Pillinger (EL31/2014) Annual Report on Exploration 2023

(to May 16th 2023)

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Summary

This is the final report on EL31/2014, which is prospective for high value Cambrian Volcanic Hosted Massive Sulphide (VHMS, Zn-Pb-Cu-Ag-Au) deposits and hybrids, as well as IRG and IOCG styles. Two large targeted VHMS end members are Rosebery (51.5Mt @ 12.1% Zn, 3.9% Pb, 0.50% Cu, 130g/t Ag, 1.9g/t Au) and Mount Lyell (311Mt @ 0.97% Cu and 0.5g/t Au). Potential also includes Henty Gold-style (5.7Mt @ 8.4g/t Au), as well as magnetite-Cu-Au mineralisation similar to that located on nearby Mt Darwin and at the Garfield Prospect.

No field activities were undertaken during the 2022-23 tenure year.

Ongoing prospectivity assessment complimented pursuit of JV opportunities during the 2022-23 tenure year, marketing Pillinger EL31/2014 with the adjacent held EL10/2018 as a highly prospective bundle. Ideally the JV partner would be the successful applicant for the anticipated up coming ERA on the adjacent former Corona Minerals EL51/2008, since the adjoining corners of these tenements encapsulate a highly prospective area, which should ideally be explored collectively. Attempts to obtain financial input from a JV partner were unsuccessful.

Introduction

This final annual report on Pillinger EL31/2014 details work undertaken to 16th May 2023. The Pillinger Exploration Licence (EL31/2014) was held by R Reid (50%) and B Koster (50%).

To-date work investigating the potential extension of the likely VHMS host horizon and basalt package of the Clark Valley Grid has been undertaken. GIS interpretation has identified several magnetic anomalies in the tenement's south west having potential correlation with the Clark Grid host horizon basalts and a large EM anomaly in the north east corner which warrants follow up. Identified prospects, as yet remain undrilled.

The Pillinger tenement is little explored with scant geological mapping (including by Electrolytic Company of Australasia Limited and Mineral Resources Tasmania more regionally) having been undertaken. Stream sediment sampling is relatively extensive within Pillinger, but associated rock chip sampling and geology reporting is sparse, including only that of Mathison (1985). Favourably an aera specific 1995 aeromagnetics survey, as well as regional aeromagnetics and radiometrics surveys cover the tenement. Intensive gridding surveys (geological mapping, soil sampling, Induced Polarisation and ground magnetics) and WTRMP (Western Tasmanian Regional Minerals Program) airborne electromagnetics extend north of the tenement boundary. Extensive access track cutting is required to further field work in this difficult to access remote tenement.

Access

Pillinger EL31/2014 covering 13km^2 lies approximately 30km south of Queenstown, west coast Tasmania. The principal access to the tenements north is via the 4WD track along South Mount Darwin Plateau, which can utilise the walking access track to the Clark River grid. Southern walking access is also possible from Farm Cove and Kelly Basin in Macquarie Harbour and the Bird River Track from the east. EZ Limited (Mathison, 1985) cut walking tracks to access the Clark River from the button grass to the west and north of the Kelly basin area. A likely now overgrown helipad was cleared near the intersection of the two main tracks.

An historic logging track is known to loop north from Kelly Basin, but has not been located and is also likely overgrown and poorly located (Figure 1). This track has not been regularly used since approximately 1925, when the last train left Pillinger prior to railway closure. The rail had initially serviced the North Mount Lyell Company and was later used for timber hauling. This route is inferred to extend north of the rail line between East and West Pillinger, but investigation finds no evidence of the track in relatively clear forest understory. A more likely route is inferred from a tree canopy linear gap shown on Google Earth, extending east and crossing the Clark River from the northern edge of the now overgrown West Pillinger township.

Access up the Clark River is best undertaken without recent rain, more remote exploration having to await drier weather during summer and autumn. Traversing the now overgrown track extending though and northwest of the historical Pillinger town ship is laborious compared to a better route staying close to the river, in relatively open forest with ferny understory. Walking time along the Clark River to the tenement edge, avoiding the lower approximately 400m of swampy ground closest to the river mouth, is approximately 2 1/4 hours. Similar timing is required to access the tenement margins

along Hazel Creek. Reconnaissance clearly identifies that access tracks need to cut to enable efficient exploration work in the area.

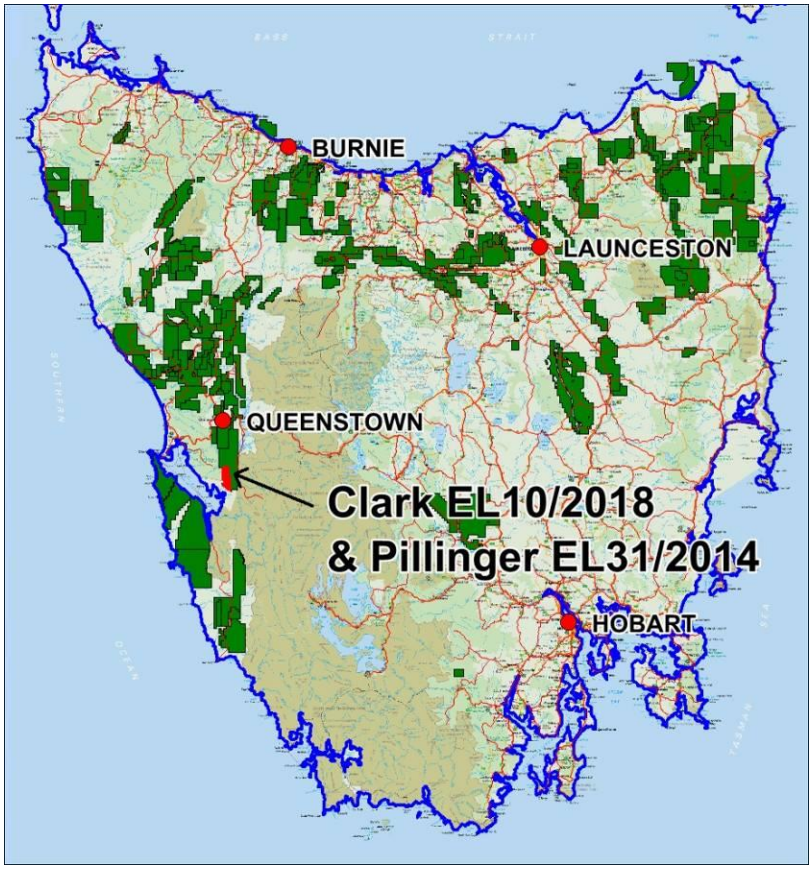

Figure 1: Location of EL31/2014.

Geology

The area is little mapped with what's known coming from MRT 250,000 scale mapping, possibly in part derived from EZ company work. The structurally complex geology of EL31/2014 comprises three principal rock types; the Middle Cambrian-aged Mount Read Volcanics (MRV), the Late Cambrian-aged Owen Group siliciclastics and uppermost Cambro-Ordovician Gordon Group (including limestone; Figure 2 & 3). The Mount Read Volcanics are largely mapped as Yolande River Sequence (YRS; Western Volcano-Sedimentary Sequence), which in a local regional context inter fingers with the Central Volcanic Complex (CVC) at or near it's top, beneath Tyndall Group (TG) quartz-feldspar phyric volcaniclastics (mapped on the eastern flank of Mt Sorell). A narrow band of CVC is aligned NW through the eastern portion of the tenement. The CVC/YRS - TG boundary represents a Volcanic Hosted Massive Sulphide (VHMS; Zn-Pb-Cu-Ag-Au) prospective stratigraphic position. The apparently greater accumulation of more siliceous and pelitic volcano-sedimentary rocks of the YRS within Pillinger relative to that in the Clark Valley to the north may indicate thicker accumulation in a Cambrian graben to the south west or folded repetition.

Cambrian granite outcrops on the South Darwin Plateau, proximal to the north east of Pillinger (EL31/2014) is associated with magnetite – Cu +/- Au mineralisation. A granite outlier is mapped by Loftus Hills (GSB16) in the tenement's NE Block / EM anomaly drainage on the spur down from South

Mt Darwin. This occurrence is not mapped by MRT (Further discussion below). The granites location is very close to a Hummingbird EM anomaly, but is not likely related as granite on South Mt Darwin is largely low conductivity. Field investigation suggests that this occurrence could otherwise be a coarse grained crystal rich quartz-feldspar volcaniclastic (similar to the Comstock Tuff?).

TCR85_2460 provides some geological insight into the centre and western parts of the tenement. They describe outcrops of kaolinised rhyolitic tuff, sheared, chloritised and sericitised volcanic rock, bedded volcaniclastic sediments and andesitic(?) volcanic with minor pyrrhotite. All positive observations despite concluding low prospectivity at the time. Porphyritic gabbro located in the south west of the area maybe a sub volcanic intrusion, related to host horizon basalts.

The Gordon Group limestone strikes NE through the centre of the tenement and is a potential (but lower priority) Pb-Zn target for Irish or Mississippi Valley styles of mineralisation. A Pb-Zn prospect is known along strike southeast of the tenement and a fold closure in limestone to the west is base-metal anomalous. Mathison (1985) infer that the Gordon Limestone thins to the NW with a facies change to marly siltstone just north of Hazel Creek.

Previous Work and Exploration History

Summary exploration detailed below mostly covers the Jukes-Darwin area adjoining the current Pillinger tenement to the north, with the only known but limited systematic modern exploration undertaken to-date on EL31/2014 being in the mid 80's by E.Z (Mathison, 1985).

Early History

The Jukes Darwin Mining Field, to the north of Pillinger is reported in GSB16 (Hills, 1914). This report mostly describes Cu, Au and magnetite mineralisation.

Old mining leases 3334 93M, 3335 93M, 4831 93M, 4778 93M and 5221 93M are noted in MRT records; being located to the north east and north of the Pillinger tenement.

The Mt Lyell Mining & Railway Company (1970's)

Howland-Rose (1978; TCR 84_2239) provides a summary of gradient array IP and ground magnetic surveys over the Clark Valley area. Phase 1 data reported ends at 00N, whereas Howland-Rose (1979; TCR 84_2242) reports data extending a further 600m south to line 6S, ending immediately within the north eastern 1km^2 block of Pillinger. A less powerful 3kw generator was used for the follow up survey, but was considered adequate. However, anomaly discrimination in the furthest south zone may not be quite as precise as the original survey (Howland-Rose, 1979).

Chargeability ranged from 10 to 70millivolts/volt. Resistivities range from 1500 to 20000 ohm-metres. Grid line spacing was wide at 200 to 400m.

Line 6S on the northern margin of the NE 1km^2 block of Pillinger returned a significant response of 14millivolts/volt with a broad (or multiple) source within +/- 20m of that centre (Howland-Rose, 1979). High 2000 ohm-metres resistivity indicates the source is disseminated chargeable material, with estimated depth <50m. This zone "Y" was reported to be associated with a significantly lower magnetic response, concluding it was not magnetite related. Pyrite within black shale mapped in this area may partly explain the anomaly response.

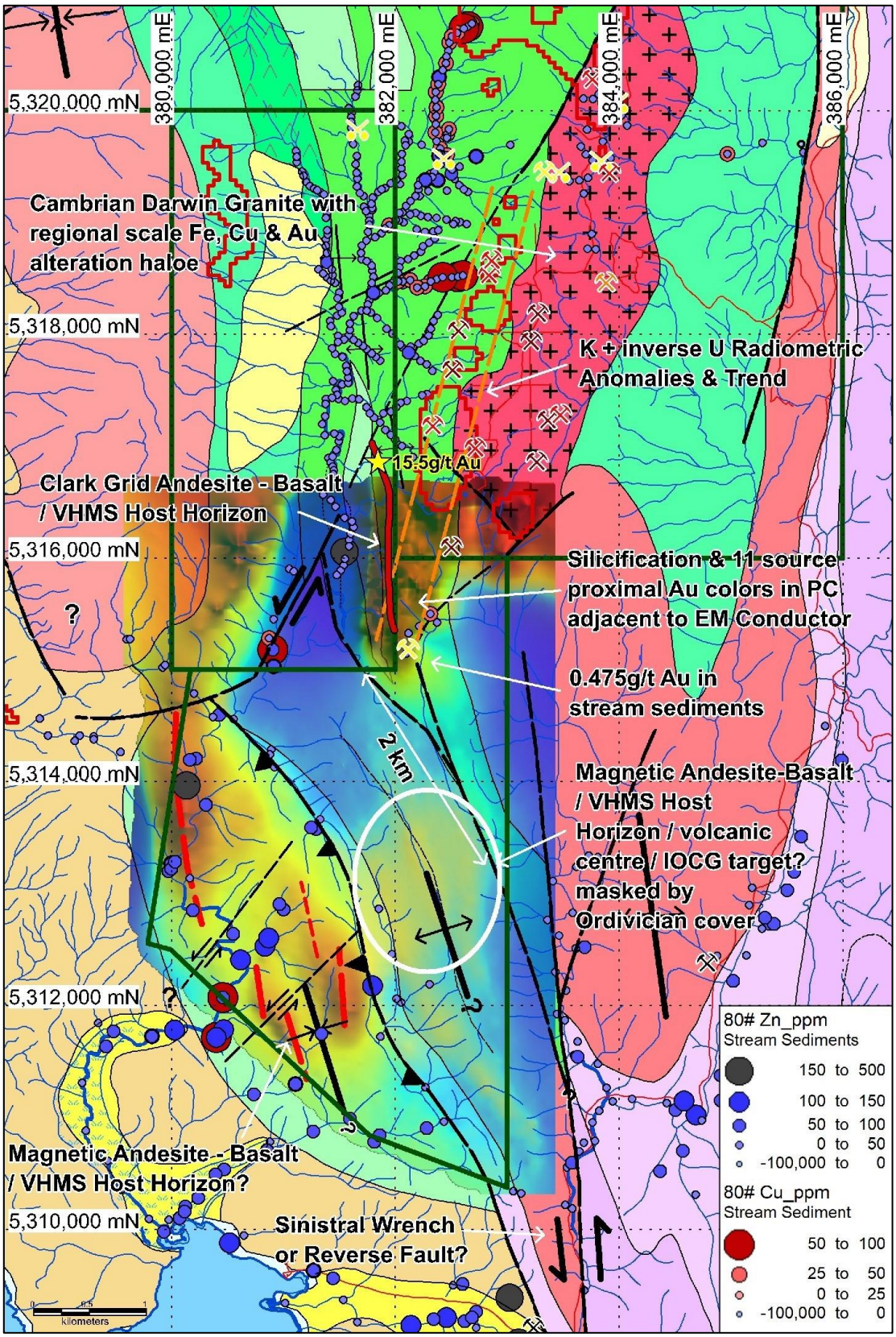

Figure 2: Regional geology of the Clark Valley and Pillinger areas, showing interpreted geology/structure and key prospective features, including inferred basalt / VHMS host horizon, known prospects, Shree Mineral's 15.5g/t Au in rock chip site and K& U radiometric anomalies (red polygons) / trend (orange lines) over clipped 1995 aeromagnetics grid transparency and MRT 250k digital geology (See Figure 3 for legend).

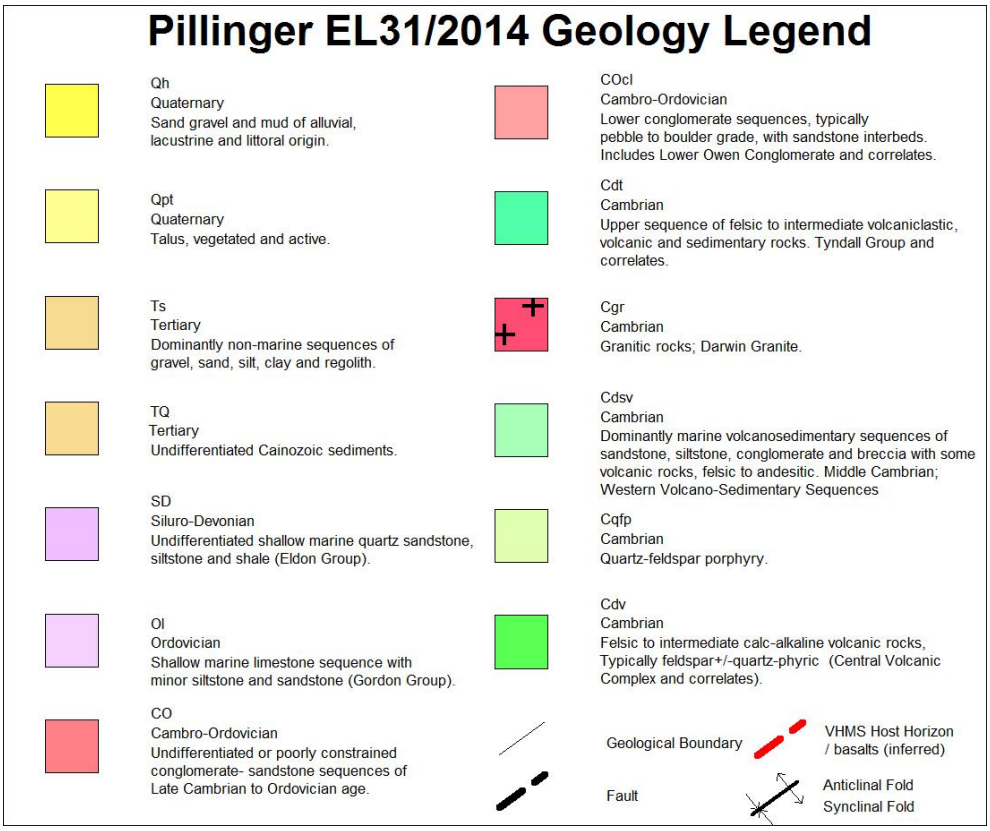

Figure 3: MRT 250k digital geology legend for the Clark Valley and Pillinger areas.

EZ. (1975)

EZ. explored the Jukes – Darwin area, including the Clark and Garfield Valley's mostly via grid cutting, geological mapping and stream sediment sampling. They concluded that stream sediment geochemistry did not appear to have located any Cu – Pb – Zn anomalies warranting further investigation (Williams, 1975).

EZ. (1984-7)

The Electrolytic Zinc Company of Australasia undertook stream sediment surveys and reconnaissance geological mapping in the tenement area and surrounds. Their stream sediment programs mostly targeted Zn-Pb mineralisation in the Gordon Limestone, west of Pillinger, as well as Au in the Clark Valley to the north (eg. Mathison, 1985). EZ also assessed the VHMS mineralisation potential of the volcanics in the core and western portion of Pillinger.

23 rock chip, 16 stream sediment and 4 panned concentrate samples were collected. Notably apple green sericite was found in panned concentrates (85-2460; SN65819, 59738), as well as bright green silicate from Hazel Creek (84-2181; SN59910), draining the south west magnetic anomalies. These occurrences possibly represents Fuchsite; a VHMS hangingwall indicator mineral.

Most heavy minerals identified in panned concentrates were thought to comprise reworked Ordovician and Silurian sediments, whilst quartz tourmaline rock, apple green sericite and epidote were interpreted as derived from altered MRV to the north (Mathison, 1985).

BHP (1990-1)

A comprehensive previous exploration data review is provided in Cameron and Read (1991; TCR91-3252). Among this is the location of two 1957 Turan helicopter EM anomalies, coincident with the Owen / MRV contact on South Darwin. BHP undertook a ground electromagnetic UTEM survey in 1990 over the upper Clark Valley, but didn't extend south into the Clark Grid, finishing well outside Pillinger EL31/2014 on 17600N, approximately 1km north of the Shree Mineral's gold in rock chip anomaly.

RGC Exploration Pty. Ltd. (1992-3)

Undertook extensive geological mapping, rock chip and soil sampling identifying anomalous base metals in soils (to 880ppm Zn) on what is now in filled by the Clark Grid.

Aberfoyle (1995)

Aberfoyle conducted a helicopter aeromagnagnetic survey of the Clarke Valley and Mt Darwin in 1995. The survey defined a magnetic zone within the Central Volcanic Complex, which subsequently has been shown to correspond with basalts and anomalous base metal in soils on the Clark Grid. The helimag data was not processed beyond an initial assessment and is not reported upon by McNeill (1996) in his relinquishment report.

WTRMP (2002)

The 2002 WTRMP airborne electromagnetic and magnetic survey unfortunately covers only the northern boundary and top NE 1km2 block of the Pillinger tenement. The WTRMP also undertook a separate widespread aeromagnetics and radiometrics over the west coast, including the Pillinger area.

Zinico Resources – Zelos Resources - Gujurat NRE Resources (2004 –7)

Zelos cut but did not sample the Clark Grid (21 lines of 500m length and 100m spacing), which planned to assess RGC's anomalous base metals in soils, extending north of Pillinger EL31/2014.

Three discrete EM responses were identified by Hungerford (in Vanzino 2007) from WTRMP electromagnetics, within both the YRS and the CVC. 'Ground truthing' by way of reconnaissance stream sediment sampling and minor rock sampling was undertaken in drainages in the vicinity of each of these anomalies and returned poor results. Best gold reported was 20ppb, with copper to 60ppm, Pb 105ppm and Zn 145ppm from samples outside Pillinger EL31/2014.

Three data points following up "Anomaly B" within Pillinger EL31/2014 return low detectable gold to 3ppb from -80# samples. Vanzino (2007) commented that "The trunk stream in the centre of the anomaly is a low lying, braided and undefined drainage – basically a swamp with the density of vegetation one expects in a swamp! No outcrop was observed and quartz rich sands dominated with very little mud fraction available for sampling. Three poor quality stream sediments were collected. The observed topography concurs with Hungerford's suggestion that the EM anomalism is probably due to surficial responses". However, the anomaly also extends beyond surficial sediments, upslope toward the Owen / CVC contact, as further discussed below.

For ground follow up, Hungerford considered that TEM (Time Domain Electromagnetic) and IP (Induced Polarisation) surveys would both locate conductive black shales, with the IP being of greater benefit overall. Although, TEM might be easier to undertake and would provide more accurate estimates of conductors properties. Hungerford's images clearly show that BHP's UTEM survey stopped well north of Pillinger EL31/2014 and the Clark Grid.

Shree Minerals Ltd. 2011-15

In 2012, the Clark Grid immediately north of Pillinger EL31/2014 was soil sampled and mapped confirming a coherent zone of anomalous base metals in soils and identifying positive vectors to VHMS mineralisation. A 0.6g/t Au in composite rock chip sample was re-sampled in 2015, returning 15.5g/t Au. This sample is coincident an ~150m plus zone of silica-sericite-pyrite alteration and remains to be further followed up. Potential to find a Rosebery or Que-Hellyer like VHMS within the grid area was considered high (Reid, 2015). The inferred VHMS exhalative horizon trends into the north of Pillinger (EL31/2014).

Reid and Koster (2016 to date)

Identified unexplained magnetic anomalies of possibly similar affinity to the Clark inferred VHMS host horizon basalt. Three principal targets are the south western magnetic anomalies, NE block and a buried VHMS / IOCG conceptual target located in the centre of the tenement. A regional interpretation evolved suggesting that the host horizon from the Clark River Grid, striking into the north east of Pillinger, maybe fault offset to the south into the centre of EL31/2014, where it's marked by elevated magnetics, possibly reflecting a source beneath the Owen Group (Figure 3).

Sampling in Pillinger's NE Block comprised 28 rock chips, 2 -80# stream sediment samples and 7 panned concentrates. Peak results were 1210ppm Zn and 0.05g/t Au in rock chip, as well as 0.475g/t Au in -80#.

A key outcome was the location and sampling of an extensive silicification zone (resistive?) at an interpreted structural intersection, in the vicinity of the NE Block EM conductor/anomaly. Rock chip analysis for gold by fire assay returned low level Au to 0.02ppm. Gold of irregular proximal to source form was found in the silica zones drainage, with up to 11 colours returned per panned concentrate sample. Potential for Henty style Au, including remobilised Devonian gold exists in this area.

Rock chips bearing low level gold (to 0.014g/t Au) were derived from a zone of lithic volcaniclastics, representing the strike extent of the Clark inferred VHMS horizon. Highly anomalous gold (0.475g/t Au) was in returned from a -80# stream sediment sample draining this area.

Field activities were interrupted by constraints imposed by the COVID pandemic during the 2020/21 and 2021/22 tenure years.

Thorough desk top review via regional scale GIS based data processing, re-interpretation and prospectivity analysis was undertaken concurrently over EL31/2014 and the adjoining EL10/2018 during the 2018 to 23 tenure years. A principal activity was re-gridding and interpretation of WTRMP 2001 radiometrics, WTRMP 2002 airborne EM and historic ground IP, along with regional soil data compilation for comparative assessment, with the aim to define a variety of prospective features for priority follow up. A key outcome was identification of a high K and low U presumable alteration related trend, extending into the NE Block of EL31/2014 (Figure 2), where silicification and gold prospectivity is noteworthy.

Work Conducted

No field activities were undertaken during the 2022-23 tenure year.

Minor ongoing prospectivity assessment complimented pursuit of JV opportunities during the 2022-23 tenure year, marketing Pillinger EL31/2014 with the adjacent held EL10/2018 as a highly prospective bundle. Ideally the JV partner would be the successful applicant for the anticipated up coming ERA on the adjacent former Corona Minerals EL51/2008, since the adjoining corners of these tenements encapsulate a highly prospective area, which should ideally be explored collectively. Attempts to obtain financial input from a JV partner were unsuccessful.

Expenditure

Table 2: Expenditure on EL31/2014 for the 2022-23 tenure year.

Expense Type	Cost
1. Geoscience	
Geology	$2,870
Geochemistry	
Geophysics	
Remote Sensing	
2. Drilling & Gridding	
Gridding	
Drilling	
3. Land Access	
4. Rehabilitation	
5. Feasibility Studies	
6. Other	
7. Administration	$265
8. Total Exploration Costs	$3,135

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Appendix

List of Appended Digital Files

EL312014_202305_01_ListOfAppendedDigitalData.txt

EL312014_202305_02_Annual_Report.pdf