963011

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1 of 6

TENEMENT NAME LAKE BARRINGTON No. .....

LOGGED BY: G. PURVIS

CO-ORDINATES 4700E 4920N AZIMUTH 210° MAG DRILLERS PARRY COMMENCED 19·10·80 DEPTH 187·5 m HOLE No. DD 80 LB1

RL COLLAR ..... INCLINATION 60° DRILL TYPE BOYLES COMPLETED 28·10·80 CASING LEFT 2·3m NW DPO No(s) 26472, 73, 74

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 ....) Pb	Zn	Cu ppm	Ag	Au
0	2·3	-			NO CORE – TRICONED										
							816101	8·4	8·7	0·3	18	28	1770	3	8·63
2·3	38·4		NQ		BRECCIO-CONGLOMERATE	Vuggy gossanous limonite ± qtz in	795551+	8·7	11·0	2·2	15	56	790	1	
			to		Partly weathered, massive, pinkish-	fractures at all angles, up to 5mm	52+	11·0	13·6	2·2	13	50	440	<1	
			27·6m		brown to grey, fairly hard-weakly	av. 1-2mm. Cut clasts. Density	816102	13·6	14·2	0·6	6	13	320	<1	<·04
			then		silicified in places.	av 1/0·5m. Below 18m the	795553+	14·2	16·0	2·3	13	120	270	<1	
			BQ		Clasts of acid volcanics and possibly	limonitic fractures also contain py.	54+	16·0	18·0	2	14	56	350	<1	
					some granitic material, mixed	Rare veins:	816103	18·0	18·3	0·3	120	690	1·88%	35	0·38
					basic volcanics.	8·5m 25mm lim 50°/LCA; 17·6m	795555+	18·3	21·7	3·15	18	46	490	<1	
					Clasts mostly rounded, some angular,	4mm Py-haem 10°/LCA; 18·2m	816104	21·7	22·3	0·6	21	17	7700	3	<·04
					up to 60mm, average <10mm, in	120mm py-haem-lim 30°/LCA (1st Cs	795556+	22·3	25	2·8	11	64	730	<1	
					gritty matrix & minor qtz frags.	to bedding); 22·2m 20mm lim-py>	57+	25	27·9	2·9	9	91	870	<1	
					Rock weakly to mod altered-sl	cp-bornite 60°/LCA; 21·75-22·2m //LCA	816105	27·9	28·2	0·3	10	17	1160	<1	<·04
					carbonate, sl silicif, bleaching in	2-3mm irreg py>bornite>cp;	795558	28·2	28·4	0·2	6	14	1670	<1	
					places	28·1m 6mm/80° LCA qtz-lim-py.	816106	28·4	28·6	0·2	10	19	600	<1	<·04
					Crude bedding: 4·3m 43°/LCA;	28·8m 30mm/30° LCA. Qtz-lim.	107	28·6	28·8	0·2	4	9	380	<1	<·04
					10·6m 40°/LCA; 16·3m 50°/LCA;	32m 2× 10mm + 15mm/60° LCA.	108	28·8	29·1	0·3	12	24	1930	2	<·04
					20·7m 47°/LCA; 32·9m 55°/LCA;	Py-haem, trace cp.; 32·35 5mm/25°	795559+	29·1	31·5	2·45	10	110	320	<1	
					38·1m 50°/LCA.	LCA py-lim; 34m 30mm/55°/LCA	60+	31·5	33·8	2·3	16	67	2500	1	
						Py-haem-lim; 35·25m 35mm/45°	816109	33·8	34	0·2	52	22	1·52%	16	0·12
						LCA Py-bornite-lim; 35·4m 15mm	795561	34	35·2	1·05	8	7	517	<1	
						/43° LCA. Py-bornite-haem-lim.	816110	35·2	35·6	0·4	48	42	2·7%	10	0·06
						35·5-37·1m Several Qtz-py-lim-bornite	795562	35·6	36·8	1·2	8	15	1904	<1	
						veins at all angles, up to 5mm.	816111	36·8	37·1	0·3	16	30	7200	8	<·04
						37·9m 8mm/30° LCA. py; 39·4m 15mm	795563+	37·1	39·5	2·4	15	56	2900	<1	
						/15° irreg. Py.	816112	39·5	39·8	0·3	22	13	2500	<1	<·04
						Minor dissem py>cp throughout	795564+	39·8	42	2·25	12	73	1560	<1	
						25-28m 1% cp>py	816113	42	42·4	0·4	12	10	3800	<1	<·04
						Cuprite x/s at 38·55m.	795565+	42·4	45·4	3	11	59	2800	<1	
							816114	45·4	46	0·6	74	42	4300	10	0·18

+ - indicates sample taken with core grinder - otherwise 1/2 core

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 2 of 6

TENEMENT NAME LAKE BARRINGTON No. 1

PLAN – MAP REFERENCE

CO-ORDINATES ... AZIMUTH ... DRILLERS ... COMMENCED ... DEPTH ... HOLE No DD 80 LB 1

RL COLLAR ... INCLINATION ... DRILL TYPE ... COMPLETED ... CASING LEFT ... DPO No(s) 26474, 67,

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 ZC) Pb (ppm)	Zn (ppm)	Cu (ppm)	Ag (ppm)	Au (ppm)
38.4	47.6		BQ		GRITTY TUFF Occasional clasts and thin interbeds of vitric tuff. Brownish-grey, partly weath, mod silicif. Massive. Weak-mod alt. Most gritty frags < 2mm of acid volc detritus - mainly qtz, feldspar, glass - rounded + angular. Poorly sorted, crudely bedded in places. Upper contact a bedding plane 55°/CA Numerous vuggy limonitic veins + fractures - core mod broken. 47.6 – 48.85m – fi gr. vitric tuff, pale greenish brown. Upper contact 40°/CA. Bedding: 41.4m 65°/CA; 44.5m 35°/CA; 48.4m 35°/CA.	Numerous limonitic veins av 1-2mm up to 8mm. Some ± py or ± qtz. Abt 1 dispersed limonite and dark Mn or hornite, in mmod hairline fractures, patches + dissem. Up to 5%. 41.2 – 41.3 – Minor malachite 41.3 – 41.45: 15% bedded Mn? + hornite? + minor malachite (1%) + trace cuprite. 42.3 – 42.4: 1% malachite assoc ± 5-10% Mn? + hornite? in sandy tuff. Minor cuprite @ 44m. 44.6m 5mm/45° CA vein approx to bedding. cp – lim – hornite. 45.3 – 45.65m. Limonitic breccia zone 55°/CA. Trace cuprite. 45.75m 10mm/30° CA. Lim-py vein. 45.75 – 46.50m 5-10% dissem Mn? – hornite? Trace malachite + cuprite. 47.50 – 48m: 10% lim in breccia zones.	816115 116 117 118 119 816126 127 128 129 130	46 46.3 46.7 47.5 48.4 49 51 52.5 53.8 55	46.3 46.7 47.5 48.4 49 51 52.5 53.8 55 56.9	0.3 0.4 0.8 0.9 0.6 1.9 1.6 1.3 1.1 1.9	18 14 8 21 10 20 17 9 11 14	13 13 15 13 30 57 28 19 25 32	1.39% 1.19% 540 1000 1600 870 280 2800 580 270	1 <1 <1 <1 1 <1 <1 <1 <1 <1	<.04 <.04 <.04 <.04 <.04
47.6	56.05		BQ		BRECCIO-CONGLOMERATE As before except finer gr. Weath confined to occasional oxidised fractures. Pale fawn-green. Weak-mod alt, heavily carbonatted and deformed matrix. Clasts – rounded up to 45mm, smaller usually angular clasts 5mm or less. Much higher proportion of matrix to clasts than before. Lower contact 60°/CA.	49m: py-lim band 35mm/65° CA. 49.3 – 49.4m: irreg patches of lim-hornite > py-cp 5-7% overall. 49.7 – 49.9m: 10°/CA – network py>lim>hornite. 53.25 – 53.35m: 10-15% cp>hornite>py. Below 53.8m: 1% overall py-cp >hornite, in irreg patches + dissem.										

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

SHEET No. 3 of 6

TENEMENT NAME LAKE BARRINGTON No.

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. DD 80 4B

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s) 26467, 69, 69, 70, 71

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 ...) PPM Pb	Zn	Cu	Ag	Au
7.05	74.55		BQ		ALTERED RHYOLITIC LAVA Hard, patchy silicif., pinkish-fawn. Mod alt - highly carbonated + sericitized. Angular qtz av 1-3mm, feldspar phenocrysts av 1-2mm, in carbonated vitric + felsic groundmass. Vague clast shapes in places of same material - esp near top of interval. Possible flow banding: 58.2m 40°/LCA; 59.4m 60°/LCA; Lineation of clasts: 66.2m 35°/LCA. Gritty bdy intruded 68.25-68.6m bedding 35°/LCA. 60.4-61m: Clayey argillan zone. Chilling evident at base of unit.	Dispersed sulphides (py-cp) throughout in small patches, blebs, fine stringers and disem grains. Mostly <2% Best zones: 57.1-58.05 3% cp >py; 61-65.7m 2-3% py>cp;	816131	56.9	58.5	1.6	14	41	2400	1	
							132	58.5	59.6	1.1	12	30	1040	<1	
							133	59.6	61.9	2.3	16	39	210	<1	
							134	61.9	63	0.95	18	34	800	1	
							135	63	64.5	1.65	16	27	1170	1	<.04
							136	64.5	66.5	1.9	18	40	940	1	<.04
							137	66.5	67.5	0.9	13	25	1290	1	
							138	67.5	68.5	1	12	21	160	<1	
							139	68.5	70	1.6	10	22	800	<1	
							816140	70	72.6	2.5	9	20	380	<1	
							141	72.6	73.9	1.7	8	21	850	<1	<.04
							142	73.9	75.6	1.7	13	27	240	<1	
							143	75.6	77.4	1.8	37	31	330	1	
							144	77.4	79.5	2	16	20	26	<1	<.04
							145	79.5	80.7	1.2	13	21	41	<1	
							146	80.7	82.5	1.8	15	22	350	<1	
74.55	77.4		BQ		GRITTY VITRIC TUFF Weak-mod alt ashy debris from the lava - fragments of qtz, feldspar and glass in fi gr vitric matrix. Occasional clasts of lava + tuff up to 90mm av. <10mm. Fine bedding visible in places: 75.95 25°/LCA. Upper contact 35°/LCA, lower 45°/LCA. Sericitic + carbonated pale fawny-tan colour. Some chlorite towards base.	74.55-75.8: Minor py+cp. 75.8-77.4: 2-3% py>>cp mainly in veinlets but all angles.	147	82.5	83.7	1.2	15	24	55	<1	
							148	83.7	85.5	1.8	33	45	98	<1	
							149	85.5	87.5	2	13	58	45	<1	<.04
							816150	87.5	89	1.5	12	38	31	<1	
							151	89	91.3	2.3	7	19	27	<1	
							152	91.3	93	1.7	10	22	120	1	<.04
							153	93	95	2	12	15	63	<1	
							154	95	97	2	16	18	85	<1	
							155	97	99	2	27	17	28	<1	<.04
							156	99	1013	2.2	15	23	42	<1	<.04
							157	101.3	103	1.7	5	17	10	<1	
							158	103	104.7	1.7	8	57	21	<1	
77.4	84.6		BQ		ALTERED RHYOLITIC LAVA - as above Fawny tan - grey colour. Angular qtz 1-3mm, av 1mm.	77.4-81m: 2% py in veinlets all angles - networks. Av 1-2mm. Trace cp 81-82.3m: 3-5% py>cp dispersed.	159	104.7	106	1.3	16	44	130	1	
							816160	106	108.3	2.3	20	32	190	1	<.04

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

SHEET No. 4 of 6

TENEMENT NAME LAKE BARRINGTON No. .....

PLAN – MAP REFERENCE .....

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. DD 80 4B

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 26475, 71

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 ZC) Pb (ppm)	Zn (ppm)	Cu (ppm)	Ag (ppm)	Au (ppm)
					Feldspars 1-2mm av <1mm. Fi gr vitric groundmass now invaded by silica. Weak-mod alt. Probable flow banding 84.4m 35°/LCA Minor thin qtz-carb veins below 82m. 84.5–84.6 Breccia zone 35°/LCA // to flow banding & lower contact.	82.3–84.5: 1–3% py, trace cp. 84.5–84.6: 15% py/cp in massive patches.	816161+	108.3	109.7	1.4	15	113	126	<1	<.04
							162+	109.7	112.6	2.9	22	128	539	<1	
							163+	112.6	113.8	1.1	20	132	535	<1	
							164+	113.8	114.8	1	10	35	110	1	<.04
							165+	114.8	117.5	2.7	10	53	178	<1	
							166+	117.5	120	2.5	12	87	302	<1	
84.6	87.5		BQ		INTERMEDIATE DYKE (?). Pale fawny-tan colour, softer - not silicif - clayey. Broken in places. Upper chilled margin. 1mm rounded qtz-carb amygdales in conspicuous microlathic groundmass & tiny (<1mm) feldspar laths. Alt mod - sericitisation. Vague lineation 43°/LCA @ 86.5m. Lower contact 30°/LCA.	Minor py except in included brecciated lava clast 85–85.1m: 7% py.	+ - indicates sample taken with core grinder - otherwise cut core								
87.5	103		BQ		ALTERED RHYOLITIC LAVA. Exactly as before. Pinkish-tan in colour. Silicified - strongly in places. Fractured - badly broken in places. Minor qtz-carb veins. Minor chlorite assoc & fractures and qtz veins below 95.5m 92.65m: Flow banding 45°/LCA. 97.2m: 45°/LCA; 100m 50°/LCA.	Generally up to 1% py>cp in stringers, patches & disseminated. Best zones: 91.7–92.7m: 1–2% py>cp. 94–96.8m: 2–3% py trace cp. 97.55–99m: py-qtz vein // LCA 2–8mm. 5% py overall. 99–100.8m: 2% py.									

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

SHEET No. 5 of 6

TENEMENT NAME LAKE BARRINGTON No. .....

PLAN – MAP REFERENCE .....

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. DD 80 LB1

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 26475

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 ZC) Pb ppm	Zn ppm	Cu ppm	Ag ppm	Au ppm
103	104.6		BQ		INTERMEDIATE DYKE (?) Pale fawn-brown, soft/fr. Sericitised feldspar phenocrysts up to 3mm in microlithic felsic groundmass – raw alt to sericite + carb. <1mm qtz-carb amygdales often containing py. 103.25: Flow banding 32°/LCA. Lower contact an annealed breccia zone 30°/LCA.	1% fi gr py in basal 25cm Otherwise trace py only.	816167^+	120	122.50	2.5	15	111	1141	<1	<.04
							168+	122.50	124.90	2.3	8	81	257	<1	
							816179^+	124.9	128.5	3.6	12	81	153	<1	
							180+	128.5	136.2	3.45	13	152	257	<1	
							181+	136.2	138.6	2.4	12	45	154	<1	
							192+	138.6	141.4	2.8	15	78	161	<1	<.04
104.6	108.4		BQ		ALTERED RHYOLITE LAVA Exactly as before. Reddish-fawn in colour. Silicified (very hard). Alteration products (sericite + carb) concentrated in abundant micro-fractures. Lower contact sharp 50°/LCA.	3% py. Minor cp > gn where sulphides strongest 106–107m (5%) Sulphides in bleached stringers + patchy networks.									
108.4	109.45		BQ		VITRIC TUFF v. fi gr. weakly alt ash ± bedding in places. Pale creamy grey to dark grey. Sericitised. Bedding disrupted + variable – 55°/LCA at 109.2m. Lower contact irreg. 15–20°/LCA.	1–2% py trace cp. Dispersed.									
109.45	176.05		BQ		ALTERED RHYOLITIC LAVA Fawny greenish-grey. Massive. Hard but not silicif. Some vughs due to	v. minor sulphides (py + cp in grains stringers + small patches), except in following zones:									

Eastman Camera Surveys:

Depth	Azimuth	Dip
30m	210°	60°
60m	209°	59.3°
90m	208°	59.3°
120m	208°	58.5°
150m	208°	56.7°
180m	208°	56.3°

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SHEET No. 6 of 6

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

TENEMENT NAME LAKE BARRINGTON No. .....

PLAN – MAP REFERENCE .....

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. DD 80 LB1

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 26464

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 ZC) Pb ppm	Zn ppm	Cu ppm	Ag ppm	Au ppm
				leaching of) carb vein material	109.45–112.7m: 2-3% py, minor	816169	173.75 *	175.3	1.55	100	210	70	4	<.04
				0.5–2mm, feldspars mostly 2mm	cp-bornite > gn-sp.	170	175.3	177.6	1.65	100	200	390	5	<.04
				or less in ill schistose, carbonated +	163–166: 2% py.	171	177.6	179.4	1.80	100	310	1200	5	<.04
				sericitised matrix. Some clayey	146–176.05m: Minor py + sp in	172	179.4	179.5	0.10	7500	5900	14%	84	1.35
				broken zones. Fracturing below 170m.	thin stringers assoc ± chlorite	173	179.5	180.4	0.25	600	1100	4700	8	<.04
				Thin qtz veinlets ± minor chlorite	(dark magnesian chlorite). Minor	174	180.4	181.8	1.50	200	2800	2100	7	<.04
				Slight agglomeratic character	cp + gn below 172.5m. ↑ 1% py >	175	181.8	184	2.10	100	1300	350	5	<.04
				towards top – vague clast shapes.	cp > gn – sp below 174m. Chlorite	176	184	185.05	1.05	100	230	260	5	<.04
				Schistosity more pronounced in areas	stringers up to 2mm at ↑↑ CA	177	185.05	186.20	0.85	100	230	300	5	<.04
				with clasts.	to mineral lineation.	178	186.20	187.50	0.75	100	310	450	5	<.04
				Flow banding: 118.4m 55°/LCA;		Best intersections:			Int.					
				117m 40°/LCA; 127.8m 45°/LCA;			18	18.3	0.3	120	690	1.88%	35	0.38
				133.7m 35°/LCA; 141.7m 35°/LCA.			21.7	22.3	0.6	21	17	7700	3	<.04
				148.5m 45°/LCA; 168.8m 40°/LCA.			31.5	46.7	15.2	17	48	3760	1	
				Vague clast shapes below 170m		inc:	35.2	35.6	0.4	48	42	2.7%	10	0.06
				Sharp lower contact ± chilling. 55°/LCA.		and	46	46.7	0.7	16	13	1.28%	<1	<.04
							179.4	179.5	0.1	7500	5900	14%	84	1.35
176.05	187.50		BQ	ALTERED VARIABLE TUFFS	176.05–179.4: 1-2% py > cp-sp > gn		179.5	181.8	2.3	360	2130	3120	7	<.04
				Above 184m, mostly gritty and	disem + thin stringers assoc ± carb									
				coarsely sandy vitric tuffs with	179.4–179.5* Vughy MASSIVE SULPHIDE	*	Depth intervals from 173.75–187.50 are approximate only							
				lenses fi gr tuff; below 184m mostly	cp > py > sp in qtz gangue. Banded		due to mislabelled core markers by driller and poor							
				fi gr tuff becoming almost tuff-free	72°/LCA – sl contorted. Core loss		core recoveries. The interval 177.6–180.4 has 0.65m							
				at base, with irreg interbeddings	at both upper and lower contacts.		of core lost. This has been assigned to that portion below							
				of sandy and gritty tuffs.	179.5–180.4: 2-3% sp-cp-py. disem		the massive sulphide although it is probable that some of							
				Greenish-grey to cream, weak-mod	(Note 0.65m core loss here).		this lost core is from the sulphide zone. Therefore the 0.65m							
				alt (sericite, carbonate) Silici below 178m.	180.4–181.5: 3% cp-bornite-		given to the massive sulphide is a minimum size – it							
				Much interval brecciation and	sp > py. Dispersed, usually assoc ± carb.		could be as much as 0.75m.							
				disrupted bedding.	181.5–183.1: 1-2% sp > bornite-cp-py.									
				Numerous brittle zones with core loss	181.5: 5mm/60°. Banded vein cp-		Sample 795688 – massive sulphide at 179.4 – for							
				esp below 185.2m.	bornite-sp in qtz-carb gangue.		polished section. (DPO 26491)							
				Bedding: 177.6m 65°/LCA; 184.7m 30°/LCA	183.1–187.5: Minor disem py-cp-sp-gn.									
				HOLE.										