

EL33/2008 – UNA PLAINS

TASMANIA

ANNUAL TECHNICAL REPORT

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VERIFICATION LISTING

Exploration Work	File_name	Type	Format Description
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Office Studies

Report	EL332008_201516_01_report	pdf	Report Body
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Drilling

Drilling_All	EL332008_201516_02_dhlocation	txt	Drill hole collar locations
Drilling_All	EL332008_201516_03_dhassay	txt	Drill hole assay data
Drilling_All	EL332008_201516_04_dhsurvey	txt	Down hole survey
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Report	EL332008_201516_05_appendix4	pdf	Drill hole lithology
Report	EL332008_201516_06_appendix5	pdf	Lithology Codes

TENEMENT DETAILS

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

Exploration Licence 33/2008 comprises 28 square kilometres located midway between Ringarooma and Mathinna in the states north-east. The licence was granted on 5th November 2008 to Geological, Educational and Mining Services Pty Ltd (GEMS).

During the period 2015 – 2016 no field work was undertaken. Due to the process of annual exploration licence renewals taking up to several months and the fact that even then the overall security of tenure for the licence is only a year, the decision has been made to surrender the licence and relinquish the ground.

KEY WORDS

Location Name:	Una, Dans Rivulet. Hinemoa.
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, Raynor's Adit, New River, Homestead Reef
Stratigraphic Name:	Mathinna Supergroup.
Geological province name:	Lachlan Fold Belt.
Geological age:	Devonian

1.0 Introduction.

Exploration Licence 33/2008 comprises 28 square kilometres located midway between Ringarooma and Mathinna in the states north-east. The licence was granted on 5th November 2008 to geological, Educational and Mining Services (GEMS) Pty Ltd.

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.

Hinemoa:

The Hinemoa workings have been explored previously by two adits and a 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 most northerly adit (Hinemoa) is still accessible. The southern adit (Raynor) is also accessible.

Alberton & New River Goldfields.

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

around the area known as the New River Goldfield is prospective for both hard-rock and potentially alluvial gold deposits.

3.0 Location and Access.

Una Plains Licence EL33/2008 is located in North East Tasmania, the licence covers 28km² commencing approximately 5 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 Mount 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.

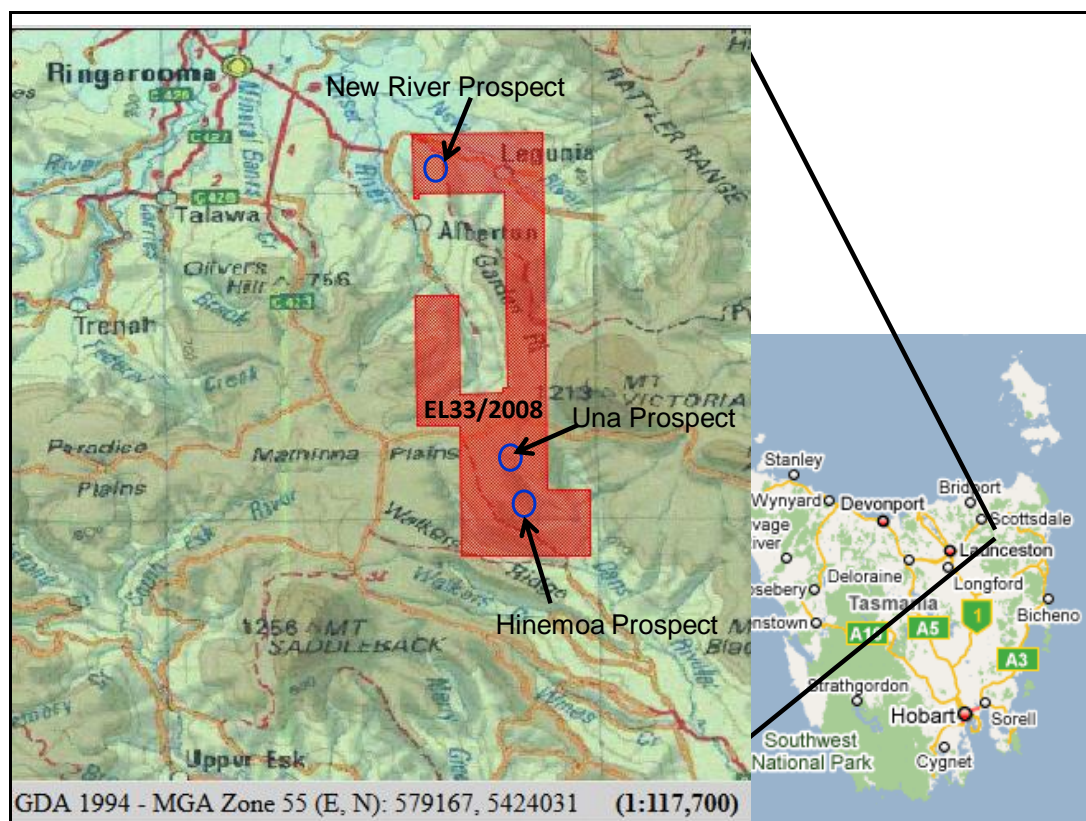


Figure 1: Location of EL33/2008 – Una Plains.

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 north-westerly 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 form 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

HOLE ID	FROM (m)	TO (m)	INTERVAL (m)	AU (g/t)	AG (g/t)	AS (ppm)	COMMENTS
UDH001	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.

During 2011 – 12 (de Vries, 2012), two holes were drilled, for a total of 113.8 metres targeting an area mid-point of the Hinemoa Adit. HGD-01 intersected a zone of strong quartz veining with minor associated sulphides (arsenopyrite and pyrite) between 23.60 and 30.10 metres down hole. HGD-02 tested the structure a further 10 metres below HGD-01 on the same strike. This hole also successfully intersected several quartz veins showing visible arsenopyrite but also minor pyrite being observed. Overall assay results obtained during the 2012 – 13 reporting period were poor with the best results shown in Table 2.

Table 2. Significant Assay Results – Diamond Drilling 2011 - 2012

HOLE ID	FROM (m)	TO (m)	INTERVAL (m)	AU (g/t)	AG (g/t)	AS (ppm)	COMMENTS
HGD-01	24.0	25.2	1.2	0.78	<1.0	3,700	Veining / Shear
HGD-02	31.1	32.4	1.3	0.72	<1.0	3,400	Veining / Shear

During 2013 – 14 (de Vries, 2014), a single diamond drill holes was drilled, for a total of 168 metres targeted below the Raynor adit to test for down-dip extensions of the structure initially driven upon. Several narrow zones of bleaching and associated stockwork veining were observed between 156 and 164 metres down hole, however

only minor sulphides were noted in the core. The hole was not able to assayed until the following reporting period.

During 2014 – 2015 (de Vries, 2015) an additional drill hole (HGD-04) was completed to a depth of 162.0 metres from the same drill pad position as HGD-03 (de Vries, 2014). Selective intervals from both HGD-03 (drilled previously) and HGD-04 were analysed. A total of five samples were submitted to Bernie Research laboratories for analysis by 25 gram fire assay for gold analysis and by four acid digest with an Atomic Adsorption finish for both silver and arsenic (Table 3).

Table 3. Assay Results – Diamond Drilling 2013 - 2015

HOLE ID	SAMPLE No.	FROM (m)	To (m)	INTERVAL (m)	Au (g/t)	Ag (g/t)	As (ppm)	COMMENTS
HGD-03	HGD3-1	33.94	34.08	0.14	0.57	<1.0	15,500	Sil, qtz, py
HGD-03	HGD3-2	129.91	130.45	0.54	0.81	1	4,200	Fault, qtz, py
HGD-03	HGD3-3	156.20	157.45	1.25	0.08	1	800	Stockwork, py
HGD-04	HGD4-1	31.30	31.50	0.20	0.48	6	6,500	Qtz, asp, py
HGD-04	HGD4-2	157.20	157.30	0.10	0.36	1	4,100	Dyke, asp, py

6.0 Exploration Completed During the Reporting Period

6.1 Licence Extension.

Due to the often protracted process of annual exploration licence renewals taking up to several months and the fact that even then the overall security of tenure for the licence is only a year, the decision has been made to surrender the licence and relinquish the ground.

6.2 Drilling

No drilling occurred during the reporting period.

6.3 Assay.

No samples were submitted for analysis during the reporting period.

7.0 Discussion and Conclusions.

Due to the inability in securing ongoing exploration tenure over the prospect areas for a period of greater than a single year, the decision has been made to not renew the licence.

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

Administration Costs

Total Costs	\$ 4,200
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