Northern Territory Government

Geophysics and Drilling Collaborations

Proposal Cover Sheet

CORE

Project title	Coppermine Creek Exploration
Applicant (Company Name)	Pacifico Minerals Ltd
Applicant ABN	43 107 159 713
Applicant postal address	PO Box Z5487, Perth WA 6842
Contact officer	Simon Noon
Contact phone number	08 6266 8642
Contact fax number	08 9421 1008
Contact email address	simon.noon@pacificominerals.com.au
Granted exploration licence number(s) where this proposal is to be undertaken	EL 26938
Proposed type of exploration program for funding (diamond drilling, gravity survey etc)	Diamond drilling
Brief summary of program (total number of metres to be drilled, number of gravity stations, total length of flight lines etc)	2 x 300m diamond drill holes, total 600m
Total direct costs for the program including GST	$132,000
Amount of funding requested including GST	$66,000
Proposed timeframes for commencement and completion of program	15 July – 15 September 2017
Names and positions of signatories to the funding contract	Simon Noon (Managing Director)
Signature of applicant	[signature]
Date	21 April 2017

2017

Geophysics and Drilling Collaborations Completion Report, EL26938 – Coppermine Creek

For

Northern Territory Government CORE Initiative

By Pacifico Minerals Ltd

November 2017

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1:250,000: Mount Young (SD53-15)

Executive Summary

The objective of the diamond drilling program proposed in the Coppermine Creek prospect area was to test for stratiform copper mineralization of Mount Isa or Nifty style, within the McArthur Group sediment and carbonate sequence. Very strong indications had been obtained, during previous RC and diamond drilling, of a copper mineralized stratabound horizon associated with an evaporite bed within the Amelia Dolomite.

The program was successful, and even though the intersections obtained were not ore grade, the two diamond holes drilled, CCD09 and CCD10 confirmed the model of an extensive, relatively shallow, stratabound, copper mineralised zone at Coppermine Creek, within which there is high potential for the development of a copper orebody with economic parameters.

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Introduction

The project is centred about 650km southeast of Darwin in the 'Gulf Country' of the Northern Territory, Australia.

Access to the tenement is gained via the Nathan River Road north of Cape Crawford. The Coppermine Creek prospect area lies in EL26938 (figure 1), within the southern portion of the Limmen National Park. Access tracks were cleared previously in 2015 and 2016 by Pacifico for RC and diamond drill programs, and only limited additional access track clearing was required.

Site inspections were carried out with a Traditional Owner Timothy Lansen, representative of the Alawa People, over the areas of planned diamond drill sites and access tracks, and it was agreed that no sites of cultural significance were to be affected by the program.

The diamond drilling program was included in the Mine Management Plan for 2017 (MMP) submitted in the name of West Rock Resources Pty Ltd, wholly owned subsidiary of Pacifico Minerals Ltd.

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

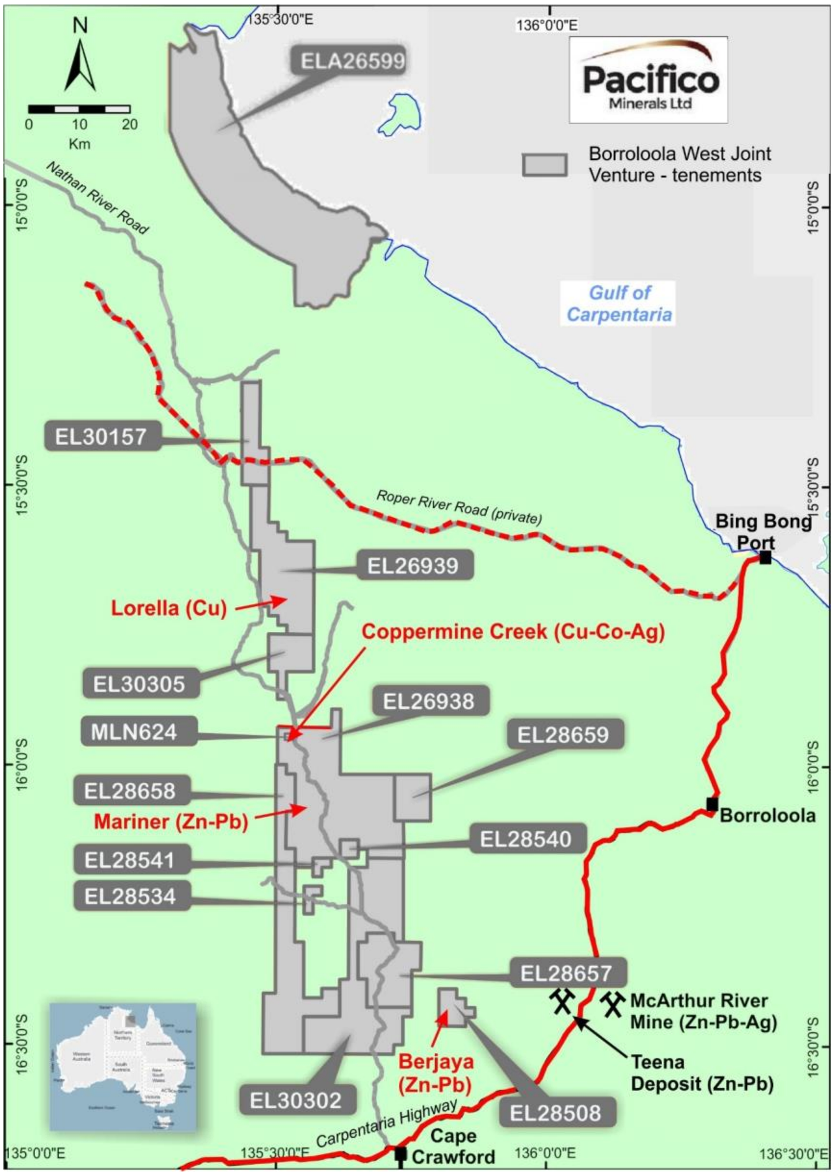

Figure 1: Borroloola West Project Tenements and location of Coppermine Creek prospect, within EL26938

Regional Context

The Coppermine Creek prospect lies in an area of McArthur Group sediments faulted against younger Roper Group sequence. In the prospect area the McArthur Group consists of Tooganinnie Formation dolomitic shale, siltstone, sandstone and dolomite, Tatoola Sandstone, Amelia Dolomite, Mallapunyah Formation hematitic sediments and carbonates and Tawallah Group coarse sandstone. The McArthur Group is faulted against the younger Roper Group sediments by the Coppermine Creek fault (reverse faulting indicated by drilling). The overlying Roper Group sediments consist of conglomerate, siltstone, and sandstone.

Outcropping and drill intersected copper mineralization (up to 50m thick) occurs along part of the Coppermine Creek Fault zone with a strike length of at least 800m.

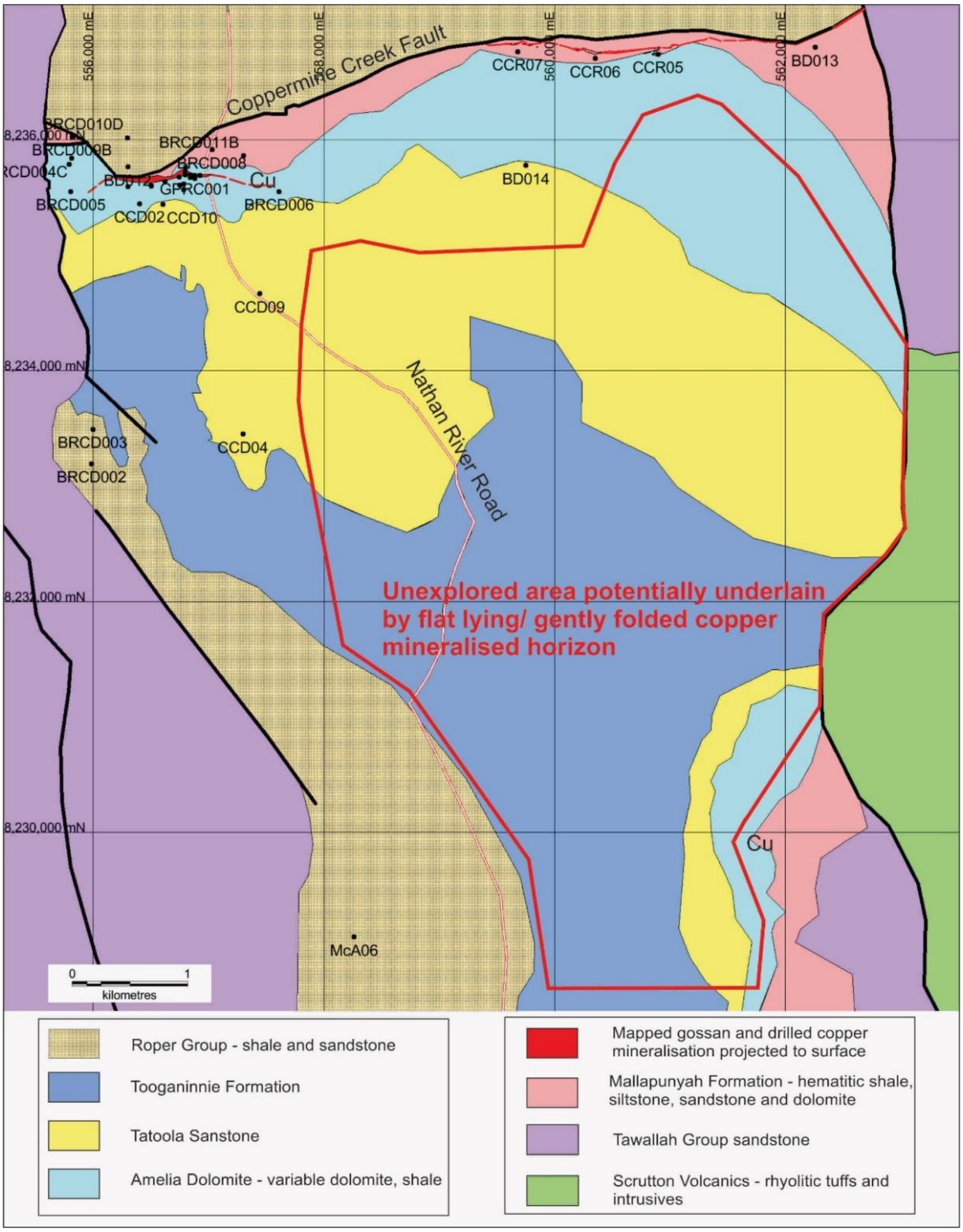

Figure 2: Geology and drilling, including location of diamond drill holes CCD09 and CCD10 at Coppermine Creek, also showing huge area potentially underlain by gently dipping mineralised horizon.

Previous Exploration

1960's, Carpentaria Exploration Company (Mount Isa Mines) drilled one diamond drill hole under the outcropping copper gossan at Coppermine Creek.

Early 1990's, Carrington Mines Ltd drilled 10 short RC holes in the eastern part of the mineralization at Coppermine.

1996/97 Broken Hill Proprietry Ltd. Some geophysics and drilled one diamond hole in the area of outcropping gossan.

2007 to 2011, Sandfire Resources NL. Drilled 7 holes, RC to about 100m, and then diamond drilling in the area of the Coppermine Creek Fault only.

2015 and 2016 Pacifico Minerals Ltd. Drilled 2 RC holes, one combined RC/ diamond hole and 2 diamond drill holes. All except 1 hole, drilled 1.3km south of the proposed holes, were drilled into the main east-west Coppermine Creek zone of intermittent gossan.

Historical information is contained in the following NTGS archived reports:
CR19630004 – CEC (MIM) 1963
CR19940348 – Carrington Mines 1993
CR19970157 – BHP 1996

Exploration Concept

The drilling targets target were for a major deposit of 50Mt of >3%Cu (+Co, Ag). It is considered that the thickness and continuity of the copper mineralised intersections obtained to date strongly indicate the potential for a major deposit in the area south of the Coppermine Creek Fault, within gently dipping underlying Amelia Dolomite, and at relatively shallow depths (<400m). This is supported by the widespread brecciation, intense fracturing, dolomitisation and quartz – dolomite veining, with associated copper mineralisation, that is mapped at surface and drilled.

The copper-cobalt-silver mineralisation at Coppermine is essentially stratabound, spatially associated with an evaporite horizon which is a dolomitised and quartz-dolomite veined bed of ex-gypsum crystals (figure 3) that is folded and brought to surface outcrop by the east-west Coppermine Creek thrust fault.

The average intersection length of all the holes drilled by Pacifico and previous explorers is 26m, and the length weighted average intersected grade from the 12 drill holes is 0.5% Cu and 0.016% Co (limits of mineralisation). The outcrop length of the mineralisation is about 800m (figure 2). If the zone extends south, dipping gently from the copper mineralised outcrop close to the Coppermine Creek Fault, there is potential for a very large volume of low grade stratabound Mount Isa/ Nifty style copper mineralisation, within which it is likely that there are significant tonnages of much higher copper (and cobalt, silver) grades.

The idea was to step back south from the previous drilling concentrated around the Coppermine Creek Fault and diamond drill test this broader zone.

Details of the Collaborative Program

Table 1: Coppermine Creek – Drill Hole Collars (GDA94 Zone 53)

Drill Hole ID	Prospect	Type	Easting	Northing	Elevation	Total depth	Dip	Azimuth
CCD09	Coppermine	DD	557443	8234668	99	252.5	-80	225
CCD10	Coppermine	DD	556602	8235441	87	300.6	-80	000

The collar positions were surveyed using a handheld GPS accurate to about 4m.

The drill program was contracted to Mitchell Services who used a Sandvik 1200 truck mounted diamond drill rig. Drilling of CCD09 and CCD10 was conducted from the 11th August to the 22nd August 2017, working double shifts. Drill hole collar specifications are listed in Table 1. CCD09 was drilled HQ3 to 35.4m and then NQ2 to the end of the hole at 252.5m. CCD10 was drilled HQ3 to 20.4m and then NQ2 to the end of the hole at 300.6m.

Single shot directional surveys were carried out every 30m on the diamond drilling to maintain control on the hole. An ACT Mk2 NQ core orientation tool was used on every diamond drill core run (< or 3m). Successful readings and marks were made on about 80% of the runs.

The core was logged for rock types (Appendix 1), structure and mineralization.

Using the orientation marks the core was orientated where possible. Structural measurements of bedding, veining and fault breccias were measured (true dip and dip direction using a 'rocket launcher') where the features were unambiguous.

A single pXRF reading was taken on the core every 1m (results are plotted on figure 4). More detailed readings were taken if veining or mineralisation was observed, and those readings averaged.

The portable XRF instrument used was an Innov-X Systems Delta DP 2000. Calibration was carried out using the Innov-X Systems Standard 316 before commencing readings sessions. Because of the very small sampling window and possible interference errors inherent with the instrument, the values are regarded as qualitative. There is a constant routine monitoring for gross errors with the instrument, which should be apparent when comparisons can be made on sending core or rock chips to a laboratory for more representative and accurate analyses.

Selected intervals showing significant amounts of visible sulphides and/or with significant pXRF copper, lead or zinc geochemistry, were halved with a core saw and delivered to ALS in Mount Isa for preparation. Pulps were then sent to ALS Townsville for ICP-MS multi-element analysis. The following preparation and analytical procedures were carried out at ALS:

Preparation

CRU-31 fine crushing, 70% to <2mm
PUL-32 pulverise 1000g to 85% < 75um

Analytical Procedures

ME-MS41 Ultratrace Aqua Regia ICP-MS:
Elements, units (detection limit): Ag ppm (0.01), Al pct (0.01), As ppm (1), Au ppm (0.02), B ppm (10), Ba ppm (10), Be ppm (0.1), Bi ppm (0.1), Ca pct (0.1), Cd ppm (0.01), Ce ppm (0.1), Co ppm (1), Cr ppm (1), Cs ppm (0.05), Cu ppm (1), Fe pct (0.1), Ga ppm (0.05), Ge ppm (0.05), Hf ppm (0.02), Hg ppm (0.01), In ppm (0.005), K pct (0.01), La ppm (0.2), Li ppm (0.1), Mg pct (0.1), Mn ppm (5), Mo ppm (0.05), Mn ppm (5), Mo ppm (0.05), Na pct (0.01), Nb ppm (0.05), Ni ppm (0.05), P ppm (10), Pb ppm (0.2), Rb ppm (0.1), Re ppm (0.001), S pct (0.01), Sb ppm (0.05), Sc ppm (0.1), Se ppm (0.2), Sn ppm (0.2), Sr ppm (0.2), Ta ppm (0.01), Te ppm (0.01), Th ppm (0.2), Ti pct (0.02), U ppm (0.05), V ppm (1), W ppm (0.05), Zn ppm (2), Zr ppm (0.5).
ME-OG46 Ore grade elements – Aqua Regia ICP AES
Cu-OG46 Ore grade Cu, Aqua Regia
Pb- OG46 Ore grade Pb, Aqua Regia

For QA/QC apart from lab standards inserted for internal monitoring, a certified standard OREAS928 was inserted as every 10th sample. Analyses values of this standard were within an acceptable range.

The following intervals of half-core were selected for analyses:

CCD09 53m to 63m, and 121m to 138m
CCD10 174m to 242m

The intervals selected to be sampled were based on observations of mineralization and the pXRF readings. Sample length was 1m of saw-halved core.

Results and Interpretation

Two holes were drilled at Coppermine Creek, CCD09 and CCD10, and both intersected visible copper mineralisation over significant widths (Figures 4 and 5).

CCD09 intersected approximately 13m of visible disseminated copper mineralisation (chalcopyrite) from 123m depth. The hole was drilled 1.4km south of the Coppermine Creek Fault and confirms Pacifico's mineralisation model, developed from previous exploration drilling and ground EM survey conductivity profiles, that the copper mineralisation is stratabound, gently dipping and that there are large areas where the depths of this layer are at only 100m to 250m depth.

CCD10 intersected a broad zone of approximately 48m of visible disseminated copper mineralisation from 170m.

Table 2: Summary of diamond drill results at Coppermine Creek

	0.1%Cu cut off				
Hole No	From (m)	To (m)	Length (m)	% Cu	
CCD09	55 132	58 135	3 3	0.4 0.2	Includes 1m @ 0.7% Cu from 55m
CCD10	174 237	192 240	18 3	0.2 0.2	Includes 2m @ 0.4% Cu from 190m

All the copper mineralisation is hosted by the Amelia Dolomite which consists typically of finely bedded dolomite with carbonaceous laminae. It is concentrated within the evaporite rich (now dolomitised) part of the sequence, consisting of ex-anhydrite nodules and masses of ex-gypsum crystals, now dolomitised, and often with zones of abundant carbonaceous laminae or crenulated carbonaceous algal mats. The copper mineralisation is present as chalcopyrite and minor bornite which forms disseminations, blebs and lenses throughout the mineralised zones.

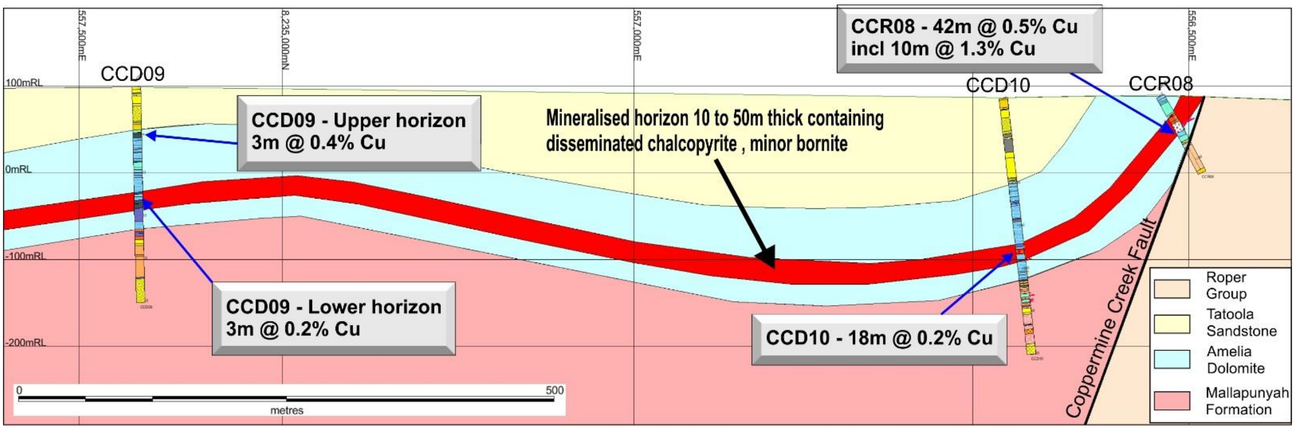

Figure 3: Section through diamond holes CCD09 and CCD10 at Coppermine Creek

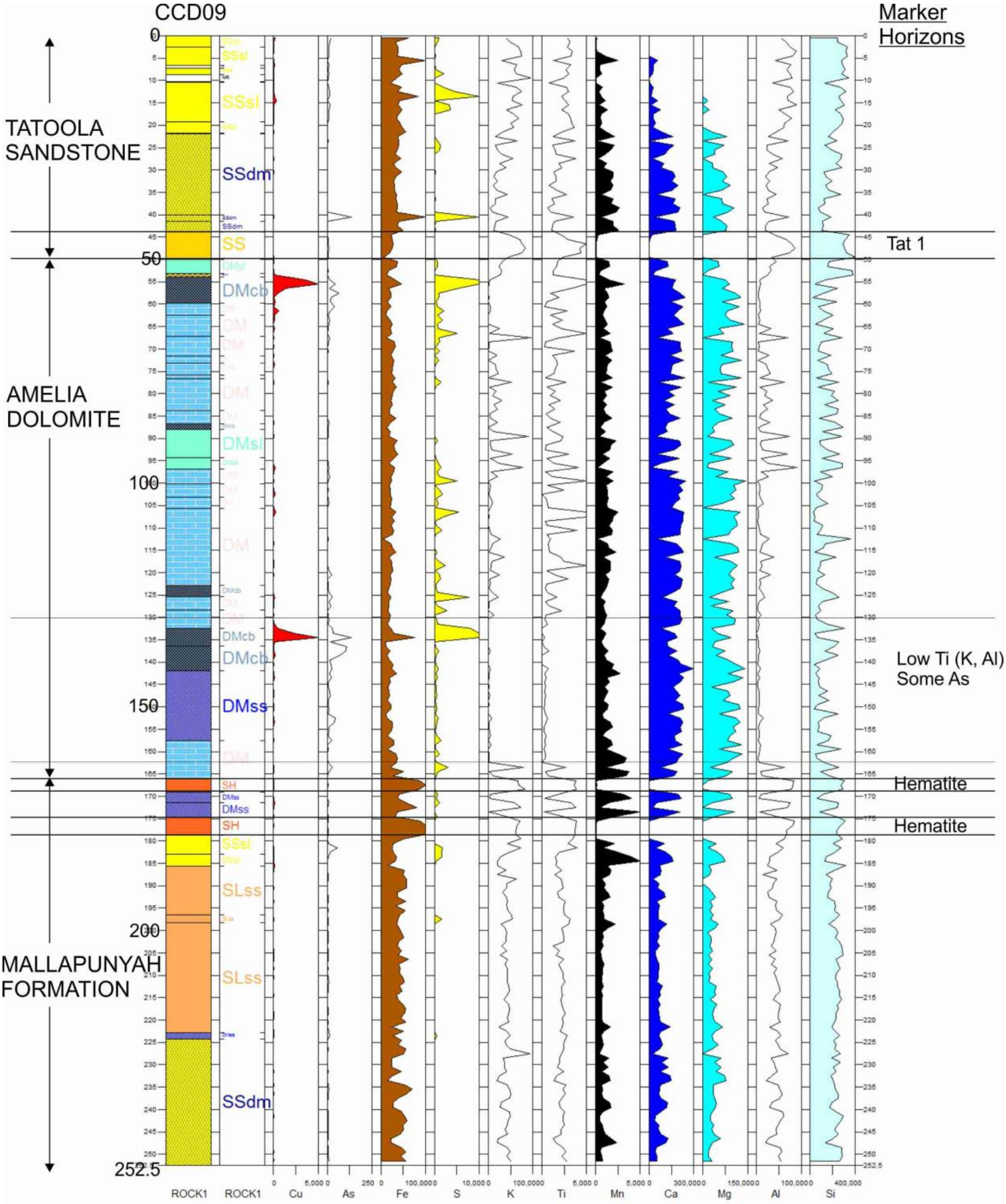

Figure 4: Coppermine Creek Prospect – Summary log and pXRF geochemistry CCD09

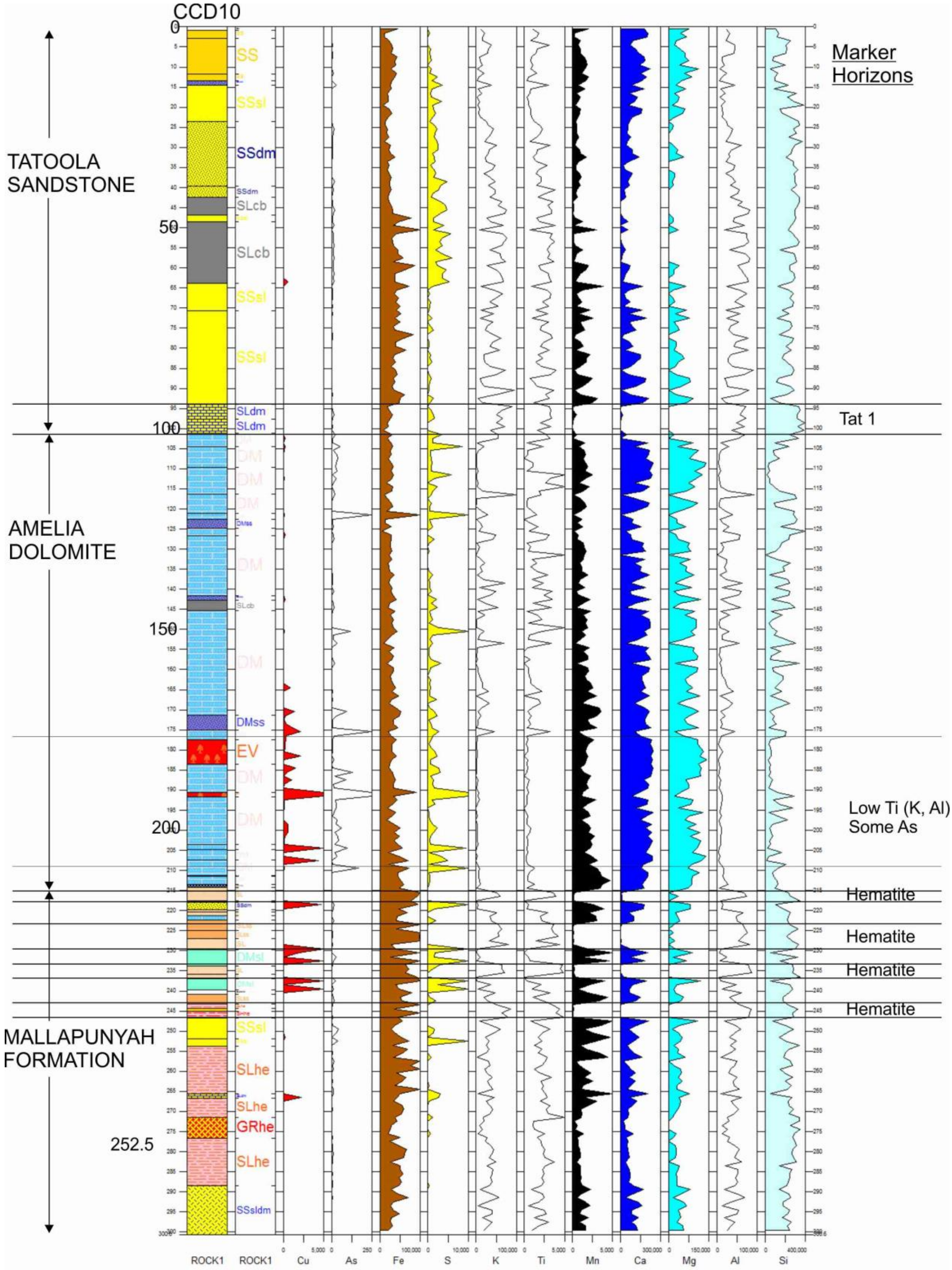

Figure 5: Coppermine Creek Prospect – Summary log and pXRF geochemistry CCD10

Conclusion

The current drilling program has confirmed that the main control of copper mineralisation is stratigraphic, and that copper mineralisation is not confined to the area of the Coppermine Creek Fault. There is major potential in the undrilled extension towards the south and east (30km2) of the copper mineralisation (Figure 2) for copper mineralisation at depths less than 400m. Targets for large economic concentrations of copper mineralisation could be defined adjacent to major north-south or north-westerly trending faults that run through the area (Figure 6).

It is planned to carry out detailed mapping and rock chip geochemistry over the prospective area to define these structures that could be a potential focus for significant copper mineralisation.

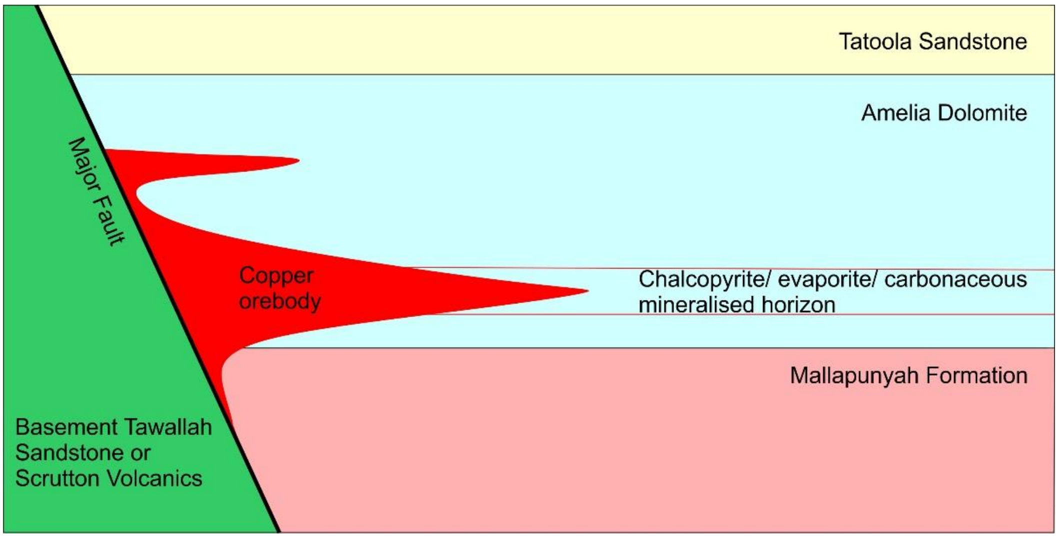

Figure 6: Schematic section showing geological exploration model for copper mineralisation

Appendix 1 – CCD09 – Drill hole log, geology and mineralisation

ID	FROM	TO	UNIT	ROCK1	LITHTE	COLOUR1	STRSTEX	ALT1	OX	VEIN1	VN%	FEO%	FEO F	PY%	PYFORM	CPY%	CPYFOI	MINS	COMMENTS
CCD09	0	2.6	TS	SSsl	fs	BR			SK										
CCD09	2.6	6.6	TS	SSsl	xb fb	GN			OX										
CCD09	6.6	7.2	TS	NR															
CCD09	7.2	8.7	TS	SSsl	xb fb	BR			OX										Bedding 80deg to CA
CCD09	8.7	10.2	TS	NR															
CCD09	10.2	10.4	TS	SS		OR		FE	OX										Fracture, no signs of significant fault
CCD09	10.4	19.2	TS	SSsl	xb mb	GY								0.01	lm				Some shale interbeds
CCD09	19.2	21.7	TS	SSsl	xb mb s	GY													
CCD09	21.7	21.9	TS	SSdm	mb sw	GY													ex-anhydrite nodules?
CCD09	21.9	40	TS	SSdm	xb mb s	RD		HE						0.01	ds				HQ to 35.4m, then NQ
CCD09	40	40.1	TS	SL	lm	GY	IF	CY						0.10	ds				Fault, 90deg to CA
CCD09	40.1	41.5	TS	SSdm	mb sw	RD		HE						0.01	ds				
CCD09	41.5	43.8	TS	SSdm	mb sw	GYGN		CL DM						0.01	ds				zones completely dolomitised with py ds
CCD09	43.8	50	TS	SS	xb fb	GY								0.02	ds				Marker Bed. Very turbulent looking, irregular cross
CCD09	50	53.1	AD	DMsl	fb ci	GY	WF	DM											
CCD09	53.1	54	AD	DMsh				DM								0.01			band with bladed ex-xls
CCD09	54	59.8	AD	DMcb	fb ci	GY	MF	DM								0.10	ds lm fr	CP CC	sections are very carbonaceous. Grey fine grained
CCD09	59.8	62.5	AD	DM	fb sx	GY										0.01	ds		
CCD09	62.5	67.2	AD	DM	fb	GY	MF							0.01	fr	0.01	ds		
CCD09	67.2	71.55	AD	DM	lm fb ci	GY													
CCD09	71.55	73.1	AD	DM	lm @ ci	GY	MF			DM	5.00								
CCD09	73.1	75.8	AD	DM	lm ci	GY													
CCD09	75.8	76.6	AD	DM	lm ci	GY	WF BX	DM											
CCD09	76.6	83.8	AD	DM	lm ci	GY													
CCD09	83.8	86.7	AD	DM	lm ci sx	GY													Beds of sedimentary breccia, signs of in-situ brecciation too
CCD09	86.7	88	AD	DMcb	fb	GY													
CCD09	88	94.3	AD	DMsl	lm ci sx	GY													
CCD09	94.3	96.8	AD	DMsl	fb @	GY								0.01	ds				
CCD09	96.8	100.1	AD	DM	fb	GY	WF												
CCD09	100.1	103.2	AD	DM	fb ci	GY										0.01	ds		cpy assoc with ci
CCD09	103.2	105.65	AD	DM	lm ci	GY													
CCD09	105.65	122.9	AD	DM	mb	GY	WF			DM	0.50					0.01	ds		Occasional bands of ex-xls elongated blades
CCD09	122.9	125.4	AD	DMcb	fb ci @	GY										0.05	ds lm		Algal mat layers, v carbonaceous
CCD09	125.4	128.3	AD	DM	mb st	GY										0.01	ds		Bands with elongated ex-?xls
CCD09	128.3	132.5	AD	DM	lm	GY										0.01	ds		
CCD09	132.5	136.4	AD	DMcb		GY	MF			DM	5.00					0.50	ds bb		
CCD09	136.4	142	AD	DMcb	fb @	GY										0.01	ds		Algal mat layers, v carbonaceous
CCD09	142	157.6	AD	DMss	lm sx	GY	WF			DM	3.00			0.01	ds	0.02	ds		
CCD09	157.6	166	AD	DM	lm	GYGN		DM CL								0.01	ds		
CCD09	166	169.1	MF	SH	fb	BR		HE											
CCD09	169.1	171.4	MF	DMss	fb	GY													
CCD09	171.4	174.7	MF	DMss	fb	GYGN								0.01	ds				
CCD09	174.7	178.6	MF	SH	fs	BR		HE CL											
CCD09	178.6	183	MF	SSsl	fb sw	GY								0.03	ds				
CCD09	183	185.6	MF	SSsl	mb	GYGN	WF	DM						0.10	ds fr				
CCD09	185.6	196.5	MF	SLss	mb	BR		HE		DM AK	0.10								Up to grit size in places
CCD09	196.5	198.3	MF	SLss	mb sx	GY GN		DM		DM AK (	0.20								
CCD09	198.3	222.8	MF	SLss	ms	BR		HE								0.01	ds		Coarse cubic transparent crystal filled vughs
CCD09	222.8	224.3	MF	DMss	mb	GY	WF			DM AK	0.10								
CCD09	224.3	252.5	MF	SSdm	mb	PK		HE		DM AK	0.20								Dolomite nodules, possibly replaced ex-anhydrite?

Appendix 2 – CCD10 – Drill hole log, geology and mineralisation

ID	FROM	TO	UNIT	ROCK1	LITHTE	COLOUR1	STRSTEX	ALT1	OX	VEIN1	VN%	FEO%	FEO F	PY%	PYFORM	CPY%	CPYFOI	MINS	COMMENTS
CCD10	0	0.9	CV	CV		BR			CV										Ss frags in clayey sand
CCD10	0.9	2.8	TS	SS		WH			SK										Leached,patches of silcrete
CCD10	2.8	11.7	TS	SS	mb fg	GY	WF		OX	DM	2.00	3.00	fr	0.02	ds				
CCD10	11.7	13.4	TS	SS	fb fg	GY			OX	DM	1.00								
CCD10	13.4	14.5	TS	DMss	fb sx	GY													
CCD10	14.5	23.6	TS	SSsl	mb	RD		HE		DM CL	1.00								HQ to 20.4, then NQ
CCD10	23.6	39.6	TS	SSdm	fb lm	GY				DM	0.50			0.20	ds				
CCD10	39.6	42.4	TS	SSdm	fb sx	GY	IF			DM	0.30								graphite along fractures
CCD10	42.4	46.9	TS	SLcb	fb lm	GY				DM	0.50			0.10	ds				
CCD10	46.9	48.6	TS	SSsl	fb	GY				DM	0.50								S0 45deg to CA
CCD10	48.6	63.9	TS	SLcb	fb	GY								0.50	ds				some sandy interbeds
CCD10	63.9	70.7	TS	SSsl	mb sw	GYGN													
CCD10	70.7	94	TS	SSsl	mb sw	RD				HE									?alteration of weakly pyritic sandstone
CCD10	94	97.6	TS	SLdm	mb	GYGN													
CCD10	97.6	101.2	TS	SLdm	lm	GYGN				CL									
CCD10	101.2	104.4	AD	DM	mb	GY				DM	0.50			0.50	ds				
CCD10	104.4	109.75	AD	DM	lm ci	GY										0.10	ds		
CCD10	109.75	116.3	AD	DM	fb ci	WH				DM									
CCD10	116.3	121.2	AD	DM	lm ci sx	GY								20.00	ds				
CCD10	121.2	122.6	AD	DM		GY	IF	DM		DM	15.00								
CCD10	122.6	124.8	AD	DMss	fb sx	GY				DM	3.00								
CCD10	124.8	126.7	AD	DM	lm	GY	MF			DM	5.00								Veins and breccia sub-parallel to core
CCD10	126.7	141.6	AD	DM	fb	GY													
CCD10	141.6	142.7	AD	DMss	fb sx	GY													
CCD10	142.7	145.35	AD	SLcb	mb	BK								1.00	ds				
CCD10	145.35	171.4	AD	DM	fb ci	GY										0.02	ds		
CCD10	171.4	175.1	AD	DMss	mg	GY										0.01	ds		
CCD10	175.1	177.55	AD	DM	lm ci	GY								0.01	fr	0.02	ds		
CCD10	177.55	183.6	AD	EV	mb sx	GY		DM								0.05	ds		Abundant ex-gypsum xls
CCD10	183.6	190.6	AD	DM	fb ci	GY										0.30	ds		
CCD10	190.6	191.7	AD	EV	ci	BK										1.00	ds		
CCD10	191.7	203.5	AD	DM	fb	GY													
CCD10	203.5	204.8	AD	DM		GY	MF			DM	10.00					0.50	ds		
CCD10	204.8	207.4	AD	DM	fb	GY													
CCD10	207.4	211.2	AD	DM	fb ci	GY	MF BX			DM	20.00					0.10	ds		Thin breccia zones, DM mx, sub parallel toCA
CCD10	211.2	211.5	AD	DM		RD	BX	HE								0.02	ds		
CCD10	211.5	213.45	AD	DM	fb	RD				DM	10.00								
CCD10	213.45	214.2	AD	DMcb	fb	GY	IF BX			DM	5.00					0.10	ds		patches HE alteration
CCD10	214.2	215.1	AD	SL		GN	IF SR			CL									shearing low angle to CA
CCD10	215.1	217.5	AD	SL		RD	IF	HE		DM	10.00					0.10	ds		
CCD10	217.5	218	AD	DM	mb ci	GY	WF			DM	5.00					0.50	ds		
CCD10	218	219.85	MF	SSdm	fg mb	GY	MF							1.00	ds				
CCD10	219.85	220.4		SL		GN	BX SR	CL		DM	1.00								
CCD10	220.4	221.3		SL		BN	WF	CL		DMCL	0.50								
CCD10	221.3	222.4		DM	mb sx	GY	WF			DM	1.00								
CCD10	222.4	225		SLss	mb sw	GN	MF	CL						0.50	ds				
CCD10	225	227		SLss		GN	IF	CL											
CCD10	227	229.7		SL	fb	GN	SR BX	CL											Some SLhe frags
CCD10	229.7	233.8		DMsl	fb	GY	IF			DM	20.00					0.10	ds		
CCD10	233.8	235.9		SL		GN	SR							2.00	ds				
CCD10	235.9	236.9		SL		RD		HE DM		DM	5.00								
CCD10	236.9	239.8		DMsl	lm	GY										0.50	ds		
CCD10	239.8	240.9		SLsshe	mb	BR													
CCD10	240.9	243.2		SLss	mb sw	GY GN		DM		DM	1.00								
CCD10	243.2	244.35		SLhe	ma	BR				DM	2.00								
CCD10	244.35	245		SS	fg sw	GN													
CCD10	245	246.7		SHhe	lm	BR													
CCD10	246.7	251.9		SSsl	mb sw	GY													some dolomitised ex-anhydrite nodules
CCD10	251.9	253.8		SSsl	mb sw	GN		DM		DM AK	1.00			3.00	ds				
CCD10	253.8	265.5		SLhe	ma	RD													
CCD10	265.5	266.7		SLdm				DM		DM	1.00					0.02	ds		
CCD10	266.7	271.5		SLhe	ma	RD													
CCD10	271.5	276.65		GRhe	mb	BR													
CCD10	276.65	288.5		SLhe	ma	BR													
CCD10	288.5	300.6		SSsldm	mb	GY		CL		DM AK	0.50								

Appendix 3 – Structural measurements CCD09

TO	BED DIP	BED AZ
12.6	20	250
14.8	20	350
15.6	20	350
21.6	7	295
27.6	7	280
33.6	15	270
35.4	30	0
44.8	5	250
47.8	10	250
50.9	30	250
57.1	25	250
68.2	10	250
71.3	10	15
74.4	10	295
77.5	10	250
80.6	20	250
83.7	10	250
86.8	20	250
89.8	20	250
93	20	250
96	15	250
99.1	30	250
117.1	10	295
120.1	15	250
123.2	20	250
129.5	10	250
132.5	10	250
134.9	30	250
135.5	10	250
141.5	15	250
149.1	15	280
150.5	15	280
156.5	10	270
162.5	10	290
171.3	30	270
174.4	10	250
180.5	15	250
183.5	10	250
219.5	15	250
222.5	15	250
228.5	15	270
234.5	10	250
237.5	5	250

Appendix 4 – Structural measurements CCD10

TO	BED DIP	BED AZ	STRESS DIP	STRESS AZ	VEIN DIP	VEIN AZ	COMMENTS
12.6	30	140					
22.4	20	130					
24.6	10	90					
30.6	10	200					
36.6	30	280					
87.6	5	120					
90.6	10	90					
93.6	5	0					
99.6	5	180					
102.6	10	80					
105.6	5	225					
108.6	10	260					
111.6	20	250					
114.6	10	290					
120.6	10	160					
174.6	20	270					
180.6	15	270					
183.6	5	260					
186.6	5	250					
192.6	30	290					
195.6	30	290					
198.6	30	290					
201.6	25	260					
213.6			50	260	50	260	DM vein and fault breccia
219.5	30	270					
222.6	50	205	65	30			Thin fault breccia
224.4	15	170					

Appendix 5 - Drill hole codes

Rocks

AV	Alluvium
CV	Colluvium
DM	Dolomite
DMsh	Dolomite - shaley
DMsl	Dolomite - silty
DMcbsl	Dolomite - silty and carbonaceous
DMcb	Dolomite - carbonaceous
Dmhe	Dolomite - hematitic
DMslhe	Dolomite - silty and hematitic
EV	Dolomite after gypsum/ anhydrite
GM	conglomerate
GR	Grit
SS	Sandstone
SSsl	Sandstone - silty
SSdm	Sandstone - dolomitic
SSdmhe	Sandstone - dolomitic and hematitic
SSmi	Sandstone - sericitic
SL	Siltstone
SLdm	Siltstone - dolomitic
Sldmhe	Siltstone - dolomitic & hematitic
SLcb	Siltstone - carbonaceous
SLdmcb	Siltstone - carbonaceous and dolomitic
SSslcb	Sandstone - silty and carbonaceous
SLhe	Siltstone - hematitic
SLgc	Siltstone - glauconitic
SLmi	Siltstone - sericitic
SH	Shale
SHdm	Shale - dolomitic
SHcb	Shale - carbonaceous
SHhe	Shale - hematitic
SX	Sedimentary Breccia
SXss	Sed breccia with ss frags
WKdm	Wacke - dolomitic
GW	Greywacke
CH	chert
VN	Vein
BX	Breccia
BXdm	Breccia - dolomite frags
BXsl	Breccia - siltstone frags
NR	No recovery
LM	Limestone

Colours

RD	Red
OR	Orange
PK	Pink
BR	Brown
GN	Green
GYGN	Grey-green
GY	Grey
BK	Black
YE	Yellow
WH	White
CR	Cream

Veins

QZ	quartz
CC	calcite
DM	dolomite
CL	chlorite

Oxidation

SK	Saprock
OX	Oxidised
UNOX	Primary

Alteration

CL	chloritic
SI	silicification
CC	carbonate
DM	dolomite
FE	ferruginous
CH	cherty
CY	clay

Sedimentary Descrips

lm	Laminated
@	Stromatolitic
fb	Finely Bedded
mb	Medium bedding
ma	Massive
sx	Sedimentary Breccia
sw	Soft sediment wavy bedding
xb	Cross bedding
st	Stylolitic
oo	Oolitic
ci	Carbonaceous shale laminae
fs	Fissile (shale breaking along bedding)
fg	fine grained
mg	medium grained
cg	coarse grained

Minerals Form

ds	Disseminated
pd	Pods
xl	Euhedral crystals
bb	blebs
lm	laminae
fr	along fractures
vl	veinlets
bn	bands

Formation

RG	Roper Group
HS	Hot Springs Formation
CF	Caranbarini Formation
RD	Reward Dolomite
BC	Barney Creek Formation
MD	Mara Dolomite
TF	Tooganinnie Formation
TS	Tatoola Sandstone
AD	Amelia Dolomite
UM	Upper Mallapunyah F
LM	Lower Mallapunyah F

Stress/brecciation textures

BX	Brecciated
IF	Intensely fractured, shattered
MF	Moderately fractured
WF	Weakly fractured
SR	Sheared

Minerals

PY	pyrite
CP	chalcopyrite
LI	limonite
BT	bornite
MC	malachite
GO	goethite
GP	graphite
RH	rhodochrosite
MN	manganese oxides
BA	barite
AK	ankerite
CC	chalcocite
GL	galena
CS	cerussite
GS	gypsum
SP	sphalerite
SD	siderite
FE	iron oxides
VU	vughy