517045

DD83LR3

BOREHOLE SURVEY LOG

DRILL HOLE N°: DD83LR3 LOCALITY: LYONS RIVER N W TASMANIA DATE COMMENCED: 1·3·83 DATE COMPLETED: 9·4·83

Survey Depth	Interval	Magnetic Azimuth	Chord Length	Dip	Grid Azimuth	Northing	Easting	Reduced Level	Camera	Core Size	Comments
COLLAR											
SETUP 0m	0m - 77m	298·5°	77m	46°	310°						
154m	77m - 195m	285°	118m	46°	296·5°						
236m	195m - 289·5m	286°	94·5m	40°	297·5°						
343m	289·5m - 367·5m	281°	78m	40°	292·5°						

517046

DD83LR3

C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 1/5

TENEMENT NAME ARTHUR RIVER E.L. No. 43/79

PLAN – MAP REFERENCE

CO-ORDINATES ... AZIMUTH 310° AMG ... DRILLERS K PARRY ... COMMENCED 1.3.83 ... DEPTH 367.5m ... HOLE No. DD83LR3

RL COLLAR ... INCLINATION 46° ... DRILL TYPE Boyles 37 ... COMPLETED 9.4.83 ... CASING LEFT ... DPO No(s)

DEPTH From (M)	DEPTH To(M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization
0	9.0	0			0 - 9.0m OPEN HOLE (TRICONE).	
9.0	11.0	0.36	NQ			
11.0	14.0	0.84			9.0m - 41.0m	
14.0	17.0	0.60			Quartz sandstone with minor	
17.0	20.0	1.05			schist. Quartz veins at 39.0m and	
20.0	23.0	1.08			35.0m.	
23.0	26.0	1.06				
26.0	29.0	1.20				
29.0	32.0	0.98				
32.0	35.0	0				
35.0	38.0	0.45				
38.0	41.0	0.38			41.0m - 41.05m.	
					Carbonaceous dolomite with	
41.0	44.0	0.51			magnesite patches.	
44.0	47.0	0.23				
47.0	50.0	0.96			41.05m - 43.0m.	
50.0	53.0	1.35			Quartz sandstone.	
53.0	56.0	2.29				
56.0	59.0	1.18			43.0m - 92.1m.	
59.0	62.0	0.59			Cuneiform magnesite (~50%	
62.0	65.0	0.96			crypto crystalline magnesite) with	
65.0	68.0	2.92			very fine sharp black selvedges	
68.0	71.0	2.41			on sandy - shaney dolomite	
71.0	74.0	1.88			patches.	
74.0	77.0	1.89			Core is leached & cavernous	
77.0	80.0	1.60			over the following intervals:	
80.0	83.0	1.90			41.0 - 54.0m, 56.8m - 65.2m	
83.0	86.0	0.29			68.5m - 69.4m, 70.8m - 71.3m	
86.0	89.0	0.23			72.2m - 73.0m, 75.2m - 77.1m	
89.0	92.0	0.89			77.5m - 92.1m.	

Sample No.	From (M)	To (M)	Rec (M)	White or Buff	% Cryptocryst Magnesite	Comments
						SPLIT CORE SAMPLES.
1056237	50.0	54.4m		W	10%	
1056238	54.4	56.8		W	70%	
1056239	56.8	62.0		B	70%	leached, with
1056240	62.0	66.2		B	70%	cavities
1056241	66.2	68.4		W	80%	
1056242	68.4	73.0		B	90%	
1056243	73.0	76.5		B	95%	
1056244	76.5	80.0		B	90%	

ASSAY VALUES (Analysed by ZC BH)

Sample No.	MgO	CaO	SiO_2	Al_2O_3	Fe_2O_3	MnO	SO_3	LOI
1056237	42.23	5.65	<.50	<.05	0.863	0.177	0.369	50.05
1056238	19.03	31.64	0.864	<.05	2.04	0.35	1.928	43.85
1056239	44.98	2.52	<.50	<.05	1.038	0.182	0.306	50.62
1056240	23.99	23.93	8.81	<.05	0.243	0.125	<.010	43.67
1056241	43.08	4.28	3.64	<.05	0.159	0.069	<.010	48.62
1056242	31.78	14.51	7.72	<.05	0.407	0.100	<.010	45.31
1056243	40.77	4.35	7.17	<.05	.297	0.087	<.010	47.31
1056244	30.09	17.44	6.04	<.05	0.219	0.110	<.010	45.89

517047

SHEET No. 2/5

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

TENEMENT NAME..... No. .....

PLAN – MAP REFERENCE.....

CO-ORDINATES..... AZIMUTH..... DRILLERS..... COMMENCED..... DEPTH..... HOLE No. DD83GR7

RL COLLAR..... INCLINATION..... DRILL TYPE..... COMPLETED..... CASING LEFT..... DPO No(s).....

DEPTH From (M)	DEPTH To (M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)
92·0	95·0	1·09			92·1m – 92·5m. Siliceous dolomite.						
95·0	98·0	1·43									
98·0	101·0	0·73			92·5m – 99·5m. Extensively leached and cavernous limestone and siliceous dolomite.						
101·0	104·0	1·39									
104·0	107·0	3·64									
107·0	110·0	3·27									
110·0	113·0	2·62									
113·0	116·0	2·71			99·5m – 101·0m. Quartz sandstone as in top interval of hole.						
116·0	119·0	2·88									
119·0	122·0	3·09									
122·0	125·0	3·17									
125·0	128·0	2·87			101·0m – 217·5m. Banded sandy dolomite and coarser sandy textured limestone (bands 5mm – 10mm thick). Very minor schist and black shale bands. Cloudy magnesite-dolomite patches throughout.	Numerous zones of broken oxidized core (generally associated with the limestone bands) give very poor recovery.					
128·0	131·0	3·01									
131·0	134·0	2·96									
134·0	137·0	3·04									
137·0	140·0	3·19									
140·0	143·0	3·00									
143·0	146·0	0·34									
146·0	149·0	2·92				121·0m. Core-axis to bedding angle: 30°.					
149·0	152·0	2·97									
152·0	155·0	3·20				123·6m. Core-axis to bedding angle: 70°					
155·0	158·0	1·91									
158·0	161·0	3·20									
161·0	164·0	3·09				164·0m. Core-axis to bedding angle: 34°					
164·0	167·0	2·65									
167·0	170·0	2·94									
170·0	173·0	2·79									
173·0	176·0	1·80									
176·0	179·0	3·09									
179·0	182·0	2·94									
182·0	185·0	2·84									

517048 SHEET No. 3/5

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

TENEMENT NAME..... No. .....

PLAN – MAP REFERENCE.....

CO-ORDINATES..... AZIMUTH..... DRILLERS..... COMMENCED..... DEPTH..... HOLE No. PD836R3....

RL COLLAR..... INCLINATION..... DRILL TYPE..... COMPLETED..... CASING LEFT..... DPO No(s).....

DEPTH From (M)	DEPTH To (M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by A.L.S.)
185·0	188·0	3·00									
188·0	191·0	3·15									
191·0	194·0	3·15									
194·0	197·0	2·96									
197·0	200·0	3·05									
200·0	203·0	3·14									
203·0	206·0	1·94									
206·0	209·0	3·00									
209·0	212·0	3·07									
212·0	215·0	2·97									
215·0	218·0	2·98			217·5m – 259·5m.						
218·0	221·0	3·06			Dark grey dolomitic siltstone	Massive – slump bedded					
221·0	224·0	3·11			with dolomitic black slate –	pyrite from 254·5m – 255·0m.					
224·0	227·0	3·00			schist and pyritic laminae.						
227·0	230·0	2·40			Schistose units have a	220·0m. Core-axis to bedding					
230·0	233·0	2·86			distinctive silvery sheen.	angle: 72°					
233·0	236·0	2·95			Plane bedded and contorted	224·0m. Core-axis to bedding			GROUND CORE		SAMPLES (Assayed by ALS.) ppm
236·0	239·0	3·00			slumped and microfaulted	angle: 72°.					Cu Pb Zn Ag Fe% As
239·0	242·0	3·00			laminations types are present.		1056230	251·0	255·0		80 35 135 1 2·97 <20
242·0	245·0	2·97			Overall pyrite content ~2%		1056231	255·0	255·5		170 105 105 4 19·5 60
245·0	248·0	3·06			Cremulated schist is common.		1056232	255·5	257·0		70 40 95 2 1·32 <20
248·0	251·0	3·20			Schist is carbonaceous.		1056233	257·0	260·0		90 40 100 2 1·32 <20
251·0	254·0	3·10					1056234	260·0	263·0		25 35 240 1 1·58 <20
254·0	257·0	3·11					1056235	263·0	266·0		45 40 310 2 1·25 <20
257·0	260·0	3·13			259·5m – 266·8m.		1056236	266·0	266·8		90 40 1100 2 1·11 20
260·0	263·0	3·00			Siliceous sandy dolomite	Cavity with basal pyrite-dolomite					
263·0	266·0	1·51			with minor pyrite intercalations.	breccia from 264·3m – 266·8m.					
						266·8m. Core-axis to					
						bedding angle: 65°.					

517049

C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 4/5

TENEMENT NAME ..... No. .....

PLAN – MAP REFERENCE .....

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. DD836R3

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH From (M)	DEPTH To (M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by Z.C.B.H.)
266·0	269·0	2·51			266·8m – 284·2m.				SPLIT CORE SAMPLES		MgO CaO SiO_2 Al_2O_3 Fe_2O_3 MnO SO_3 LOI.
269·0	272·0	1·36			Cream coloured massive magnesite (cryptocrystalline).	Sharp upper contact ~45° to core axis.	1056245	266·8	269·0		29·02 19·55 3·03 <·050 1·004 0·151 0·016 46·96
272·0	275·0	0·54			Numerous veinlets of sparry magnesite – dolomite constitute ~5% of interval.	Pyrite and red sphalerite upto 2mm across occur within 1cm of this contact.	1056246	269·0	275·2		34·54 14·95 <·50 <·05 1·201 0·147 0·162 49·22
275·0	278·0	1·65					1056247	275·2	281·0		22·20 27·38 4·11 <·05 0·318 ·093 ·069 45·29
278·0	281·0	1·25									
281·0	284·0	1·06									
					Numerous zones of honeycomb-structured silica dolomite rock (residual after carbonate) occur over the following intervals:				GROUND CORE SAMPLES (ASSAYED BY ALS) ppm		Cu Pb Zn Ag Fe% As
					269·2m – 275·2m		1056201	281·0	284·0		50 40 125 2 1·10 <20
					275·35m – 277·0m		1056202	284·0	287·0		40 35 135 2 2·99 <20
					277·6m – 278·0m		1056203	287·0	290·0		300 50 220 3 6·76 20
					281·0m – 284·2m.		1056204	290·0	293·0		130 55 175 3 5·92 20
284·0	287·0	2·56					1056205	293·0	296·0		110 35 310 3 3·64 <20
287·0	290·0	2·90			284·2m – 314·0m.		1056206	296·0	299·0		125 35 130 3 5·54 <20
290·0	293·0	1·37			Dark grey siliceous dolomitic siltstone – graphitic slate laminite. Plane – slump – microfaulted bedding is present. The more graphitic zones have upto 30% slump bedded pyrite. Pyrite is most prominent over the following intervals: 287·2m – 287·5m and 290·1m – 290·2m. Core is bleached (suggestive of removal of carbonaceous material) from 293·0m – 295·5m and 296·0m – 306·0m and 306·4m – 314·0m.	284m – 293m. Bedding is approximately normal to core axis.	1056207	299·0	302·0		800 40 310 4 12·4 20
293·0	296·0	2·31					1056208	302·0	305·0		600 55 700 3 16·4 <20
296·0	299·0	1·85					1056209	305·0	308·0		620 35 170 2 16·9 40
299·0	302·0	1·37					1056210	308·0	311·0		290 30 60 2 11·6 20
302·0	305·0	1·46					1056211	311·0	314·0		520 30 85 2 11·2 60
305·0	308·0	2·70					1056212	314·0	317·0		80 20 60 2 5·33 <20
308·0	311·0	2·99					1056213	317·0	320·0		125 25 70 2 8·18 <20
311·0	314·0	3·18					1056214	320·0	323·0		170 35 60 3 13·5 40
							1056215	323·0	326·0		135 25 165 2 4·99 <20
							1056216	326·0	329·0		180 20 170 2 3·54 <20
							1056217	329·0	332·0		150 20 105 2 2·78 <20
						Significant pyrite is still present in the bleached zones.	1056218	332·0	335·0		90 20 85 2 3·78 <20
							1056219	335·0	338·0		75 20 85 2 2·58 <20
							1056220	338·0	341·0		125 30 145 2 2·74 <20
							1056221	341·0	344·0		235 30 85 3 11·0 40

517050

SHEET No. 5/5

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

TENEMENT NAME..... No. .....

PLAN – MAP REFERENCE.....

CO-ORDINATES..... AZIMUTH..... DRILLERS..... COMMENCED..... DEPTH..... HOLE No. DD834R3

RL COLLAR..... INCLINATION..... DRILL TYPE..... COMPLETED..... CASING LEFT..... DPO No(s).....

DEPTH From (M)	DEPTH To(M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by... A.L.S.....) Cu	Pb	Zn	Ag	Fe	As
314·0	317·0	3·10			314·0m - 367·5m.		1056222	344·0	347·0		340	30	120	3	9·87	20
317·0	320·0	3·32			As above but siltstone - schist is		1056223	347·0	350·0		130	25	115	1	7·42	<20
320·0	323·0	3·04			pale green (chloritic) rather than	Patches of specular hematite	1056224	350·0	353·0		160	15	170	1	1·60	<20
323·0	326·0	3·05			graphitic. Rock is still dolomitic	from 318·5m - 318·6m and at	1056225	353·0	356·0		120	25	130	1	3·38	<20
326·0	329·0	2·92			and pyritic.	318·0m and 318·9m.	1056226	356·0	359·0		55	20	75	1	3·97	<20
329·0	332·0	2·92			Core is strongly pyritic from:		1056227	359·0	362·0		65	20	90	1	4·32	<20
332·0	335·0	3·00			320·2m - 322·0m (~15%).		1056228	362·0	365·0		80	20	90	2	2·97	<20
335·0	338·0	2·97			342·0m - 345·3m (~10%).		1056229	365·0	367·5		160	20	155	1	2·00	<20
338·0	341·0	2·76			Numerous speckled cryptocrystalline		EOH									
341·0	344·0	2·56			silica - dolomite patches											
344·0	347·0	2·58			occur between 339·2m and											
347·0	350·0	1·70			341·5m.											
350·0	353·0	2·05			A conglomerate band occurs											
353·0	356·0	2·95			from 347·0m - 348·5m.											
356·0	359·0	3·05			Clasts are low sphericity sub-											
359·0	362·0	2·87			rounded sandstone, argillite											
362·0	365·0	2·90			and black shales up to 3cm											
365·0	367·0	2·10			across. Matrix is pyrite											
367·0	367·5	0·50			and carbonate-rich.											
EOH																
					A band of amphibolite occurs											
					between 357·5m and 358·3m.											
					EOH at 367·5m.											