Borroloola West Project, N.T.

RC Drilling Program
Four Mile, Mariner, Johnstons, Berjaya and Coppermine Creek Prospects

September to October 2016

David Pascoe

November 2016

Contents

Work completed

Heritage clearances to avoid sites of cultural significance, an MMP (and amended MMP), and consent from the landholders and managers of land affected by the planned RC drill program were obtained.

An RC drill program of 17 holes for 2477m was completed.

Drill Hole ID	Prospect	Type	Easting	Northing	Elevation	Total depth	Dip	Azimuth
CCR05	Coppermine	RC	560897	8236743	75	97	-70	000
CCR06	Coppermine	RC	560353	8236706	77	144	-60	000
CCR07	Coppermine	RC	559681	8236766	72	144	-60	000
CCR08	Coppermine	RC	556502	8235605	90	120	-50	000
FMR01	Four Mile	RC	554534	8200500	102	150	-90	000
FMR02	Four Mile	RC	554721	8202014	86	192	-90	000
FMR03	Four Mile	RC	554639	8203992	81	120	-90	000
FMR04	Four Mile	RC	554721	8205002	83	150	-90	000
FMR05	Four Mile	RC	554351	8205000	75	208	-80	090
MNR01	Mariner	RC	559806	8223426	118	156	-75	090
MNR02	Mariner	RC	559716	8224286	122	150	-80	090
MNR03	Mariner	RC	559557	8225489	126	96	-80	090
MNR04	Mariner	RC	559551	8226498	110	150	-80	090
JTR01	Johnstons	RC	568726	8201821	135	150	-60	300
BJR01	Berjaya	RC	587735	8185588	102	150	-80	220
BJR02	Berjaya	RC	587033	8181097	106	150	-60	090
BJR03	Berjaya	RC	591700	8181775	105	150	-80	135

Table 1: RC program September to October 2016

All the holes were geologically logged and a pXRF reading taken for each meter interval. Selected intervals were sent to ALS Townsville for ICP-MS multi-element analysis. Samples containing +1% Cu, Zn or Pb were automatically re-analysed with an ore grade analysis using an ICP-AES finish to more accurately determine the high grade Cu, Zn or Pb values.

During delays and waiting on the drilling program geological mapping and pXRF reconnaissance was carried out over the Scrutton Volcanics east of the Nathan River Road. Additions and modifications were made to the geological maps at Four Mile, Johnstons, Berjaya, Mariner and Coppermine Creek through additional fieldwork.

Summary of Results and Conclusions

Significant drill intersections and strong indications of significant mineralisation were obtained at Coppermine Creek and Mariner.

At **Coppermine Creek** the western RC hole (CCR08) in the main previously known prospect, intersected a significant thickness of low grade copper mineralisation - 42m @ 0.5% Cu (0.1%Cu c/o), including 10m @ 1.3% Cu (0.5% Cu c/o) - associated with quartz and dolomite veining. The hole confirms the continuity of mineralisation spatially associated with an ex-evaporite bed identified and intersected in holes CCD02, CCD03 and MYD7, and can be inferred to have been intersected in several holes drilled by previous explorers. There is a very large volume potential if this mineralisation continues towards the south, within which there may be significant tonnages of higher grade copper mineralisation. Bedding appears to be shallow overall, confirmed in Pacifico's drill hole CCD04 which was drilled 2.3km to the south. To identify the continuity of mineralisation and where higher grades might be intersected the value (and cost) of ground EM and IP could be assessed, before diamond drilling.

At **Mariner** 4 RC holes were drilled (MNR01 to MNR04) and oxidised lead values intersected in three of the holes. Compilation of the geological information together with pXRF multielement logs demonstrates that the lead mineralisation is hosted in basal Roper Group sandstone, siltstone and chert breccia. Regional evidence shows that the Roper Group itself contains no primary mineralisation. This indicates that the Mariner mineralisation was either physically eroded from pre-existing mineralisation and deposited at the base of the Roper Group, or is the result of groundwater remobilisation of lead, zinc, silver and copper from nearby mineralisation underlying the Roper Group. Diamond drilling to search for this primary mineralisation is recommended.

<u>Other prospects</u>

Barney Creek Formation black carbonaceous and dolomitic siltstones were intersected at Berjaya and Four Mile.

At **Four Mile** RC drilling (FMR01 to FMR05) intersected black carbonaceous, dolomitic and pyritic siltstones of the Barney Creek Formation in four of the five holes. No significant base metal intersections were obtained. However anomalous lead values were obtained in part of the FMR05 indicating some hydrothermal mineralising activity associated with the nearby NE trending fault.

At **Berjaya** 3 holes (BJR01 to BJR03) were drilled with no significant base metal values obtained. The identification of probable Barney Creek Formation in BJR02 supports the surface geological interpretation, and there is scope for further on the ground follow up mapping and reconnaissance pXRF work.

At **Johnstons** only minor copper values were obtained in the first 20m of JTR01. No values were obtained deeper in the hole related to the shear zone containing thin fault breccias with copper mineralisation mapped at surface, indicating that any mineralisation is patchy and discontinuous.

The three RC holes (CCR05 to CCR07) at the eastern end of **Coppermine Creek** did not intersect any significant mineralisation despite a semi-continuous gossanous breccia mapped at surface.

The next stage of work could involve:

- Geophysical consultant to assess value of ground EM and IP at Coppermine Creek to define high grade copper targets associated with evaporite horizon within a lower grade envelope.

- Detailed geological mapping at Mariner to establish diamond drill targets in McArthur Group sediments beneath the Roper Formation.
- Detailed mapping of the Anticline area Berjaya to assess significance and continuity of the Barney Creek Formation intersected in BJR02.
- Mapping Lorella, compile all drilling information and establish targets for diamond/ RC drilling if prospective model can be established.

Leading to:

- RC and diamond drilling at Coppermine Creek to establish a major copper (cobalt, silver) resource.
- Diamond drilling Mariner,
- Drilling on other prospects above where targets are defined.

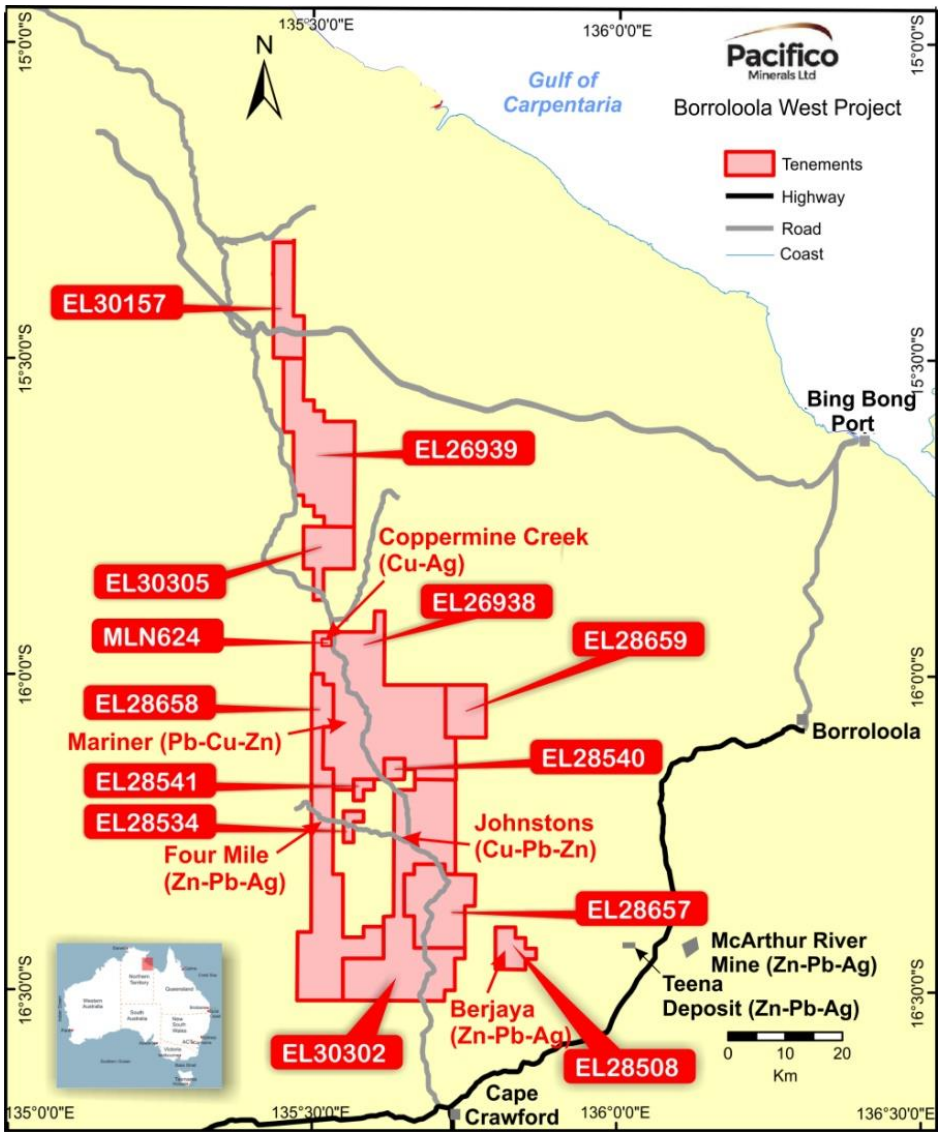

Figure 1: Borroloola West Project Tenements and Location of prospects

Native Title and Ground Access

An updated map and extracts from the records was obtained from the AAPA covering all Pacifico's EL's.

Limmen National Park (southern portion) , formerly Billengarrah Station

A meeting was held in September at the Tamarind Tree in Borroloola with a group of the Alawa people representatives who have a Native Title claim DC2000/029 over the southern portion of the Limmen National Park. Pacifico was represented by Simon Noon, Ron Roberts and David Pascoe at the meeting. Site inspections were subsequently carried out with TO Timothy Lansen and it was agreed that no sites of cultural significance were to be affected by Pacifico's RC drill program. Pacifico representatives during the site inspections were David Pascoe and Ron Roberts.

Agreement was made with Parks and Wildlife to rehabilitate all access roads and drill sites according to the provisions of the MMP within the Limmen National Park.

An MMP for the drill program was approved by the Department of Minerals and Energy, NT.

Berjaya

Berjaya lies in McArthur River Station and is covered by granted Native Title DCD2015/008 registered Native Title dated 26/11/2015. It is divided into 11 estates.

As a result of an Authority Certificate, applied for by MIM in 1993, a Restricted Works Area was put over Berjaya. Its conditions were researched at the AAPA offices in Darwin. The only conditions are that we must consult with the TO before undertaking any significant work. Investigations were made in the Borroloola District to determine the TO for the Berjaya licence area. There was a consensus that Ronnie Raggett speaks for that area. A site inspection was made with Nelson Raggett, son of Ronnie Raggett. David Pascoe was the Pacifico representative. The areas around the hot springs in the central part of the licence were regarded as sensitive and siting of the drill collars was adjusted to avoid these areas. Nelson Raggett agreed that the access tracks and drill sites to be cleared did not interfere with any site of cultural significance.

An agreement had been made with the land owner Glencore to rehabilitate all access roads and drill sites according to the provisions of the MMP. Discussions were held with the manager David Daniells who advised on access and indicated that the program would not interfere with property activities.

An amended MMP was applied for to include the proposed Berjaya drill holes.

Four Mile (zinc-lead-silver)

Five RC holes, FMR01 to 05 were drilled at Four Mile (figure 2). Four of the five RC holes (FMR01 to FMR05) intersected Barney Creek Formation carbonaceous siltstones. The sections (figures 3 and 4) show the beds dipping at about 25 deg overall, to the west. Summary logs for all holes with pXRF geochemical profiles are shown in figures 5 to 9.

There is very fine disseminated pyrite throughout the Barney Creek Formation carbonaceous siltstone. Sulphur values indicate an average of about 0.5 volume % pyrite. This increases to over 1% and up to 4% pyrite in an upper and lower sulphidic zone, both several meters thick (figures 3 and 4) but contain no significant associated base metals. Disseminated pyrite remains very fine grained but is much more concentrated in these zones, which are associated with slightly elevated As, but no significant associated base metals. In the upper sulphidic zone, Fe increases out of proportion to the S values, indicating probable siderite formation.

Below the upper sulphidic zone in FMR05 there are several meters of elevated Pb, from 300ppm to 900ppm Pb, associated with thin dolomite veinlets. This may be reflecting the vicinity of the potentially mineralising NE trending fault (figure 2).

In FMR03 there is minor dolomite veining with traces of sphalerite within the underlying Mara Dolomite.

The surface anomalism in Pb, Cu, Zn and As is reflected in the oxidised upper parts the sulphidic Barney Creek Formation of the RC holes. It appears that oxidising sulphides become enriched in these elements, but in the primary rocks there is no significant anomalism.

Drilling and surface mapping have demonstrated that from youngest to oldest the main units or the McArthur Group at Four Mile are:

- Hot Springs Member – clayey sandstone, siltstone.
- Caranbarini Formation – siltstone, carbonaceous and dolomitic siltstone, sedimentary breccias
- Reward Dolomite – massive and finely bedded dolomite
- Barney Creek Formation – carbonaceous and dolomitic shale and siltstone, with disseminations, nodules and thin stratabound bands of disseminated pyrite
- Mara Dolomite Member – massive and finely bedded dolomite, only minor interbedded siltstone.

The units are displaced by NE trending faults, which are also apparent on the Landsat images. They appear to terminate in the Hot Springs Member indicating a possible Barney Creek timing. The northernmost fault is reflected in the regional seismic survey line. These faults appear to control the extent and thickness of the Caranbarini, Reward Dolomite and Barney Creek Formations.

FMR01 (figure 5) drilled entirely through Hot Springs Formation clayey sandstone and siltstone. There was a considerable amount of water intersected, perhaps causing the shallowly dipping VTEM conductivity in this area.

The drilling and resulting analyses do not directly indicate the existence or otherwise of a SHMS zinc deposit. However this western section of the Barney Creek Formation as a whole could be as prospective as those parts around the McArthur River Mine. More detailed geochemistry of the sulphide rich zones is being undertaken that may indicate the vicinity of, or vectors to SHMS mineralisation.

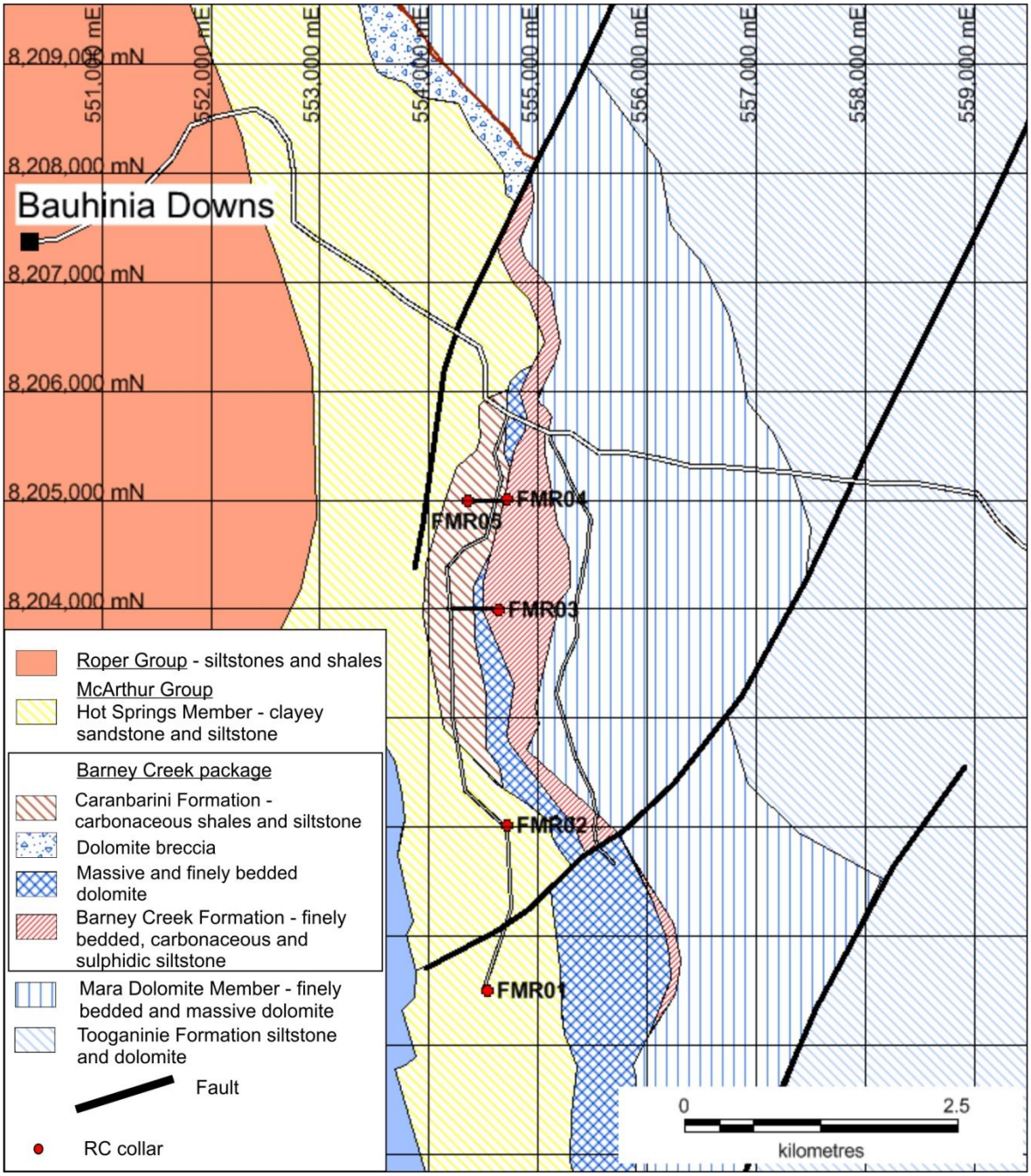

Figure 2: Four Mile Prospect – RC drill collars and reinterpreted geology

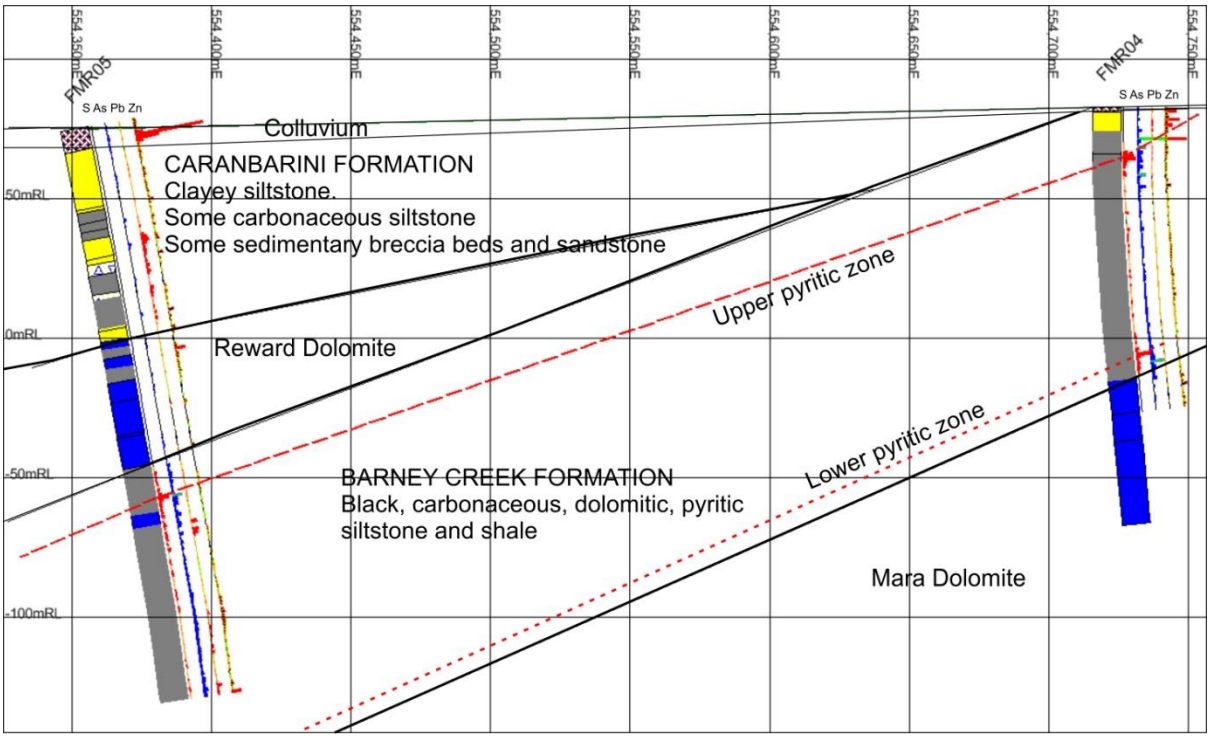

Figure 3: Four Mile Prospect - East-west Section through FMR05 and FMR04

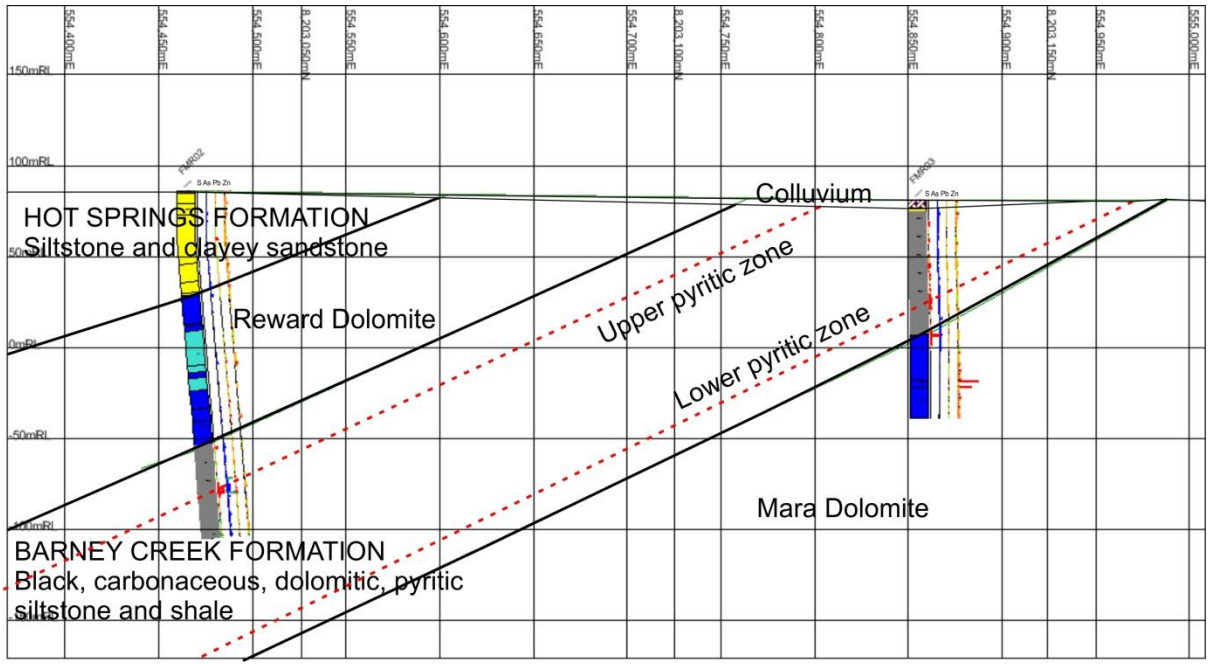

Figure 4: Four Mile Prospect – North East- South west Section (projected) through FMR03 and FMR02

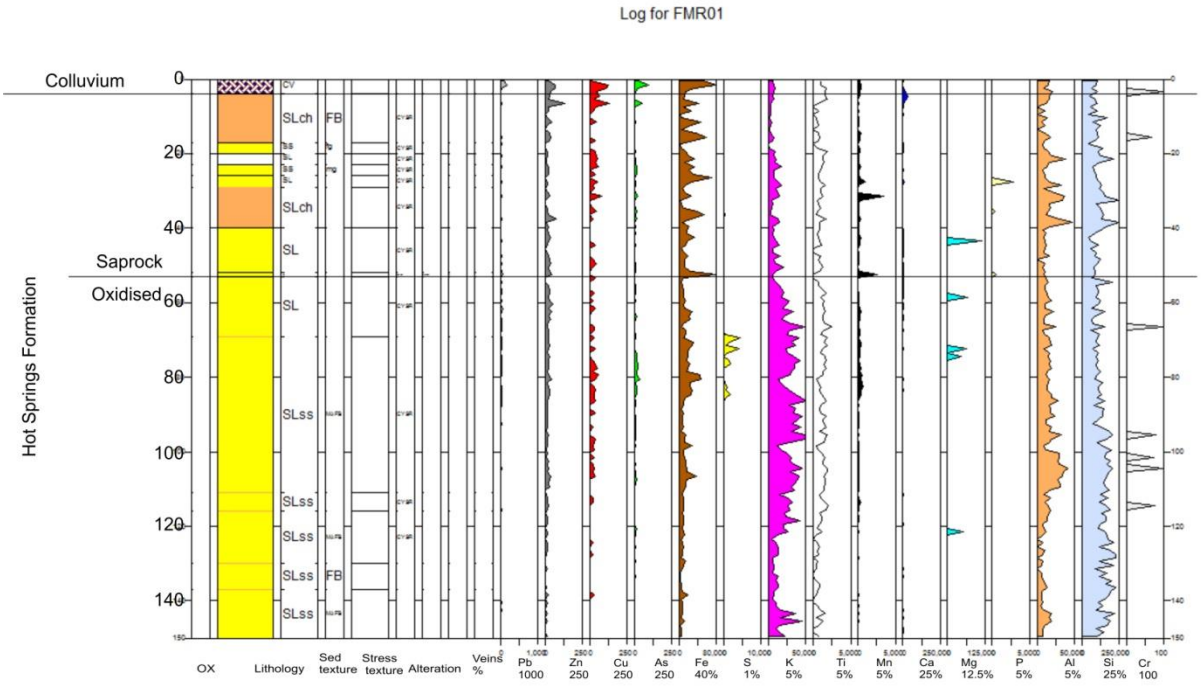

Figure 5: Four Mile Prospect – Summary log and pXRF geochemistry FMR01

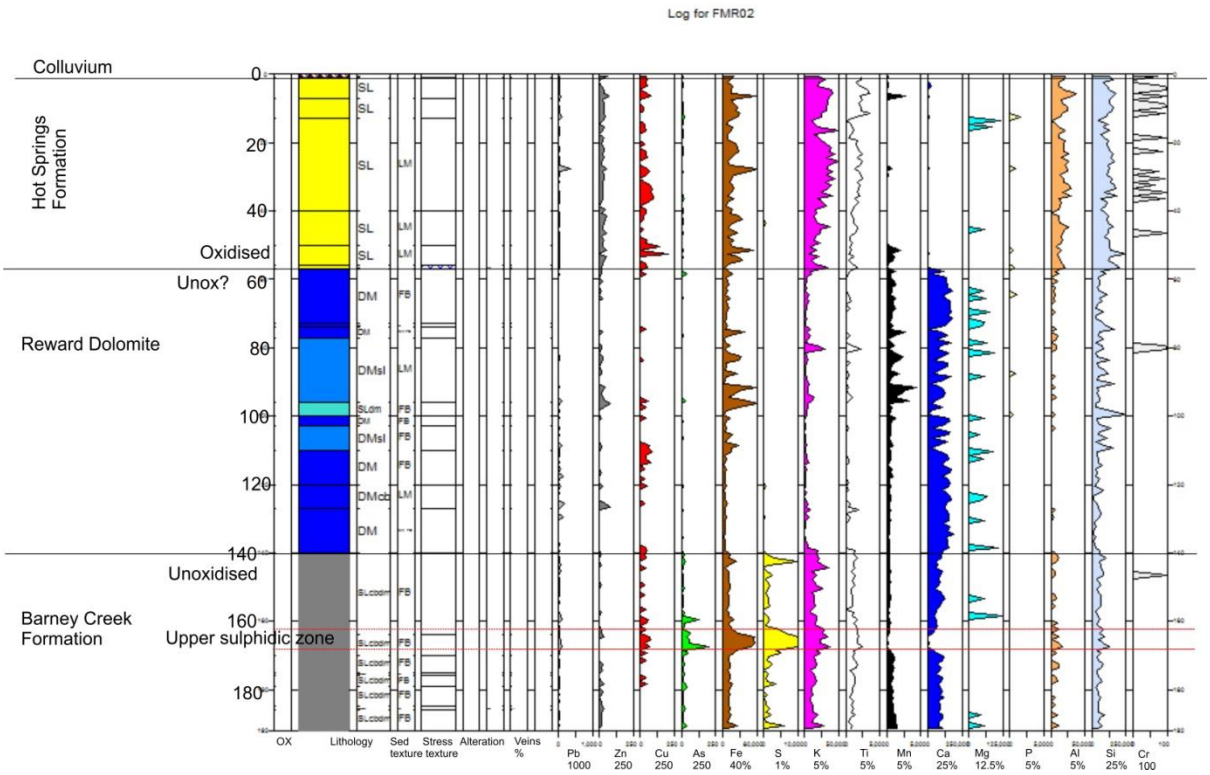

Figure 6: Four Mile Prospect – Summary log and pXRF geochemistry FMR02

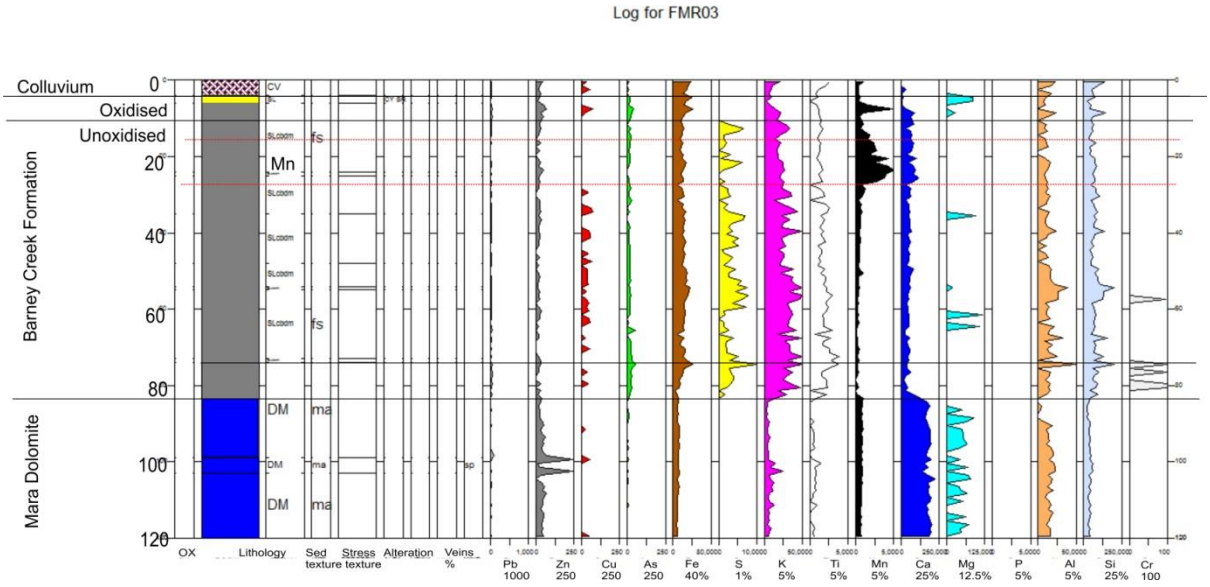

Figure 7: Four Mile Prospect – Summary log and pXRF geochemistry FMR03

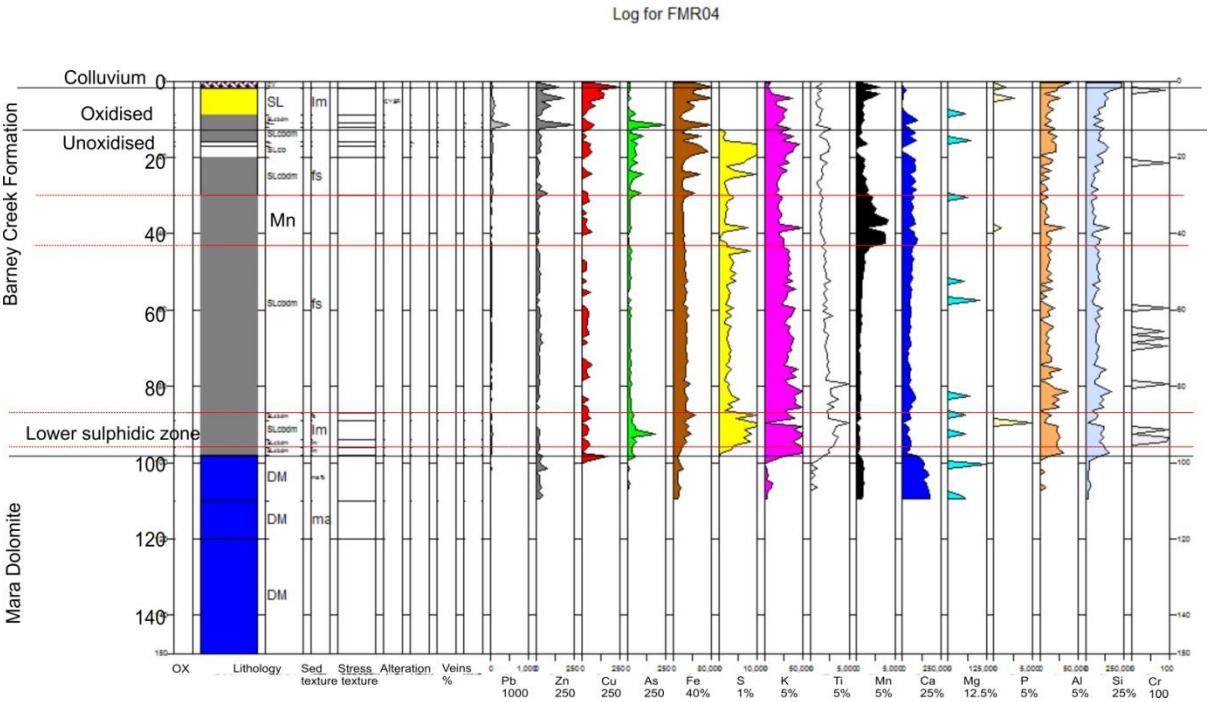

Figure 8: Four Mile Prospect – Summary log and pXRF geochemistry FMR04

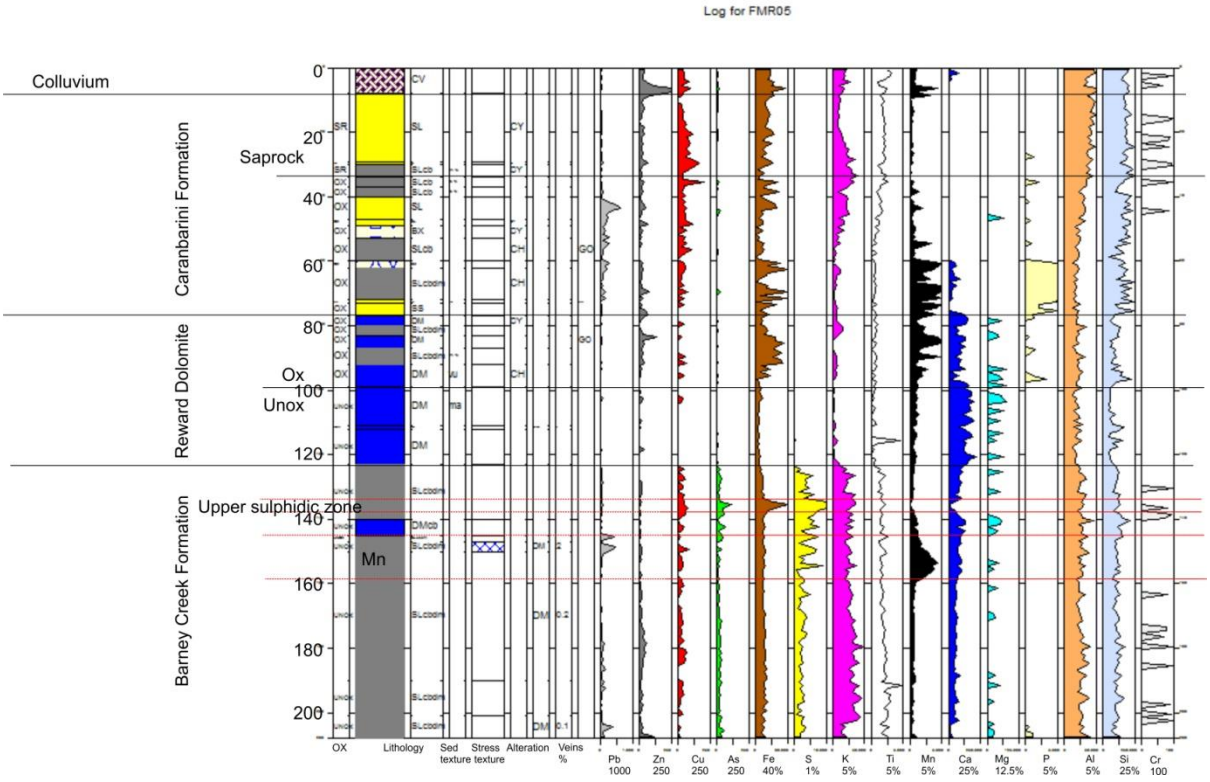

Figure 9: Four Mile Prospect – Summary log and pXRF geochemistry FMR05

Berjaya (zinc-lead-silver)

Three RC holes, BJR01 to 03, were drilled for 450m (figure 10). All three RC drill holes intersected carbonaceous, pyritic shales and siltsones of the Barney Creek Formation (oxidised in BJR01 and BJR02).

BRJ01 was drilled to test an area of possible thickening of the Barney Creek indicated by the outcrop pattern. It was drilled close to the Hot Springs / Barney Creek contact in order to be sure to test the lower part of the Barney Creek, and to avoid thicknesses of clayey and waterlogged Hot Springs Formation that could limit the penetration of the RC rig. The hole intersected 60m of oxidised Barney Creek Formation before passing into Mara Dolomite. The Mara Dolomite was extensively brecciated with dolomite veining and disseminations of specular hematite, but no anomalous base metal geochemistry. This could be giving rise to the extensive but apparently barren ferruginous gossanous matrix breccias mapped to the south.

BJR02 was drilled in the Anticline area near the centre of EL 28508 to test for mineralisation and whether the observed rocks with disseminated boxworks were Caranbarini or Barney Creek Formation. The hole intersected oxidised siltstones and sandstones. An interpretation of the summary log has been attempted based on the pXRF geochemistry profiles, together with the geological logs. Comparisons were made with the Barney Creek package stratigraphy in BJR03 and at Four Mile, and the best interpretation is that Barney Creek Formation sediments are intersected near the bottom of the hole BJR02.

The first 60m are considered to be Hot Springs Formation sediments based on the high K and Al which reflects clay rich shaley sediments. From 60 to 118m is considered to be oxidised Reward Dolomite, based on dolomite textures in the chips and appearance at surface. The upper part contains disseminated goethite after sulphides in both the down hole chips and in float at surface. From 118m to the end of the hole (150m) is interpreted as oxidised Barney Creek Formation carbonaceous and pyritic siltstones. The hole was drilled adjacent to a major fault and did not reach the base of the probable oxidised Barney Creek Formation (figures 13 and 14). Diamond drilling may be required to test the thickness and prospectivity of the unit.

BJR03 was drilled in the SE corner of the Berjaya licence. It was designed to test if the Barney Creek Formation was thickening up against a possible SW trending fault. 120m of Barney Creek Formation black carbonaceous and dolomitic siltstones were intersected containing finely disseminated pyrite throughout. It was underlain by Mara Dolomite.

BJR01 and BJR03 are indicating strongly that there is no significant SHMS mineralisation likely in their vicinity.

BJR02 indicates previously unmapped and unrecognised Barney Creek Formation related to a major north-south fault. Future mapping and pXRF reconnaissance could concentrate on this zone to assess the detailed structure and possible potential.

None of the holes through the Barney Creek Formation contained anomalous base metal values. However more detailed geochemistry will be carried out on selected samples to test for documented pathfinder elements to a McArthur style SHMS deposit.

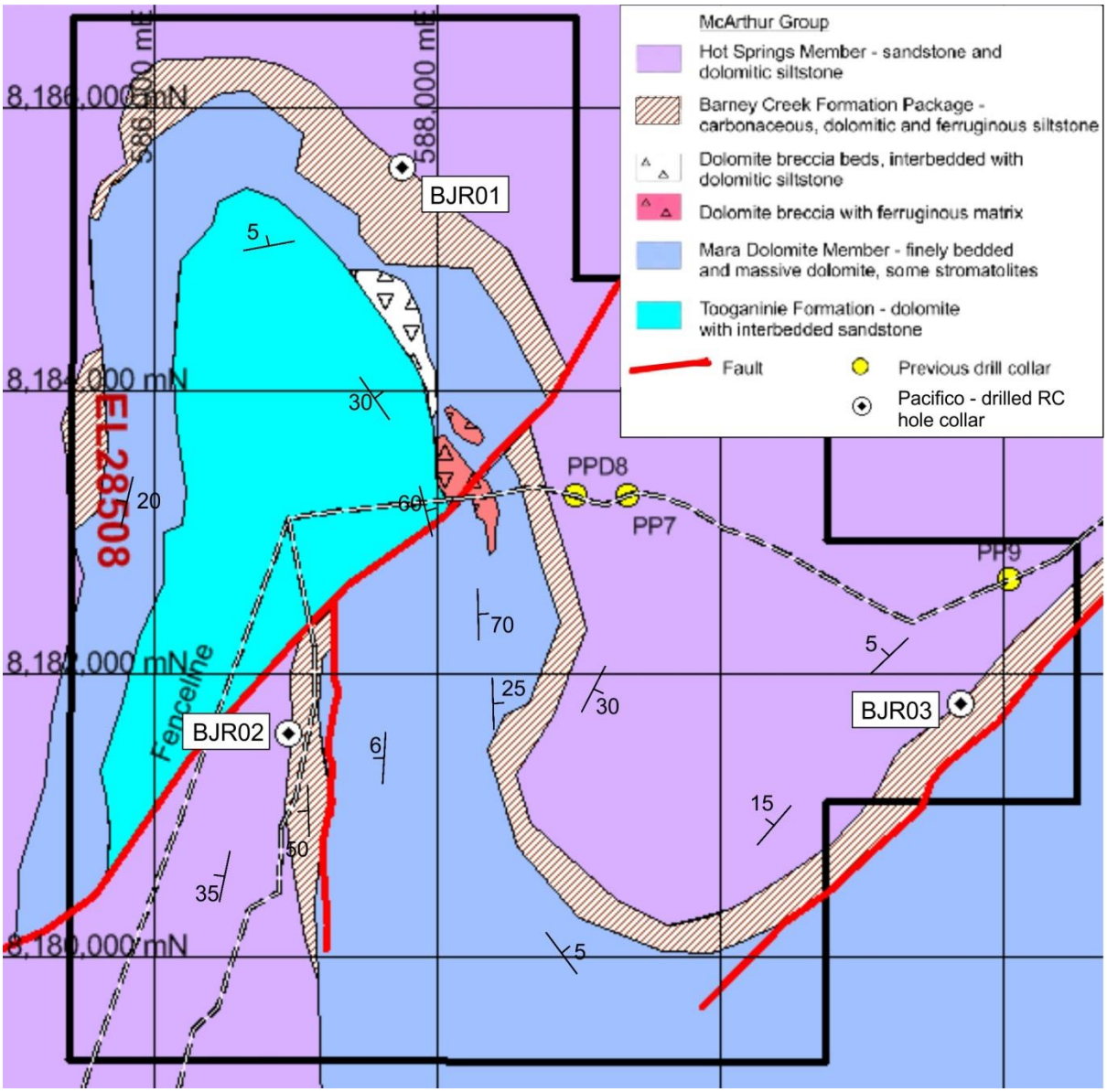

Figure 10: Berjaya EL28508 – Geology and RC drill hole collars

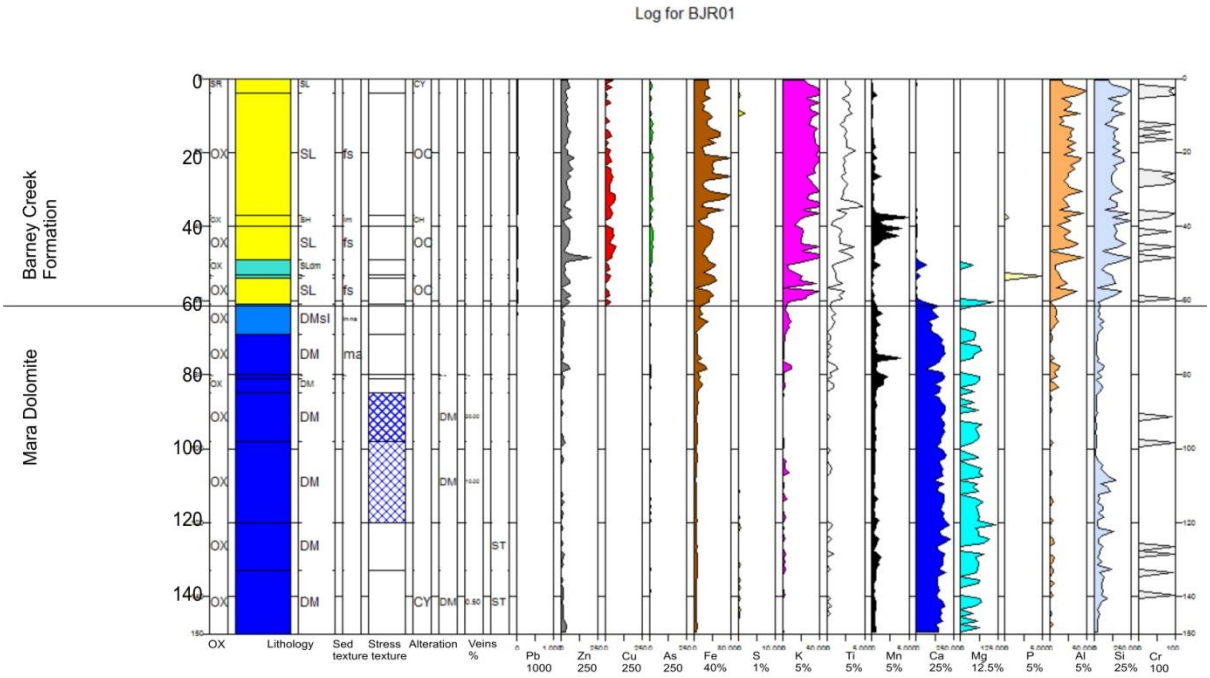

Figure 11: Berjaya Prospect – Summary log and pXRF geochemistry BJR01

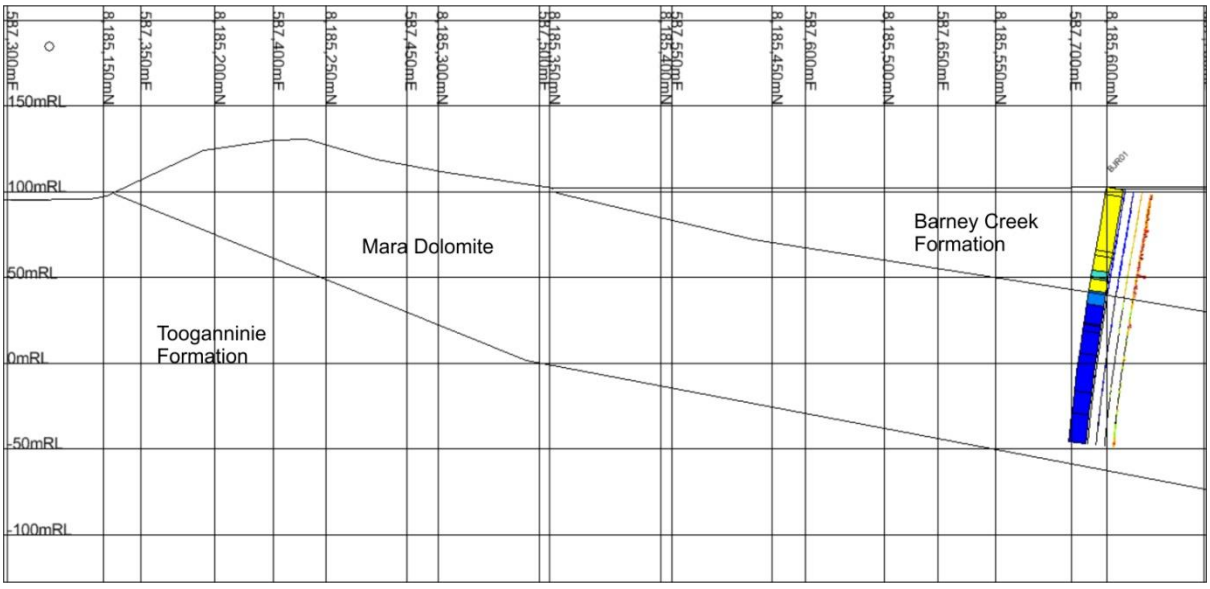

Figure 12: Berjaya Prospect – Section (direction 040) through BJR01

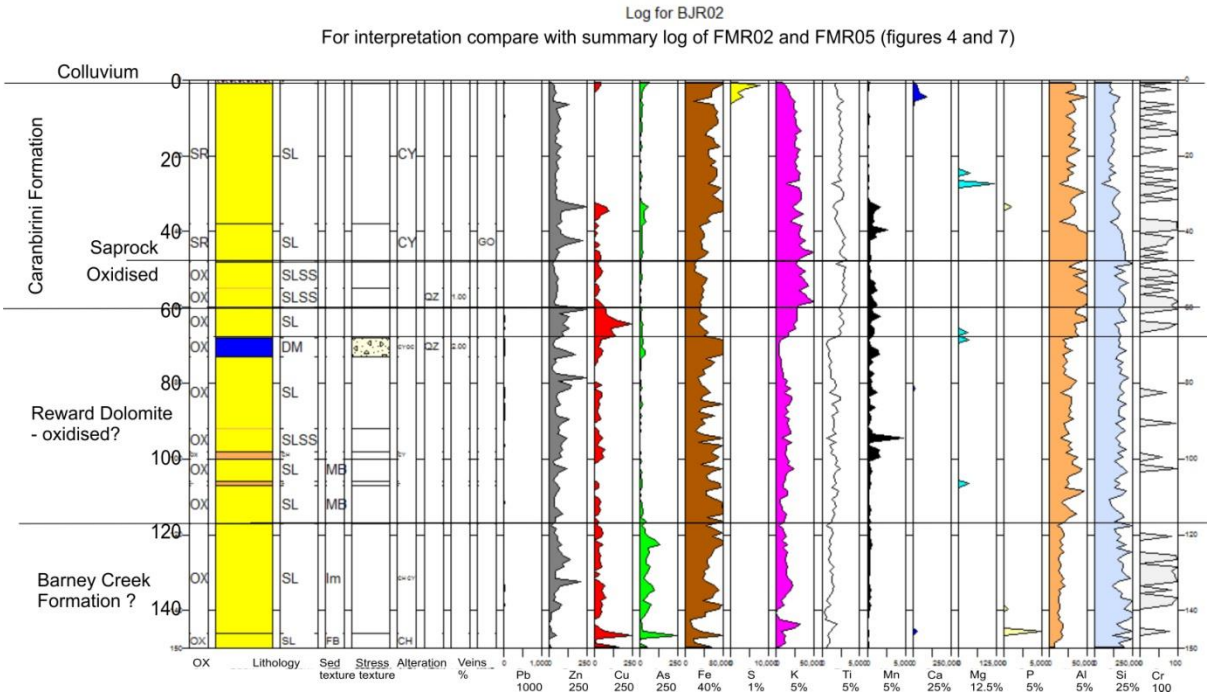

Figure 13: Berjaya Prospect – Summary log and pXRF geochemistry BJR01

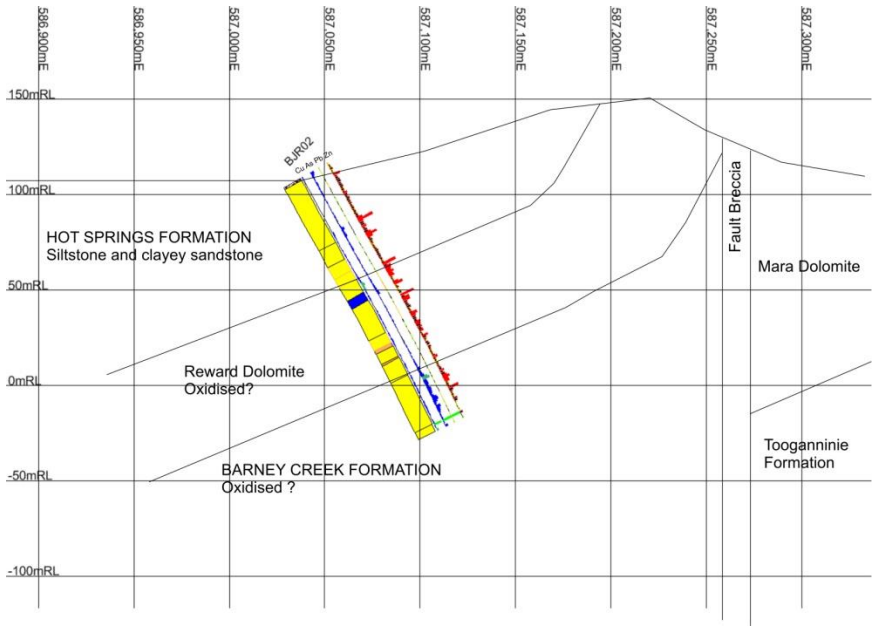

Figure 14: Berjaya Prospect – Section (direction 090) through BJR02

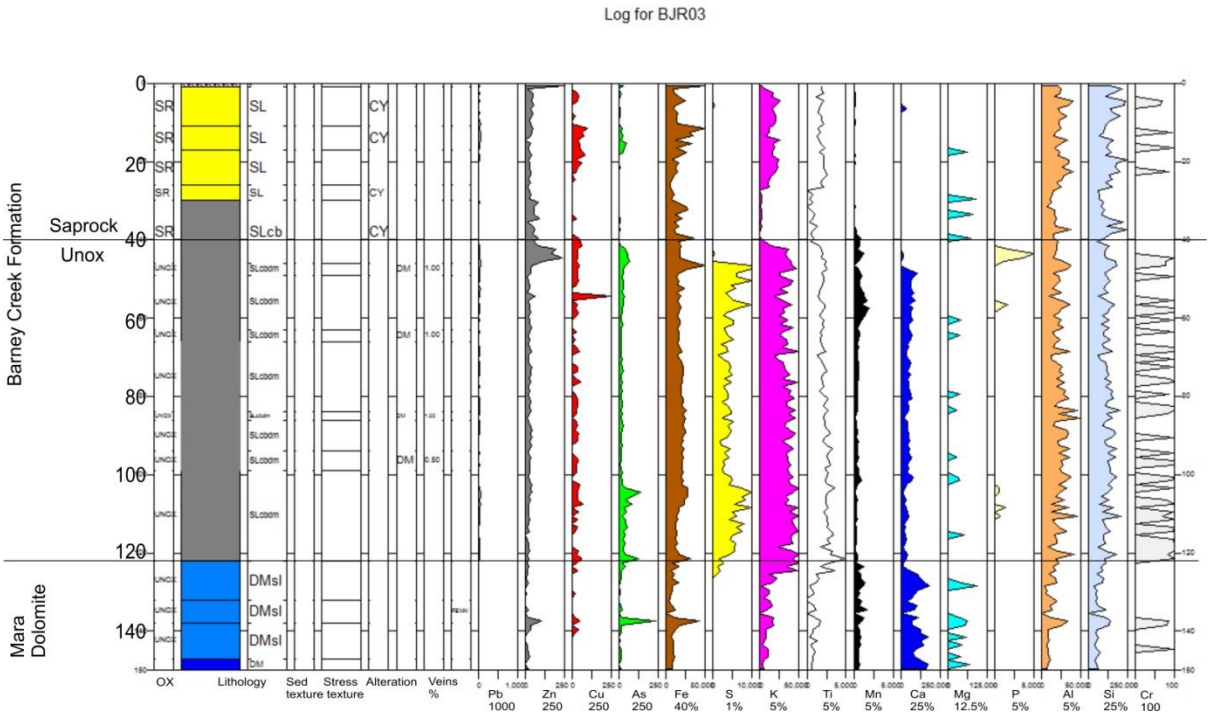

Figure 15: Berjaya Prospect – Summary log and pXRF geochemistry BJR03

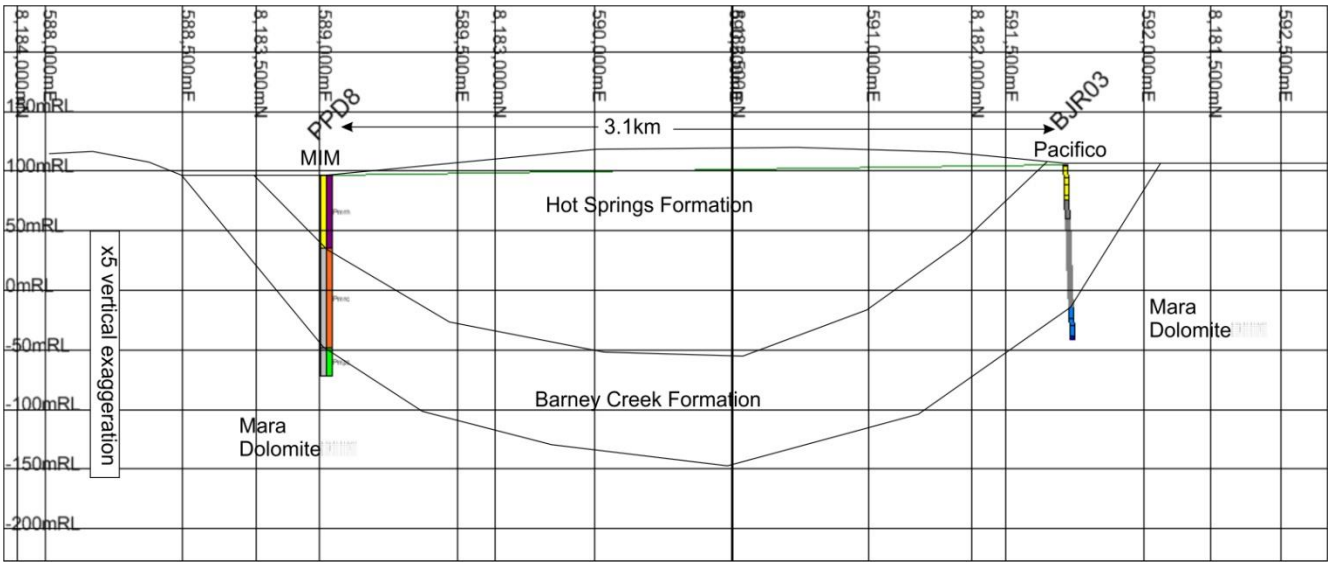

Figure 16: Berjaya Prospect – Section (direction 120) through BJR01. Note X5 vertical exaggeration.

Mariner (zinc-lead-silver)

Four RC holes were drilled by Pacifico (MNR01 to MNR04). MNR01, 02 and 03 demonstrate that oxidised lead mineralisation forms at the base of the Roper Group (table 2). The basal unit of the Roper Group consists of sandstone, siltstone and chert breccia fragments in a clayey matrix. All the mineralisation found to date is oxidised. MNR04 intersected geochemically anomalous zinc in dolomite of the underlying Tooganninie Formation (figures 20 and 24).

Hole ID	From (m)	To (m)	Length	Pb
MNR01	6	27	21	1.0%
including	13	19	6	2.4%
MNR02	25	46	21	0.35%
MNR03	41	66	25	0.09%

Table 2: Lead intersections at Mariner

The lead mineralised zones are also slightly anomalous in zinc (up to 549ppm Zn over 1m interval). As the Roper Group contains no known primary mineralisation whatsoever regionally it is likely that the lead and zinc originate from base metal mineralisation in the underlying McArthur Group and has moved by hydromorphic dispersion along the contact zone (figure 22). Diamond drilling is proposed to test the McArthur Group downdip of MNR03.

The prospect was drilled by MIM in 1977/78 (RDH01 to 14, percussion holes, most shown on figure 17) and by BHP in the early 1980's (1 diamond hole – MARD1).

BHP had the similar concept of Barney Creek Formation concealed by the Roper Group and drilled diamond holes at Mariner North - McA06, and north of Coppermine Creek – McA15 (both drill holes were unsuccessful and did not get through the Roper Formation).

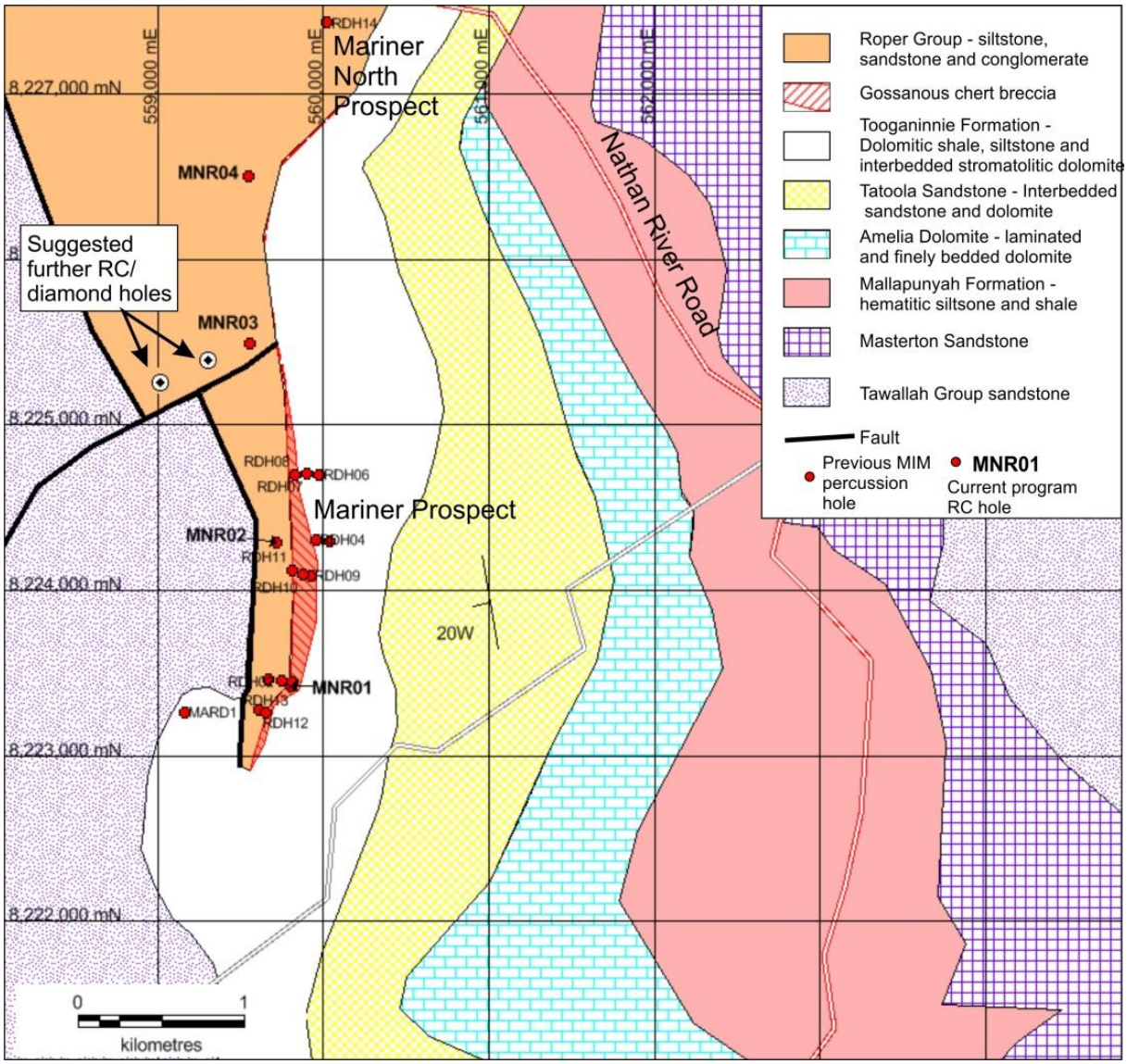

Figure 17: Mariner Prospect – Updated interpreted geological plan showing current RC collars (MNR series)

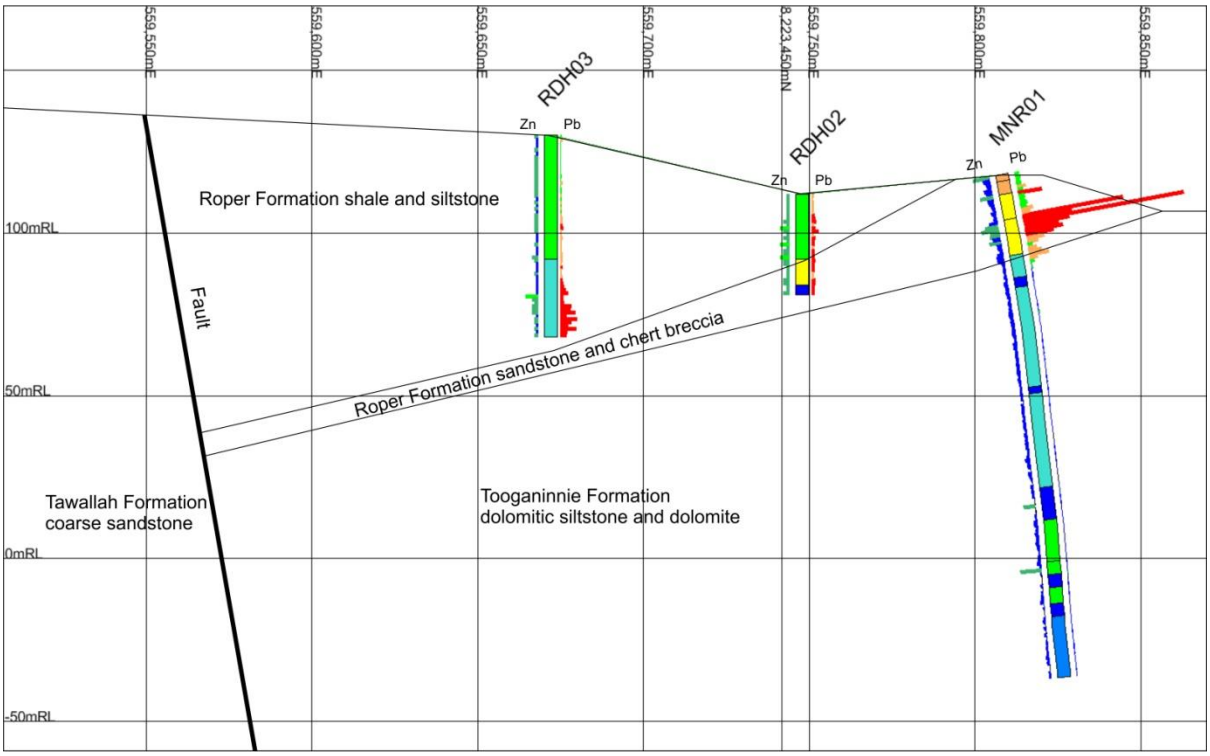

Figure 18: Section east-west through MNR01, showing previous MIM percussion holes RDH02 and RDH03

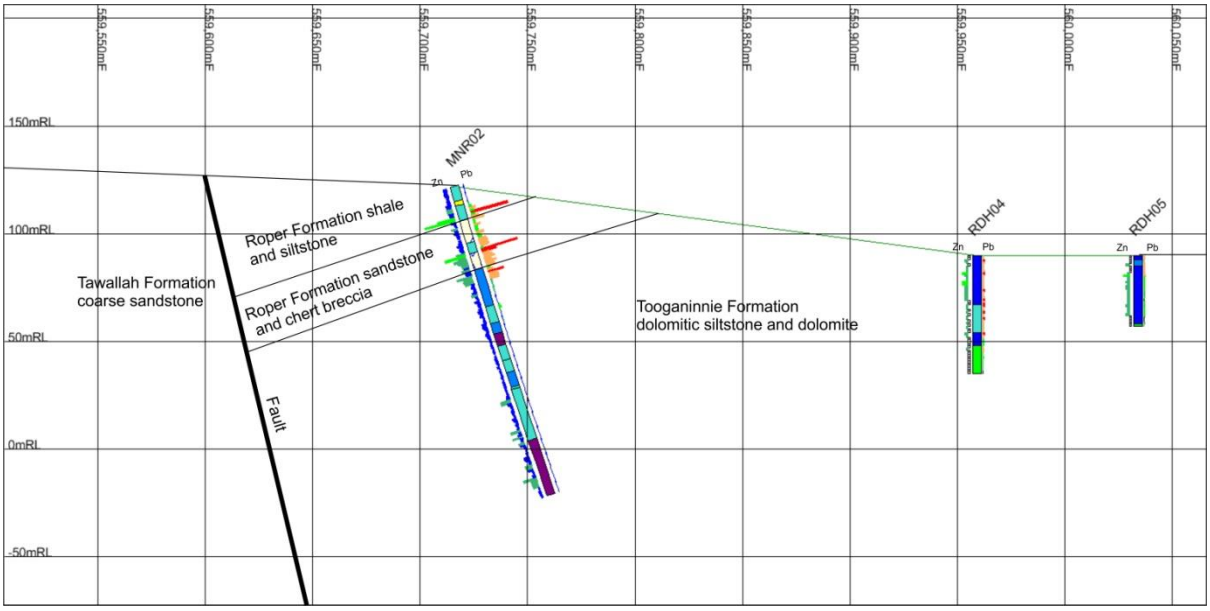

Figure 19: Section east-west through MNR02, showing previous MIM percussion holes RDH04 and RDH05

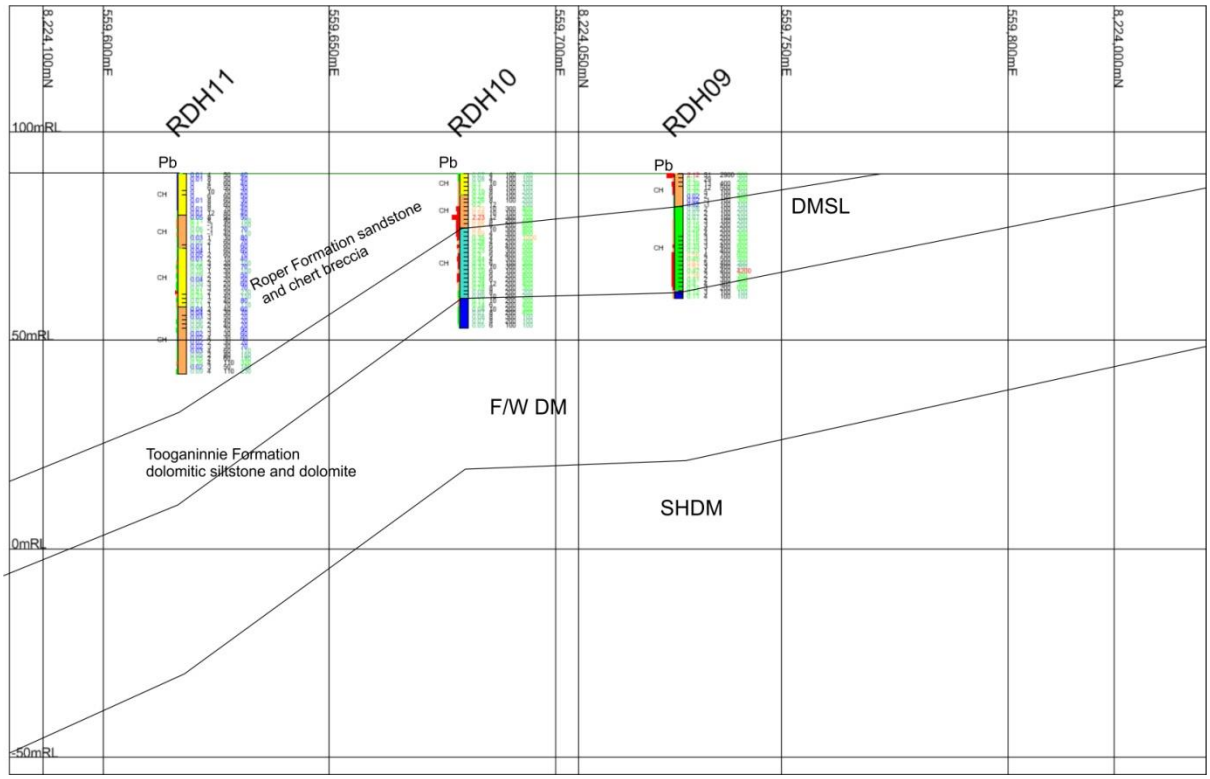

Figure 20: Section east-west through previous MIM percussion holes RDH011, RDH10 and RDH09

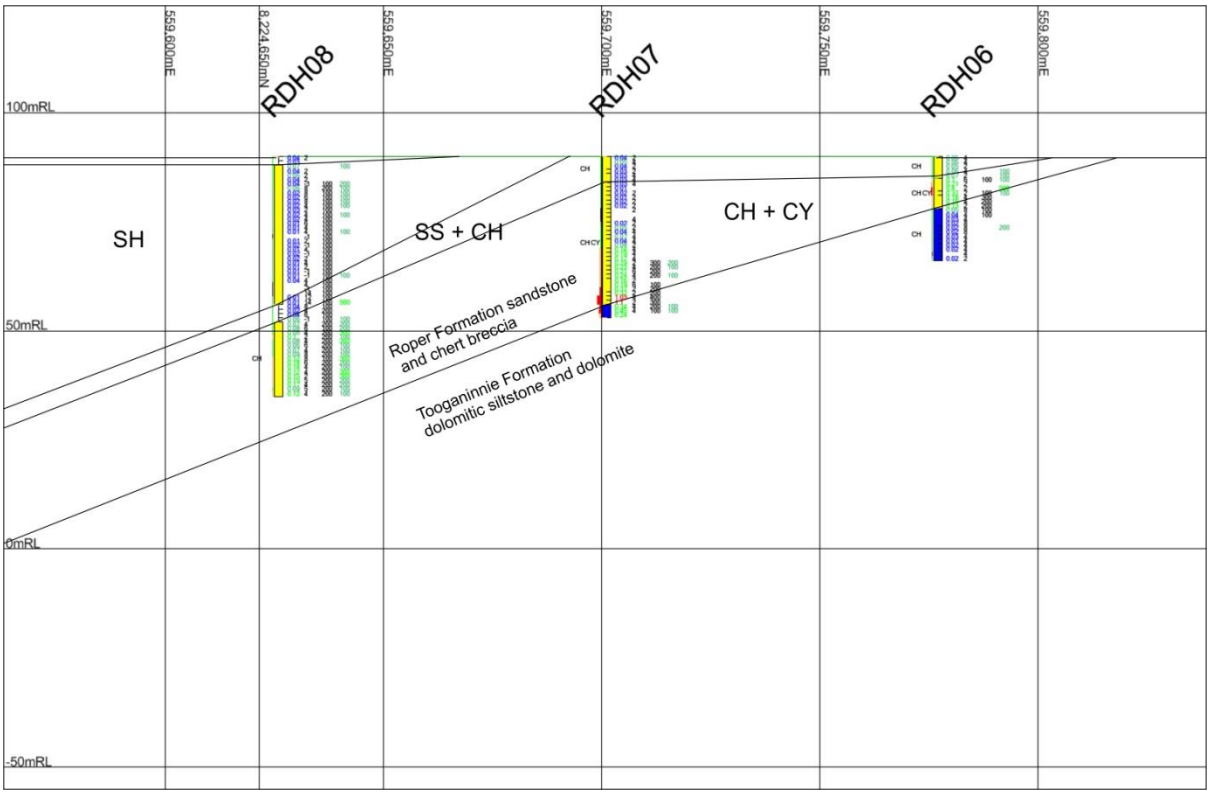

Figure 21: Section east-west through previous MIM percussion holes RDH011, RDH10 and RDH09

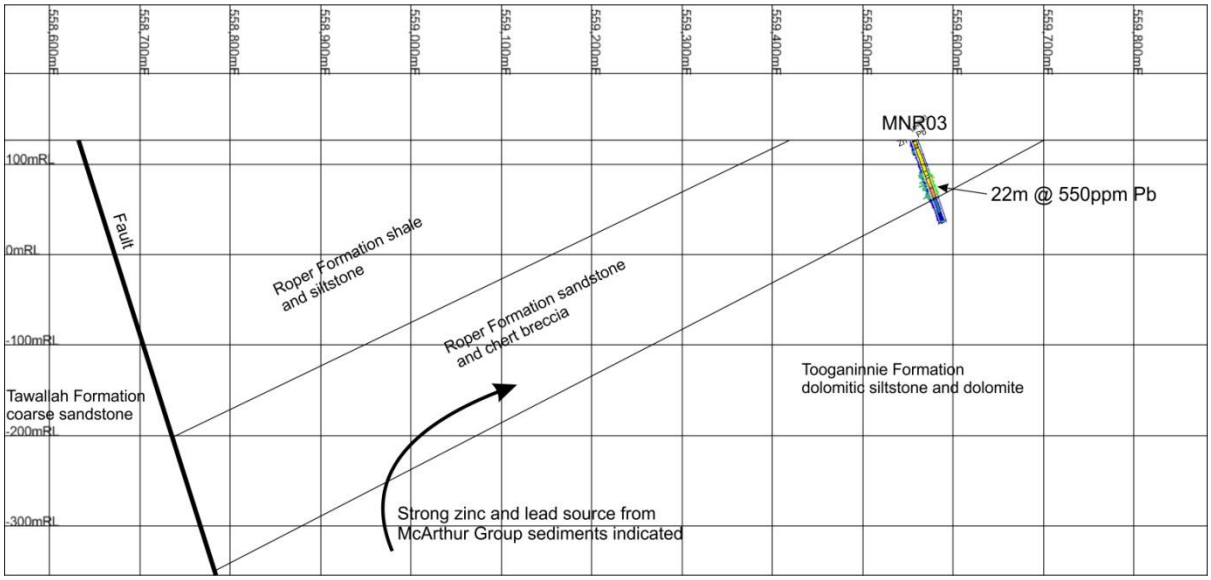

Figure 22: Section east-west through MNR03

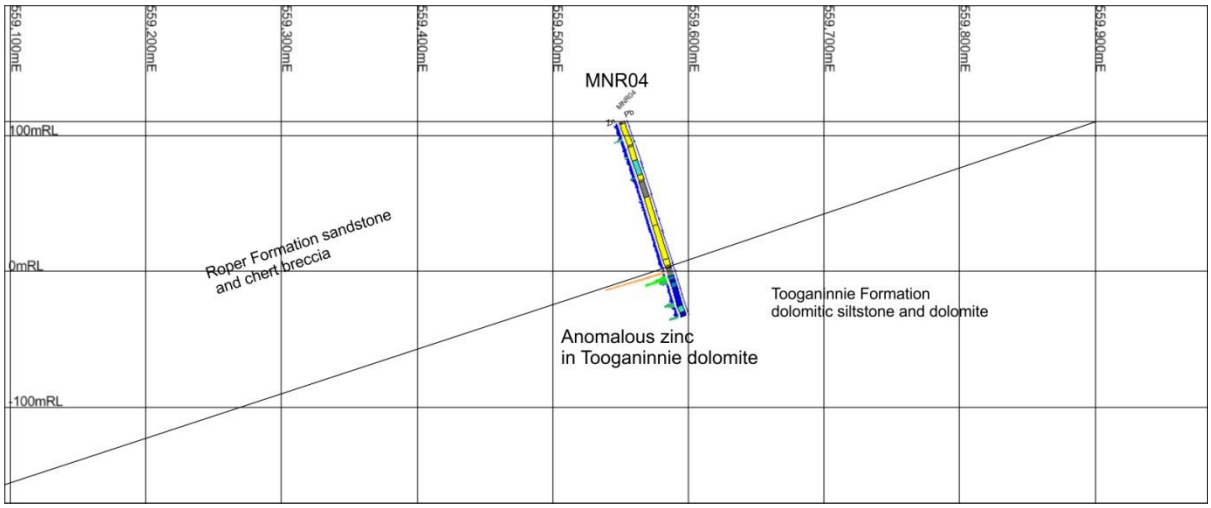

Figure 23: Section east-west through MNR04

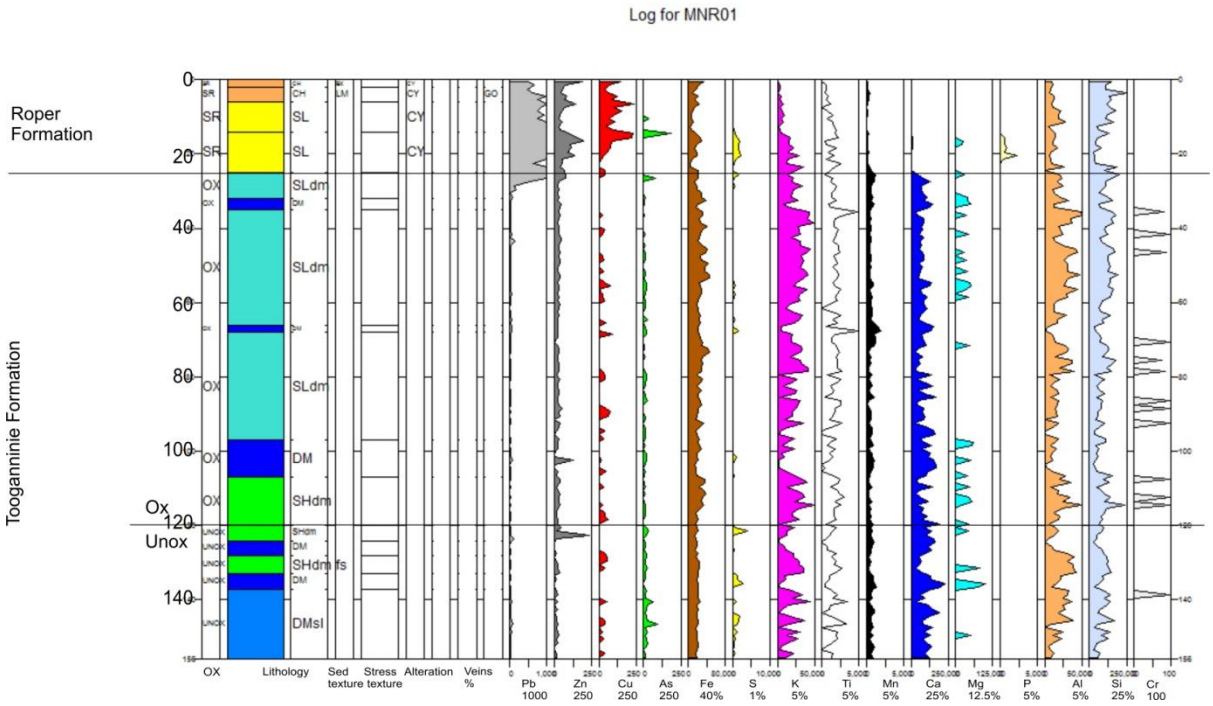

Figure 24: Mariner Prospect – Summary log and pXRF geochemistry MNR01

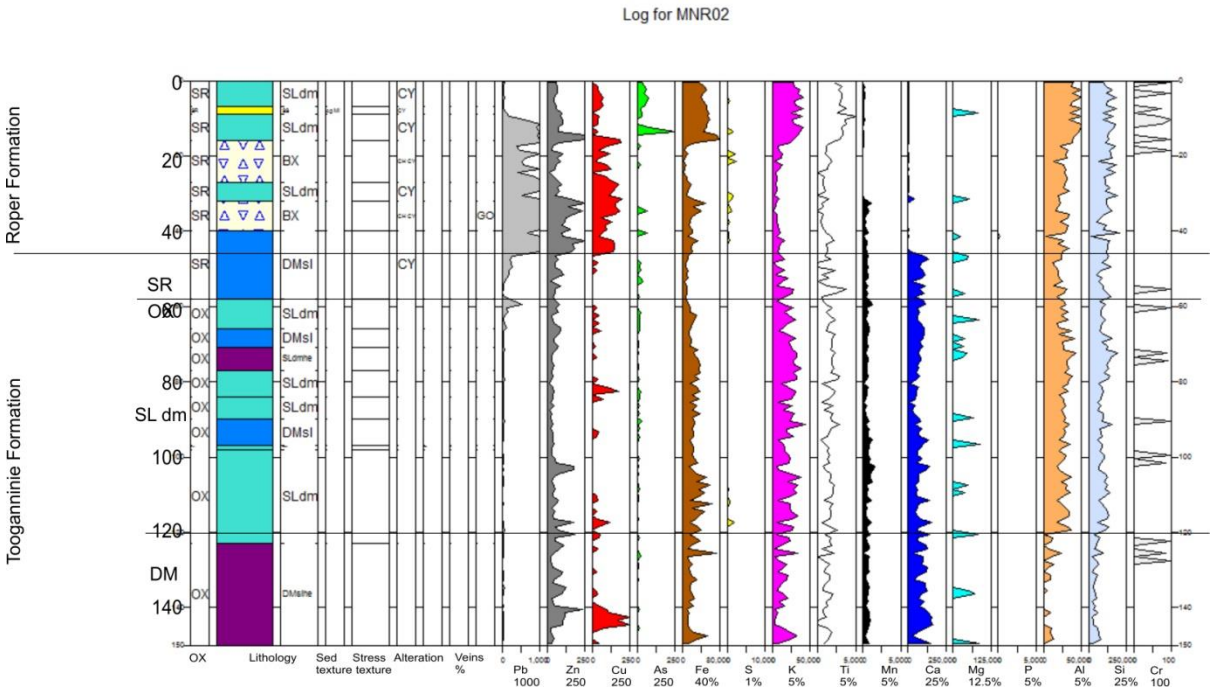

Figure 25: Mariner Prospect – Summary log and pXRF geochemistry MNR02

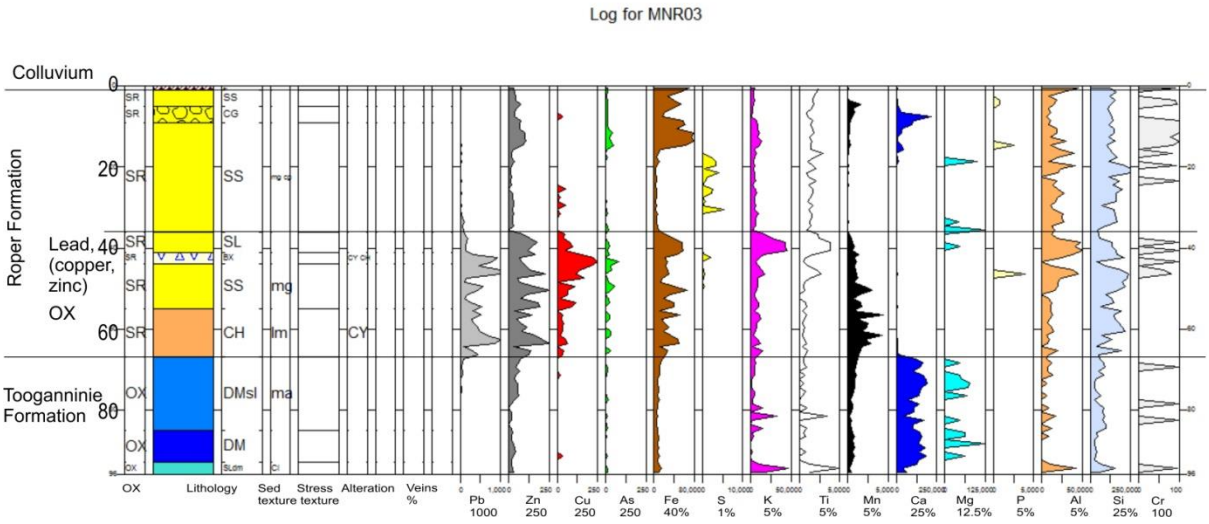

Figure 26: Mariner Prospect – Summary log and pXRF geochemistry MNR03

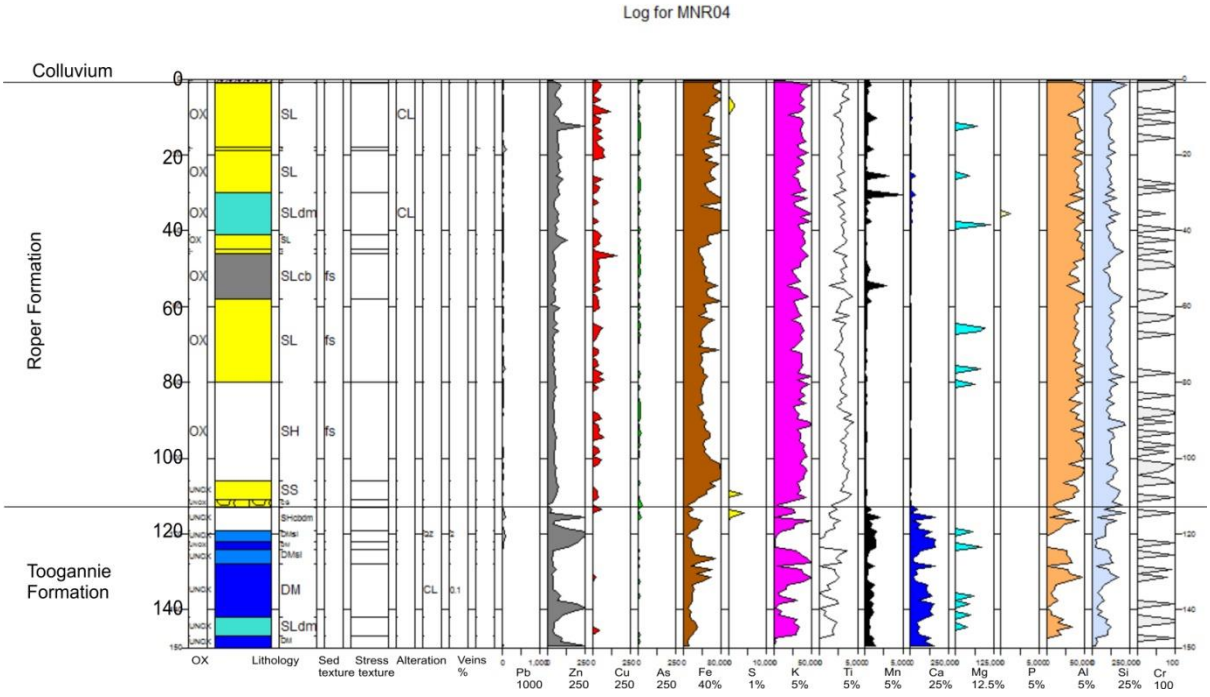

Figure 27: Mariner Prospect – Summary log and pXRF geochemistry MNR04

Coppermine Creek (copper-cobalt-silver)

One RC hole, CCR08, was drilled into the Gordons Fault area of Coppermine Creek and intersected 23m of 0.7% Cu and 5g/t Ag (oxidised), including 10m of 1.3% Cu, 0.01% Co and 8g/t Ag, table 3, in a zone of quartz-dolomite veining with malachite spatially associated with a stratabound ex-evaporite horizon in the hangingwall of Gordons Fault. The fault itself was unoxidised and contained chalcopyrite (8m @ 0.2% Cu).

Hole No	Cut off %Cu	From (m)	To (m)	Interval (m)	Cu %	Ag g/t	Co ppm
CCR08	0.1	31	73	42	0.50	4	56
	0.3	35	58	23	0.72	5	71
	0.5	48	58	10	1.3	8	98
	1.0	48	51	3	2.8	5	117

Table 3: Coppermine Creek Prospect – CCR08 intersection at different cut offs (ICP-MS)

The copper-cobalt-silver mineralisation at Coppermine is essentially stratabound, spatially associated (within, hangingwall or footwall) an ex-evaporite bed which is a dolomitised bed of ex-gypsum crystals (figure 27) and is brought to surface by drag folding along the Gordons Fault. Considering all the holes drilled by Pacifico, and all drilling of previous explorers, the average intersection length (table 4) is 26m and the length weighted average intersected grade from the 11 drill holes is 0.5% Cu and 0.016% Co. Most of the previous holes have not been analysed for silver. The outcrop length of the mineralisation is 700m (figure 28). If the zone extends south, dipping gently, from the copper mineralised outcrop at the Gordons Fault there is potential for a very large volume of low grade stratabound Mount Isa/ Nifty style copper mineralisation, within which it is possible that there may be significant tonnages of much higher copper (and cobalt, silver) grades (both oxide and primary). The unoxidised copper mineralisation is almost entirely chalcopyrite, which suggests the possibility of a very clean, uncomplicated and low cost metallurgy.

It is recommended that ground EM and IP be assessed for effectiveness over the known mineralisation, in order to identify more sulphide rich areas that may contain the higher copper grades in gently dipping strata beneath 50 to 250m of overlying stratigraphy. Diamond drilling will then either test these targets and/or step out from the known mineralisation e.g. proposed diamond drill hole (300m depth) east of CCD02 (already cleared) on figure 28.

Drill Hole Number	From (m)	To (m)	Intersection Length (m)	Cu %	Co ppm
CEC01 (MIM)	76	93	17	0.5	9
MYD7 (BHP)	181	189	8	0.3	na
GPRC01 (Carrington)	17	30	13	0.4	19
GPRC04 (Carrington)	0	35	35	0.4	148
GPRC05 (Carrington)	0	50	50	0.2	196
GPRC07 (Carrington)	0	49	49	0.7	472
GPRC08 (Carrington)	13	34	21	0.3	203
GPRC09 (Carrington)	20	51	31	0.6	83
GPRC10 (Carrington)	4	19	15	0.4	11
CCD02 (Pacifico)	147	159	12	0.4	17
CCD03 (Pacifico)	40	73	33	0.5	35
CCR08 (Pacifico)	35	58	23	0.7	71

Table 4: Current and previous drill intersections of copper and cobalt through the evaporite zone

na = not analysed
MIM = Mount Isa Mines Ltd
BHP = BHP Exploration Pty Ltd
Carrington = Carrington Mines Ltd

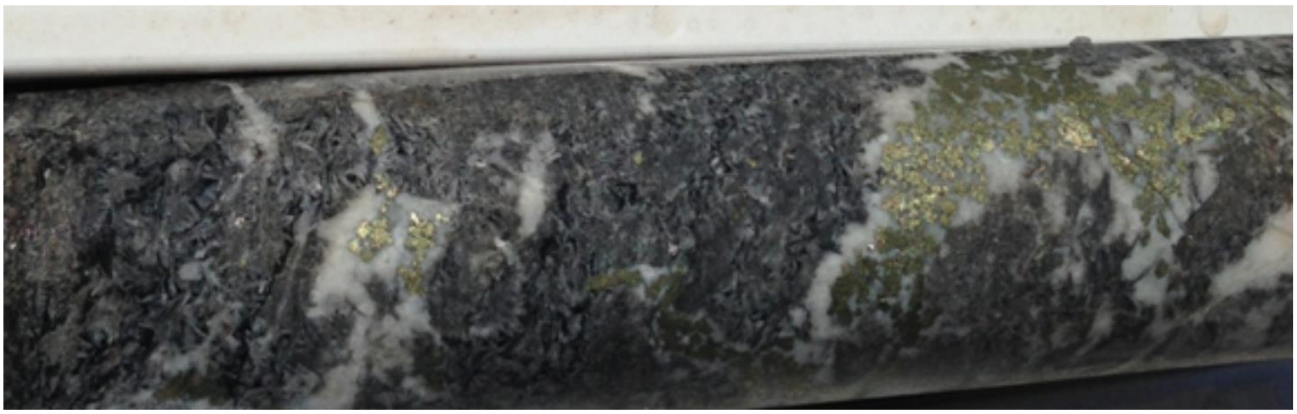

Figure 27: Core from CCD02 (Pacifico diamond hole drilled 2015) – 146m, chalcopyrite (no pyrite) mineralisation in ex- evaporite bed packed with bladed gypsum pseudomorphs.

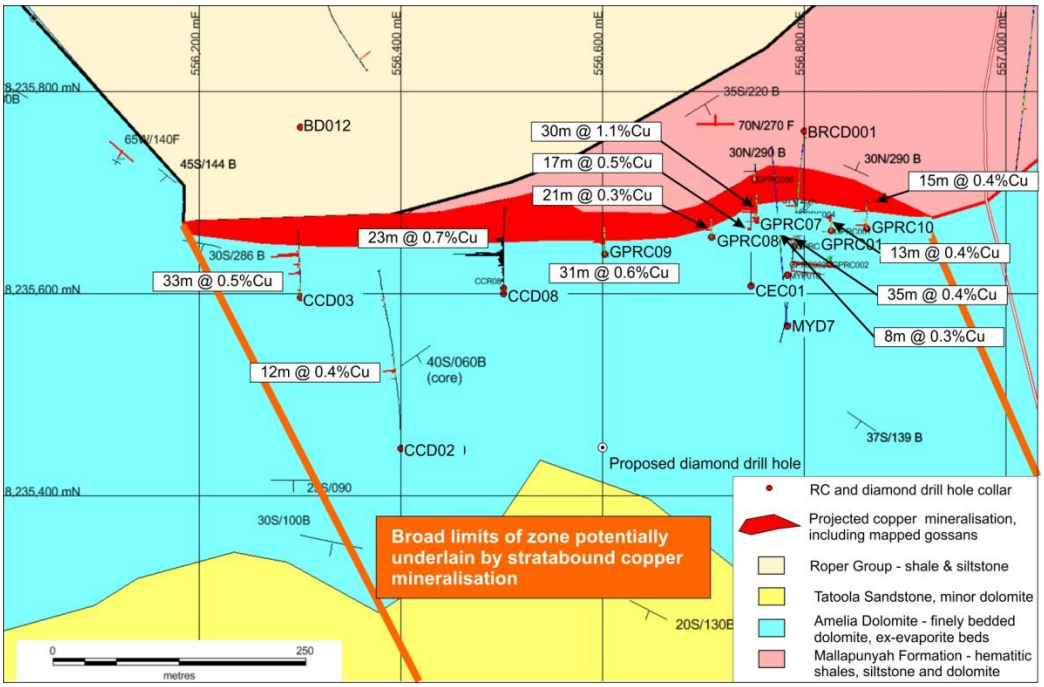

Figure 28: Coppermine Creek Prospect – Geological plan showing projected drill hole traces, stratabound copper intersections and potential extent

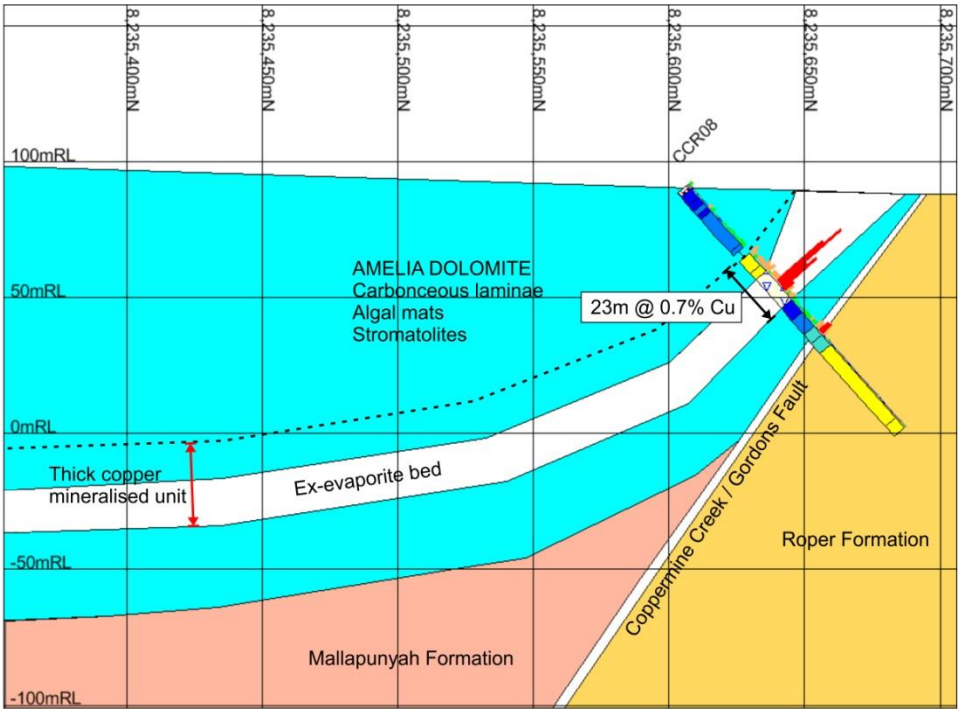

Figure 29: Coppermine Creek Prospect – East west section through CCR08 showing probable extension of copper mineralisation to the south

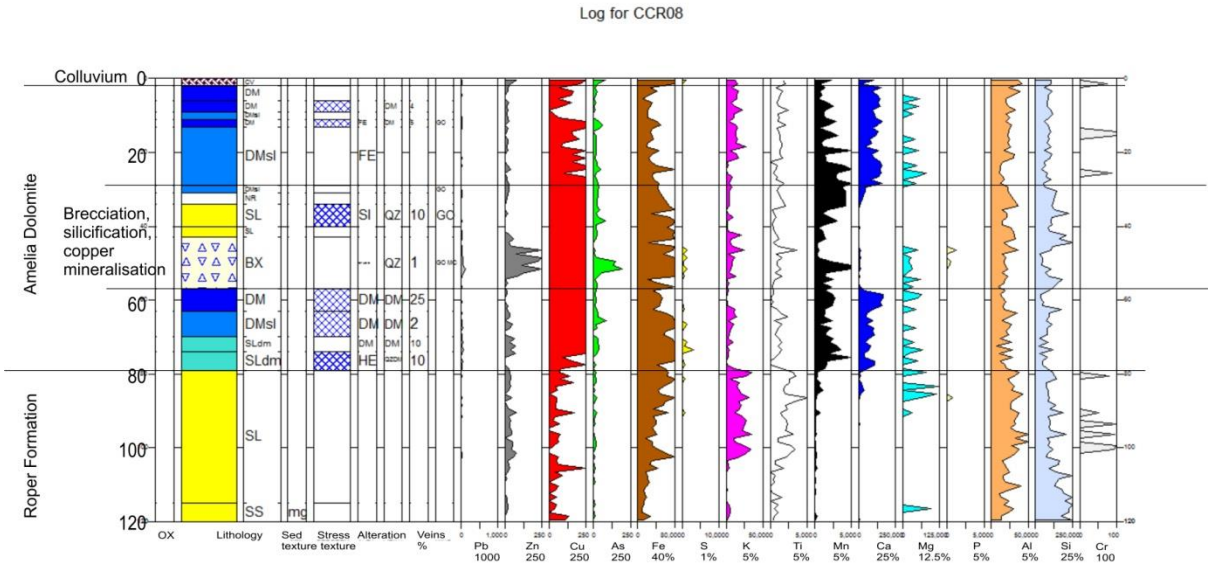

Figure 30: Coppermine Creek Prospect – Summary log and pXRF geochemistry CCR08

Coppermine Creek – Eastern Extension

Three RC holes (CCR05 to CCR07) were drilled to test the Gordons Fault for structurally controlled high grade copper mineralisation.

The eastern extension to the copper mineralised Gordons Fault was mapped for five kilometers east of previous drilling by Pacifico (figure 31). Where mineralised it comprises breccia with dolomite fragments in a gossanous matrix containing anomalous copper and lead values. In the 2km zone targeted for RC drilling by Pacifico the structure was mapped with up to 15m width, with pXRF values from gossan breccia matrix of up to 0.47%Cu and 3.3%Pb (selected rock chips). These values were considered significant due to the consistency of anomalism within the Gordons Fault in the highly weathered and silcretised rocks and poor outcrop.

All the holes only obtained only weak mineralisation. The mapped breccia can now be seen to lie within the Mallapunyah Formation and may be stratabound and either of low dip or dipping to the north. However in these cases there is little room for significant mineralisation before being cut off by the late (post-Roper) Coppermine Creek Fault.

CCR07 intersected 6m (21m to 27m) of 0.12%Zn (ICP-MS) within a dolomite breccia, figures 32 and 33.

CCR06 did not intersect the mapped geochemically anomalous gossanous breccia, it collared in Mallapunyah Formation indicating that the Amelia Dolomite contact is to the south of the collar. Geochemically anomalous copper was intersected in the reverse fault contact zone into the Roper Formation.

CCR05 was drilled to intersect the fault between the Mallapunyah Formation and Amelia Dolomite. The hole again unexpectedly collared in Mallapunyah Formation. The structural complexity is greater here than anticipated and the hole was terminated at 97m pending a re-interpretation of the surface geology.

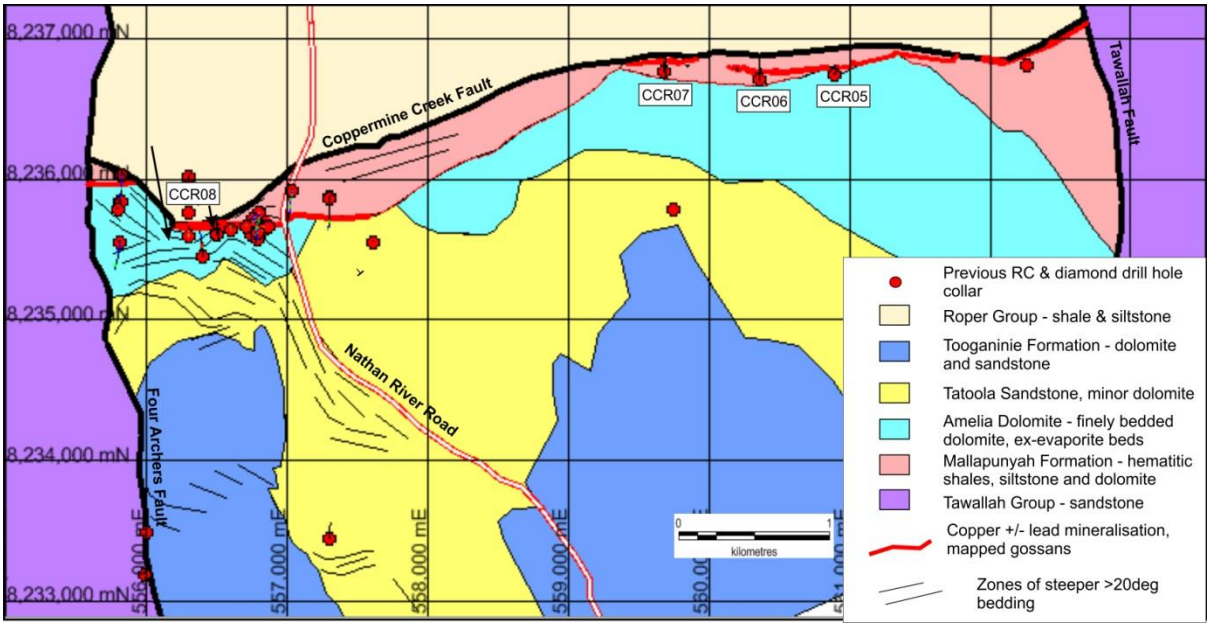

Figure 31: Coppermine Creek – RC collars and revised geology

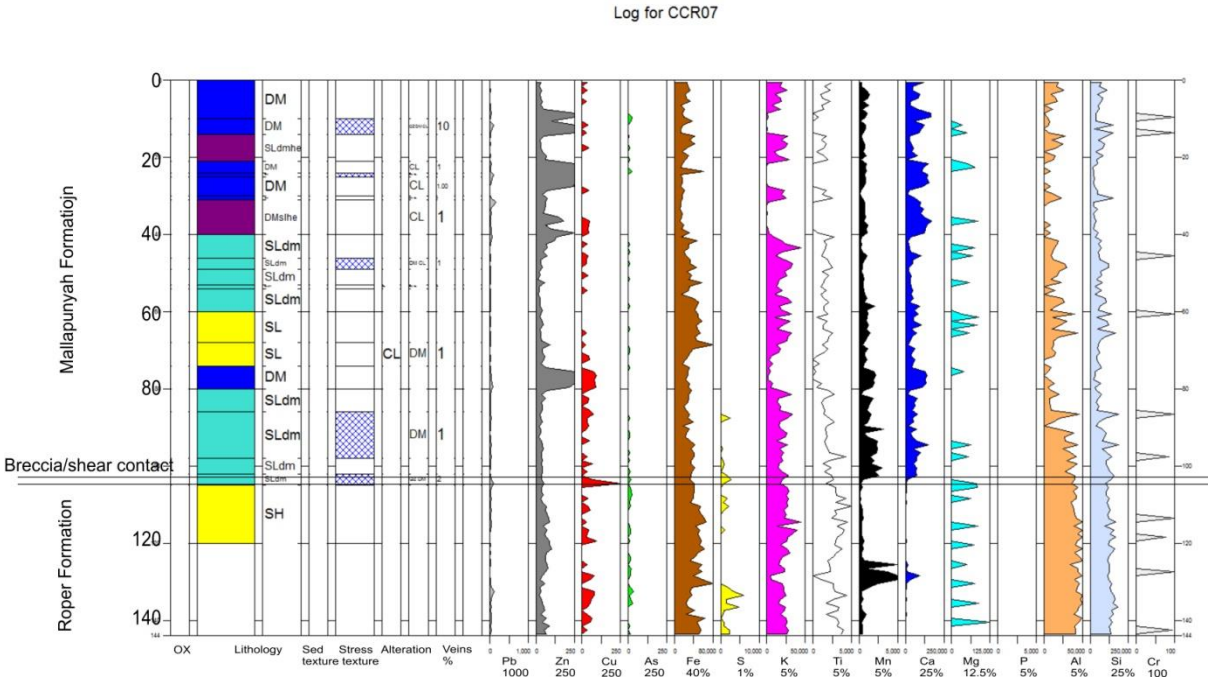

Figure 32: Coppermine Creek Prospect – Summary log and pXRF geochemistry CCR07

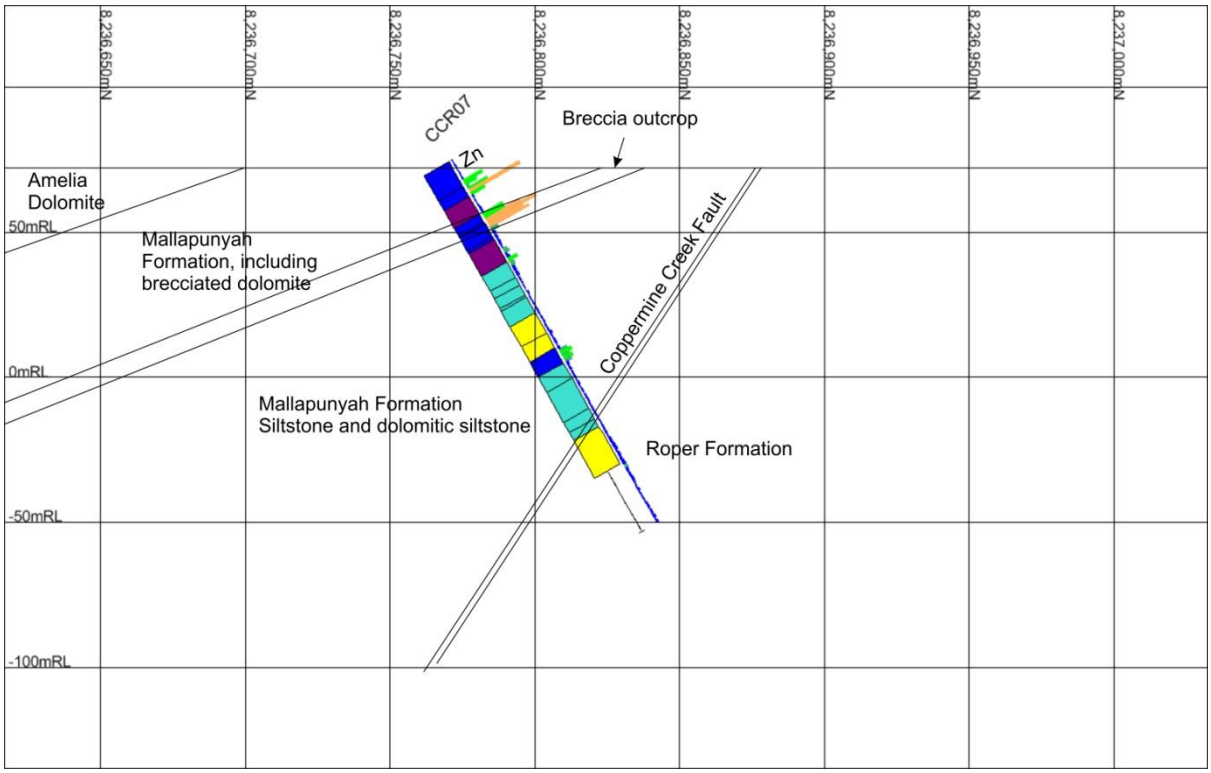

Figure 33: Coppermine Creek Prospect – North South section through CCR07

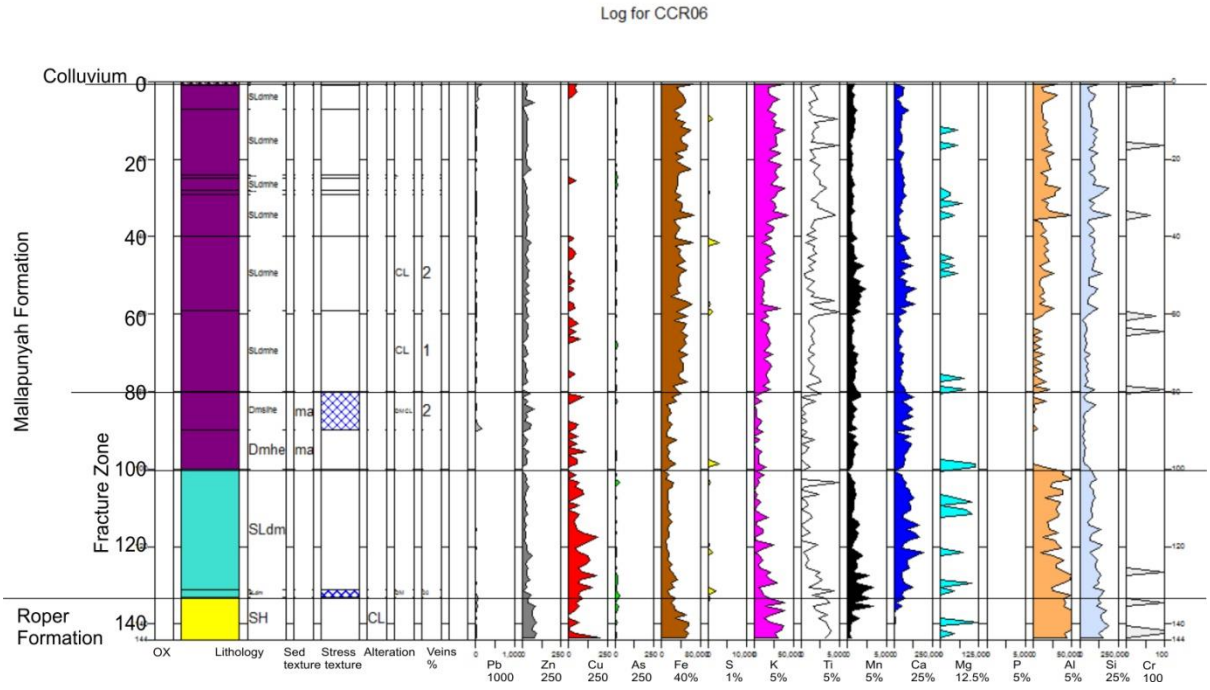

Figure 34: Coppermine Creek Prospect – Summary log and pXRF geochemistry CCR06

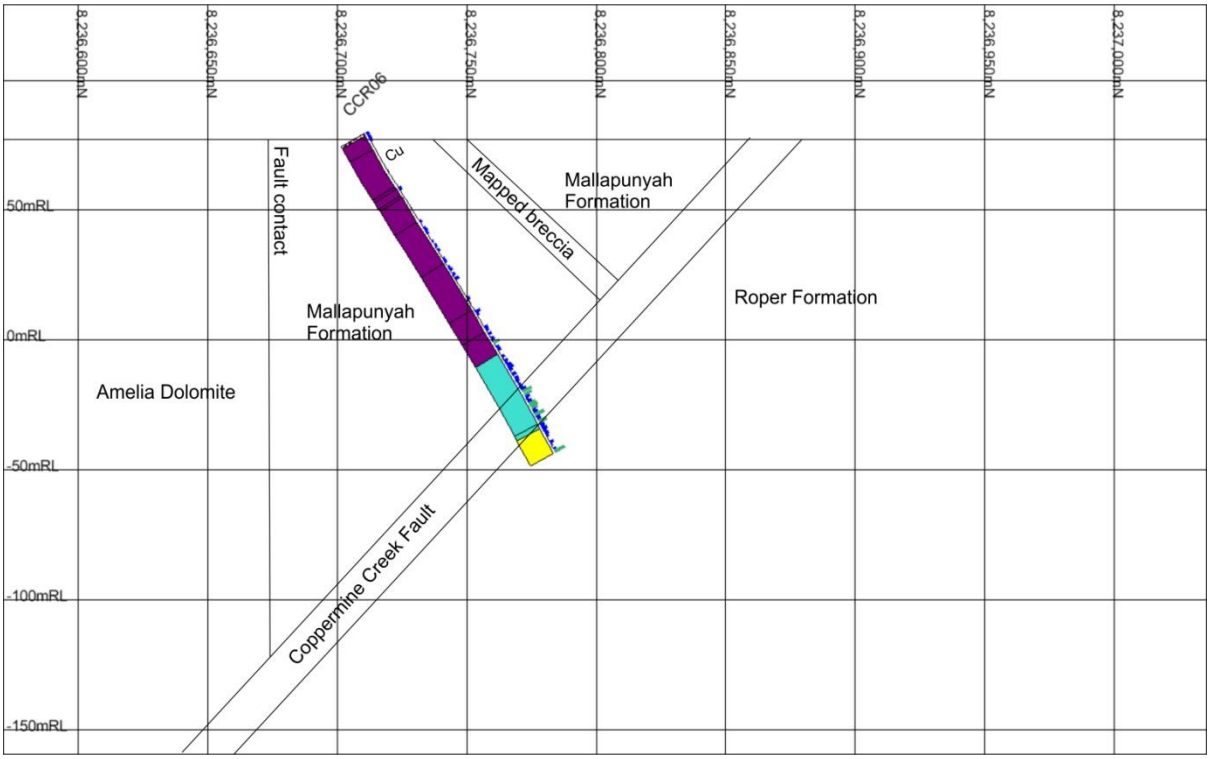

Figure 35: Coppermine Creek Prospect – North south section through CCR06

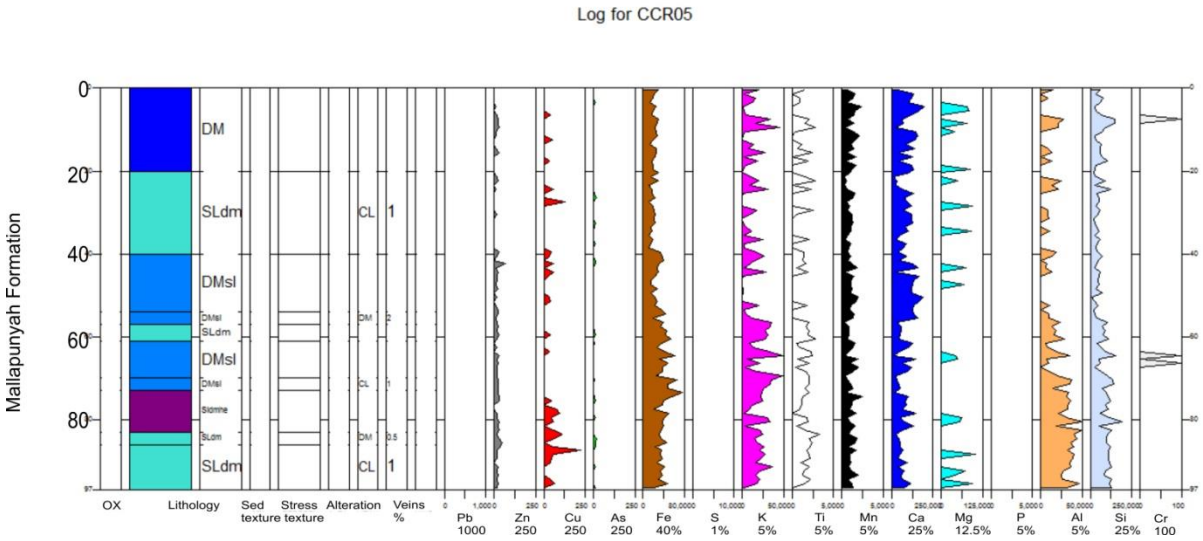

Figure 36: Coppermine Creek Prospect – Summary log and pXRF geochemistry CCR06

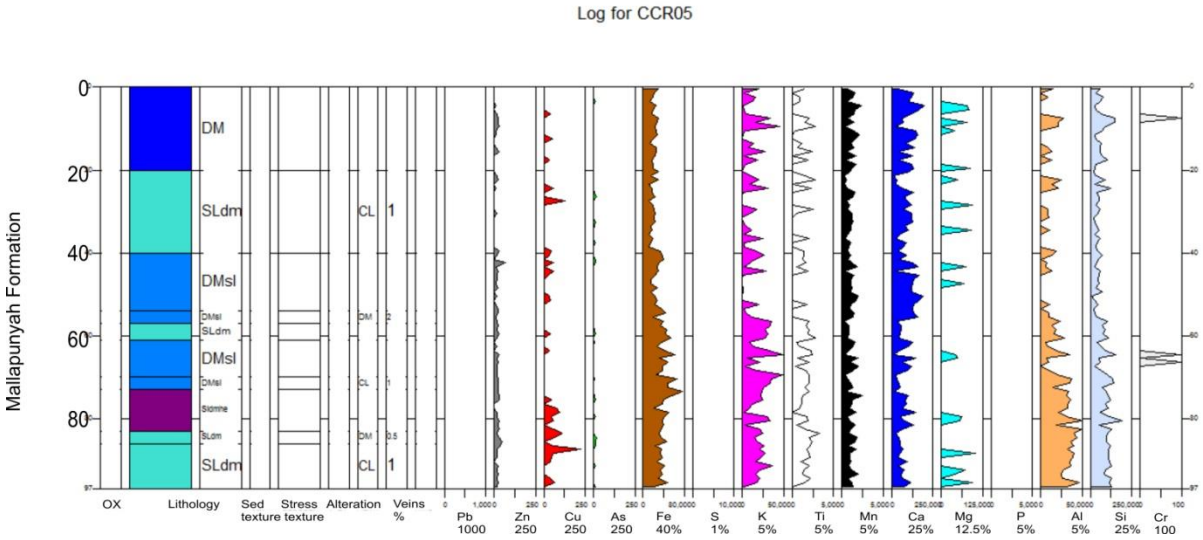

Figure 37: Coppermine Creek Prospect – Summary log and pXRF geochemistry CCR05

Johnstons (copper)

Johnstons prospect consists of shallow diggings on copper-lead mineralisation (Figure 38). Host rocks are flat lying dolomite and siltstone. There are a large number of thin discontinuous steeply dipping breccia zones exposed in shallow workings over an area of 100m x 40m. Malachite is common, and cerussite is reported.

One hole had been drilled previously, by MIM under the workings, which obtained 7.4m @ 1.3%Pb and traces of chalcopyrite but no copper analyses, from 55.3m. Mapping and pXRF work indicate that the mineralisation may extend north and south for 300m under shallow colluvium and sheetwash.

JTR01 was planned to test the apparently more copper rich possible southern extension. Only minor values of copper were obtained in the top 20m of the hole (figure 36), indicating that there is no overall continuous zone of mineralisation, and that in any case grades are low. (From 12m to 15m JTR01 intersected 500ppm Cu, ICP-MS)

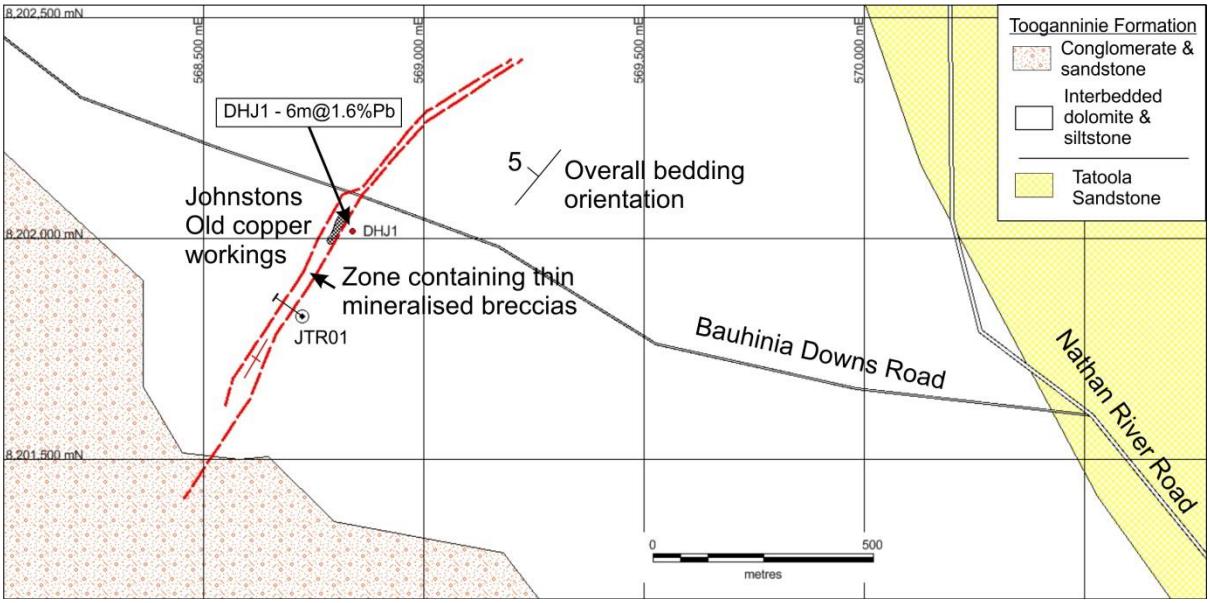

Figure 38: Johnstons – extension of structure defined to south, and Pacifico JTR01 RC collar

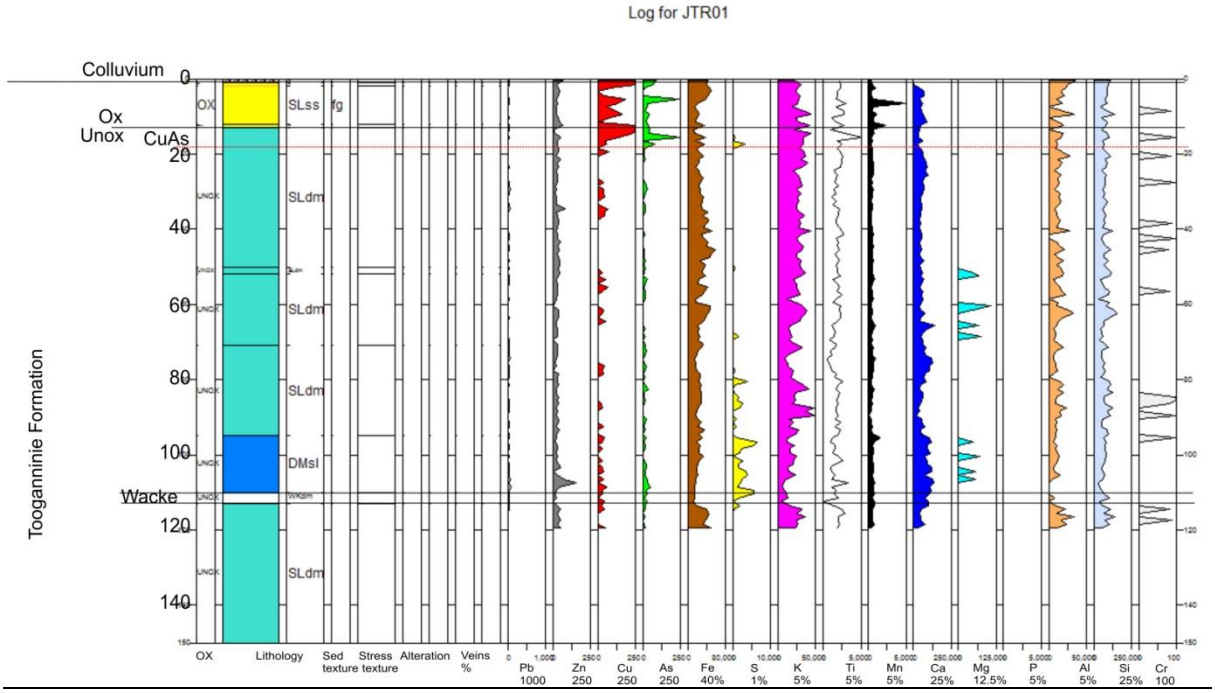

Figure 39: Johnstons Prospect – Summary log and pXRF geochemistry JTR01

Proposed programs

The BWJV ground operated by Pacifico is highly prospective for economic copper (cobalt, silver) and zinc-lead (silver) mineralisation. However while outcrop is widespread but highly weathered, the stratigraphy is flat to gently dipping, and mineralisation only outcrops at surface where it is folded, or pushed to surface by later faults eg McArthur River, Coppermine Creek.

To search for relatively shallow deposits beneath barren overlying stratigraphy requires-

1. Geology – prime mineralised horizons within Pacifico operated ground appear to be the Barney Creek Formation and the lower part of the Amelia Dolomite, including the ex-evaporite horizon and the contact with the underlying Mallapunyah Formation. Detailed mapping of the surface exposure of this stratigraphy will indicate approximate depth to the mineralised horizons, and possible mineralisation related faults.

2. Geochemistry – pXRF of selected ferruginous rock chips, outcrop or float. Either to provide direct targets or to indicate generally mineralised areas in which to concentrate. With an appreciation of the highly weathered terrane and extreme dilution by leached rocks, it can be appreciated that conventional stream sediment or soil sampling is unlikely to be effective.

3. Geophysics – to date no geophysical method has been shown to be effective in this terrane. If costs are reasonable test lines over the known mineralisation at Coppermine Creek could assess the applicability of selected ground EM and IP methods.

4. At this stage of our understanding the most cost effective and rapid method to explore is ground geological mapping, pXRF on selected samples during reconnaissance by the geologist, RC drilling if <150m, and diamond drilling for >150m.

The next stage of work could involve:

- Geophysical consultant to assess value of ground EM and IP at Coppermine Creek to define high grade copper targets associated with evaporite horizon within a lower grade envelope.
- Detailed geological mapping at Mariner to establish diamond drill targets in McArthur Group sediments beneath the Roper Formation.
- Detailed mapping Berjaya to assess significance and continuity of the Barney Creek Formation intersected in BJR02.
- Mapping Lorella, compile all drilling information and establish targets for diamond/ RC drilling if prospective model can be established.

Leading to:

- RC and diamond drilling at Coppermine Creek to establish a major copper (cobalt, silver) resource.
- Diamond drilling Mariner to identify the zinc-lead SHMS source in the underlying McArthur Group
- RC drilling and diamond drilling at other prospects as targets are developed – e.g. Berjaya (zinc-lead), Four Mile (zinc-lead), Lorella (copper).