

McARTHUR RIVER RESOURCE DRILLING, 2008										GEOLOGICAL LOG SHEET										GEO		Karissa Grenfell				HOLE				H15/50		Start Date:8/11/2008	
Collar Northing			1550		Easting		7247.4			RL 10030.6		Azimuth(G) 270			Dip -71			Total Depth			163m			Number of pages				Finish Date:					
							LITHOLOGY				ALTERATION				SULPHIDES		FAULTING				GEOTECHNICAL			STRUCTURE					COMMENTS				
FROM	TO	INTERVAL	COL	WTH	CODE	G	LITH	TEX	DOL	VEIN	NO	CR	CO	PY	MIN	TYPE	NAME	Q	OXJ	REC%	CORE	CUT	DEPTH	BCA	A1	OTH	D	A2					
7																																	
0.00	18.00	18.00																		0	NQ	1/2								No Recovery			
18.00	21.00	3.00	BR	CW	Qa															100	NQ	1/2		12/089						Poorly consolidated sand and river gravel, BOCO @ 21m			
21.00	21.80	0.80	CR	HW	LpH		HB	L						M						100	NQ	1/2								Strongly weathered Bbh			
21.80	23.20	1.40	BL	FR	LpH		HB	L						M						100	NQ	1/2											
23.20	23.32	0.12	GY	FR	LpH		SA	B												100	NQ	1/2								Two repeated graded beds separated by 2cm shale			
23.32	23.47	0.15	BL	FR	LpH		HB	L						M						100	NQ	1/2											
23.47	23.64	0.17	GY	FR	LpH		SA	B												100	NQ	1/2								Two graded bed cycles separated by 3cm shale			
23.64	24.68	1.04	BL	FR	LpH		HB	L						M						100	NQ	1/2								Minor Dol on fracture plane			
24.68	24.74	0.06	BL	FR	LpH		SA	B				W								100	NQ	1/2								Dol vein along fracture and graded bed			
24.74	25.30	0.56	BL	FR	LpH		HB	L						M						100	NQ	1/2											
25.30	25.36	0.06	GY	FR	LpH		SA	B				W		W						100	NQ	1/2								Dol coating on fracture			
25.36	26.12	0.76	BL	FR	LpH		HB	L						M						100	NQ	1/2											
26.12	26.19	0.07	GY	FR	LpH		SH	B												100	NQ	1/2											
26.19	27.20	1.01	BL	FR	LpH		HB	L						M						100	NQ	1/2								Minor clay bedding fill @ 26.6m, fault @ 27.14m			
27.20	27.40	0.20	GY	MW	LpH		SA	FA	CR			W								100	NQ	1/2								Faulted			
27.40	28.37	0.97	BL	FR	LpH		HB	L	DO	<1%				M						100	NQ	1/2								Fault @ 28.13m minor clay fill			
28.37	28.88	0.51	BL	FR	LpH		HB	L						W						100	NQ	1/2											
28.88	28.93	0.05	GY	FR	LpH		SA	B	DO	<1%										100	NQ	1/2									Minor dol veins		
28.93	30.02	1.09	BL	FR	LpH		HB	L						M						100	NQ	1/2											
30.02	30.50	0.48	BL	FR	LpH		HB	L						W						100	NQ	1/2									Broken core @ 30.34m, possible fault?		
30.50	31.70	1.20	BL	FR	LpH		HB	L						M						100	NQ	1/2									Grey bands and minor pyrite at 29.83 and 31.1		
31.70	32.05	0.35	GY	FR	LpH		SA	B												100	NQ	1/2											
32.05	32.91	0.86	BL	FR	LpH		HB	L						M						100	NQ	1/2											
32.91	33.02	0.11	GY	FR	LpH		SA	B						W						100	NQ	1/2									Minor Pyrite <1%		
33.02	35.05	2.03	BL	FR	LpH		HB	L						M						100	NQ	1/2									Grey band @ 33.6m		
35.05	35.29	0.24	BL	FR	LpH		HB	L					W							100	NQ	1/2									Concretion @ 34.67 and 35.61m, grey bands @ 35.1m and 35.22m		
35.29	36.03	0.74	BL	FR	LpH		HB	L						M						100	NQ	1/2											
36.03	36.49	0.46	BL	FR	LpH		HB	B												100	NQ	1/2		12/088									
36.49	36.55	0.06	GY	FR	LpH		SA	B						W						100	NQ	1/2									Minor pyrite		
36.55	36.98	0.43	BL	FR	LpH		HB	L						M						100	NQ	1/2											
36.98	37.31	0.33	GY	MW	LpH		SH	FA	CR			W								100	NQ	1/2									0.02m laminated at end of split		
37.31	37.34	0.03	GY	FR	LpH		SA	B												100	NQ	1/2									Minor graded bed		
37.34	38.54	1.20	BL	FR	LpH		HB	L	DO	<1%				M						100	NQ	1/2									Localised fault zone at 38.15-38.24, trace Sphal and Gal		
38.54	39.19	0.65	BL	FR	LpH		SH	B												100	NQ	1/2											
39.19	39.28	0.09	GY	FR	LpH		SA	B												100	NQ	1/2											
39.28	40.14	0.86	BL	FR	LpH		SH	B												100	NQ	1/2									Fault @ 40.16m, pyrite and minor dol on surface plane, coarse grey bands		
40.14	40.36	0.22	GY	FR	LpH		SA	B	DO	<1%				W						100	NQ	1/2									Clasts up to 5mm		
40.36	40.48	0.12	BL	FR	LpH		HB	L						M						100	NQ	1/2											
40.48	40.54	0.06	GY	FR	LpH		SA	B	DO	<1%										100	NQ	1/2									Minor pyrite		
40.54	41.06	0.52	BL	FR	LpH		HB	L						M						100	NQ	1/2											
41.06	41.16	0.10	GY	FR	LpH		SA	B												100	NQ	1/2					</						

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Collar Northing				1550			Easting			7247.4			RL		10030.6		Azimuth(G)			270		Dip			-71			Total Depth			163m			Number of pages			Finish Date:					
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FROM	TO	INTERVAL	COL	WTH	CODE	G	LITH	TEX	DOL	VEIN	NO	CR	CO	PY	MIN	TYPE	NAME	Q	OXJ	REC%	CORE	CUT	DEPTH	BCA	A1	OTH	D	A2														
7																																										
67.26	67.68	0.42	GY	FR	LpH		SL	B	DO	<1%										100	NQ	1/2							Minor graded bed at 67.35m													
67.68	68.27	0.59	GY	FR	LpH		SX	XT												100	NQ	1/2							Fault @ 67.81m with minor coarse pyrite													
68.27	69.12	0.85	GY	FR	LpH		H	L	DO	<1%										100	NQ	1/2							Repeated graded bed from 67.68 to 67.78m													
69.12	69.26	0.14	PaGY	FR	LpH		SX	XT	DO	<1%				T						100	NQ	1/2																				
69.26	70.07	0.81	BL	FR	LpH		HB	L						M						100	NQ	1/2							Fault zone @ 69.8m													
70.07	70.13	0.06	GY	FR	LpH		SA	B												100	HQ3	1/2																				
70.13	71.93	1.80	GY	FR	LpH		H	FA	DO	<1%										100	NQ	1/2							Broken core, fault planes with clay fill, graded bed @ 71.3m													
71.93	72.09	0.16	GY	FR	LpH		SX	XT	DO	1-5%				T						100	NQ	1/2																				
72.09	74.16	2.07	BL	FR	LpH		HB	L	DO	<1%				M						100	NQ	1/2							Core broken, fault zone to 72.4m													
74.16	75.86	1.70	CR	FR	LpH		SX	XT	DO	<1%										100	NQ	1/2		14					Clasts up to 30mm													
75.86	76.04	0.18	GY	FR	LpH		H	L						W						100	NQ	1/2																				
76.04	77.55	1.51	GY	FR	LpH		H	L						M						100	NQ	1/2							Graded beds at 76.28m and 76.74m, concretions throughout													
77.55	77.58	0.03	CR	FR	LpH		TP	B												100	NQ	1/2																				
77.58	78.62	1.04	GY	FR	LpH		H	L						M						100	NQ	1/2							Graded bed at 77.84m, concretions throughout													
78.62	79.46	0.84	GR	FR	LpH		SX	XT	DO	<1%										100	NQ	1/2																				
79.46	81.11	1.65	GY	FR	LpH		SL	L												100	NQ	1/2							Minor clasts @ 80.7m													
81.11	81.48	0.37	GY	FR	LpH		SA	B	DO	<1%					T					100	NQ	1/2							Spheal on lower contact													
81.48	85.06	3.58	GY	FR	LpH		H	L												100	NQ	1/2							Graded interval @ 82.21													
85.06	85.15	0.09	GY	FR	LpH		SA	B												100	NQ	1/2																				
85.15	86.44	1.29	GY	FR	LpH		SL	L	DO	<1%										100	NQ	1/2																				
86.44	86.87	0.43	GY	FR	LpH		SL	L												100	NQ	1/2							Core loss @ 86.6m													
86.87	88.51	1.64	GY	FR	LpH		H	L	DO	<1%				W						100	NQ	1/2							Coarse grain pyrite on bedding breaks and assoc with dol veins													
88.51	89.95	1.44	GY	FR	LpH		SL	B	DO	<1%										100	NQ	1/2																				
89.95	91.07	1.12	GY	FR	LpH		H	L												100	NQ	1/2							Minor hard green tuff bands @ 90.03m, 90.6m													
91.07	91.31	0.24	GR	FR	LpH		SL	B												100	NQ	1/2																				
91.31	92.23	0.92	BL	FR	LpH		HB	L	DO	<1%				M						100	NQ	1/2																				
92.23	92.41	0.18	GY	FR	LpH		TP	B												100	NQ	1/2							4cm graded bed at base													
92.41	94.83	2.42	BL	FR	LpH		HB	L	DO	<1%				M						100	NQ	1/2							Graded bed @ 92.67m, faulted zone at 94m broken core													
94.83	94.89	0.06	GY	FR	LpH		SA	B												100	NQ	1/2																				
94.89	95.07	0.18	BL	FR	LpH		HB	L						M						100	NQ	1/2																				
95.07	95.37	0.30	GY	FR	LpH		SA	B	DO	<1%				T						100	NQ	1/2																				
95.37	95.49	0.12	BL	FR	LpH		HB	L						M						100	NQ	1/2																				
95.49	95.97	0.48	GY	FR	LpH		SA	B												100	NQ	1/2		10/087					Repeated graded beds @ 95.61m, 95.66m, 95.79m and base of split													
95.97	98.72	2.75	GY	FR	LpH		H	L	DO	<1%				M						100	NQ	1/2							Repeated graded bed @ 97.1m, 97.21m													
98.72	99.80	1.08	GY	FR	LpH		H	L												100	NQ	1/2																				
99.80	100.54	0.74	GY	FR	LpH		SX	XT	CR			M		W						100	NQ	1/2		21/190F					Fault zone with dolomite crust and coarse grain pyrite													
100.54	100.81	0.27	GY	FR	LpH		H	L												100	NQ	1/2							Minor graded bed @ 100.68m													
100.81	102.25	1.44	GY	FR	LpH		SX	XT						M						100	NQ	1/2							Clasts up to 5cm, internal folding with pyritic shales													
102.25	102.78	0.53	GY	FR	LpH		SA	B						W						100	NQ	1/2							3 repeated graded beds with interbedded pyritic shales													
102.78	103.12	0.34	GY	FR	LpH		H	L						W						100	NQ	1/2																				
103.12	103.38	0.26	GY	FR	LpH		SX	XT						T						100	NQ	1/2																				
103.38	104.03	0.65	GY	FR	LpH		H	L												100	NQ	1/2							Graded bed @ 103.78m													
104.03	104.09	0.06	GY	FR	LpH		SA	B												100	NQ	1/2																				
104.09	105.51	1.42	GY	FR	LpH		H	L	DO	<1%				M						100	NQ	1/2							Graded beds @ 104.34m and 104.7m													
105.51	106.17	0.66	GY	FR	LpH		H	L												100	NQ	1/2																				
106.17	106.27	0.10	GY	FR	LpH		H	L						M						100	NQ	1/2																				
106.27	106.63	0.36	GY	FR	LpH		H	B						W						100	NQ	1/2							Minor repeated graded beds @ 106.11m, 106.38m													
106.63	106.73	0.10	GY	FR	LpH		SX	XT												100	NQ	1/2																				
106.73	107.62	0.89	GY	FR	LpH		H	L						M						100	NQ	1/2							3cm graded bed @ 107.22m													
107.62	108.19	0.57	GY	FR	LpH		SL	B												100	NQ	1/2							3 repeated graded beds from 107.82m to 107.87m													
108.19	108.69	0.50	GY	FR	LpH		SX	XT						T						100	NQ	1/2																				
108.69	109.03	0.34	GY	FR	LpH		H	B												100	NQ	1/2																				
109.03	109.13	0.10	GY	FR	LpH		SA	B						T						100	NQ	1/2																				
109.13	109.82	0.69	GY	FR	LpH		H	L						S						100	NQ	1/2																				
109.82	109.98	0.16	CR	FR	LpH		TP	B												100	NQ	1/2							Broken core													
109.98	111.74	1.76	BL	FR	LpH		HB	L						M						100	NQ	1/2							Minor concretions													
111.74	111.94	0.20	GY	FR	LpH		SX	XT												100	NQ	1/2																				
111.94	112.63	0.69	GY	FR	8UA		H	L						M	W					100	NQ	1/2							Minor nodular texture													
112.63	113.76	1.13	GY	FR	8LA		H	L						W	W					100	NQ	1/2		14					Black chert intervals @ 113.02m, 113.62m and 114m, minor tuff @ 114.36m													
113.76	113.84	0.08	GY	FR	8LA		SA	B												100	NQ	1/2																				
113.84	115.16	1.32	GY	FR	8LA		H	L						W	W					100	NQ	1/2																				
115.16	115.29	0.13	GY	FR	I78A		SL	L												100	NQ	1/2																				
115.29	115.47	0.18	GY	FR	I78A		SA	B												100	NQ	1/2																				
115.47	116.40	0.93	BL	FR	7UA		HB	L						M	M					100	NQ	1/2							Mino graded bed at 116.28m													
116.40	118.49	2.09	BL	FR	7UA		HB	L	DO	<1%	W			M	W					100	NQ	1/2							Nodular texture													
118.49	118.62	0.13	GY	FR	7MA		TH	L												100	NQ	1/2							4 tuff intervals with interbedded shale													
118.62	120.12	1.50	BL	FR	7LA		HB	L	DO	<1%	M		</																													

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FROM	TO	INTERVAL	COL	WTH	CODE	G	LITH	TEX	DOL	VEIN	NO	CR	CO	PY	MIN	TYPE	NAME	Q	OXJ	REC%	CORE	CUT	DEPTH	BCA	A1	OTH	D	A2					
7																																	
122.59	122.83	0.24	GY	FR	I56A		SL	B												100	NQ	1/2											
122.83	123.27	0.44	GY	FR	I56B		SX	XT	DO	<1%				W						100	NQ	1/2											
123.27	125.95	2.68	GY	FR	5UA		H	L	DO	1-5%				M	W					100	NQ	1/2											
125.95	126.64	0.69	GY	FR	5UA		H	L			W			M	M					100	NQ	1/2											
126.64	127.07	0.43	GY	FR	5UA		H	L			W			W	W					100	NQ	1/2											
127.07	127.16	0.09	CR	FR	5MA		TP	B												100	NQ	1/2											
127.16	128.16	1.00	GY	FR	5MA		H	L	DO	<1%				M	M					100	NQ	1/2								Dol coated fracture @ 127.92m			
128.16	128.22	0.06	GY	FR	5MA		SA	B						W						100	NQ	1/2											
128.22	128.53	0.31	GY	FR	5LA		H	L						S	T					100	NQ	1/2		10									
128.53	128.66	0.13	GY	FR	I45A		SH	L												100	NQ	1/2								Minor graded intervals @ 128.55m, 128.58m			
128.66	128.81	0.15	GY	FR	I45B		SX	L												100	NQ	1/2								Breccia and graded bed with internal siltstone			
128.81	129.60	0.79	GY	FR	4UA		H	L	DO	<1%				M	W					100	NQ	1/2											
129.60	129.96	0.36	GY	FR	4MA		SL	L						W						100	NQ	1/2								Graded interval @129.85m			
129.96	130.88	0.92	GY	FR	4LA		H	L						M	M					100	NQ	1/2											
130.88	132.26	1.38	GY	FR	4LA		H	L			W			M	W					100	NQ	1/2		12									
132.26	132.29	0.03	GY	FR	4LB		TP	B												100	NQ	1/2											
132.29	133.36	1.07	GY	FR	4LB		H	L						M	W					100	NQ	1/2								Black shale intervals, clay tuff @ 133.36m			
133.36	135.06	1.70	GY	FR	4LC		H	L			W			W	W					100	NQ	1/2											
133.36	135.18	1.82	GY	FR	I34		SA	L	DO	<1%										100	NQ	1/2								Repeated graded bed			
135.18	135.28	0.10	GY	FR	I34		H	L						M	W					100	NQ	1/2											
135.28	135.72	0.44	GY	FR	I34		SL	L	DO	<1%				W						100	NQ	1/2								5 x repeated graded beds			
135.72	138.73	3.01	GY	FR	3UA		H	L			W			M	M					100	NQ	1/2								2cm clay tuff @ base of split			
138.73	141.30	2.57	GY	FR	3UB		H	L	DO	<1%				M	W					100	NQ	1/2		10/099						Minor localised faults, 10mm graded bed at base of split			
141.30	141.62	0.32	GY	FR	3MA		H	L						S						100	NQ	1/2											
141.62	141.72	0.10	GY	FR	3MA		SA	L	DO	<1%										100	NQ	1/2											
141.72	141.79	0.07	GY	FR	3MA		H	L						S						100	NQ	1/2											
141.79	141.86	0.07	GY	FR	3MA		TH	B												100	NQ	1/2								Minor clay			
141.86	141.98	0.12	GY	FR	3MB		SL	L												100	NQ	1/2								Minor tuff at base of unit			
141.98	142.59	0.61	GY	FR	3LA		H	L						W	M					100	NQ	1/2											
142.59	142.63	0.04	GY	FR	3LA		SA	B						T						100	NQ	1/2											
142.63	142.79	0.16	GY	FR	3LA		H	L						W	W					100	NQ	1/2											
142.79	142.81	0.02	GY	FR	3LA		TP	B												100	NQ	1/2								Base of 3LA			
142.81	143.82	1.01	GY	FR	3LB		H	L	DO	<1%				M	W					100	NQ	1/2								Base of 3LB			
143.82	144.04	0.22	CR	FR	3LB		TP	B												100	NQ	1/2											
144.04	146.02	1.98	GY	FR	3LC		H	L			W			M	M					100	NQ	1/2		14/99									
146.02	146.32	0.30	GY	FR	3LC		H	L			M			W	W					100	NQ	1/2											
146.32	146.39	0.07	GY	FR	3LC		TP	B												100	NQ	1/2											
146.39	146.56	0.17	GY	FR	3LC		H	L						W	W					100	NQ	1/2											
146.56	146.61	0.05	GY	FR	3LC		SA	B	DO	<1%										100	NQ	1/2											
146.61	146.95	0.34	GY	FR	3LD		H	L	DO	<1%				W	M					100	NQ	1/2											
146.95	148.37	1.42	GY	FR	I23A		H	L			M									100	NQ	1/2								24cm wide faulted zone @ 147.16m			
148.37	149.42	1.05	GY	FR	I23A		H	L			M			S						100	NQ	1/2								Minor conretions @ 149.64m			
149.42	149.44	0.02	GY	FR	I23B		TP	B												100	NQ	1/2											
149.44	149.65	0.21	GY	FR	I23B		H	L			W			M						100	NQ	1/2		10/106						Minor silt intervals @ 149.47m, 149.56m, 149.58m			
149.65	149.71	0.06	GY	FR	I23B		TH	L												100	NQ	1/2								Minor mm clay intervals			
149.71	150.21	0.50	GY	FR	I23B		H	L			W									100	NQ	1/2								Minor tuff at base of split			
150.21	151.07	0.86	GY	FR	I23B		H	L			M			W	T					100	NQ	1/2								Tuff @ base of split, increase in nodular texture			
151.07	151.82	0.75	GY	FR	I23C		H	L			M			S						100	NQ	1/2											
151.82	152.51	0.69	GY	FR	I23D		H	L						M						100	NQ	1/2		17/096						Thin black chert @ 152.09m			
152.51	152.80	0.29	GY	FR	2A		H	L			W			W	W					100	NQ	1/2								Minor tuff at base of split			
152.80	153.89	1.09	GY	FR	2B		H	L						W	S					100	NQ	1/2								Two minor clay intervals @ 153.91m, 153.94m			
153.89	153.95	0.06	GY	FR	2B		TH	L												100	NQ	1/2		16						Black chert interval @ 154.08m			
153.95	154.93	0.98	GY	FR	2C		H	L						W	S					100	NQ	1/2								Base of 2C			
154.93	154.98	0.05	GY	FR	2C		TP	B												100	NQ	1/2								Silt intervals, 2mm graded bed @ 155.55m, black chert @ 155.62m			
154.98	156.06	1.08	GY	FR	2D		H	L						W	S					100	NQ	1/2											
156.06	156.16	0.10	GY	FR	I12A		SL	L			W			W						100	NQ	1/2											
156.16	156.30	0.14	GY	FR	I12A		H	L						M						100	NQ	1/2											
156.30	156.94	0.64	GY	FR	I12B		SA	B												100	NQ	1/2		18/094						Repeated graded bed at base of split			
156.94	157.52	0.58	GY	FR	I12C		H	L						S						100	NQ	1/2											
157.52	157.54	0.02	GY	FR	I12C		TP	B												100	NQ	1/2											
157.54	157.74	0.20	GY	FR	I12C		H	L						W						100	NQ	1/2		16/093									
157.74	158.47	0.73	GY	FR	I12D		SA	B												100	NQ	1/2								Minor repeated graded beds at top x 3, graded bed at base below breccia c			
158.47	158.71	0.24	GY	FR			H	L						S						100	NQ	1/2								1A			
158.71	160.50	1.79	GY	FR			H	L			S			M	W					100	NQ	1/2								1A			
160.50	161.08	0.58	GY	FR	LdH		H	B						W						100	NQ	1/2											
161.08	161.14	0.06	GY	FR	LdH		SA	B												100	NQ	1/2											
161.14	161.60	0.46	GY	FR	LdH		H	L																									