_GRAB01 0907001 1.53  
1.53 <1 15300  
D UNA\_PLAINS UNA UDH001 5 5.3 95260 0.03 0.03  
<1 250  
D UNA\_PLAINS UNA UDH001 5.3 6.4 95261 0.05 0.05  
<1 100  
D UNA\_PLAINS UNA UDH001 6.4 7 95262 0.02 0.02  
<1 200

D	UNA_PLAINS	UNA	UDH001	7	7.3	95263	0.13	0.13
	<1	300						
D	UNA_PLAINS	UNA	UDH001	34.7	40	95264	-0.01	
	<0.01	<1	1000					
D	UNA_PLAINS	UNA	UDH001	40	40.6	95265	0.04	0.04
	<1	750						
D	UNA_PLAINS	UNA	UDH001	41	41.6	95267	0.14	0.14
	<1	1550						
D	UNA_PLAINS	UNA	UDH001	44.3	44.8	95268	0.15	0.15
	<1	900						
D	UNA_PLAINS	UNA	UDH001	44.8	45.3	95269	0.05	0.05
	<1	350						
D	UNA_PLAINS	UNA	UDH001	40.6	41	95266	0.34	0.34
	<1	950						
D	UNA_PLAINS	UNA	UDH002	25	25.5	95270	0.02	0.02
	<1	250						
D	UNA_PLAINS	UNA	UDH002	25.5	26	95271	-0.01	
	<0.01	<1	250					
D	UNA_PLAINS	UNA	UDH002	26	26.6	95272	0.08	0.08
	<1	200						

EOF

## **APPENDIX 3**

Drilling Results (DS1)

H0001 Exploration Licence Data header file  
H0002 Version 1  
H0003 Generated 10/10/2011  
H0004 Reporting period end\_date 5/10/2011  
H0005 State Tasmania  
H0100 Tenement\_name EL33\_2008  
H0101 Tenement\_holder Geological Educational & Mining Services Pty Ltd  
H0102 Project\_name Una Plains  
H0103 Map\_sheet\_number\_250K K5521; NORTH EAST  
H0113 Map\_sheet\_number\_100K 8415: FORRESTER  
H0123 Map\_sheet\_number\_25K 5642; ALBERTON  
H0123 Map\_sheet\_number\_25K 5642; VICTORIA  
H0200 Start\_of\_data\_acquisiton 1/10/2010  
H0201 End\_of\_data\_acquisiton 30/09/2011  
H0202 Data\_format SG1  
H0203 Number\_of\_data\_records 12  
H0204 Date\_of\_metadata\_update 30/09/2011  
H0300 FileNames  
H0301 downhole\_survey\_data\_file EL332008\_201011\_04\_dhsurvey.txt  
H0502 Vertical\_datum AHD  
H0506 Surveying\_instrument Down Hole Distance  
H0507 Surveying\_company  
H0900 Remarks Single Shot Eastman Survey Camera  
H1000 Project Prospect HOLE\_ID Depth Azimuth\_AMG Azimuth\_Magnetic  
Dip Instrument  
H1001 metres degrees\_decimal degrees\_decimal  
degrees\_decimal  
H1004 0.1 0.5 0.5 0.5  
D Project Prospect Hole-ID Distance Azimuth  
Azimuth\_Mag Dip Instrument  
D UNA\_PLAINS UNA UDH001 47 241 255.5 -45 Eastman  
Singleshot  
D UNA\_PLAINS UNA UDH002 35 226 240.5 -48 Eastman  
Singleshot  
D UNA\_PLAINS UNA UN001 1 64.5 79 -61 Eastman Singleshot  
D UNA\_PLAINS UNA UN002 1 64.5 79 -58.2 Eastman Singleshot  
D UNA\_PLAINS UNA UN003 1 64.5 79 -78 Eastman Singleshot  
D UNA\_PLAINS UNA UN004 1 64.5 79 -74 Eastman Singleshot  
D UNA\_PLAINS UNA UN005 1 64.5 79 -64.8 Eastman Singleshot  
D UNA\_PLAINS UNA UN006 1 64.5 79 -55.2 Eastman Singleshot  
D UNA\_PLAINS UNA UN007 1 64.5 79 -53 Eastman Singleshot  
D UNA\_PLAINS UNA UN008 1 64.5 79 -60.8 Eastman Singleshot  
D UNA\_PLAINS UNA UN008 25 64.5 79 -58.8 Eastman Singleshot  
EOF

## **APPENDIX 4**

Lithological Logging (DL1)

H0001 Exploration Licence Data header file  
H0002 Version 1  
H0003 Generated 10/10/2011  
H0004 Reporting period end\_date 5/10/2011  
H0005 State Tasmania  
H0100 Tenement\_name EL33\_2008  
H0101 Tenement\_holder Geological Educational & Mining Services Pty Ltd  
H0102 Project\_name Una Plains  
H0103 Map\_sheet\_number\_250K K5521; NORTH EAST  
H0113 Map\_sheet\_number\_100K 8415; FORRESTER  
H0123 Map\_sheet\_number\_25K 5642; ALBERTON  
H0123 Map\_sheet\_number\_25K 5642; VICTORIA  
H0200 Start\_of\_data\_acquisiton 1/10/2010  
H0201 End\_of\_data\_acquisiton 30/09/2011  
H0202 Data\_format SG1  
H0203 Number\_of\_data\_records 12  
H0204 Date\_of\_metadata\_update 30/09/2011  
H0300 FileNames  
H0301 rock\_description\_file EL332008\_201011\_05\_lithology.txt  
H0302 lithology\_code\_file EL332008\_201011\_06\_lithcode.txt  
H0502 Vertical\_datum AHD  
H0506 Surveying\_instrument Down Hole Distance (From)  
H0507 Surveying\_company  
H0600 Sample\_Code Sample\_Type Sample\_Description  
H0601 R DC Drill core Drill Hole Lithology  
H0900 Remarks From - To interval record  
H1000 Project Prospect Hole\_id From To Lith\_1 MINERAL Weathering  
QTZ ALT\_TYPE  
H1001 metres metres species % style  
H1004 0.1 0.1  
D Project Prospect Hole-ID From To Lithology Sulphide  
Weathering % Qtz ALT\_TYPE  
D UNA\_PLAINS UNA UDH001 0 4.1 SLTSH - sox 0  
-  
D UNA\_PLAINS UNA UDH001 4.1 4.3 SLTSH - mox 0  
feox  
D UNA\_PLAINS UNA UDH001 4.3 5.2 SLTSH - sox 0  
-  
D UNA\_PLAINS UNA UDH001 5.2 7.3 SL/QV py asp sox 40  
"sil, feox, ser"  
D UNA\_PLAINS UNA UDH001 7.3 10.6 SH - fr 0  
-  
D UNA\_PLAINS UNA UDH001 10.6 16.5 SLTSH - fr 0  
-  
D UNA\_PLAINS UNA UDH001 16.5 17.3 SLTST/SST - fr  
0 -  
D UNA\_PLAINS UNA UDH001 17.3 18.8 SLTSH - fr 0  
-  
D UNA\_PLAINS UNA UDH001 18.8 20 SST - fr 0  
-  
D UNA\_PLAINS UNA UDH001 20 21 SST/QV - fr  
1 -

D	UNA_PLAINS	UNA	UDH001	21	21.7	SST	-	fr	0
D	UNA_PLAINS	UNA	UDH001	21.7	22.8	SST	-	fr	0
D	UNA_PLAINS	UNA	UDH001	22.8	23.1	SST/QV		py	fr
D	UNA_PLAINS	UNA	UDH001	23.1	24.9	SST/QV		-	fr
D	UNA_PLAINS	UNA	UDH001	24.9	27.3	SLTST/SH/SST-			fr
D	UNA_PLAINS	UNA	UDH001	27.3	32.8	SST	-	fr	0
D	UNA_PLAINS	UNA	UDH001	32.8	34.7	SLTSH	-	fr	0
D	UNA_PLAINS	UNA	UDH001	34.7	35.4	SST/QV		asp py	sox
D	UNA_PLAINS	UNA	UDH001	35.4	35.6	SLTSH	-	fr	0
D	UNA_PLAINS	UNA	UDH001	35.6	39.4	SST/SL-		fr	1
D	UNA_PLAINS	UNA	UDH001	39.4	42.7	SST/QV		py asp	fr
D	UNA_PLAINS	UNA	UDH001	42.7	43.4	SH/SL	-	fr	0
D	UNA_PLAINS	UNA	UDH001	43.4	44.7	SLTST/QV		asp	fr
D	UNA_PLAINS	UNA	UDH001	44.7	45.6	SLTSH	-	fr	1
D	UNA_PLAINS	UNA	UDH001	45.8	45.9	SST/QV		-	fr
D	UNA_PLAINS	UNA	UDH001	45.9	47.3	SST	-	fr	0
D	UNA_PLAINS	UNA	UDH001	45.6	45.8	SST	-	fr	0
D	UNA_PLAINS	UNA	UDH002	0	1.8	SH	-	mox	0
D	UNA_PLAINS	UNA	UDH002	1.8	6.5	SST	-	mox	0
D	UNA_PLAINS	UNA	UDH002	6.5	7.1	SST/QV		-	sox
D	UNA_PLAINS	UNA	UDH002	7.1	8.3	SST/SL-		mox	0
D	UNA_PLAINS	UNA	UDH002	8.3	9.8	SST	-	sox	1
D	UNA_PLAINS	UNA	UDH002	9.8	10	SST/QV		-	sox
D	UNA_PLAINS	UNA	UDH002	10	20	SST	-	fr	0
D	UNA_PLAINS	UNA	UDH002	20	20.6	SLTSH	-	fr	0
D	UNA_PLAINS	UNA	UDH002	20.6	23.5	SST/SL-		fr	1
D	UNA_PLAINS	UNA	UDH002	23.5	24.5	SLTSH	-	fr	1

D	UNA_PLAINS	UNA	UDH002	24.5	26.6	SST/QV		py asp	fr
	1	"sil, epi"							
D	UNA_PLAINS	UNA	UDH002	26.6	28.1	SST	-	fr	1
	-								
D	UNA_PLAINS	UNA	UDH002	28.1	28.8	SLTSH	-	fr	0
	-								
D	UNA_PLAINS	UNA	UDH002	28.8	29.3	SST	-	fr	0
	-								
D	UNA_PLAINS	UNA	UDH002	29.3	30.2	SLTSH	-	fr	0
	-								
D	UNA_PLAINS	UNA	UDH002	30.2	35.8	SST	-	fr	1
	-								
D	UNA_PLAINS	UNA	UN001 0	0.5	NULL	-	sox	-	-
D	UNA_PLAINS	UNA	UN001 0.5	2.3	SST	-	sox	-	-
D	UNA_PLAINS	UNA	UN001 2.3	2.5	SLTST	-	sox	-	-
D	UNA_PLAINS	UNA	UN001 2.5	6.2	SLTST/SST	-	sox	-	-
	-								
D	UNA_PLAINS	UNA	UN001 6.2	8.5	SST	-	sox	-	-
D	UNA_PLAINS	UNA	UN001 8.5	10	SLTST	asp	sox	-	-
D	UNA_PLAINS	UNA	UN001 10	10.6	SST	-	fr	tr	sil
D	UNA_PLAINS	UNA	UN001 10.6	12	SLTST	-	fr	-	-
D	UNA_PLAINS	UNA	UN001 12	12.5	QV	asp py	vg(?)	fr	100
	sil								
D	UNA_PLAINS	UNA	UN001 12.5	14.3	SST/SLTST	asp py	fr	tr	
	-								
D	UNA_PLAINS	UNA	UN001 14.3	18.2	SST	-	fr	tr	-
D	UNA_PLAINS	UNA	UN002 0	0.5	NULL				
D	UNA_PLAINS	UNA	UN002 0.5	5.9	SST				
D	UNA_PLAINS	UNA	UN002 5.9	6.2	NULL				
D	UNA_PLAINS	UNA	UN002 6.2	10.7	SST				
D	UNA_PLAINS	UNA	UN002 10.7	11	SST				
D	UNA_PLAINS	UNA	UN002 11	12.2	SST				
D	UNA_PLAINS	UNA	UN002 12.2	13.1	NULL				
D	UNA_PLAINS	UNA	UN002 13.1	14.4	LODE				
D	UNA_PLAINS	UNA	UN002 14.4	16.2	SST/SLTST				
D	UNA_PLAINS	UNA	UN002 16.2	16.7	NULL				
D	UNA_PLAINS	UNA	UN002 16.7	18.1	SST/SLTST				
D	UNA_PLAINS	UNA	UN002 18.1	19.3	SLTST/SST				
D	UNA_PLAINS	UNA	UN002 19.3	21.2	SST/SLTST				
D	UNA_PLAINS	UNA	UN003 0	0.3	NULL				
D	UNA_PLAINS	UNA	UN003 0.3	4.9	SST				
D	UNA_PLAINS	UNA	UN003 4.9	9.5	SST/SLTST				
D	UNA_PLAINS	UNA	UN003 9.5	10.4	SST				
D	UNA_PLAINS	UNA	UN003 10.4	11.9	SST/SLTST				
D	UNA_PLAINS	UNA	UN003 11.9	12.4	SLTST				
D	UNA_PLAINS	UNA	UN003 12.4	16.6	SST/SLTST				
D	UNA_PLAINS	UNA	UN003 16.6	20.2	SLTST/SST				
D	UNA_PLAINS	UNA	UN003 20.2	21.6	LODE				
D	UNA_PLAINS	UNA	UN003 21.6	22.1	SST				
D	UNA_PLAINS	UNA	UN003 22.1	25.7	SLTST/SST				
D	UNA_PLAINS	UNA	UN004 0	0.2	NULL				
D	UNA_PLAINS	UNA	UN004 0.2	8.7	SST				
D	UNA_PLAINS	UNA	UN004 8.7	16.2	SST/SLTST				
D	UNA_PLAINS	UNA	UN004 16.2	18	SLTST				
D	UNA_PLAINS	UNA	UN004 18	19.2	LODE				

D	UNA_PLAINS	UNA	UN004	19.2	21.3	SLTST/SST			
D	UNA_PLAINS	UNA	UN004	21.3	24.3	SLTST/SST			
D	UNA_PLAINS	UNA	UN005	0	0.2	NULL			
D	UNA_PLAINS	UNA	UN005	0.2	3.3	SST			sil
D	UNA_PLAINS	UNA	UN005	3.3	4.9	SST			sil
qvns									
D	UNA_PLAINS	UNA	UN005	4.9	5.6	SST			sil
D	UNA_PLAINS	UNA	UN005	5.6	6.2	SST			sil
ser									
D	UNA_PLAINS	UNA	UN005	6.2	10.7	SST			sil
D	UNA_PLAINS	UNA	UN005	10.7	12.2	SST/SLTST			
D	UNA_PLAINS	UNA	UN005	12.2	12.8	SLTST			
D	UNA_PLAINS	UNA	UN005	12.8	17.1	SST/SLTST			
D	UNA_PLAINS	UNA	UN005	17.1	17.7	SLTST			
D	UNA_PLAINS	UNA	UN005	17.7	18.3	SST			
D	UNA_PLAINS	UNA	UN005	18.3	19.4	LODE			sil
qvns bx									
D	UNA_PLAINS	UNA	UN005	19.4	21.2	SST/SLTST			
D	UNA_PLAINS	UNA	UN005	21.2	22.9	SST			
D	UNA_PLAINS	UNA	UN005	22.9	25.7	SST/SLTST			
D	UNA_PLAINS	UNA	UN006	0	0.7	NULL			
D	UNA_PLAINS	UNA	UN006	0.7	4	SST			
D	UNA_PLAINS	UNA	UN006	4	5.3	SLTST/SST			
D	UNA_PLAINS	UNA	UN006	5.3	6.6	SST			
D	UNA_PLAINS	UNA	UN006	6.6	8.3	SLTST/SST			
D	UNA_PLAINS	UNA	UN006	8.3	11	SST			
D	UNA_PLAINS	UNA	UN006	11	15	SLTST/SST			
D	UNA_PLAINS	UNA	UN006	15	17.1	SST			
D	UNA_PLAINS	UNA	UN006	17.1	17.7	SST			
D	UNA_PLAINS	UNA	UN006	17.7	19	LODE asp py vg			
sil qvns bx									
D	UNA_PLAINS	UNA	UN006	19	20.3	SLTST			
D	UNA_PLAINS	UNA	UN006	20.3	21.6	SST/SLTST			
D	UNA_PLAINS	UNA	UN006	21.6	24.2	SST/SLTST			
D	UNA_PLAINS	UNA	UN007	0	1.2	NULL			
D	UNA_PLAINS	UNA	UN007	1.2	4.7	SST/SLTST			
D	UNA_PLAINS	UNA	UN007	4.7	6.3	SLTST			
D	UNA_PLAINS	UNA	UN007	6.3	6.7	SLTST/SST			
D	UNA_PLAINS	UNA	UN007	6.7	11.9	SLTST/SST			
D	UNA_PLAINS	UNA	UN007	11.9	15.8	SLTST			
D	UNA_PLAINS	UNA	UN007	15.8	16.9	SLTST			
D	UNA_PLAINS	UNA	UN007	16.9	18.1	SST			
D	UNA_PLAINS	UNA	UN007	18.1	19.2	LODE			
D	UNA_PLAINS	UNA	UN007	19.2	23.2	SLTST/SST	py asp vg		
D	UNA_PLAINS	UNA	UN007	23.2	25.2	SST			
D	UNA_PLAINS	UNA	UN007	25.2	27.2	SLTST/SST			
D	UNA_PLAINS	UNA	UN008	1.9	10	SLTST -	-	0	-
D	UNA_PLAINS	UNA	UN008	10	14.7	SST/SLTST	-	-	0
-									
D	UNA_PLAINS	UNA	UN008	14.7	20.9	SST/SLTST	-	-	0
-									
D	UNA_PLAINS	UNA	UN008	20.9	22.7	SST py asp	-	0	-
D	UNA_PLAINS	UNA	UN008	22.7	25	SST/SLTST	-	-	20
sil									

D	UNA_PLAINS	UNA	UN008	25	29.6	SST/SLTST	-	-	40
	sil								
D	UNA_PLAINS	UNA	UN008	29.6	30	SST py asp	-	5	-
D	UNA_PLAINS	UNA	UN008	30	32.7	SST/SLTST	-	-	0
	-								
D	UNA_PLAINS	UNA	UN008	32.7	33.4	LODE asp py	-	80	"sil,
	ser"								
D	UNA_PLAINS	UNA	UN008	33.4	36.7	SST/SLTST	asp py	-	1
	-								
D	UNA_PLAINS	UNA	UN008	36.7	40.7	SST	-	-	0
	EOF								

## **APPENDIX 5**

Lithological Logging (DL1)

H0001 Exploration Licence Data header file  
H0002 Version 1  
H0003 Generated 10/10/2011  
H0004 Reporting period end\_date 5/10/2011  
H0005 State Tasmania  
H0100 Tenement\_name EL33\_2008  
H0101 Tenement\_holder Geological Educational & Mining Services Pty Ltd  
H0102 Project\_name Una Plains  
H0113 Map\_sheet\_number\_250K K5521; NORTH EAST  
H0123 Map\_sheet\_number\_100K 8415: FORRESTER  
H0133 Map\_sheet\_number\_25K 5642; ALBERTON  
H0133 Map\_sheet\_number\_25K 5642: VICTORIA  
H0200 Start\_of\_data\_acquisiton 1/10/2010  
H0201 End\_of\_data\_acquisiton 30/09/2011  
H0202 Data\_format SG1  
H0203 Number\_of\_data\_records 12  
H0204 Date\_of\_metadata\_update 30/09/2011  
H0300 FileNames  
H0301 lithology\_code\_file EL332008\_201011\_06\_lithcode.txt  
H0502 Vertical\_datum AHD  
H0506 Surveying\_instrument  
H0507 Surveying\_company  
H0900 Remarks Logging Codes  
H1000 Code Lithology  
H1001  
H1004  
D LITHOLOGY  
D CODE LITHOLOGY  
D QV Quartz vein  
D SLTST Siltstone  
D CL Clay  
D SST Sandstone  
D FLT Fault  
D SHR Shear zone  
D GRAN Granite  
D GRIES Griesen  
D  
D WEATHERING  
D CODE WEATHERING  
D F FRESH  
D EW EXTREME WEATHERED  
D VW VERY WEATHERED  
D MW MODERATELY WEATHERED  
D LW LIGHTLY WEATHERED  
D NULL NO MATERIAL(Core loss - void)  
D  
D MINERAL  
D CODE MINERAL  
D gal Galena  
D bar Barite  
D NULL No Sulphides present  
D py Pyrite  
D sph Sphalerite

D cass Cassiterite  
D mal Malachite  
D stan Stanite  
D sul Undefined Sulphide  
D flour Florite  
D cpy Chalcopyrite  
D  
D ALTERATION  
D CODE ALTERATION  
D 0 No visible alteration mineralis  
D 1 "Minor bleaching, silica, carbonate and pyrite"  
D 2 "Moderate sericite, silica and carbonate with minor base metals"  
D 3 "Strong to pervasive sericite, silica and carbonate with abundant base metals  
including pyrite"  
D 4 "Intense sericite, silica and carbonate bleaching with base metals and pyrite  
(Massive Sulphide)"  
D  
D ALTERATION\_STYLE  
D CODE ALTERATION\_STYLE  
D sil silicification  
D feox iron oxide staining (after sulphide)  
EOF