White Cliff Minerals LTD

**17 June 2020** **ASX Code: WCN**

# Midas Cu-Au Projects Update in Paterson Province

## HIGHLIGHTS

- A full data review of the newly named Midas Cu-Au Projects, (that encapsulates Table Top and Coolbro Creek on E45/5107 and E45/5112) has been completed, with 21 targets identified.
  - E45/5107 has 4 project areas with 8 targets. These 8 targets form part of the previously announced geochemical program.
  - E45/5112 has 6 target types based on their structural/geological setting, with 13 high priority first pass targets to follow up.
- The planned geochemical sampling program has not started yet due to wet weather. The program was to utilise a sampling crew already in the area, that has not yet mobilised back.
- In addition to the geochemical sampling program to commence at E45/5107, White Cliff is eager to advance E45/5112, which will most likely include geochemical sampling and additional mapping, ahead of first-pass drilling.
- The Midas Cu-Au Projects have been subject to limited and sporadic field activities, however they have both shown presence of gold mineralisation, including drilling by CRAE at Table Top which intersected **2.9g/t Au** over 2m.

White Cliff Minerals Limited ("White Cliff" or "the Company") is pleased to advise shareholders that a full review of the Midas Cu-Au Project, that encapsulates Table Top (E45/5107) and Coolbro Creek (E45/5112) has been completed, with 21 targets identified for further review.

**Commenting on the update, White Cliff's Technical Director, Edward Mead said:**

*"The more work we do on the project, the more opportunities we see for potential structural fluid pathways, and geological units that have potential as traps for mineralised fluids. White Cliff needs to get on the ground and the recent rain that has delayed the geochemical sampling program is frustrating. The Company was aiming to utilise a crew already in the area as a way of minimising the costs of the program.*

*"The Patersons Province has seen a lot of activity over the last 12 to 24 months, including the great success of Greatland Gold/Newcrest Mining at Haverion. Having tenure along the Northern extension of Kintyre and 60km south of Nifty, we are excited about getting on the ground to undertake first pass exploration."*

### Project Overview

The Paterson Province comprises a Paleoproterozoic basement of Rudall Complex metamorphic rocks overlain by Neoproterozoic sediments of the Yeneena and northwestern Officer Basins, and Paleozoic Canning Basin sediments to the northeast. The province hosts several world-class deposits: Telfer gold-

copper mine, Nifty copper mine and Kintyre uranium deposit. The recent Winu and Havieron discoveries are being considered as intrusion-related copper-gold mineralisation hosted in buried Yeneena Basin sediments on the Anketell Shelf. They are located proximal to major NW to NNW-trending faults. Information available on the mineralisation indicates it is dense, magnetic, conductive and potentially chargeable, making it a good target for geophysical exploration, particularly given that mineralisation underlies Canning Basin sediments and is blind to surface.

The Midas Cu Au Projects are located on major granite dome structures, have highly prospective fault structures, and in the case of E45/5107 have significant historical stream sediment sampling programs completed by CRA Exploration in the 80s, with follow up rock-chip sampling reported in WAMEX reports. Localised mapping was also undertaken, and the technical data consolidated by White Cliff needs to be validated and field checked. Recent inclement weather has slowed on ground activities; however, this has provided the technical team with additional time to fully interrogate the project data.

R. Russell and Associates previously carried out structural mapping from aerial imagery over both E45/5107 and E5/5112. The intention of the work program was to outline the main structural features of the tenements and locate areas considered to be favourable for mineralisation from the perspective of the photo-geological mapping.

The work program was completed by using photo-geological interpretation of 1:50,000 high resolution aerial imagery. Detailed mapping work was then completed over four areas on E45/5107 considered to have the best potential in the tenement at scales of between 1:15,000 and 1:7,500. Detailed mapping was completed over the entire E45/5112 tenement.

The following are the main conclusions on E45/5107:

- The *western* parts of E45/5107 are prospective for medium to large-scale sedimentary-hosted exhalative copper and cobalt mineralisation in receptive units of the Broadhurst Formation.
- In the *eastern* parts of the tenement, small to moderate-volume high-grade gold mineralisation is possible in quartz saddle reefs and stockworks in fault-controlled folds in the Coolboro Formation.
- *Broad-scale doming* postulated by previous workers in the east of the tenement, including by the Geological Survey of WA, is not obvious on the present high resolution aerial imagery. However, if validated by further work, such a structure would have the potential to host large-volume gold mineralisation.

The following are the main conclusions on E45/5112:

Conceptually, porous or chemically receptive units in the Pungkuli Formation of the Yeneena Supergroup are considered to be favourable locations for Co/Cu, SEDEX-type mineralisation. Two units are of particular interest in the Yeneena section in E 45/5112:

- The basal conglomerates, the Taliwanyah Formation, may form more porous and permeable facies which are receptive to mineralised fluids. Possible outcrops of the basal conglomerate or lenses of conglomerate in the Pungkuli Formation are identified in the work programme and selected for field attention.
- Interbedded carbonate units are known to occur in the Pungkuli Formation and may form reactive facies for migrating mineralised fluids. Light-toned zones in the dark- toned Pungkuli Formation could possibly be carbonate facies and these are identified in two main areas which are recommended for field checking

The Pungkuli Formation outcropping on the east-southeastward plunging nose of the main McKay Ridge Dome is considered to be a prime trap site for mineralised fluids. Here, two main outcrop areas are recommended for field examination.

The outcrop of the Pungkuli Formation on the northern flank of the main dome is highly weathered. Several outcrops of an ironstone cap are scattered across the weathered Pungkuli Formation outcrop. It is recommended that the remnants of the caprock should be examined in the field for gossanous material or remnants of Cu minerals.

The Rudall metamorphic basement outcrops are thought to be prospective particularly for gold and secondarily for base metals and uranium. The basement rocks are not specifically targeted in this work programme but six zones of exploration interest are identified from the air photograph interpretation.

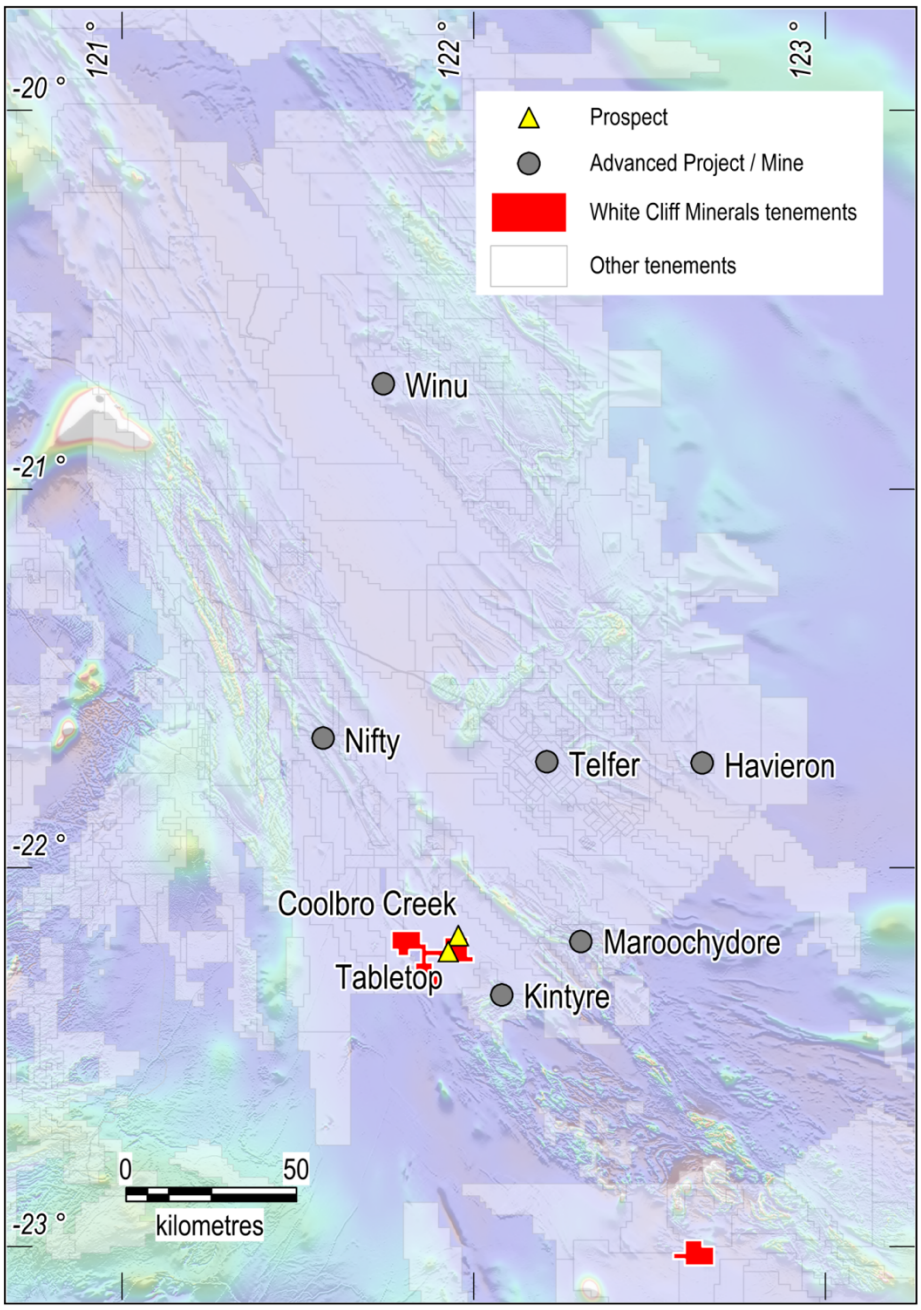


**Figure 1: Midas Cu Au Project location (E45/5107 and E45/5112) to significant projects in the Paterson Province overlying the regional airborne RTP magnetics.**

### Midas Cu Au Project E45/5107

E45/5107 has surface geology which is approximately 80% outcrop, predominantly comprising Meso- to Neoproterozoic Coolbro Sandstone with minor remnant Permian Paterson Formation. The Coolbro Sandstone forms the basal unit of Yeneena Basin which overlies Paleoproterozoic granitic gneisses (orthogneisses) and metasediments (paragneisses) of the Rudall Complex (Williams and Bagas, 1999). The Yeneena Basin-Rudall Complex unconformity is exposed near the Kintyre deposit and doesn't outcrop within E45/5107.

Multiple orogenic events have resulted in complex folding of the Proterozoic sequences (Hickman and Bagas, 1999). Mapped structures within E45/5107 are generally NW- to NNW-trending (sub-parallel to the major Southwest Thrust located immediately to the west of E45/5107) with some minor N-S faults. The presence of a large dome some 10 kilometres wide and 15 kilometres long is shown on the G.S.W.A 1:250,000 map sheet (the 'Tabletop Dome'). The eastern parts of E 45/5107 cover the main part of the dome, which has been of interest due to its apparent geological similarity with the mineralised Telfer Dome some 80km to the north-northeast.

Historically, gold has been recorded in stream sediment samples around Coolbro Creek and in rock-chip samples at Table Top. At Table Top historical mapping indicates quartz filled fracture systems over 3 km in length. The results of this historical work will be validated by future site visits.

**Table 1:** Exploration Targets in E 45/5107 from interpretation of aerial imagery and magnetics.

| Target Number | Figure No. | Location | | Rank | Description |
|---|---|---|---|---|---|
| | | Easting | Northing | | |
| T2a | 2a 2b | 383500 | 7535800 | 2 | Mid-graben high in the Midas half graben. SEDEX-type mineralisation possible in favourable unites in the Broadhurst Fm. |
| T3a | 3a 3b | 378900 | 7546900 | 6 | Folding on the mid-graben high in briadhurst Fm. Some fault displacement of the unites likely. SEDEX-type mineralisation possible in carbonate or trapped against shale units. |
| T3b | | 380250 | 7544800 | 5 | Major fault zone controlling the buried edge of a trough containing the main Broadhurst section. Drag folding possible along the fault trapping mineralised fluids. |
| T4a | 4a 4b | 389300 | 7542300 | 1 | Anticlinal fold on a major NW-trending thrust/reserves fault system. Much quartz float and veining suggests saddle reefs and stockworks may be present in the fold. Earlier sampling of quartz veins returned 89g/t Au in close proximity to this fold. |
| T4b | | 389450 | 7543300 | 3 | Extensive areas of quartz float and quartz veining in N-S trending faults. A NW-plunging syncline in the north contains quarts veins along the bedding planes in the Coolboro sandstone. |
| T4c | | 389700 | 7543700 | 4 | Extensive areas of quartz float and quartz veining in a buried or obscure N-S trending fault zone. Quartz veins appear to be partly *en echelon*. |
| T5a | 5a 5b | 396000 | 7540150 | 7 | Complex fold belt on a major WNW trending reverse/thrust fault zone with much quartz float and veining associated. Possible stockworks and saddle reefs may occur in the antiforms. |
| T5b | | 396750 | 7540800 | 8 | Fold belt on a NW trending fault zone. Antiform and synform folds identified. Quartz veining may be mineralised here. |

Mapping of the structural geology of E45/5107 was completed at a scale of 1:50,000 from an aerial image with resolution of 50 centimetres.

- Linear features, interpreted to be faults or bedding planes and joints in the outcropping units, are mapped from linear associations of geomorphological features and tonal contrasts.
- Regolith types, outcrop geology and rock types are identified from tonal, textural and colour patterns on the imagery.

Four areas considered to be of special exploration interest were selected from the 1:50,000 mapping for detailed mapping. They are:

- The Midas Half Graben in the southwest of the tenement area. The mapping here was completed at a scale of 1:15,000 (Figure 2a).
- The Northwest Graben in the northwest of the tenement. The mapping was completed at a scale of 1:15,000 (Figure 3a).
- The Central Fold Belt in the central parts of E 45/5107. The mapping here was completed at a scale of 1:7,500 (Figure 4a).
- The Southeast Fold Belt in the southeast of the tenement. The mapping here is at a scale of 1:10,000 (Figure 5a).

Eight targets identified from the photo-mapping are listed and discussed briefly in **Table 1**. A nominal relative rank from 1 to 8 was assigned to each target. Schematic cross sections are presented in each figure for each of the areas to more clearly define the target concepts.

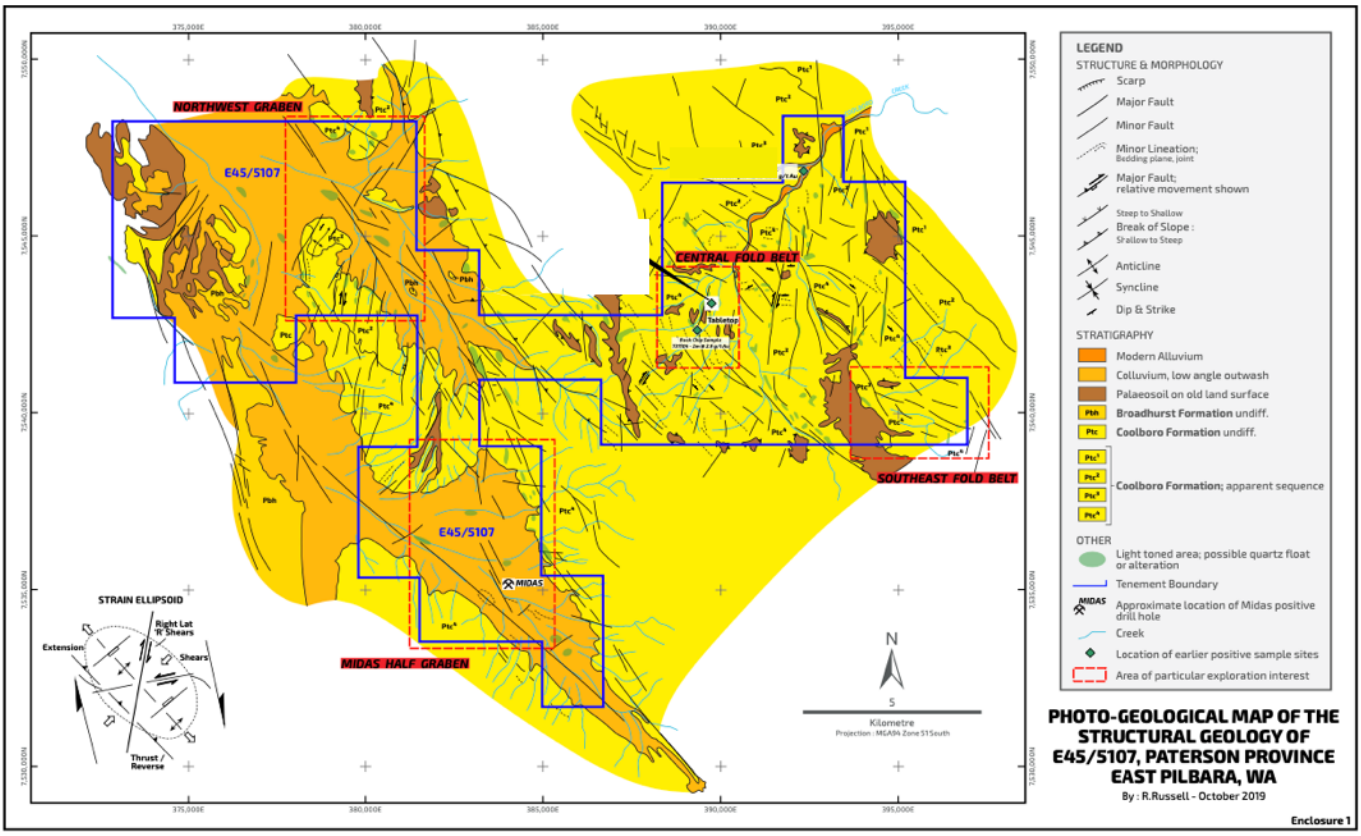


**Figure 2: E45/5107 has 4 project areas (Northwest Graben, Midas Half Graben, Central Fold Belt and Southeast Fold Belt) with 8 targets identified by Photo Geological and desktop review by R Russell and Associates. The report was completed in October 2019 and incorporates data from Southern Geoscience.**

### *Midas Half Graben*

The contact zone between the Coolboro Sandstone to the east and the Broadhurst argillaceous/carbonate units to the west is partly or wholly fault-controlled. Slices of Broadhurst sediments are faulted into the Coolboro section in grabens or half grabens. The Broadhurst outliers form wedges enclosed by the major thrust/reverse fault systems that dip to the east below the thick Coolboro section. Conceptually, it is possible that upward-migrating mineralised fluids in the fault conduits could have been trapped in favourable units within the Broadhurst section. The presence of the major northwest trending faults, acting as fluid conduits, is seen as a strongly positive feature for the prospectivity of this contact zone.

The southern part of E 45/5107 covers an interpreted half graben faulted into the Coolboro section which contains an outlier of Broadhurst sediments. It is here that Midas drilled shallow holes which intersected favourable pyritic carbonaceous sediments containing anomalous copper. The area is informally named the 'Midas Half Graben' in this report. The area (**Figure 2a**) is considered by the writer to be highly prospective and worth further exploration effort.

In the half graben, the Broadhurst sediments are deeply weathered and subcrop below a thick sheet of alluvial and colluvial outwash in a broad triangular valley between Coolboro sandstone outcrops (Photograph 2, **Figure 2a**). A set of narrow linear traces extends northwestward through the centre of the outwash plain. These traces, probably representing lines of more vigorous vegetation growth, are thought to reflect faults at depth. Weak magnetic highs in the plain suggests that slightly iron-rich Broadhurst units subcrop at shallow depth. To the north of the half graben, Coolboro sandstone outcrops in a narrow anticline directly on-trend with the interpreted central fault zone in the prospective area. It is the writer's

opinion that the central faults mark a mid-graben structural high (**Figure 2b**). Curved lineation and a possible right lateral displacement of the main central graben fault trend at a location approximately 383500E/7585800N suggest that the mid-graben high may culminate in this area (Target T2a, **Table 1**). A magnetic high coincides with the zone, suggesting that the Broadhurst section has been elevated here.

Mineralisation is conceptually also possible in favourable units in the Broadhurst section on the flanks of the Midas half graben and in the mid-graben structural high (**Figure 2a** and **b**). The area drilled by Midas appears to be about 700 metres to the southeast of the present interpreted area of interest. Geochemical sampling across the T2a target area is recommended. If the results are positive, airborne electromagnetic data acquisition should follow.

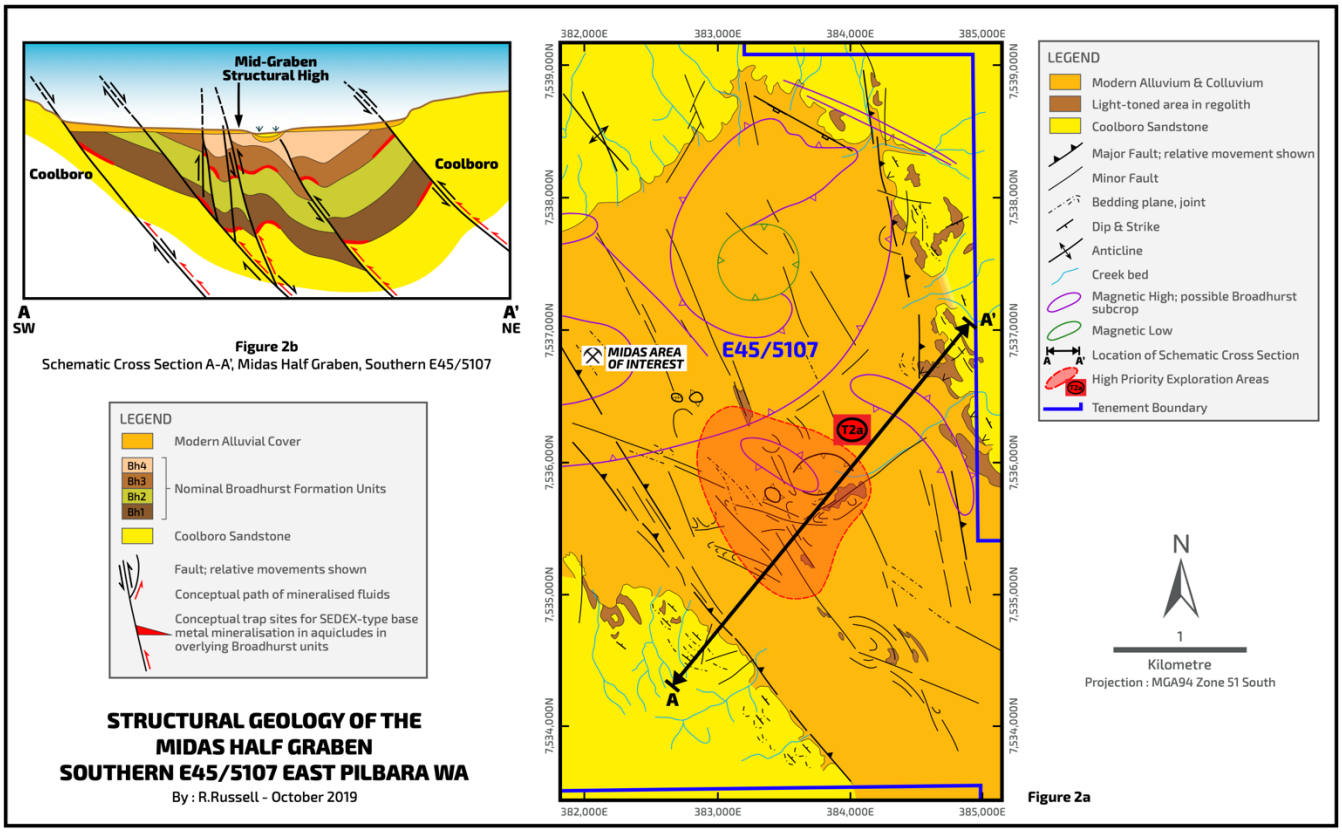


**Figure 2a 2b: E45/5107 Midas Half Graben structural geology interpretation.**

### *Northwest Graben*

A further fault-controlled structural low is mapped in the central-northwest part of E 45/5107 (**Figure 3a**). Here, the mid-graben high is more prominent. The central anticline is effectively flanked by two half grabens containing the Broadhurst units (**Figure 3b**). The magnetic data suggests that the Broadhurst units dip away from the axis of the anticline which is cored by Coolboro sandstone. Displacements of the western flank of the anticline are likely due to northwest trending faulting (**Figure 3a**). A major fault zone is interpreted extending northwest through the centre of the area of interest which obliquely intersects with the graben and the central anticline. The fault is thought to represent a thrust/reverse trend with throw down to the east. It is likely to disrupt the stratigraphy across the area and exert a control on the trapping of mineralised fluids in the buried Broadhurst Formation (**Figure 3b**). The fault is coincident with a strong magnetic gradient in the southeastern parts of the mapped area which is though likely to reflect thicker or shallower Broadhurst units on the eastern side

The precise structural pattern is obscure and the interpretation here is conjectural. Trap situations are tentatively identified along the main northwest fault and on pinchouts on the eastern flank of the graben (**Figure 3b**).

Two zones of particular exploration interest are identified from the present mapping (**Table 1**):

- T3a lies in the northern part of the graben where the Broadhurst section appears to be tightly folded against the western flank of the mid-graben high (**Figure 3a**). The intersection zone between these folds and the main northwest trending fault are considered to be of particular interest. The trap situations on **Figure 3b** are conjectural as no sub-surface information is available in the area at present.
- T3b is located to the southeast along the main northwest fault (**Figure 3b**). A circular feature about 200m in diameter is mapped here in a zone of intense faulting. A magnetic gradient sharply down to the west coincides with the fault zone, suggesting that the Broadhurst units thin rapidly in this direction. Fold controlled traps and pinchouts along the fault are thought to be the best sites for SEDEX-type mineralisation in this area.

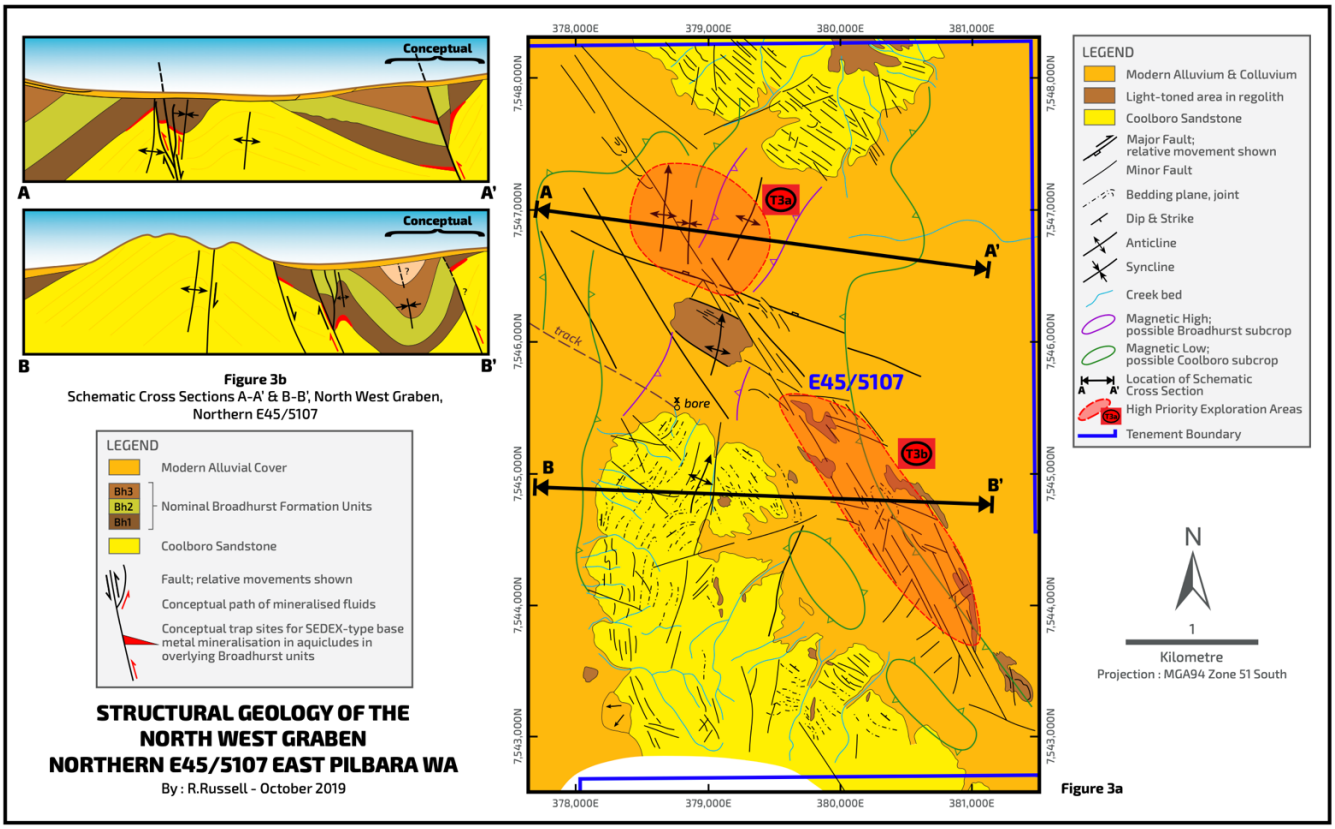


**Figure 3a 3b: E45/5107 Northwest Graben structural geology interpretation.**

***Central Fold Belt***

**2.9g/t Au** over 2m was recovered in a drill hole by CRA in 1980 in quartz veins in a zone of folding in the central part of E 45/5107 (**Enclosure 1**). The location of this positive result is on the western flank of the 'Central Fold Belt' identified in the present work programme. On the aerial imagery (Photograph 4), the main fold in the belt is interpreted as anticlinal. The axis of the fold is parallel to the main faults and plunges to the north (**Figure 4a**). Colluvial sheets of quartz fill most of the narrow valleys and quartz veins can be seen on the imagery following the bedding planes in the sandstone. Quartz stockworks and saddle reefs in the folds are considered to be possible. The earlier positive drill result is a highly encouraging factor. Systematic rock chip sampling of the quartz veins is recommended in this area.

Three general target areas are identified here (see **Table 1**):

- T4a is located along the main anticlinal fold. Quartz veining is prominent along the northwest faults and along the bedding in the sandstone (**Figure 4b**).
- A zone of north-south trending faults splays off the main northwest trending faults and extends northward (T4b). Broad sheets of quartz float are located in this corridor and quartz veining becomes common to the north where a northward-plunging syncline is mapped (**Figure 4b**).

- T4c is located to the east of the main fold. The structural pattern here is obscure but several *en echelon* quartz veins trending east-west are identified in the north of the target area, possibly located in tension gashes. In the south, north-south veins have intruded into right lateral shears.

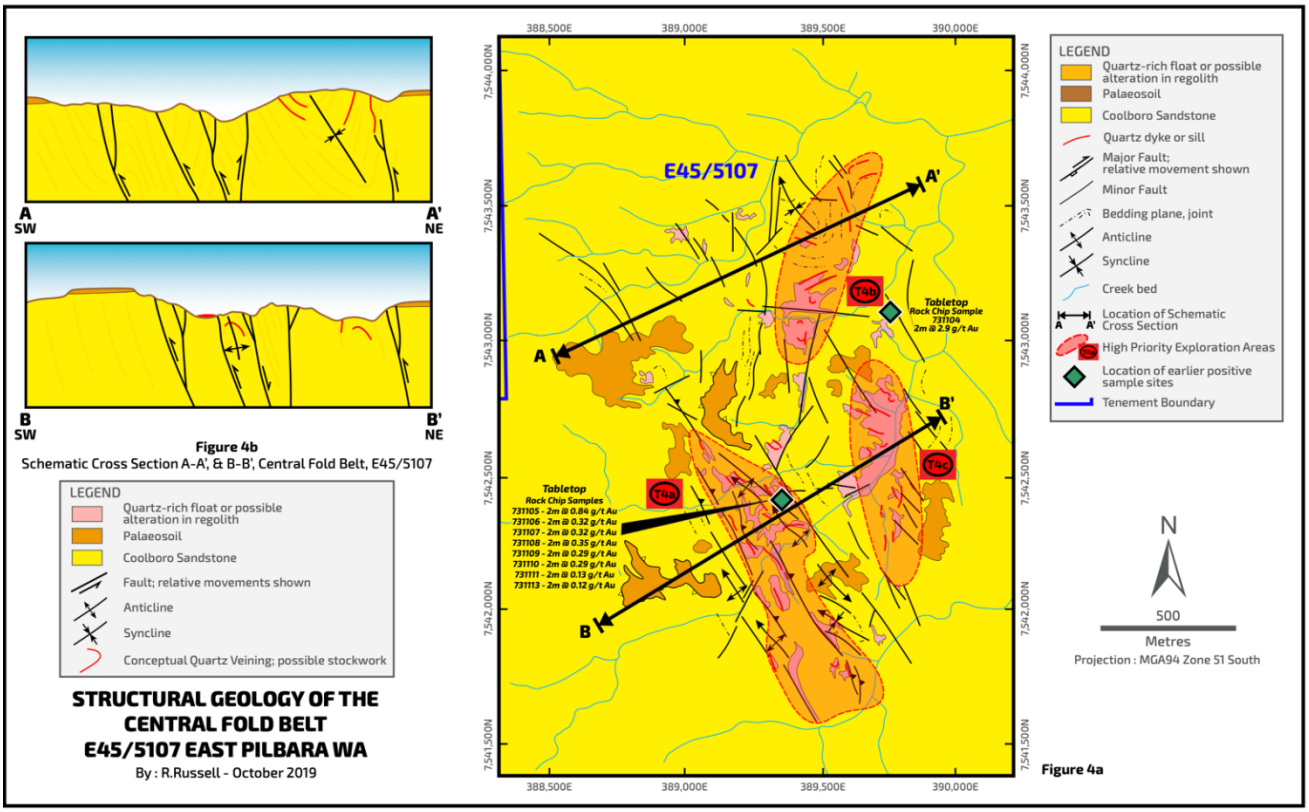


**Figure 4a 4b: E45/5107 Central Fold Belt structural geology interpretation, with assay results from previous sampling shown in the diagram. The assay results are not JORC 2012 and work will be undertaken to resample the areas to validate the historical data.**

***Southeast Fold Belt***

Intense folding associated with extensive quartz veining is identified in the southeastern corner of E 45/5107 (Enclosure 1; **Figure 5a**). Remnants of an older land surface survive in the area and the saprolitic horizon at the base of the palaeosoil gives a smooth light-toned signature on the imagery (Photograph 5). This saprolite is easily confused with quartz float. The main folds follow the fault trends toward the northwest and north-northwest. Quartz veining is common close to the fault outcrops but not elsewhere. Stockworks and saddle reefs are possible in association with the folds, particularly in the anticlines. It is not yet known whether the quartz veins are mineralised in this area. However, rock chip sampling is recommended here to establish the mineralogy of the quartz veins.

Two main target areas are identified from the mapping (**Table 1**):

- T5a is located where anticlinal and synclinal folds are identified containing numerous quartz veins in a northwest trending fault zone (**Figure 5b**). Areas of quartz float are mapped, many of which are thought to contain outcropping quartz veins.
- T5b is located on a north-northwest trending fault zone which splays off the main northwest trend. The folding is mainly anticlinal (**Figure 5b**) and quartz veining along the faults and within the Coolboro bedding planes is likely.

E 45/5107 is located in the Paterson Province, East Pilbara in Western Australia (**Figure 1**). The tenement lies some 80 kilometres south-southwest of the major Telfer Cu-Au gold mine. It straddles the contact between the Coolboro Sandstone in the east and the younger Broadhurst Formation in the west. The area is remote even by WA standards and has only been superficially explored in the past.

Previous sampling for gold appears to have been sporadic and unsystematic. However, two positive results are known to have been returned in the tenement area:

- Field work by CRA on the western margin of the Tabletop Dome in 1980 has returned **2m@2.9g/t** Au from rock chip samples in an outcropping quartz vein. A further 8 positive results, considered to be those exceeding 0.1g/t Au, were also recovered by CRA during the same exploration programme. The location of the positive samples are plotted as accurately as possible on the present mapping (**Figure 4a**). The positive samples lie close to the 'Central Fold Belt' identified in the present mapping. Clusters of quartz veins can be seen in this area on the imagery in association with the folding and represent a high priority exploration target.
- Stream sediment sampling in the northeast part of the tenement by CRA some 38 years ago returned **82g/t** Au from the gravels of Coolboro Creek. This very high value was reportedly obtained from the -40 mesh fraction during the sampling when visible gold was observed. No information is available on the quality of the trap site but the result is seen as a strongly positive indicator that the entire northeastern part of the tenement is broadly prospective for gold.

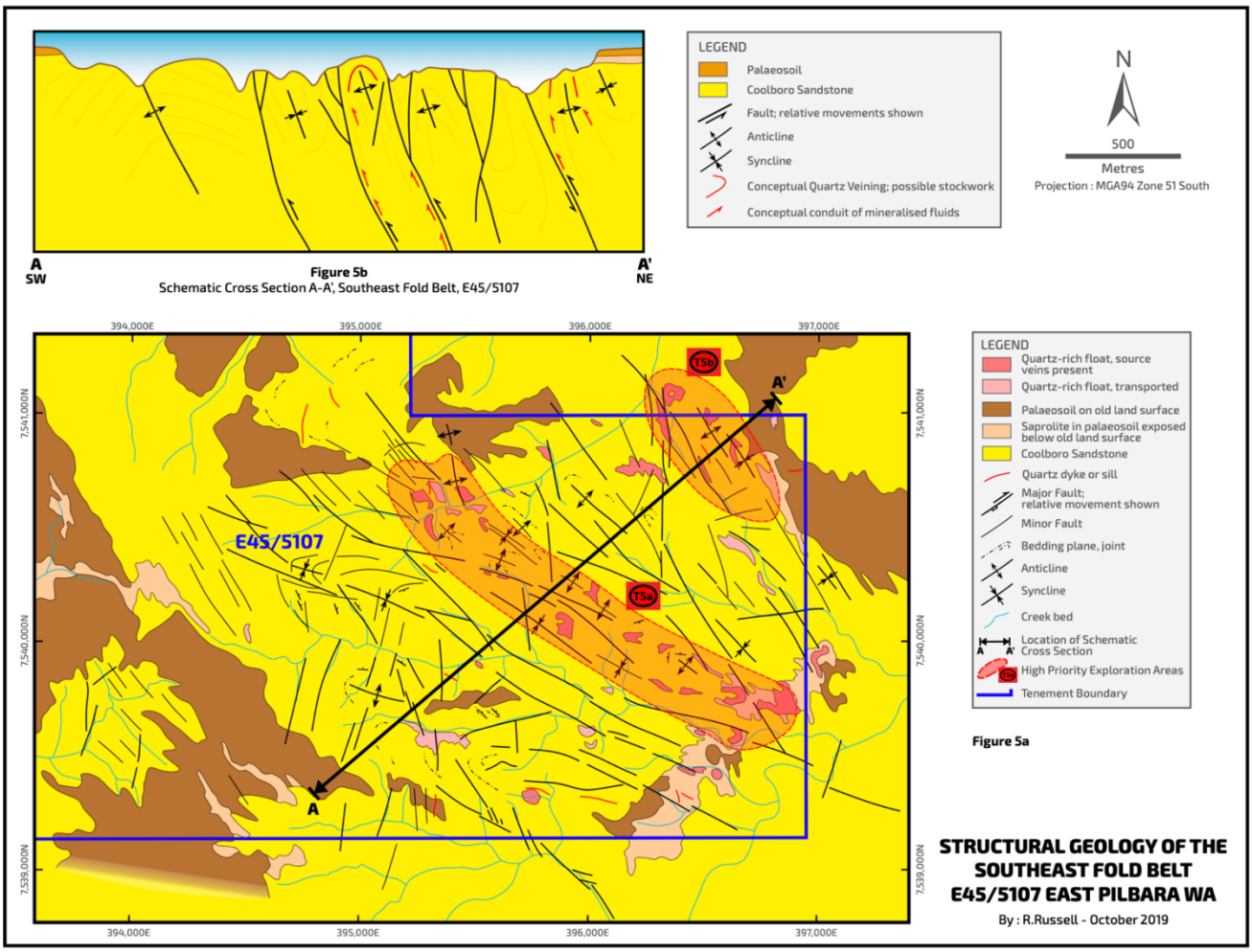


**Figure 5a 5b: E45/5107 Southeast Fold Belt structural geology interpretation.**

**Tenement E45/5112**

E 45/5112 is located south of the Rudall Range in the East Pilbara in Western Australia, just south of the Rudall Ranges National Park (**Figure 1**). The tenement lies some 175 kilometres south-southwest of the major Telfer gold mine. It lies over the Mackay Ridge Dome. This structure is an east-southeastward-dipping antiform. The Neo-Proterozoic Yeneena Supergroup conglomerates, shales and sandstone dip radially off the dome at shallow angles to the north, east and south. The Yeneena sediments rest unconformably on steeply-dipping Rudall Complex Basement schists which form the core of the dome.

E45/5112 covers most of the McKay Ridge Dome (**Figures 6** and **7**) and hosts important Yeneena Supergroup sediments the focus of SEDEX style and structurally controlled components of the Telfer, Nifty and Maroochydore Gold/Copper/Cobalt deposits. Dome structures also may provide a source and or a heat engine for mineralising fluids. The sequence appears to be an antiformal dome exposing the Rudall Metamorphic Complex at its core, flanked by Yeneena Group sediments (Throssell Range Group) and then younger sediments still of the Officer Basin (Tarcunyah Group). The tenement is proximal to the major NW regional structure (MacKay Fault; also named as the Southwest Thrust on other maps).

Little work has been done to date in the project area and the project area can be regarded as unexplored.

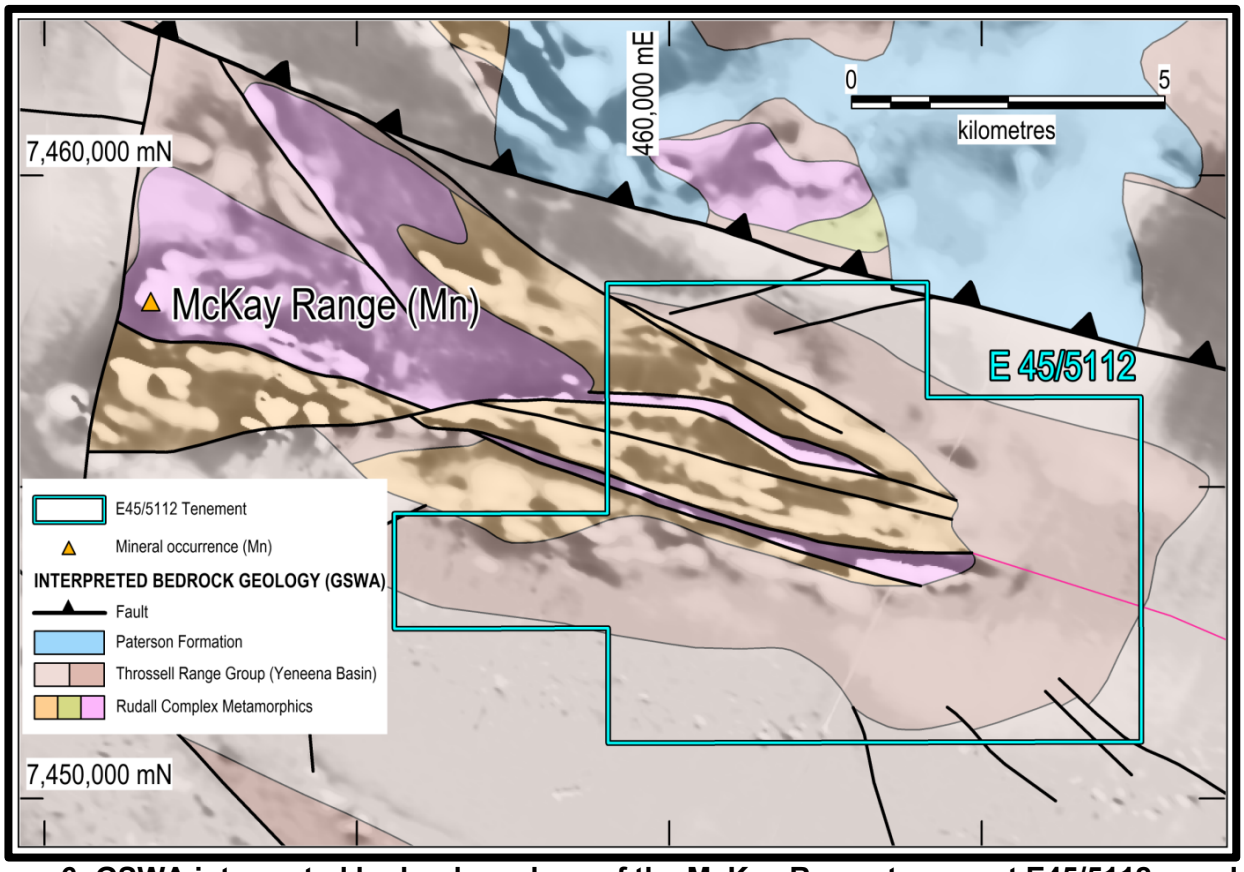


**Figure 6: GSWA interpreted bedrock geology of the McKay Range tenement E45/5112, overlain on RTP 1VD magnetics.**

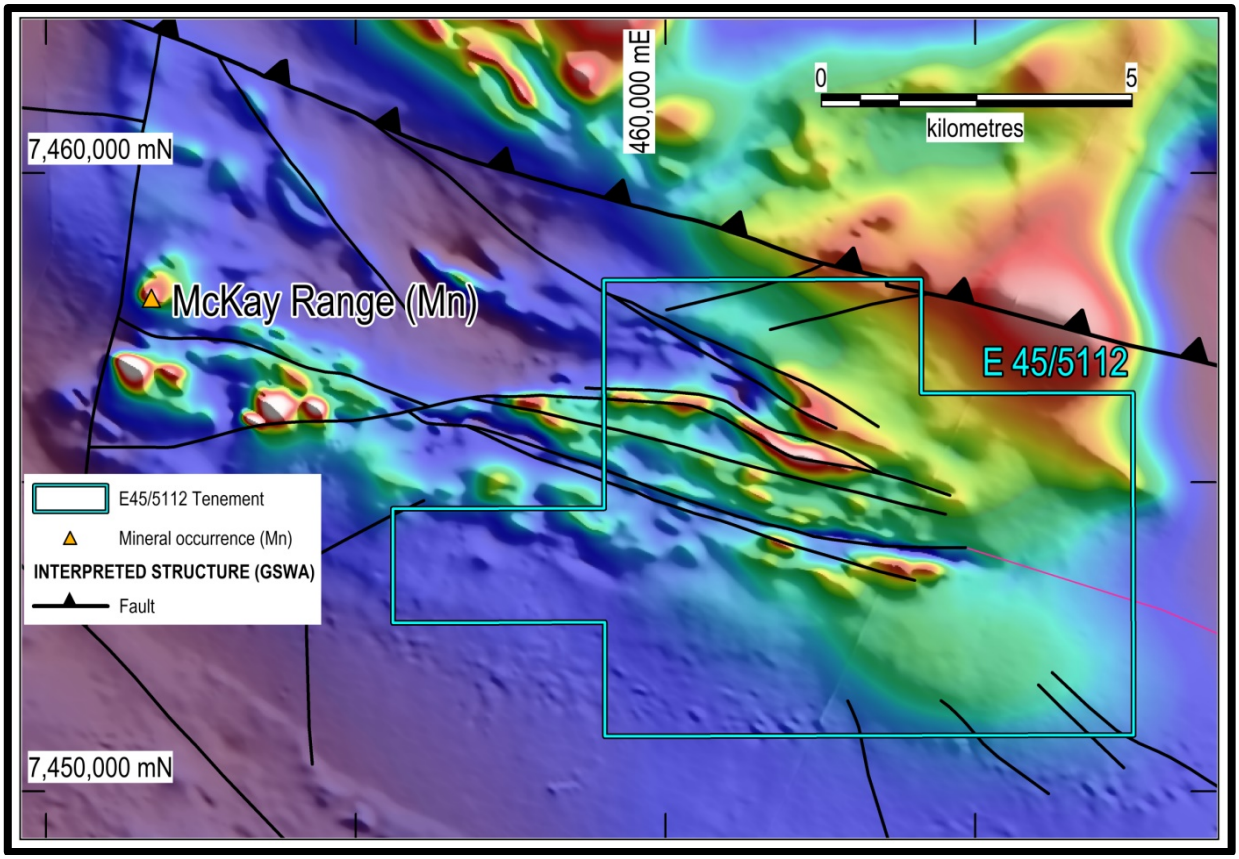


**Figure 7: RTP magnetic image and GSWA interpreted bedrock structure of the McKay Range tenement E45/5112.**

The targets identified from the photo-mapping are listed and discussed briefly in **Table 2**. A nominal relative rank from A1 to F1 was assigned to targets considered to be worthy of first-pass attention in the field. Two schematic cross sections are presented for each of the areas to more clearly define the target concepts (**Figure 9**).

**Table 2:** Exploration Targets from Photo-Geological Mapping in E 45/5112

| Target No. | Approximate Location | | Target Type | First-pass Priority | Description | Recommended Field Work |
|---|---|---|---|---|---|---|
| | Easting | Northing | | | | |
| F1 | 458300 | 7454200 | Fault Trap | | Offset in the main unconformity. Geology is obscure in the pan handle. | Soil samples along fault trends. Outcrops are poor but rock chip where possible. |
| F2 | 462500 | 7452150 | | F1 | Major fault may throw down to the NE and form trap for fluids migrating NE. | |
| F3 | 463000 | 7456000 | | | Possible fault, may be trapping mineralised fluids migrating SW. | |
| F4 | 459500 | 7458000 | | | Narrow graben in Pungkuli shale | |
| | | | | | | |
| C1a to c | 459200 | 7453850 | Coarse-grained basal unit | | Possible eroding remnants of conglomerate facies near base of Pungkuli Fm. | Look for gossanous float or Fe-rich soil. Take soil or rock chip samples as appropriate. |
| C2 | 460350 | 7453000 | | C2 | Saprolite bench in Pungkuli Fm. May be exposed conglomerate in low-amp anticline | |
| C3 | 460900 | 7454000 | | C1 | Ridge formed on the main unconformity by more resistant unit. May be conglomerate | |
| C4 | 461750 | 7453550 | | | Ridge on the main unconformity. May be basal conglomerate | |
| C5 | 462000 | 7453050 | | | Low ridges up-dip in the Pungkuli Fm, may be conglomerate. | |
| C6a to c | 463100 to 64200 | 7453200 to 53750 | | C3 | Outliers of basal conglomerate on basement. | |
| C7 | 464800 | 7453350 | | | Check at the base of this hill for mineralised conglomerates. If positive, follow the trends to the NE and SW. | |
| C8 | 462900 | 7455820 | | | Possible coarse-grained lens on main unconformity. | |
| | | | | | | |
| Ca1 | 462100 | 7452950 | Carbonate unit in Pungkuli Fm.? | | Saprolite? In Pungkuli shale. May be carbonate unit exposed | Look for gossanous material. Soil or rock chip as appropriate. |
| Ca2 | 463750 | 7452500 | | D1 | Fold in the Pungkuli Fm extends 2km to the east. Carbonate units may be exposed on this the W end. | |
| | | | | | | |
| I1 | 459600 | 7453500 | Iron-stained units in the Pungkuli Fm. | | Patches of Fe-rich float. May overlie a palaeochannel on the unconformity. | Soil sample of Fe-rich float |
| I2 | 460200 | 7452600 | | B2 | Small ferricrete scarps in an area of possible up-warp. May overlie a palaeochannel in the unconformity. | Check for gossan and take rock chip samples. |
| I3 | 465950 | 7454900 | | B1 | Ferricrete cap in Pungkuli shale approximately on the main axis of the McKay Dome. | |
| I4 | 463900 | 7455850 | | | Ferricrete outcrops in weathered Pungkuli Fm. On the north side of the dome. | |
| I5 | 463500 | 7456080 | | | | |
| I6 | 462500 | 7456500 | | B3 | | |
| I7 | 461650 | 7457250 | | | | |
| | | | | | | |
| D1 | 464900 | 7454750 | Axis of McKay Ridge Dome | A1 | Unconformity between the Pungkuli Fm and the basement on the dome axis. Check for gossans along entire length. | Check for gossans or alteration. Rock chip or soil sample as appropriate. |
| D2 | 466250 | 7454900 | | A2 | Weathered Pungkuli shales on the McKay Ridge Dome axis. | |
| | | | | | | |
| R1 | 462500 | 7455000 | Rudall Complex Basement | E1 | NW-trending cross faults in the main anticline. Displacements of the crest are both right and left lateral. | Check fault zones for shearing. Rock chip sample where there is any staining due to mineralisation or sulphide pits. |
| R2 | 462850 | 7455000 | | E2 | | |
| R3 | 464300 | 7454750 | | E3 | | |
| R4 | 463100 | 7453650 | | | Conjugate fault set intersection | |
| R5 | 461400 | 7456060 | | | WNW-trending thrust fault cut s obliquely through schist units | |
| R6 | 460780 | 7456900 | | | NW-trending fault displaces folded basement schist units | |

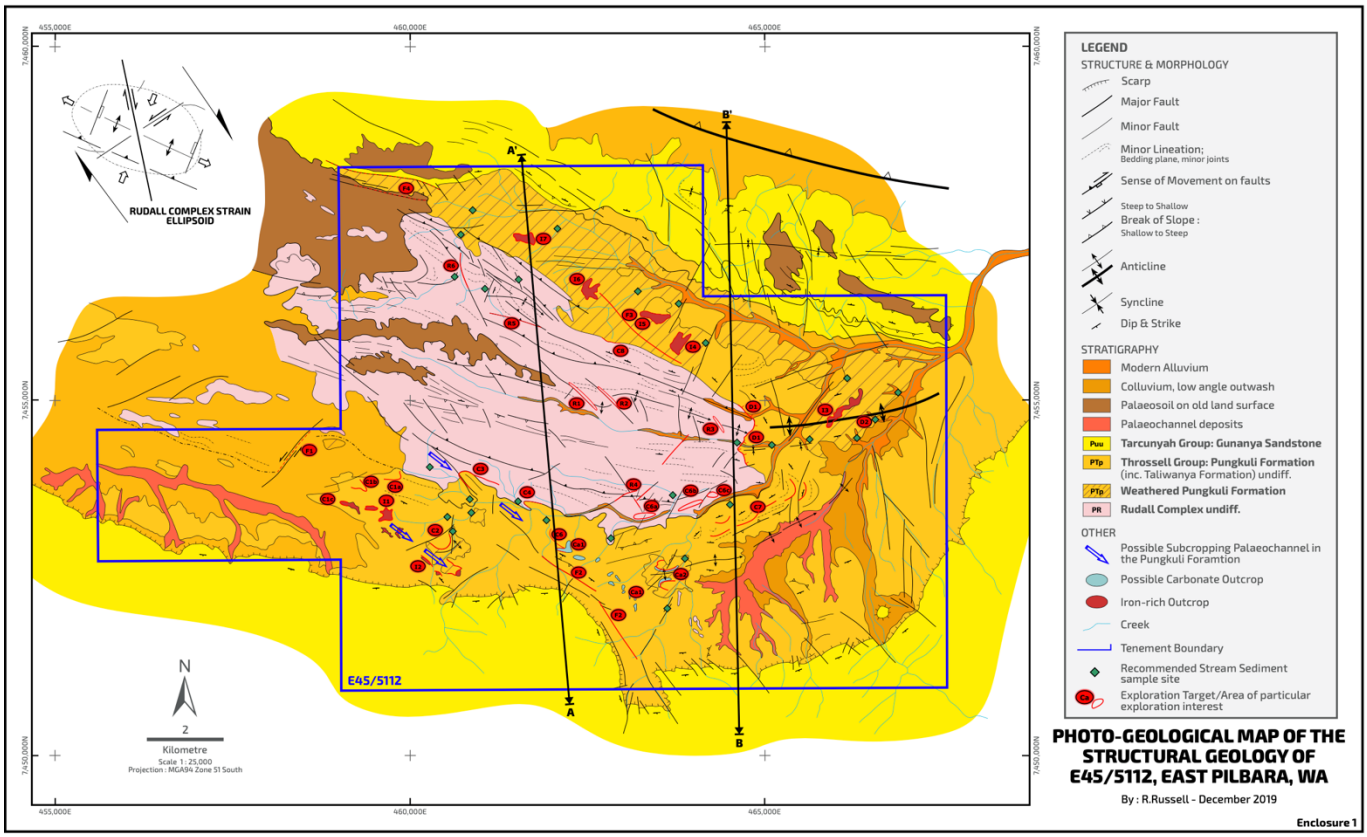


**Figure 8: E45/5112 Photo structural geology interpretation which includes 13 high priority first pass targets.**

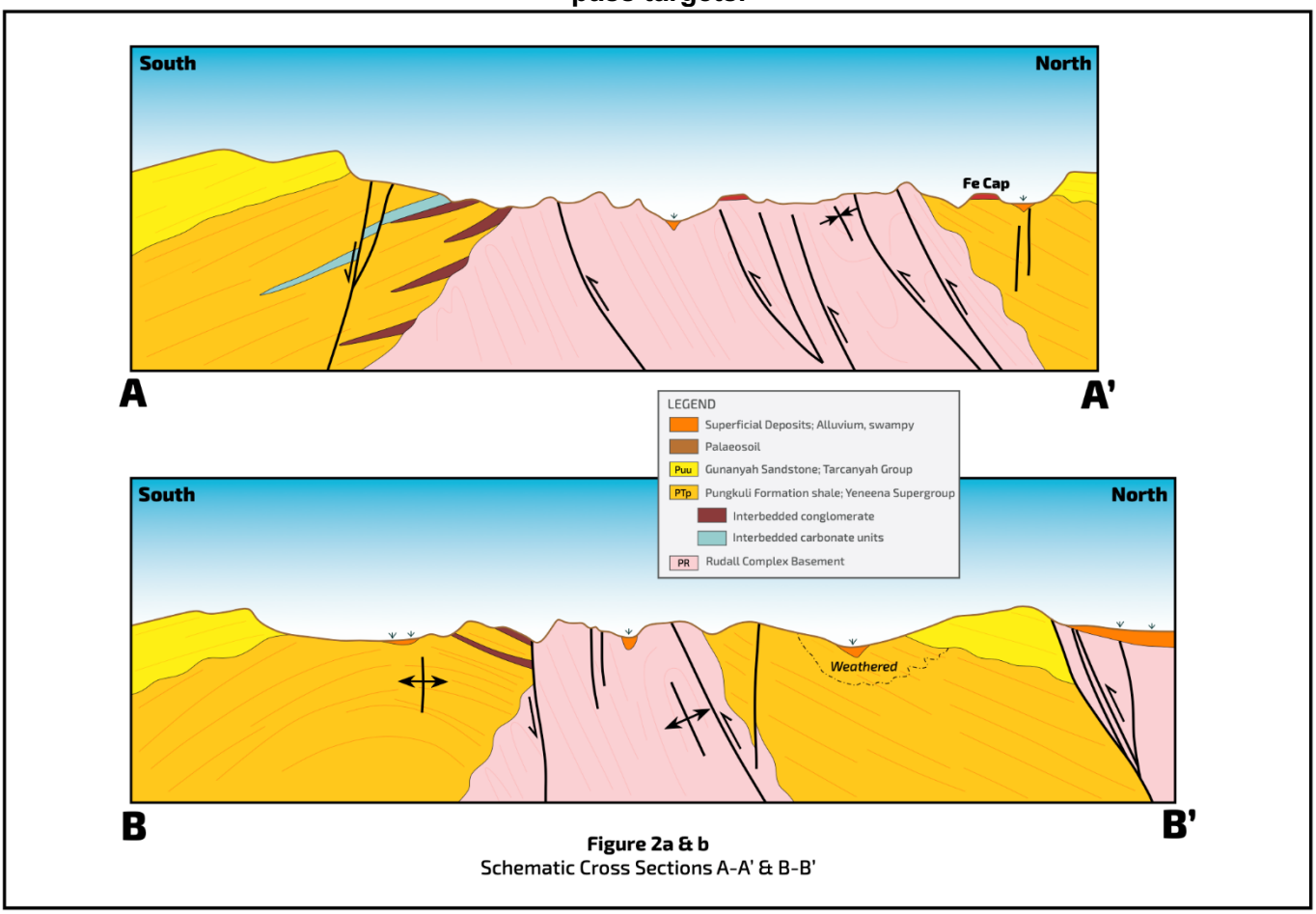


**Figure 9: Schematic Cross Sections A-A' and B-B' from Figure 8.**

**Further Information:**

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Director
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The Information in this report that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr Edward Mead, who is a Member of the Australian Institute of Mining and Metallurgy. Mr Mead is a director of the company. Mr Mead has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the `Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Mead consents to the inclusion of this information in the form and context in which it appears in this report.

## APPENDIX 1.

The following Tables are provided to ensure compliance with the JORC Code (2012 Edition) requirements for the reporting of Exploration Results at the Mt Sydney Project.

### Section 1: Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Sampling techniques** | *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* | Airborne magnetic-radiometric data from the Rudall River survey were historically acquired by Kevron Geophysics Pty Ltd for Cameco Australia Pty Ltd in May 1998. A total of 5,844 line km were acquired at 200 m line spacing on E-W oriented lines at a mean terrain clearance of 60 m.<br><br>The data are held in open-file by the Geological Survey of Western Australia registration number 71399.<br><br>The aircraft, geophysical sensors, acquisition system details are unknown as no metadata or logistics report accompanies the data. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | System calibrations are unknown as no logistics or acquisition report accompanies the data. |
| | *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.* | Airborne magnetic-radiometric data were reprocessed in 2015 for previous explorer Energia Minerals and used to derive a bedrock lithological and structural interpretation, including identification of any discrete magnetic or radiometric anomalies. Five conceptual structural and/or alteration-associated gold targets were identified within E45/107. The presence of mineralisation has yet to be determined.<br><br>Airborne magnetic-radiometric surveys and the derived interpretations are an industry standard practise for regional to prospect scale evaluation, litho-structural interpretation, and conceptual target generation. |
| **Drilling techniques** | *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).* | No drilling is being reported. |
| **Drill sample recovery** | *Method of recording and assessing core and chip sample recoveries and results assessed.* | No drilling is being reported. |
| | *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | No drilling is being reported. |
| | *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | No drilling is being reported. |
| **Logging** | *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* | No drilling is being reported. |
| | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* | No drilling is being reported. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|

| | | |
|---|---|---|
| | *The total length and percentage of the relevant intersections logged.* | No drilling is being reported. |
| **Sub-sampling techniques and sample preparation** | *If core, whether cut or sawn and whether quarter, half or all core taken.* | No drilling is being reported. |
| | *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* | No drilling is being reported. |
| | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | No drilling is being reported. |
| | *Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.* | No drilling is being reported. |
| | *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second- half sampling.* | No drilling is being reported. |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | No drilling is being reported. |
| **Quality of assay data and laboratory tests** | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* | Magnetic and radiometric measurements taken using an airborne system.<br>Details of the airborne system / equipment and calibrations / checks prior to the commencement of the 1998 survey were not included in the registration of the survey with the Geological Survey of Western Australia and are unknown. |
| | *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* | Details of the airborne magnetic-radiometric system and sensors are unknown. |
| | *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.* | No new data quality checks were made on the historical airborne magnetic-radiometric data. The survey data is considered of sufficient quality for the purposes of the 2015 interpretation and target generation carried out. |
| **Verification of sampling and assaying** | *The verification of significant intersections by either independent or alternative company personnel.* | No assay data is being reported. |
| | *The use of twinned holes.* | No drilling is being reported. |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Data recording specifications of the 1998 airborne magnetic-radiometric survey are unknown. The data are held in digital archive with the Geological Survey of Western Australian (registration number 71399). |
| | *Discuss any adjustment to assay data.* | No assay data is being reported. |
| **Location of data points** | *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* | Details of the positioning system used for the 1998 airborne magnetic-radiometric survey are unknown. |
| | *Specification of the grid system used.* | Reprocessed airborne magnetic-radiometric data are in the GDA 94 / MGA, Zone 51 datum and projection. |
| | *Quality and adequacy of topographic control.* | Details of the elevation control used for the 1998 airborne magnetic-radiometric survey are unknown, however they are assumed to be of sufficient quality/accuracy for the purpose of interpretation. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|

| | | |
|---|---|---|
| **Data spacing and distribution** | *Data spacing for reporting of Exploration Results.* | Airborne magnetic-radiometric data were acquired on 200m line spacing at 90/270 degrees line orientation, and sampling frequencies of 20 Hz (magnetic) and 1 Hz (radiometric). A nominal flight height of 60m above surface was flown.<br>1:50,000 50 centrimetre high resolution photography. |
| | *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* | No assay data being reported. |
| | *Whether sample compositing has been applied.* | No sample compositing has been applied. |
| **Orientation of data in relation to geological structure** | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* | Surveying oriented east-west approximately perpendicular to the major lithological trends and/or other features of interest. |
| | *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | No assay data being reported. |
| **Sample security** | *The measures taken to ensure sample security.* | All data acquired by Kevron Geophysics Pty Ltd and reported to Cameco Australia Pty Ltd. |
| **Audits or reviews** | *The results of any audits or reviews of sampling techniques and data.* | No independent audits have been undertaken. |

## 1 Section 2: Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Mineral tenement and land tenure status** | *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* | E45/5107 is 100% owned by Hobbs & Heugh Pty Ltd, which is a subsidiary company of White Cliff Minerals Limited. Hobbs & Heugh Pty Ltd has the right to acquire 100% of E45/5112. |
| | *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | The tenements are in good standing with native title agreements in place. |
| **Exploration done by other parties** | *Acknowledgment and appraisal of exploration by other parties.* | CRAE Pty Ltd undertook stream sediment sampling in the mid 1980s, and rock-chip sampling. Mapping was also completed.<br><br>Cameco Australia Pty Ltd flew 200m line spaced airborne magnetic-radiometric data in 1998.<br><br>Geoscience Australia flew 1km line spaced TEMPEST airborne electromagnetic data in 2008.<br><br>Southern Geoscience Consultants reprocessed the airborne magnetic-radiometric data and completed an interpretation in 2015 for Energia Minerals that this news release is based on.<br><br>R.Russell and Assocaites October 2019 High Resolution 50 centimetre Photo geological and structural interpretation. |
| **Geology** | *Deposit type, geological setting and style of mineralisation.* | Two gold occurrences (Coolbro Creek and Tabletop) are the only known mineral occurrences within E45/5107. Here, minor amounts of visible gold have been extracted from gravels in the Coolbro Creek. The gold is thought to be epithermal and sourced from NW-trending quartz veins within the Coolbro Sandstone (Williams and Bagas, 1999).<br>Stratabound Cu-(Pb-Zn) mineralisation was discovered in Broadhurst Formation sediments (stratigraphically overlying the Coolbro Sandstone) at the Nifty and Maroochydore deposits in the early to mid-1980s. Maroochydore is located ~25 km east of the Table Top project. Broadhurst-hosted base metal mineralisation has also been targeted to the west.<br>Uranium mineralisation at the Kintyre deposit is unconformity-associated vein-type. It has been likened to deposits in the East Alligator River Province, NT and the Athabasca region in Canada (Jackson and Andrew, 1990). The ore is primarily pitchblende veins occurring within Rudall Complex schists and garnetiferous quartzite below the Mesoproterozoic unconformity. A NW-trending shear transects the deposit and has contributed to some ore remobilisation (Jackson and Andrew, 1990). |
| **Drill hole Information** | *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*<br><br>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth*<br>• *hole length.* | No drilling is being reported. |

| | | |
|---|---|---|
| | *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.* | No drilling is being reported. |
| **Criteria** | **JORC Code explanation** | **Commentary** |
| **Data aggregation methods** | *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* | No assay data being reported. |
| | *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* | No assay data being reported. |
| | *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | No metal equivalent values are being used. |
| **Relationship between mineralisation widths and intercept lengths** | *These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').* | No assay data being reported. |
| **Diagrams** | *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.* | Refer to figures in body of text. |
| **Balanced reporting** | *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | No assay data being reported. |
| **Other substantive exploration data** | *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | All relevant exploration data is shown on figures, and listed in the JORC table above |
| **Further work** | *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br><br>*Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | A follow up exploration work program is being designed and is outlined in the announcement.<br><br>All relevant diagrams and inferences have been illustrated in this report. |