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Diversified Minerals Pty. Ltd. EL 8-2009 Red Hills Annual Report for Period 12 November 2015 to 11 November 2016 Vol. 1 of 1 December 2016

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Date:	December 2016
Map Sheets:	Tasmania 1:25,000 Series Selina (3836) Tasmania 1:100,000 Series Sophia (8014)
Geographic Co-ord (GDA94):	Min East: 381,000m Max East: 384,000m Min North: 5,363,000m Max North: 5,368,000m
Commodity(s):	Base metals, gold, silver

ABSTRACT

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INTRODUCTION

This report is an account of work carried out on Tenement EL 08/2009 (Red Hills) during the tenement year November 2015 – November 2016.

Location & Access

EL 8/2009 Red Hills is centred approximately 25 km north of Queenstown in western Tasmania. The western boundary of the EL abuts UML's Henty Gold Mine Lease 7M-1991 (Figure 1).

Access to the EL 8/2009 area from the south is via the Anthony Road (B28), the unsealed Howards Road to the Henty mine site, then by mine service road and formed 4WD tracks. The main 4WD track from the Henty mine crosses from the west over Moxon Saddle into the central section of the EL. Alternative access to the eastern section of the EL is possible on foot from a departure point along the Anthony Road (B28) north of Lake Plimsoll.

Tenure

EL 8/2009 Red Hills, covering 11.0 sq km, was granted to Bendigo Mining Ltd (BML) on the 16th November 2009 for a period of five years. The company submitted a successful bid to explore the tenement in accordance with Mineral Resources Tasmania's Exploration Release Areas process. Application for the EL was lodged shortly after BML's acquisition of the Henty gold mine in July 2009. BML announced a change of company name to Unity Mining Ltd (UML) effective from 6 December 2010.

Recent amendment of the Land Tenure classification has resulted in the entire EL area being located within the Mount Murchison and Lukes Knob Regional Reserves. All exploration activity proposed on the tenement requires assessment by and approval from the Mineral Exploration Working Group (MWEG) prior to commencement. Approval of exploration programs is conditional upon UML meeting the requirements of the Mineral Exploration Code of Practice and all site specific conditions.

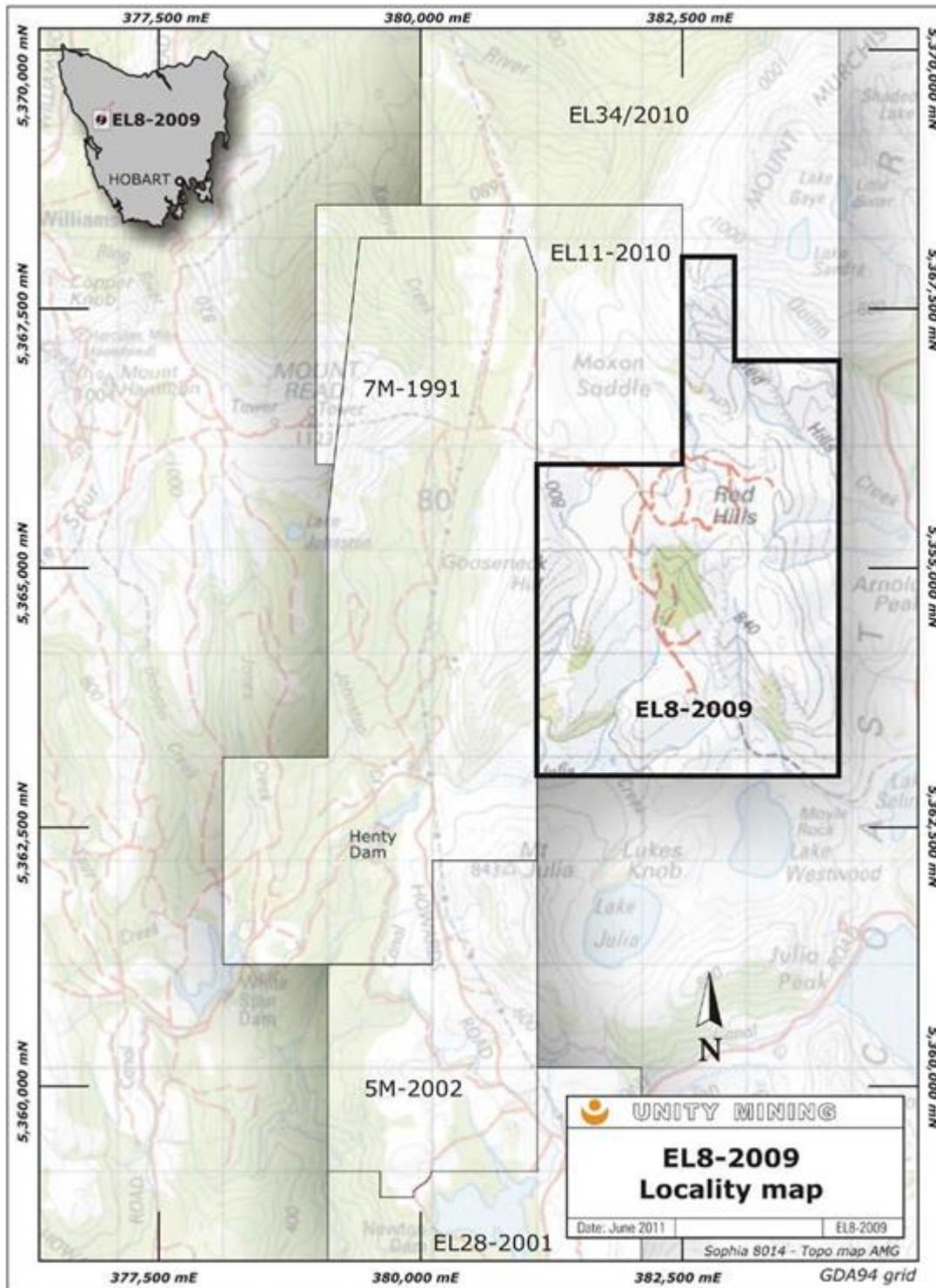


Figure 1: EL8/2009 Tullah location map. Other DMPL tenements are also shown. Projection is UTM Zone 55 MGA94 co-ordinate system.

GEOLOGY

Regional geology

A major portion of the EL 8/2009 Red Hills area is underlain by the Cambrian Mount Read Volcanics (MRV), apart from the eastern section of the tenement which covers a thin strip of Late Cambrian - Ordovician Owen Group.

The MRV comprise a package of massive, feldspar-phyric lavas and volcanoclastics, which passes upwards into a mixed sequence of basaltic to rhyolitic lavas, intrusives and volcanoclastics, with intercalated shale and siltstone. In general, there is a transition from feldspar-phyric to strongly quartz-phyric lithologies from the bottom to the top of the sequence. On a regional scale the MRV is divided by the north-northeast – trending Henty Fault. Red Hills EL 8/2009 is located to the east of this major structural feature (Ref. Figure 2).

The Owen Conglomerate consists of siliciclastic sediments, including large volumes of very coarse siliciclastic conglomerate, which unconformably overlies the MRV. Clasts within the conglomerate are dominantly metaquartzite, derived from the Proterozoic Tyennan basement further to the east, with little or no material from the MRV.

Rocks in the region have been subjected to at least two major polyphase deformations, one in the Cambrian and the other in the Devonian (the latter probably equivalent to the Tabberabberan Orogeny). Evidence of the Devonian deformation is apparent in a regional NNE- striking cleavage and development of west-over-east thrusting on pre-existing, NNE structures and synchronous NW striking structures.

Local geology

The oldest rocks in the EL 8/2009 Red Hills area are rhyodacitic lavas of the MRV, with intercalated black siltstone and shale (correlated with the Central Volcanic Sequence). These volcanic and volcanoclastic sequences are exposed on the eastern limb of an interpreted south - plunging syncline. Massive, quartz-phyric lavas (Mt Julia Rhyolite) and quartz-phyric volcanoclastic sediments, correlated with the Tyndall Group, occur stratigraphically above the CVC rocks in the keel of the interpreted synclinal structure. These younger rocks are also exposed along the overturned western limb of the syncline, truncated by the Henty Fault in proximity to the Henty mine.

Alteration and mineralisation

Two principal styles of mineralisation have been identified in the Red Hills area:

- Stratabound base metal sulphides+gold+silver VMS mineralisation hosted by CVC mass flow units (Lower Mineralised Horizon). Modern exploration has mainly focused on testing for this style of mineralisation following the discovery intersection in hole RH5. Based on isotopic data, metal ratios and analysis of the alteration assemblages this mineralisation has strong similarities to the Rosebery VHMS system (Purvis, 2010).
- Vein and disseminated copper+gold+magnetite mineralisation associated with chlorite+feldspar alteration of the Red Hills lava. Earliest prospecting and small scale mining activity was concentrated on this type of mineralisation, as at the Northern Adits area.

Thin zones of base metal sulphides+gold mineralisation hosted within black shale and siltstone units in the CVC comprise the Upper Mineralised Horizon (UMH). Recent drilling has also intersected gold mineralisation associated with pyrite veining in CVC dacitic volcanics, located between the LMH and UMH.

PREVIOUS EXPLORATION

Prospecting activity in the Red Hills area commenced in the late 19th Century. Several adits and shallow shafts were mined to work near surface copper mineralisation. Mount Lyell Mining and Railway Company acquired all mineral rights over the area in 1905, however this early phase of prospecting and mining activity ceased shortly afterwards.

Modern exploration techniques were first applied in the Red Hills area in the late 1950s. Work by Rio Tinto and Electrolytic Zinc Company, in joint venture, included various geophysical surveys followed up by drilling of four diamond drillholes.

Exploration was undertaken semi-continuously from 1969 – 1985 when the area was included within EL 9/66 held by Mount Lyell Mining and Railway Company. Work was carried out in joint venture with Getty Oil Development Company from 1977. Numerous geophysical surveys were completed in this extended phase of exploration and drilling comprised 26 open hole percussion and 17 diamond drillholes. Massive base metals sulphides were intersected in drillhole RH5 completed by Mt Lyell in early 1977. A mineral resource of 1 Mt at 2 g/t gold, 37 g/t silver, 4.6% zinc and 1.3% lead was estimated based on intersections in this discovery hole and four step-out diamond drillholes. The mineralisation was considered to be open both above and below the intersection in drillhole RH5.

Geochemical sampling and additional geophysical surveys, including downhole EM surveying of RH5, were undertaken in 1985 – 1993 by CRA Exploration in joint venture with Aberfoyle. Limited diamond drilling follow up was completed. Four additional diamond drillholes were completed in the Red Hills area by Plutonic/Homestake, in joint venture with Goldfields Exploration (later AurionGold, then Placer Dome Asia Pacific).

Newcrest Mining acquired EL 9/2005 over Red Hills in mid 2005. Prior to relinquishing the EL area in 2008 Newcrest completed four deep diamond drillholes (NCT006, NCT007, NCT009 and NCT010). Maximum depth drilled was 792.1m in drillhole NCT 006. Three of these holes were designed to test at depth in areas of prospective stratigraphy for continuation of the stratabound gold-rich base metal sulphides discovered in drillhole RH5. One drillhole (NCT009) was aimed at testing a conceptual gold+copper rich footwall stringer zone within the Red Hills lava of the Central Volcanic Complex.

During the 2010-2011 reporting period, an appraisal of the Red Hills prospect was commissioned by BML and completed by J.G. Purvis, consulting geologist. Recommendations from this review formed the basis of an eventual six-hole diamond drilling program undertaken in the period. The holes were designed to test at 50 m spacing around the RH5 discovery intersection. Alternative drillhole collar locations were also proposed in the review to ensure that environmental impact of site preparation earthworks would be minimised. This program confirmed that the VHMS mineralisation in historical drillhole RH5 represents a small, irregularly shaped lens with limited potential as an economic mineral resource. Holes aimed at testing up dip from the RH5 intersection failed to intersect the target LMH host, due to faulting or localised changes in morphology of the adjacent CVC sequences. Drilling intersected several thin zones of gold mineralisation hosted in silica altered dacitic lavas located in the stratigraphic hanging wall of the LMH.

During the 2011-2012 reporting period, Outer-Rim Exploration was commissioned for downhole electromagnetic logging of drillholes RHD24-25 AND RHD27-29 (RHD26 was permanently sealed after drilling due to making water). RHD28 collar was not located and so logging of holes RHD24, RHD25, RHD27 and RHD29 was carried out using a Crone Pulse EM. Measurements were taken by time-domain EM or Transient EM. Results failed to identify any significant conductor.

During the 2012-2013 reporting period, 34 rock chip samples were collected and analysed from the Northern Adits prospect of the tenement, and diamond drill hole RHD30 was drilled to test for an offset of the LMH to the east above the previously defined mineralised zone. RHD30 intersected the broken and faulted LMH at the up-dip projection calculated from previous drilling. This confirmed the faulted and broken nature of the LMH up-dip from RH5, but discounted an offset of the horizon to the east of the projected position.

On 17th October 2013, Mineral Resources Tasmania approved the drilling of a drillhole of approximately 300m to test at depth the mineralisation in the Northern Adits area of Red Hills (WPA13/43). Due to company restructuring and financial pressures at Henty Mine, at the time of writing this drillhole was yet to be drilled.

In 2013-14 rock chip and grab samples were taken in the Northern Adits area and in 2014-15, restoration of the Red Hills track was completed, in order to channel run-off away from the track and to maintain access to the Red Hills area.

WORK COMPLETED (NOVEMBER 2015 TO NOVEMBER 2016)

A review of historic documents, particularly of the mining and sampling history of Adit 1N (Northern Adits area) was completed by Gerald Purvis.

RESULTS

The results of the review undertaken by consultant Gerlad Purvis are documented below.

History of 1N Adit

Copper was discovered in the Red Hills rhyodacite around 1891. In the 1N Adit area a high-grade quartz-chalcopyrite vein trending SSE was found outcropping near the base of a west-facing slope, within intensely chloritized and silicified rhyodacite carrying disseminated pyrite-chalcopyrite-magnetite.

The old miners exposed the vein (No.1) in the east wall of a 10m deep opencut. From the base of the wall 1N Adit was driven 080°mag for 31.7m (104') beyond No.1 Vein, hitting two more quartz-chalcopyrite veins on which crosscuts were driven. No.2 Vein was 10.7m (35') from the entrance and driven on for 6.7m (22') at 160°mag. No.3 Vein was 22.9m (75') from the entrance and driven on for 15.2m (50') at 150°mag.

Just outside on the north side of the adit entrance a 11.6m (38') 'winze' was sunk, from which a 12.8m (42') drive was put in on the same heading as the adit above.

In 1905 Mt Lyell Co. took over the leases. They systematically sampled the adit and then extended it to 59m (193'). They didn't sample the extension. They also drove a 5.2m (17') crosscut 'SE' (probably SSE) from the end of the drive in the winze. Before withdrawing in 1908 some copper ore mined from the adit was sent to their Queenstown smelter. No excavation has been done at 1N Adit since. The workings are detailed on plans by E.J.Smith (1899) and Mt Lyell (1907), and in reports by Harcourt-Smith (1898), Twelvetrees (1900) and Blake (1938). *Figure 2.*

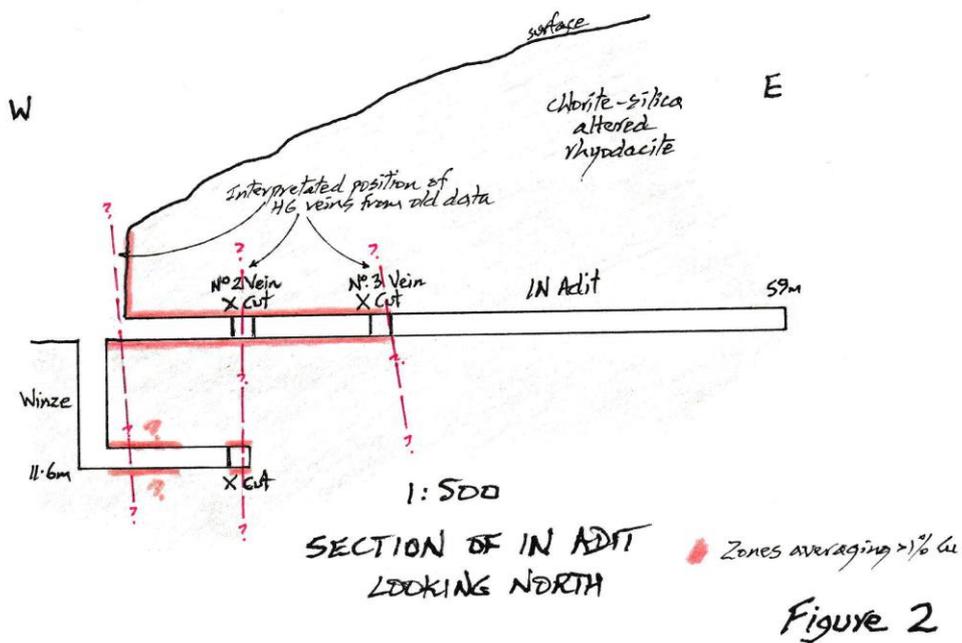
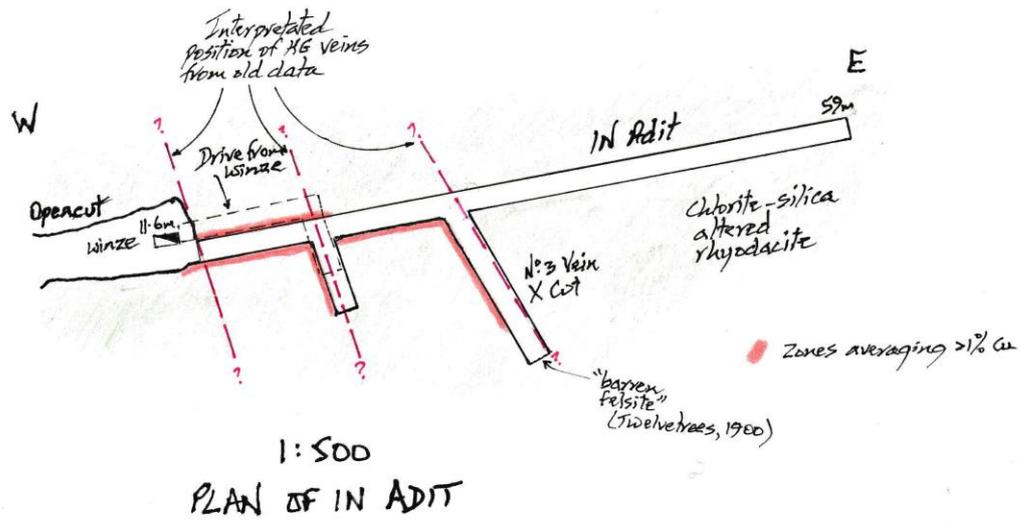


Figure 2. Mt Lyell Coy. Map of adits with averaged sampling results.

At the time of Twelvetrees' 1900 visit 240 tons of copper ore was stacked outside the adit, 40t first class at 4.9% Cu and 200t second class at 2% Cu (gold was not mentioned). The ore had come from the first 21m (70') of the adit "mostly from near the entrance" (No.1 Vein). Twelvetrees says No.1 Vein averaged 4.15% - 5.1% Cu.

Additionally, a "small pile" of stacked ore had come from a "body of ore" in the lower drive off the winze (apparently the down-dip extension of No.1 Vein). The crosscut later put in by Mt Lyell off the end of the winze drive had 2-3% Cu in the face according to Blake. This is almost certainly the downdip extension of No.2 Vein as the crosscut here lies directly beneath the No.2 Vein Crosscut in 1N Adit above. This indicates No.2 Vein is vertical.

Geology

Despite visits by Harcourt-Smith, Twelvetrees and Blake and more recent geologists, geological information from the adit is scant. There is no geological plan of the adit or its surrounds and observations are fragmentary. Widths of the 3 veins are unknown and their dips nowhere measured. Notes on E.J.Smith's 1899 plan indicate No.1 Vein dips NE, as does a smaller quartz-sulphide vein in No.3 Trench 60m SSE of the adit (possibly the extension of No.1 Vein). From Twelvetrees' description No.3 Vein also apparently dips NE. This NE dip is opposite the cleavage in the lava which strikes SSE, like the veins, but dips 75-80° SW. Plots of all the known information suggest the NE vein dip is steep and probably >80°. As noted above, No.2 Vein is apparently vertical.

The quartz-chalcopyrite-gold veins occur in intensely chloritized and silicified rhyodacite containing disseminated pyrite-chalcopyrite-magnetite-gold which is strongest adjacent to the veins. Blake reports chalcopyrite occurs as small aggregates, bunches and occasional short veins, in association with pyrite and magnetite. Callaghan & Vicary (2000) describe the mineralization as stringer veinlets, massive lenses to 25cm and disseminations, of pyrite-chalcopyrite-magnetite associated with intense chloritization and silicification. It is quite clear that the known mineralization is strongest in and around No.1 Vein.

1905 Adit Sampling

In 1905 Mt Lyell sampled the south wall of the adit, from 1.5m outside the entrance to No.3 Vein Crosscut, and the west walls of both crosscuts. Sampling was mostly in 1.5m (5') lengths but whether it was chip or channel isn't known (Blake describes it as "systematic" and "precise"). Sample numbers and locations are on the 1907 Mt Lyell plan but results only appear in a 1970 Mt Lyell report (Newnham, 1970). *Figure 3.*

The south wall samples averaged **1.05% Cu over 21.9m (72')**. Au was apparently not assayed, which seems odd given that Ag was (averaging 5g/t). The first 7.6m (25') adjacent to No.1 Vein averaged 2.17% Cu. The ~1.5m intervals encompassing No.2 and No.3 veins were not sampled as they had been excavated by the crosscuts (the backs perhaps could have been sampled). However, individual samples of the veins (widths not recorded) returned:

		Cu (%)	Au (g/t)	Ag (g/t)
No.1 Vein	9.37	1.24	20	
No.2 Vein	3.75	trace	3	
No.3 Vein	2.00	trace	5	

The west wall of No.2 Vein Crosscut assayed **6.7m (22') @ 0.56% Cu**, and the west wall in No.3 Vein Crosscut **15.2m (50') @ 0.8% Cu**.

1971 & 2000 Adit Sampling

In 1971 Mt Lyell re-sampled the disseminated mineralization in the adit with 1.5m (5') chip samples, getting **17m (55') @ 0.36% Cu** and **15.2m (50') @ 0.26% Cu** (McKibben, 1971). Gold was not assayed. No sample location details or individual assay results were reported, but apparently the HG quartz-chalcopyrite-gold veins and their immediate wallrocks were not sampled. Mt Lyell at this time were targeting the bulk-low-grade Cu potential of Red Hills.

In 2000 Tim Callaghan and Bruce Stark sampled 1N Adit for Goldfields, taking 2m "chip-channel" (continuous-chip?) samples along the north wall. Best result was **12m @ 1% Cu, 0.18g/t Au** & 3.5g/t Ag, starting at the entrance. Beyond 12m no sample exceeded 0.63% Cu or 0.06g/t Au, and the 47m interval 12m - 59m (end of the adit) averaged just 0.12% Cu & <0.01g/t Au. The Cu results are substantially lower than those from Mt Lyell's 1905 sampling where the first 7.6m of the south wall averaged 2.17% Cu. No Goldfields sample even reached 2% Cu.

Although the adit length is correct on Goldfields' plan, the two crosscuts are shown nearly double the distance into the adit and almost twice as long, as they appear on Mt Lyell's early survey plans, which would have been accurate. The crosscuts weren't sampled by Callaghan and Stark.

Rock Sampling

Rock sampling outside the adit also indicates potential for economic Au and Cu values.

In 1985-87 CRAE focused on testing the gold potential at Red Hills, which included rock sampling in the 1N Adit area. No sampling was attempted underground but of 9 rock samples from outcrops and dump material around the adit entrance, 4 returned significant gold values. Samples by Goldfields and Newcrest produced similar results:

ROCK SAMPLES:	<u>Au g/t</u>	<u>Cu %</u>	<u>Ag g/t</u>	<u>As ppm</u>	
<i>CRAE (1986)</i>					
1154568	1.44	?	?	395	Dump chips. Massive cp-py.
1154593	2.00	0.41	15	570	0.5m channel of o/c 30m S of adit.
					Ox massive py, silic porph & chlor volc.
1154950	2.48	6.4	37	760	Bulk rock chip from workings. Semi-massive py-cp.
1155623	0.94	7.2	25	580	As above.
<i>Goldfields (1983)</i>					
1105	2.40	11.1			Dump sample. Semi-massive py-cp in chlorite.
<i>Newcrest (2006)</i>					
NTR0002	1.03	3.37	<1	200	HG sample from workings. Chlorite-hematite altered volcanics.

Sample 1154593 (outcrop 30m S of adit) is particularly interesting, not only as it is at a distance from the adit, but also because the elevated gold value (2g/t) correlates with a modest Cu value (0.41%). This is the only sample to date showing such a ratio

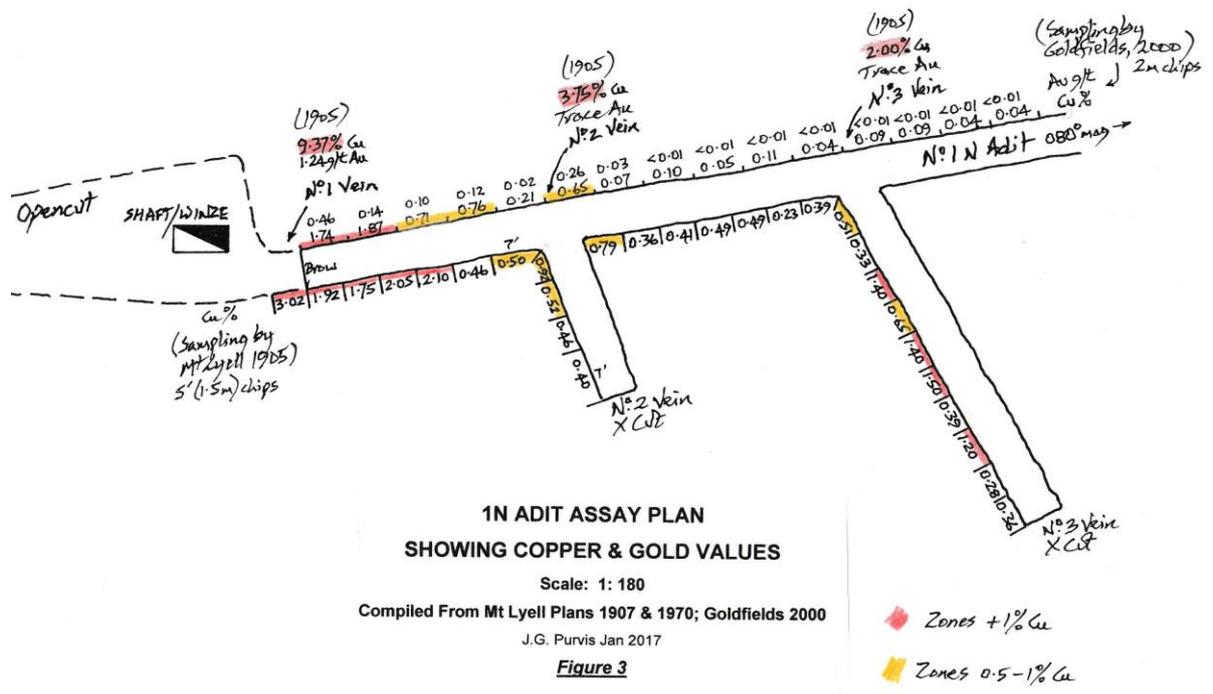


Figure 3. Results of 1905 sampling.

CONCLUSIONS

Whilst the historic work doesn't indicate a large gold or copper target, the combination of copper and gold indicates a mineralised system which, with structural deformation, may be upgraded to form Henty-style gold, or it may be peripheral to a bigger system. Shallow drilling is planned to test the system at depth and the continuity of the stronger structures.

EXPENDITURE FOR THE PERIOD 12 NOVEMBER 2016 - 11 NOVEMBER 2017

Expenditure by UML on EL 08/2009 for the 12 months ended September 2015 was \$2,500 as follows:

Expenditure for 12 months ending September 2016	\$
Personnel	13500
Geochemistry	
Geophysics	
Remote Sensing	
Gridding	
Drilling	
Access	
Rehab	
Feasibility	
Roads and tracks	
Other	
Admin	
TOTAL	13500

PLANNED WORK AND EXPENDITURE

The proposed exploration program for the new combined tenement ending April 2016 consists of:

- 300 m of drilling
- Sampling and assaying of drill core.

Planned expenditure is \$80,000.

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