

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

SHEET No. 1 of 11

TENEMENT NAME EL45/92 MT DUNDAS No.

PLAN - MAP REFERENCE BLACKSACKS

AMG: 36611E 5360766N.

CO-ORDINATES..... AZIMUTH..... 080° AMG DRILLERS ALMAC COMMENCED 12/4/96

DEPTH 342.2m HOLE No. DD96DB112

RL COLLAR 195m INCLINATION 50° DRILL TYPE 1 1/4" DIAMOND COMPLETED 16/5/1996

CASING LEFT..... DPO No(s) 82164

DEPTH		Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)											
From (M)	To (M)										Mag Sus				REC (ton)	REC (To)	REC (M)	REC (%)				
												Depth	Value	Depth	Value							
0	5	-	-	Qha	Overburden.							5	0	20.5	0	0	5	-	-			
												5.5	0	21	2	5	5.5	0.15	30			
5	5.7	50	Sx	Qha	Overburden clays							6	2	21.5	0	5.5	7.0	1.5	100			
												6.5	2	22	10	7.0	8.5	0.7	20			
5.7	9.4	78	Sx	Ogdc	Dark grey/black clays with rotted limestone fragments and occasional dk grey sand zones. Possibly dolomitic. Maybe minor siderite	A lot of fragments are non calcareous - ? dolomitic. ? Siltstone Unit. minor disseminations of pyrite.	5470901	5.7	9.1			7	0	22.5	10	8.5	9.1	0.5	83			
												2	9.1	11.5	7.5	CL	23	90	9.1	10.6	1.3	87
												3	11.5	14.5	8	CL	23.5	CL	10.6	11.5	0.4	44
												4	14.5	17.5	8.5	0	24	0	11.5	13.0	1.5	100
												5	17.5	20.2	9	0	24.5	CL	13.0	14.5	1.3	87
												6	20.2	23.3	9.5	0	25	5	14.5	16.0	1.1	73
												7	23.3	26.5	10	0	25.5	10	16.0	17.5	1.0	67
												8	26.5	29.3	10.5	0	26	CL	17.5	18.1	0.6	100
												9	29.3	30.7	11	CL	26.5	0	18.1	18.9	0.6	75
												10	30.7	33.5	11.5	0	27	2	18.9	20.2	1.0	77
9.4	10.1	67	Sx	Ogul	Dark grey rotted argillaceous calcarenite with bioclots inc coral (Syringopora) badly broken core + core loss	calcite vein 1cm @ 25° to c/a.						11	33.5	36.7	12	0	27.5	CL	20.2	21.0	0.8	100
												12	36.7	39.6	12.5	0	28	5	21.0	22.3	1.3	100
												13	39.6	42.9	13	0	28.5	0	22.3	23.3	0.7	70
												14	42.9	46.0	13.5	12	29	CL	23.3	24.8	0.8	53
												15	46.0	48.0	14	1	29.5	8	24.8	26.4	0.6	100
10.1	10.9	86	Sx	Ogdc	Dark grey/black sand with small non-calcareous rock fragments.	Numerous small lumps of pyrite 2 nd recrystallised - surface weathering						16	48.0	50.5	14.5	0	30	CL	25.4	26.5	0.3	33
												17	50.5	53.5	15	CL	30.5	0	26.5	28.0	1.2	80
												18	53.5	56.5	15.5	0	31	0	28.0	29.3	1.0	77
												19	56.5	59.4	16	0	31.5	0	29.3	30.7	1.1	79
10.9	107.9	60	Sx	Ogdl	Partially dolomitised calcareous limestone.							20	59.4	62.5	16.5	0	32	0	30.7	32.0	1.3	100
												21	62.5	65.5	17	CL	32.5	10	32.0	32.5	0.2	40
												22	65.5	68.5	17.5	0	33	0	32.5	33.0	0.5	100
107.9	114.5	95	2	Ogul	light grey fine grained calcarenite inter mixed with dark grey argillaceous calcarenite - nodules (up to 1cm) breccia-like; becoming less breccia-like + argillaceous downhole more micritic.							23	68.5	71.5	18	0	33.5	0	33.0	33.5	0.5	100
												24	71.5	74.5	18.5	30	34	195	33.5	34.5	1.0	100
												25	74.5	77.5	19	9	34.5	0	34.5	35.4	0.9	100
												26	77.5	80.5	19.5	0	35	2	35.4	36.7	1.3	100
												27	80.5	83.5	20	5	35.5	0	36.7	37.7	1.0	100

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

SHEET No. 2 of 11

TENEMENT NAME MT DUNDAS No. 45192

PLAN - MAP REFERENCE Blackjacks

CO-ORDINATES 366611 E 360766 N AZIMUTH 080° AMG DRILLERS ALMAC COMMENCED 12/4/96 DEPTH 342.2m HOLE No. DD96D3112
RL COLLAR 195M INCLINATION 50° DRILL TYPE LY44 COMPLETED 16/5/96 CASING LEFT DPO No(s) 8264

DEPTH		Cora Rec. %	ROD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)							
From (M)	To (M)										Mag SIS				REC (m)	REC (%)	REC (m)	REC (%)
											Depth Value	Depth Value	REC (m)	REC (%)	REC (m)	REC (%)		
114.5	115.9	100	2	Ogmu	Micrite unit with birds eyes not very well laminated; with a small scale open unit present.	Bedding possibly 60° to c/a.	5470928	83.5	86.5		36	450	51.5	8	37.7	38.9	0.7	58
							29	86.5	89.5		35.5	34	52	0	38.9	39.6	0.55	79
							30	89.5	92.4		37	0	52.5	0	39.6	40.3	0.6	86
							31	92.4	95.55		37.5	1	53	CL	40.3	41.5	1.0	83
							32	95.55	98.3		38	0	53.5	0	41.5	41.9	0.3	75
115.9	125.0	70	3F	Ogud.	Partially rotted argillaceous calcareite with distinct argillite interstitial and bands. occ coarse bioclastic band Slightly laminated argillite laminae Micrite unit.	Bedding 60° to c/a.	33	98.3	101.1		38.5	CL	54	CL	41.9	42.9	1.0	100
							34	101.1	101.9		39	0	54.5	1	42.9	44.5	0.6	40
							35	101.9	104.6		39.5	CL	55	0	44.5	45.0	0.4	80
							36	104.6	107.9		40	0	55.5	55	45.0	46.0	1.0	100
											40.5	0	56	0	46.0	47.2	1.2	100
							37	117.7	120.0		41	CL	56.5	40	47.2	47.5	0.3	100
							38	120.0	122.2		41.5	2	57	CL	47.5	48.0	0.5	100
125.0	125.8	100	2	Ogmu	Partially rotted micrite unit; not very well laminated light grey in colour.						42	15	51.5	0	48.0	49.5	1.2	80
											42.5	25	58	0	49.5	50.5	1.0	100
											43	0	58.5	CL	50.5	51.5	0.7	70
											43.5	CL	59	95	51.5	52.3	0.4	50
125.8	130.6	100	1	Ogud	Zone of intermixed limestone (units - Fine grained grey calcareite with intermixed argillite zones (? large calcareite nodules); occ bioclastic band and occ syn-sed breccias. locally burrowed particularly downhole.						44	0	59.5	72	52.3	53.5	0.8	67
											44.5	0	60	96	53.5	54.3	0.4	50
											45	0	60.5	8	54.3	54.9	0.4	67
											45.5	0	61	0	54.9	55.5	0.5	83
											46	0	61.5	0	55.5	56.5	0.7	70
											46.5	10	62	6	56.5	57.7	0.5	42
											47	65	62.5	0	57.7	58.9	1.0	83
											47.5	0	63	10	58.9	59.4	0.3	60
											48	0	63.5	200	59.4	59.9	0.4	80
											48.5	0	64	0	59.9	61.4	1.3	87
130.6	133.5	75	4X	Og12	Rotted and broken core. badly weathered clays also sheared looking.		39	130.6	133.5		49	0	64.5	0	61.4	62.5	1.0	91
											49.5	0	65	0	62.5	64.0	1.0	87
											50	11	65.5	5	64.0	65.5	1.6	100
											50.5	11	66	0	65.5	66.3	0.8	100
											51	5	66.5	0	66.3	67.1	0.6	75

301088

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

SHEET No. 3 of 11
No. 45192

TENEMENT NAME.....
PLAN - MAP REFERENCE..... Blackjacks
DEPTH..... 342.2m HOLE No. DD96DB12
COMPLETED..... 16/5/96 CASING LEFT..... DPO No(s) 82164

CO-ORDINATES 366611E
S360766N AZIMUTH..... 080° AMG DRILLERS..... ALMAC
RL COLLAR..... 195M INCLINATION..... 50° DRILL TYPE..... 1444

DEPTH		Core Rec. %	ROD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)							
From (M)	To (M)										Mag Sus		Rec (mm)	Rec (%)	Rec (m)	Rec (%)		
133.5	141.0	100	1	Ogpl	Fine grained grey calcarenite locally micritic with thin beds of argillite and interstitial argillaceous calcarenite. Possibly burrowed. Small scale syn-sed brecciation eg 138.5m.		5470940	136	137.5		67	0	82.5	3	67.1	68.5	1.2	86
											67.5	5	83	0	68.5	69.6	1.0	90
											68	0	83.5	0	69.6	70.7	1.0	90
											68.5	2	84	CL	70.7	71.5	0.5	63
											69	CL	84.5	0	71.5	73.0	1.0	67
											69.5	5	85	CL	73.0	74.5	1.6	100
											70	0	85.5	CL	74.5	76.0	1.2	80
											70.5	0	86	CL	76.0	77.5	0.3	20
141.0	152.7	100	1	Ogmu	Inter-laminated fine grained calcarenite and argillite. Occ birds eye micrite bands between laminae. From 146m more argillite dominant - loss of laminae where interbeds of calcarenite and argillite to 148m. ? a laminated micrite unit. After 150m back to a more recognisable laminated micrite unit.	Bedding 80° to c/a. becoming more 70°-65° to c/a.	41	144.8	146.0		71	35	86.5	0	77.5	79.0	0.9	60
											71.5	2	87	0	79.0	79.6	0.6	100
											72	0	87.5	4	79.6	80.5	0.7	77
											72.5	CL	88	50	80.5	81.5	1.0	100
											73	0	88.5	20	81.5	82.5	0.8	90
											73.5	0	89	CL	82.5	83.5	0.7	70
											74	0	89.5	0	83.5	84.5	0.5	50
											74.5	0	90	0	84.5	85.5	-	0
											75	0	90.5	CL	85.5	86.5	0.3	30
											75.5	0	91	0	86.5	87.5	1.0	100
											76	4	91.5	0	87.5	88.3	0.8	100
											76.5	CL	92	0	88.3	89.5	0.8	67
											77	CL	92.5	5	89.5	90.8	1.0	77
152.7	153.3	100	1	Ogbr	Syn-sedimentary breccia unit - porosity now filled with calcite. Bottom contact a calcite vein 0.8cm thick partially forms contact. Bottom of a PAC.	Minor pyrite.	42	152.7	153.3		77.5	0	93	CL	90.8	92.4	1.3	81
											78	0	93.5	0	92.4	93.6	1.0	83
											78.5	0	94	CL	93.6	94.6	0.7	70
											79	0	94.5	10	94.6	95.5	0.7	74
											79.5	5	95	4	95.5	96.9	1.3	100
											80	0	95.5	5	96.9	98.3	0.9	64
											80.5	0	96	4	98.3	99.6	0.3	23
											81	0	96.5	9	99.6	100.6	0.3	30
153.3	153.8	100	1	Ogmu	Grey birds eye micrite - well developed. Not very laminated.						81.5	0	97	0	100.6	101.1	0.3	60
											82	5	97.5	CL	101.1	101.9	0.7	89

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

SHEET No. 4 of 11
No. 45192

TENEMENT NAME.....

PLAN - MAP REFERENCE Black Jacks

CO-ORDINATES 366611 E 536.0766 N AZIMUTH 080° AMG DRILLERS ALMAC COMMENCED 12/4/96

DEPTH 342.2m HOLE No. DD96DB112

RL COLLAR 195M INCLINATION 50° DRILL TYPE LY44 COMPLETED 16/5/96

CASING LEFT..... DPO No(s) 82164

DEPTH		Core Rec. %	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)							
From (M)	To (M)									Mag		SUS		REC (mm)	REC (to)	REC (m)	REC (g/g)
									Depth	Value	Depth	Value					
153.8	159.0	100	1	Ogul Sequence of mixed limestones including equigranular bioclastic units, argillaceous interbeds with med fine grey calcarenite.	minor blabs of pyrite in bioclastic units					98	0	118.5	CL	101.9	102.7	0.6	75
										98.5	0	114	8	102.7	103.0	0.3	100
										99	CL	114.5	0	103.0	104.0	0.35	35
										99.5	CL	115	0	104.0	104.6	0.45	75
										100	10	115.5	5	104.6	106.0	0.7	50
										100.5	CL	116	5	106.0	106.8	0.4	50
159.0	161.0	100	1	Ogmu Micrite unit with oncolites passing into an interlaminated argillite & fine calcarenite unit as seen higher up hole coarsening d/hole.	Bedding - 55° to c/a.					101	6	116.5	0	106.8	107.9	0.8	72
										101.5	0	117	5	107.9	109.0	1.0	90
										102	6	117.5	4	109.0	109.6	0.4	67
										102.5	4	118	5	109.6	112.0	2.4	100
										103	0	118.5	2	112.0	114.0	2.0	100
										103.5	CL	119	CL	114.0	115.0	1.0	100
161.0	164.3	100	1	Ogul Shallow unit with micrites and calcite filled stromatolite cavities, intermixed with argillaceous calcarenite zones. Stick bryozoa from 161.8-162.1 including small scale laminated micrite units coarse bioclastic bank @ 163.9m	Minor blabs of pyrite in argillite	5470943	163.1	164.3		104	0	119.5	CL	115.0	116.5	1.3	87
										104.5	5	120	5	116.5	117.7	1.2	100
										105	CL	120.5	5	117.7	120.0	1.3	57
										105.5	5	121	0	120.0	121.0	0.7	70
										106	0	121.5	CL	121.0	122.0	0.3	30
										106.5	0	122	0	122.0	124.0	1.5	75
										107	0	122.5	0	124.0	125.0	0.8	80
										107.5	CL	123	0	125.0	127.0	2.0	100
										108	4	123.5	5	127.0	130.0	3.0	100
164.3	164.5	100	1	Ogbr Syn-sedimentary breccia unit	Disseminated blabs of sphalerite in matrix up to 0.5cm in size.	44	164.3	164.5		108.5	4	124	9	130.0	131.2	1.0	83
										109	5	124.5	5	131.2	132.1	0.7	77
										109.5	CL	125	10	132.1	133.2	0.8	72
										110	6	125.5	5	133.2	134.6	1.4	100
164.5	167.65	63	5x	Ogfs Zone of broken core and core loss, pos fault zone	Small dolomitic section 166.9 - 167.1 with minor dissem sphalerite	45	164.5	165.6		110.5	0	126	20	134.6	136.0	1.4	100
						46	165.6	166.7		111	0	126.5	5	136.0	139.0	3.0	100
						47	166.7	167.65		111.5	CL	127	5	139.0	142.0	3.0	100
167.65	175.3	100	1	Ogul Fine grained locally micritic bioclastic calcarenite with argillaceous bioclastic calcarenite zones		48	167.65	169.0		112	0	127.5	8	142.0	144.2	2.2	100
										112.5	0	128	5	144.2	147.0	2.8	100
										113	6	128.5	9	147.0	148.8	1.8	100

301090

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

SHEET No. 5 of 11
TENEMENT NAME 45/92 No. DD96DE
PLAN - MAP REFERENCE Backjacks
DEPTH 342.2m HOLE No. DD96DE/12
CASING LEFT..... DPO No(s) 82164

366611E
CO-ORDINATES 5360766N AZIMUTH 080° AMG DRILLERS ALMAC COMMENCED 12/4/96
RL COLLAR 195m INCLINATION 50° DRILL TYPE LY44 COMPLETED 16/5/96

DEPTH		Core Rec. %	R/D	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)							
From (M)	To (M)										MAG		SUS		Rec (m)	Rec (%)	Rec (m)	Rec (%)
					Distinctive white 'blobs' of calcareous bioclots in grey micrite @ 170m. Shallow sub-tidal facies.	minor calcite veining (irregular)					129	8	144	5	148	150.0	1.2	100
											129.5	14	145	8	150.0	150.9	0.9	100
											130	6	145.5	11	150.9	154.0	3.1	100
											130.5	20	146	8	154.0	154.9	0.8	88
											131	0	146.5	5	154.9	156.3	1.4	100
175.3	177.7	100	1	Ogud	Shallow deep intertidal facies with micrite units interbedded with argillaceous bioclastic calcarenites						131.5	CL	147	10	156.3	159.0	2.7	100
											132	5	147.5	11	159.0	162.1	3.1	100
											132.5	CL	148	5	162.1	163.1	1.0	100
											133	10	148.5	2	163.1	164.3	1.2	100
											133.5	2	149	11	164.3	165.6	0.8	62
177.7	179.1	100	1	Ogmu	laminated micrite unit with bird eyes micrite bands between laminae of argillaceous and micritic calcarenites.	Bedding 60° to c/a.	S470949	177.7	179.1		134	10	149.5	9	165.6	166.7	0.8	72
											134.5	12	150	2	166.7	167.1	0.3	75
											135	CL	150.5	3	167.1	167.5	0.3	75
											135.5	9	151	5	167.5	169.0	1.0	67
											136	5	151.5	5	169.0	172.0	3.0	100
179.1	185.8	100	1	Ogud	Argillaceous bioclastic calcarenite with micrite bands, burrowing						136.5	6	152	8	172.0	175.0	3.0	100
											137	10	152.5	4	175.0	177.0	2.0	100
											137.5	7	153	5	177.0	180.0	3.0	100
185.8	197.8	100	1	Ogud	Fine grained almost micritic bioclastic calcarenite with distinct argillaceous bands (?Stylocumulus) but with bioclasts becoming slightly nodular @ 195m.	Bedding 60° to c/a.	50	187.0	197.5		138	11	153.5	2	180.0	181.2	0.9	76
											138.5	12	154	10	181.2	184.0	2.8	100
											139	10	154.5	2	184.0	187.0	3.0	100
											139.5	9	155	5	187.0	190.0	3.0	100
											140	5	155.5	9	190.0	193.0	3.0	100
							51	196.0	197.5		140.5	9	156	11	193.0	196.0	3.0	100
											141	6	156.5	6	196.0	199.0	3.0	100
197.8	202.0	100	1	Ogmu	laminated micrite unit with birds eye micrites	Bedding 70° to c/a.					141.5	14	157	9	199.0	200.0	1.0	100
											142	4	157.5	9	200.0	202.0	1.2	67
											142.5	10	158	6	202.0	202.4	0.3	75
202.0	214.5	100	1	Ogud	Fine grained micritic calcarenite with fine grained bioclasts. Interstitial argillaceous calcarenite - v. shallow sub-tidal.						143	11	158.5	12	202.4	202.7	2.3	100
											143.5	8	159	9	202.7	207.0	2.3	100
											144	4	159.5	10	207.0	207.7	0.2	29

301091

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

SHEET No. 6 of 11
No. 45192

TENEMENT NAME.....

PLAN - MAP REFERENCE..... Blackjacks

CO-ORDINATES 366611E 5360766N AZIMUTH 080° AMG DRILLERS ALMAC COMMENCED 12/4/96

DEPTH 342.2m HOLE No. DD96DB12

RL COLLAR 195m INCLINATION 50° DRILL TYPE LY44 COMPLETED 16/5/96

CASING LEFT..... DPO No(s) 82164

DEPTH		Core Rec. %	RAD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)							
From (M)	To (M)										MAG		SUS		REC (G/T)	REC (G)	REC (M)	REC (%)
					locally coarse bioclastic zone, coarse coral fragments @ 209.4m 205.7m.	Bedding @ 214.5 70° G/c/d	5490952	205.5	207.0		160	10	175.5	9	207.7	209.3	1.6	100
					? small beach deposit 212-212.5 bioclastic unit.						160.5	10	176	10	209.3	212.2	2.9	100
											161	6	176.5	10	212.2	214.0	1.8	100
											161.5	6	177	4	214.0	216.1	2.1	100
											162	15	177.5	10	216.1	217.8	2.7	100
											162.5	0	178	12	217.8	220.5	1.7	100
											163	2	178.5	10	220.5	223.0	2.5	100
214.5	220.5	100	1	Ogmu	Partially laminated micrite unit within fine grained calcarenite 217.0-218.0 argillaceous beds < 3cm thick inter bedded with fine calcarenite as argillaceous bioclastic calcarenite	Bedding 70° to c/a.					163.5	2	179	6	223.0	225.5	2.5	100
											164	6	179.5	14	225.5	226.9	1.4	100
											164.5	25	180	5	226.9	228.4	1.5	100
											165	24	180.5	0	228.4	230.7	2.3	100
											165.5	0	181	CL	230.7	233.8	3.1	100
											166	9	181.5	11	233.8	236.0	2.2	100
											166.5	0	182	15	236.0	237.4	1.2	86
220.5	223.0	100	1	Ogmu	Mixed unit of argillaceous bioclastic calcarenites, argillite bands, channel units (equigranular bioclastic calcarenites)		5490953	220.5	222.0		167	79	182.5	15	237.4	238.4	0.7	70
											167.5	10	183	10	238.4	239.0	0.5	83
											168	CL	183.5	11	239.0	239.8	0.4	44
											168.5	6	184	10	239.8	240.3	0.4	80
											169	5	184.5	12	240.3	241.2	0.8	72
											169.5	12	185	14	241.2	241.9	0.35	50
223.0	225.0	100	1	Ogmu	med grained equigranular bioclastic unit.						170	10	185.5	15	241.9	242.2	1.2	92
											170.5	15	186	10	242.2	244.3	0.7	63
											171	12	186.5	5	244.3	245.6	0.3	23
225.0	227.7	100	1	Ogmu	Interbedded argillite and fine grained calcarenite with burrowed zones Sub-tidal - possibly deep.	Calate breccia var 227.7-228.05	5490954	227.7	228.2		171.5	10	187	15	245.6	246.2	-	-
											172	13	187.5	13	246.2	247.0	0.2	25
											172.5	10	188	5	247.0	249.0	0.15	15
											173	10	188.5	5	249.0	248.7	0.5	71
											173.5	10	189	5	248.7	249.4	0.5	71
228.05	228.2	100	5	Ogdc	Dark grey clay probable fault zone.						174	15	189.5	10	249.4	250.0	0.3	50
											174.5	10	190	5	250.0	251.2	0.9	75
											175	13	190.5	15	251.2	253.0	1.0	56

301092

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

SHEET No. 7 of 11
No. 45192

366611E
CO-ORDINATES 5360766N AZIMUTH 080° AMG DRILLERS ALMAC COMMENCED 12/4/96
RL COLLAR 195m INCLINATION 50° DRILL TYPE L444 COMPLETED 16/5/96

TENEMENT NAME
PLAN - MAP REFERENCE Blackjacks
DEPTH 342.2m HOLE No. DD96DB112
CASING LEFT DPO No(s) 82164

DEPTH		Core Rec. %	RAD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)								
From (M)	To (M)										MAG				SUS				
												Depth	Value	Depth	Value	Rec (mm)	Rec (%)	Rec (m)	Rec (Pw)
228.2	230	100	1	Ogmu	Top of a PAC unit, with a small lens of micrite unit underlain by birds eye micrite.							191	15	206.5	8	253.0	253.9	0.4	44
												191.5	15	207	6	253.9	254.4	0.4	80
												192	10	207.5	CL	254.4	255.6	1.0	83
												192.5	9	208	4	255.6	257.1	0.9	60
												193	15	208.5	10	257.1	258.0	0.45	50
230.0	235.0	100	1	Ogud	Intermixed sequence of fine grained calcarenites, equigranular bioclastic calcarenites; bioclastic bands discrete argillite bands occ with birds eye micrite and argillaceous bioclastic calcarenites.							193.5	10	209	10	258.0	259.8	0.4	40
												194	5	209.5	5	259.8	260.0	0.3	60
												194.5	7	210	12	260.0	260.5	0.5	100
												195	10	210.5	6	260.5	261.0	-	-
												195.5	CL	211	10	261.0	261.5	0.4	80
												196	10	211.5	15	261.5	263.0	1.3	87
												196.5	13	212	10	263.0	263.7	0.3	43
												197	10	212.5	5	263.7	265.0	1.3	100
												197.5	15	213	9	265.0	265.5	0.4	80
235.0	239.0	80	1	Ogud	Zone of rotting of units possible fault zones dark grey clays, broken core and minor core loss	Shearing evidence.	5470955	235.0	236.4			198	15	213.5	5	265.5	267.5	2.0	100
							56	236.4	238.4			198.5	CL	214	0	267.5	270.0	2.5	100
							57	238.4	239.0			199	8	214.5	7	270.0	271.2	1.2	100
												199.5	9	215	0	271.2	272.0	0.6	75
												200	5	215.5	CL	272.0	273.0	0.8	80
239.0	240.5	50	5	Oguz	fault zone comprising dark grey clays and brecciated fragments of limestone (no obvious dolomite) Rotted limestone - ? cavity		58	239.0	240.3			200.5	5	216	2	273.0	274.6	1.6	100
												201	0	216.5	8	274.6	276.9	2.3	100
												201.5	CL	217	6	276.9	277.9	0.9	90
												202	4	217.5	10	277.9	278.6	0.4	90
												202.5	5	218	CL	278.6	279.0	0.3	75
												203	0	218.5	10	279.0	279.6	0.3	50
240.5	251.2	50	2f	Ogud	Med fine grained, locally micritic and locally argillaceous bioclastic calcarenite zones of rotted core. more argillite zone @ 250-250.5m		59	248.0	249.4			203.5	7	219	7	279.6	280.4	0.2	25
							60	249.4	251.2			204	9	219.5	8	280.4	281.1	0.4	57
												204.5	5	220	4	281.1	281.5	0.3	75
												205	15	220.5	0	281.5	284.2	2.7	100
												205.5	15	221	10	284.2	286.3	2.1	100
												206	10	221.5	5	286.3	286.6	0.15	50

301093

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

SHEET No. 8 of 11
No. 45192

TENEMENT NAME.....

PLAN - MAP REFERENCE Blackjacks

CO-ORDINATES 366611E
S360766N AZIMUTH 080° AMG DRILLERS ALMAC COMMENCED 12/4/96

DEPTH 342.2M HOLE No. DD96 DB112

RL COLLAR 195M INCLINATION 50° DRILL TYPE LY44 COMPLETED 16/5/96

CASING LEFT..... DPO No(s) 82164

DEPTH		Core Rec. %	ROD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)							
From (M)	To (M)										MAG		SIS		From REC	REC (To)	REC (M)	REC (%)
251.2	259.0	60	5	Ogdc	Calcareous dark grey clay - ? cavities	@ 254.5 large pieces of massive sphalerite - redmill - source unknown	5470961	251.2	253.0		222	10	237.5	5	286.6	287.5	0.3	50
							62	253.0	253.9		222.9	5	238	8	287.1	287.9	0.2	50
							63	253.9	254.4		223	6	238.5	2	287.9	287.9	0.3	30
							64	254.4	255.6		223.5	5	239	5	287.9	290.2	1.0	77
							65	255.6	257.1		224	7	239.5	CL	290.2	291.0	0.2	25
259.0	267.55	77	2F	Ogcl	med fine grained intermixed argillite and bioclastic calcarenite.		66	257.1	259.0		224.5	5	240	0	291.0	292.0	1.0	100
							67	259.0	260.5		225	6	240.5	7	292.0	294.0	2.0	100
							68	260.5	261.5		225.5	9	241	CL	294.0	294.6	0.4	67
											226	9	241.5	4	294.6	295.1	0.25	50
267.55	274.6	90	2	Ogmu	laminated micrite unit with zones of fenestral micrite; argillaceous laminae	Bedding 60° to c/A	69	273	274.6		226.5	10	242	5	295.1	295.4	0.1	33
											227	9	242.5	6	295.4	296.0	0.3	50
											227.5	2	243	CL	296.0	296.4	0.1	25
											228	0	243.5	CL	296.4	296.8	0.3	75
											228.5	0	244	6	296.8	297.4	0.2	50
274.6	281.4	70	1	Ogcl	Fine grained almost micritic calcarenite with minor bands of argillite - stylolites. minor birds eyes zone of rotted inst.						229	0	244.5	CL	297.4	297.9	0.1	20
											229.5	2	245	CL	297.9	298.5	0.4	67
											230	2	245.5	6	298.5	299.5	1.0	100
											230.5	0	246	CL	299.5	299.8	0.2	67
											231	2	246.5	9	299.8	300.5	0.5	71
											231.5	9	247	0	300.5	301.6	0.9	81
281.4	281.8	110	3	Ogmu	laminated micrite unit with fenestrate micrite and argillaceous laminae	Bedding 65° to c/A					232	6	247.5	CL	301.6	302.0	0.4	100
											232.5	CL	248	10	302.0	303.0	0.3	30
											233	0	248.5	10	303.0	303.8	0.6	75
											233.5	6	249	6	303.8	305.1	1.3	100
281.8	286.2	100	2	Ogcl	Argillaceous fine grained calcarenite locally bioclastic burrowed.		70	284.2	286.2		234	0	249.5	3	305.1	305.7	0.1	17
											234.5	4	250	11	305.7	306.9	0.9	75
											235	0	250.5	CL	306.9	308.0	0.8	72
											235.5	0	251	11	308.0	308.6	0.2	33
286.2	290.8	50	4x	Ogcl	Zone of broken and rotted core, including clay zones possible micrite units	Gyr. sed breccia 287.9-298.05					236	8	251.5	5	308.6	309.0	0.1	25
											236.5	6	252	14	309.0	309.8	0.2	25
											237	8	252.5	0	309.8	311.2	1.4	100

301094

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

SHEET No. 9 of 11
No. 45/92

TENEMENT NAME.....
PLAN - MAP REFERENCE.....

CO-ORDINATES ^{366611E} 5360766N AZIMUTH 080° AMG DRILLERS ALMAC COMMENCED 12/4/96 DEPTH 342.2M HOLE No. D096DB112
RL COLLAR 195M INCLINATION L444 DRILL TYPE L444 COMPLETED 16/5/96 CASING LEFT..... DPO No(s) 82164

DEPTH		Core Rec. %	RCD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)					
From (M)	To (M)										MAG		SUS			
											Depth	Value	Depth	Value	Depth	Value
290.8	292.8	100	3f	Ogmu	Laminated micrite unit	Bedding 70° to e/a. Minor calcite (+dolomite) veining irregular pattern	5470971	291	292.8		253	0	268.5	5	284	5
											253.5	CL	269	10	284.5	6
											254	14	269.5	7	285	2
											284.5	5	270	4	285.5	CL
292.8	294.4	62	1	Ogul	Argillaceous bioclastic calcarenite		72	292.8	294.4		255	16	270.5	25	286	2
											255.5	14	271	5	286.5	0
											256	12	271.5	2	287	9
294.4	294.7	100	5	Ogul	Rotted limestone - ? micritic calcarenite		73	294.4	295.1		256.5	CL	272	2	287.5	0
											257	5	272.5	7	288	5
											257.5	10	273	0	288.5	CL
294.7	296.2	67	4	Ogul	Calcite (+dolomite) vein locally breccia veining	Minor pyrite	74	295.1	296.2		258	5	273.5	9	289	0
											258.5	CL	274	10	289.5	0
											259	10	274.5	10	290	0
296.2	296.6	80	5	Ogul	Block rotted argillaceous calcarenite		75	296.2	296.6		259.5	8	275	0	290.5	CL
											260	0	275.5	CL	291	10
											260.5	0	276	2	291.5	5
296.6	296.8	100	1	Ogul	Red calcareous unit possible calcite/hematite vein	Minor dissemin blobs of pyrite	76	296.6	296.8		261	5	276.5	CL	292	4
											261.5	10	277	6	292.5	10
											262	6	277.5	CL	293	6
											262.5	7	278	10	293.5	13
296.8	297.4	50	5	Ogul	Cal/dol vein		77	296.8	297.4		263	2	278.5	0	294	0
											263.5	CL	279	5	294.5	6
297.4	298.5	63	4x	Ogul	Broken core - core loss light grey clay/sand argillaceous limestone		78	297.4	298.5		264	5	279.5	0	295	CL
											264.5	7	280	CL	295.5	12
											265	7	280.5	5	296	9
											265.5	7	281	50	296.5	5
298.5	299.5	90	3b	Ogmu	Tectonised laminated micrite unit with cal/dol veining		79	298.5	299.5		266	10	281.5	0	297	10
											266.5	10	282	6	297.5	4
											267	8	282.5	10	298	CL
299.5	301.0	100	1	Ogul	Argillite dominant unit						267.5	2	283	2	298.5	0
											268	6	283.5	5	299	5

301093

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

SHEET No. 10 of 11
No. 45192

TENEMENT NAME.....

PLAN - MAP REFERENCE Blackjacks

CO-ORDINATES 366611E 5350766N AZIMUTH 080° AMG DRILLERS ALMAC COMMENCED 12/14/96 DEPTH 342.2m HOLE No. DD96DB112
RL COLLAR 195m INCLINATION 50° DRILL TYPE L444 COMPLETED 16/5/96 CASING LEFT..... DPO No(s) 82164

DEPTH		Core Rec. %	ROD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)						
From (M)	To (M)										NAG		SUS				
										Depth	Value	Depth	Value				
301.0	302.0	80	5x	Ogul	Rotted limestone - dark sandy clay & fragments						299.5	6	315	0			
											300	10	315.5	5			
											300.5	10	316	5.5			
302.0	306.8	55	2	Ogul	Fine grained grey locally micritic calcarenite with intermixed dark grey argillaceous med grained calcarenite. Poss nodular fine grained calcarenite	Cal/dol veining					301	0	316.5	200			
											301.5	5	317	19.9			
											302	6	317.5	15.0			
											302.5	CL	318	20			
											303	10	318.5	20			
											303.5	5	319	200			
											304	9	319.5	200			
306.8	309.8	50	4x	Ogul	Partially rotted argillaceous calcarenite with reddened limestone zones - Broken con - poss laminated unit 309.1m - 309.8m.		5470980	306.8	308.0		304.5	8	320	4.5			
											305	10	320.5	9.5			
											305.5	CL	321	8.2			
											306	10	321.5	15.0			
											306.5	0	322	15.0			
											307	7	322.5	200			
309.8	315.0	78	2f	Ogul	Fine grained grey calcarenite with interstitial argillite becoming argillite dominant core becoming more rotted d/hole.	Bedding 60° to c/a.	81	313.1	315.0		307.5	8	323	CL			
											308	6	323.5	CL			
											308.5	CL	324	CL			
											309	4	324.5	CL			
											309.5	CL	325	30			
											310	9	325.5	CL			
315.0	316.1	72	5x	Ogul	Rotted reddened limestone with calcareous sand zones - clay zones.		82	315.0	316.1		310.5	4	326	30			
											311	5	326.5	CL			
											311.5	6	327	CL			
											312	10	327.5	CL			
316.1	322.8	90	2f	Ogul	Light brown/fawn and dark brown grey siderite replacing limestones initially + then replacing of 2 clothes Bracciated bedded units. Occ clay zones.	Reddened clay zone 317.5 - 318.5m. Bedding 60° to c/a 317.0m. " 45° to c/a @ 322m.	83	316.1	317.5		312.5	CL	328	7.2			
											84	317.5	318.5	313	10	328.5	7.5
											85	318.5	319.5	313.5	6	329	CL
											86	319.5	321.0	314	10	329.5	CL
											87	321.0	321.9	314.5	25	330	5

301096

