



KRUCIBLE METALS LTD

Mineral Discovery Company

ABN 12 118 788 846

EPM 15354 SQUIRREL HILLS

Partial Relinquishment Report

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SUMMARY

The Squirrel Hills EPM 15354 is located about 160km SE of Mount Isa in NW Queensland on the Duchess (SF54-6), McKinlay (SF54-7), and Boulia (SF54-10) 1:250,000 government map sheets.

The tenement is considered to be prospective for Broken Hill/Cannington style (SEDEX) basemetal mineralisation, IOCG (Iron Oxide Copper Gold) Ernest Henry style mineralisation as well as unconformity type uranium mineralisation.

Exploration on the relinquished areas has consisted of interrogation of previous companies' reports, interpretation and manipulation of geophysical data. From this work target areas have been defined and Krucible is systematically exploring these areas for mineralisation.

Reconnaissance sampling completed on a number of areas has helped in highlighting zones of low mineralisation potential. A review of all data collected resulted in the application to Relinquish 35 sub-blocks. Within these relinquished areas a total of 4 rock chip samples have been collected with only weak results returned with maximums of 74ppm copper, 82ppm molybdenum, 16ppm lead and 342ppm zinc.

The work Krucible has completed to date has not highlighted any areas of interest and has hence applied for 35 sub-blocks to be relinquished. This was granted by the Department of Natural Resources and Mines on the 7th of August 2013.



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1. INTRODUCTION

The Squirrel Hills EPM15354 is located about 160km SE of Mount Isa in NW Queensland. The area was selected mainly because of the proximity to the Cannington silver/zinc/lead Mine owned by BHP-Billiton (see Figure 1). It was also considered prospective because of the geology and structures present. The area is under explored due to difficulties completing exploration presented by substantial Mesozoic and recent sedimentary cover.

The EPM is located on the Duchess SF54-6, Boulia SF54-10 and the McKinlay SF54-7 1:250,000 map sheets. The terrain varies between each block of the EPM. Crackenback and Bustard Creek areas are relatively inaccessible without 4WD vehicles; the only public roads are about 20km away. Private station tracks are present but not shown on any maps. The relief is steep with narrow valleys and moderate vegetation, the only way to navigate prospects once away from any tracks is by foot. Garnet, Cannington South and El Rita Prospects are easily accessible, close to main roads and have minimal vegetation except where close to waterways. Most of the area is black soil country which is easily navigated in dry conditions.

1.1 Tenure Information

The Squirrel Hills EPM 15354 was granted to Anthony J. Alston on the 29th March 2007 for a period of five years and consisted of 142 sub-blocks. On the 8th October 2007 the tenement was transferred 100% to Krucible Metals Ltd. On the 30th of March 2009 71 Sub-blocks were relinquished from the EPM. Krucible applied for a variation for renewal for the 4th year of grant to retain 100% of the EPM this was granted on the 4th of June 2010. Krucible again sought a 100% variation for renewal for the 71 Sub-blocks, this was granted on the 16th of November 2011. Krucible has also applied for a renewal for the whole EPM to continue exploring for the next 5 years, this was approved by the Department of Natural Resources and Mines on the 3rd of September 2012.

Krucible applied to relinquish 35 Sub-blocks from the Squirrel Hills EPM15354 on the 23rd of July 2013. This was accepted by the Department of Natural Resources and Mines on the 7th of August 2013. The relinquished sub-blocks are in Table 1 below and in Figure 2.

Table 1 – List of Relinquished Squirrel Hills Sub-Blocks

BIM	Blocks	Sub-blocks
CLON	1401	L M W X Y Z
CLON	1473	B C D E G H J K N O P
CLON	1474	A B C D J L Q
CLON	1549	G M R V W
CLON	1763	N O S Z
CLON	1764	D V
	Total:	35 Sub-blocks

2. REGIONAL SETTING

The Geology of the Squirrel Hills area is characterised by poorly outcropping lower Proterozoic granitoid intrusives. Much of the basement is covered by Mesozoic units ranging depth from about 10 – 200metres. Structures in the basement are orientated mainly in N-S, NE and NW directions.

Much of the geological interpretation is derived from geophysical information due to the limited exposure of basement rocks – especially meta-sediments.

2.1 Mineralisation

The Cannington silver-lead-zinc deposit is hosted by metamorphosed sediments of the Proterozoic Soldiers Cap Group that includes gneisses, schists, quartzites and banded iron formations (“BIFs”). The BIFs are iron rich clastic rocks and calcsilicate rocks.

The sulphide ores of Cannington are hosted by quartzo-feldspathic gneisses containing garnet, and calc-silicate minerals, migmatite, amphibolite and pegmatite. The Cannington deposit is considered to be possibly a Broken Hill type deposit and certainly at a similar grade of metamorphism.

Cretaceous sediments cover the Proterozoic basement to depth of 20m to more than 200m. Cannington is under approximately 60m of cover. The Cannington sulphide mineralisation contains pyrrhotite and magnetite and testing of positive airborne magnetic anomalies was critical to the discovery. The position of magnetic features close to basement 'highs' is also considered a favourable exploration criterion.

About 20km south-south-east of Cannington at the G6 area there is a relatively strong magnetic anomaly in interpreted Soldiers Cap sediments under 100m of cover – this is within the joint venture between Krucible and BHP.

Lower Proterozoic rocks are intruded by plutons of the Williams Batholith: granite, granodiorite, diorite and dolerite dykes. In the Krucible EPM areas the Squirrel Hills Granite crops out to the northwest of Cannington. It is a post tectonic, non-foliated, A-type granite, considered to have been emplaced about 1500 to 1550 Ma. The granite is a pink, sometimes porphyritic rock type that contains elevated Uranium.

The Williams Supersuite is classified in the Hiltaba Association. The Hiltaba Association (type locality, Roxby Downs in South Australia) contains a spectrum of granite types from oxidised, hematite to magnetic-stable suites. The Williams Granite is in the oxidised suite. Copper and gold is spatially associated with the more oxidised type, while gold and tin is associated with the more reduced fluids.

Copper is usually associated with high temperature, oxidised granitic melts that occur late in the history of any province/terrane. Unlike most mineralised granite suites, mineralisation is often close to or internal to the granitoid itself (Wyborn 2002).

The Bustard Creek Prospect, 25km north-west of Cannington, contains shears with iron and copper mineralisation hosted by Squirrel Hills Granite, part of the Williams Supersuite. In the same area, scattered elevated uranium (up to 200ppm uranium) occurs over a north-trending zone of about 10km, near the contact of the granite and meta-sediments to the east, at the intersection of prominent north-north-east and north-west trending fault systems.

Some 100km to the north of the Bustard Creek Prospect, the copper deposits of Ernest Henry and Rocklands are associated with the aureole of the Williams Granite. Krucible considers that the IOCG mineralisation is widespread within the Williams Supersuite and constitutes a valid target at Bustard Creek Prospect.

The Westralia (alluvial gold), Crackenback (gold) and Mount Ulo (lead/silver/gold) workings are situated 35km north-west of Cannington, near the western boundary of the Bustard Creek EPM, close to the geological contact of the Kuridala Formation (equivalent to Soldiers Cap Group) and the Squirrel Hills Granite. A number of gold and base-metal anomalous sample sites are located within the Krucible ground.

Much of the Bustard Creek area is covered by younger sediments. In the east, an interpreted contact between Squirrel Hills Granite and Soldiers Cap Group is obscured by alluvium. Krucible consider the metasediments close to the contact to be prospective for Cannington style mineralisation.

Uranium

The Lower Cretaceous Toolebuc Formation contains clastic sediments and limestones. There is a good radiometric response which is caused by anomalous uranium. Molybdenum is also anomalous in the Toolebuc Formation crops out 4km east-north-east of Cannington at Krucible's El Rita Prospect.

The uranium, within the Toolebuc Formation, is likely to have been mainly sourced from the Williams Batholith and to have been transported in ground waters to this area down river systems. The material

causing deposition of the uranium in the Toolebuc Member is uncertain but it could be phosphate, carbonate, sulphide or organic material. The presence of economic deposits of uranium in the area will probably depend on the presence of a sufficient quantity of precipitating agent at any particular site, to result in an economic concentration being reached.

3. PREVIOUS WORK

Most of the previous work carried out in this area has been related to BHP Minerals looking for Proterozoic Broken Hill type basemetal and IOCG systems. Uranium roll-front style mineralisation was also the subject of previous exploration by Marathon. Glengarry has also carried out a number of programs looking for Cannington or Mt Isa style systems.

BHP carried out a number of regional airborne geophysical surveys (magnetics and gravity) over the area. A summary of previous exploration is outlined below.

BHP carried out ground geophysical surveys and drill testing over several targets during the 1990s. Pasminco, under joint venture, also completed a variety of exploration surveys on their tenements between June 2000 and July 2001.

Garnet Prospect

In 1977, Marathon Petroleum Limited drilled a number of shallow rotary holes, south and south-west of Cannington. This drilling was aimed at uranium mineralisation in the younger cover sediments, although most holes were drilled to basement and provided valuable information for basement depth modelling. Up to 50ppm uranium was intersected in the drilling and several wire line gamma ray anomalies were also reported but do not appear to have been assayed. Several holes also intersected alteration including, garnets, sillimanite and sulphides which may be pathfinders to base-metal mineralisation.

Bustard Creek Prospect

In 1993 and 1994, Aberfoyle Exploration Ltd. carried out some work in the southern portion of the Bustard Creek area, targeting IOCG mineralisation associated with the radioactive Squirrel Hills Granite. This work consisted of rock chip sampling, geological mapping and ground magnetic surveys. Up to 2.5% copper was returned from sampling at narrow historic workings in the Granite (the Bustard Creek Prospect). Although no scintillometer surveys were carried out, rock chip samples were routinely assayed for uranium and returned several anomalous values from 50ppm to 160ppm in a north-north-east corridor. No drilling was carried out by Aberfoyle.

4. KRUCIBLE'S WORK PROGRAM

Krucible's exploration on this EPM has involved research of previous companies' exploration and interpretation of regional geophysical and geological data. The company identified target zones from this work which lead to completion of a reconnaissance sampling program to selected sites.

4.1 Target Generation

5 target areas have been identified in the Squirrel Hills EPM based on geological and geophysical interpretations as well as previous company's exploration.

Crackenback/Bustard Creek

These 2 targets are situated within the Squirrel Hills Granite which is part of the Williams Batholith, a known mineralisation event. Both these areas have historic copper workings hosted within shear zones within the granite. Krucible has completed reconnaissance of the area and collected rock chips/grab samples in the area. Analysis of these has suggested part of the area be relinquished.

El Rita

Lying to the northeast of the Cannington Mine this prospect lies on the Toolebuc formation which is anomalous in uranium and molybdenum. Krucible has selected the areas where the Toolebuc formation is buried and where reconnaissance exploration has failed to produce any anomalies.

Cannington South

This prospect is dominated by a circular magnetic high which has been targeted by previous drilling but not intersected. To the north of this the magnetics become subdued and the interpreted depth to Proterozoic units is deeper, hence the northern part of this prospect area has been relinquished.

Garnet

Krucible has completed intense exploration on this prospect which has highlighted anomalous copper, gold, and rare earth mineralisation. To the south of this an interpreted dyke is easily visible on the regional magnetics (Figure 3). There is possible mineralisation associated with the contacts of this dyke and the country rock, however away from this the prospectivity is poor and these regions have been relinquished.

4.2 Geochemical Sampling

Krucible collected a total of 4 samples within the areas being relinquished. The samples were collected in areas identified as having mineral enrichment, interesting alteration or composition which may have anomalism. Samples were collected as grab samples from outcropping units or from Lag material collected using hand methods from areas of potential. These samples were then sent to ALS Townsville and analysed for elements. Krucible uses a number of methods for this, samples 10012, 10013 and 10492 were analysed by ME-ICP61 for selected elements except gold which is analysed by fire assay method AU-AA22. Sample 10245 was analysed by ME-ICP62 for selected elements except gold which is analysed by fire assay method AU-AA22, uranium thorium and fluorine were also analysed by ME-XRF05. The ICP methods use 4 acid digestion and are analysed by inductively coupled plasma-atomic emission spectrometry.

The results from these samples indicated weakly anomalous molybdenum of up to 82ppm. All other values were low and no significance has been placed on the assay results received. The results are tabled in Appendix 1.

5. CONCLUSIONS AND RECOMMENDATIONS

Krucible has completed desktop research including previous company's exploration, geological interpretation and geophysical observations which led to the identification of 5 broad prospect areas. Subsequently Krucible completed reconnaissance on these which included rock chip sampling.

Based on this work Krucible has determined areas of low potential. Within these areas a total of 4 samples were collected which failed to identify any areas of potential, hence Krucible has relinquished 35 sub-blocks from the Squirrel Hills EPM 15354.

6. BIBLIOGRAPHY

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