CRA EXPLORATION PTY. LIMITED

DRILL-HOLE SUMMARY LOG

321034

HOLE NAME: DD96ZK123 | AMG EAST 371212 NORTH 5351970

PROSPECT: KING BILLY | GRID EAST 71212 NORTH 1970

EL: ZEEHAN 2 EL34/88 | RL 145m. DEPTH 113.7m

DATE DRILLED: 20/3/96

LOGGED BY: S.A.J. RUSSELL

DRILLING CO.: DDTAS

DRILL TYPE: DIAMOND

DRILL RIG: LY38 - Helicopter

LOC DRILL CORE: ZEEHAN

SURVEYS:

DEPTH	AZIM (AMG)	DIP	DEPTH	AZIM (AMG)	DIP
0m	180°	60°			
60m	180°	62°			
105m	182°	62°			

OBJECTIVES OF HOLE:

Diamond drilltest of elevated surface geochemistry and also lower limestone/sandstone contact. Possible down dip test of, helimag anomaly at lower limestone/sandstone contact.

LITHOGICAL SUMMARY:

FROM	TO	FORM CODE	COMMENTS
0	1.5	Qha.	No Recovery. - overburden
1.5	24.7	Ogul.	Cavitalious + variably argillaceous calcarenite
24.7	27.0	Ogpo	Channel - equigranular biodastic unit.
27.0	44.6	Ogul	Variably argillaceous calcarenites. Minor pyrite on fractures
44.6	46.5	Ogmu.	Laminated micrite + minor biodasts
46.5	66.1	Ogul	Calcarenite + local micrites + various pale grey clay horizons.
66.1	71.8	Ogmu	Dismicrite. Faint laminations @ 60° to CA. Some burraws.
71.8	74.7	Ogfz.	Faulted argillaceous calcarenite.
74.7	78.8	Ogul.	Grey calcareous clays
78.8	82.4	Ogdc	Dominantly clays + minor competent calcarenite.
82.4	83.4	Ogsd.	Sidentic alteration zone.
83.4	94.5	Ogfc.	Dominantly ferruginous clays (some dk grey/black clays)
94.5	101.0	Om.	Dark red coarse grained arkosic sandstone
101.0	101.6	Om	Fissile ferruginous siltstone.
101.6	113.7	Om	Red coarse grained arkose sandstone.

MINERALISATION SUMMARY:

FROM	TO	COMMENTS
		Zinc values < 1000 ppm
		Elevated zinc zone from 75 to 107m.

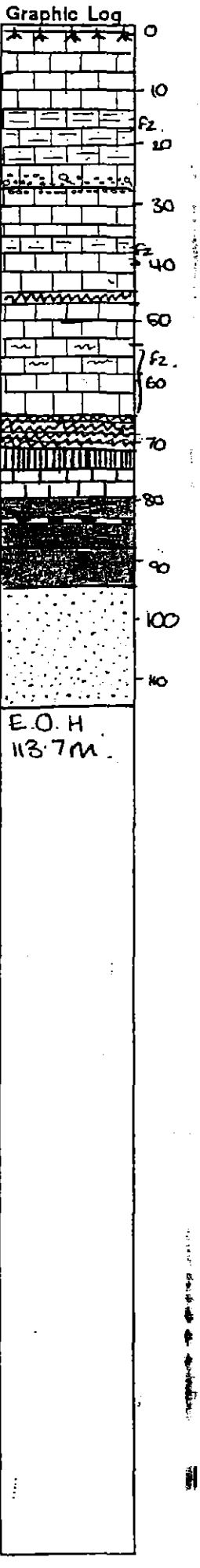
CONCLUSIONS:

Hole finished >100m than expected because Moina sandstone was intersected

Cleavage = 80° to CA @ 15m; 10° to CA @ 34m;
Bedding = 35° to CA @ 38m; 55° to CA @ 43m, 55° to CA @ 50m; 60° to CA @ 70m

Bedding = 70-75° to CA @ 101.6m,

Graphic Log



C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1/4

TENEMENT NAME KING BILLY No. 34/88

PLAN – MAP REFERENCE Zeehan 2

AMG: 371212E

CO-ORDINATES 5351910N AZIMUTH 168° (Mag) DRILLERS DDTAS COMMENCED 20/3/1996 DEPTH 113.07m HOLE No. DD96ZK123

RL COLLAR 145m INCLINATION 60° DRILL TYPE LY 38 COMPLETED 26/3/1996 CASING LEFT DPO No(s) 82157

DEPTH From (M)	DEPTH To(M)	Core Rec. %	RQD (CD)	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)
0	1.5	0	-	Qha	No recovery	-				
1.5	14.8	40	3F	Ogul	Cavitatious calcarenite (grey) with local micritic units. Cavities are sand filled (brown) Occasional bioclasts.	Variable iron (limonite) staining. Abundant calcite veining	5852501	12.4	13.7	
14.8	15.2	100	3F	Ogul	Argillaceous/silty calcarenite unit, dark grey in colour	Possible cleavage @ 80° to c/A.				
15.2	16.8		2F	Ogul	Grey calcarenite, with ≈15% argillaceous material + numerous bioclasts <0.5cm in diameter	Numerous calcite veins				
16.8	18.5	70	3X	Ogf2	Broken up grey calcarenite + argillaceous calcarenite. Medium grained sandy texture.	Calcite veining.				
18.5	23.0	80	2F	Ogul	Grey-dark grey calcarenite fine grained with significant argillaceous component (20-25%)	20-21m - possible fault zone (Ogf2) (broken core)				
23.0	24.7	80	2F	Ogul	Intensely calcite veined grey calcarenite, locally micritic, with ≈5% argillaceous material Rare bioclasts.	Pyrite occurs in fine cracks + within the calcarenite at the edge of calcite veins.	5852502 03	23.0	24.0 26.0	
24.7	27.0	66	3F	Ogoo	Pale grey equigranular bioclastic unit, medium grained - channel deposit.	Calcite veining + minor py. along fracture surfaces + edges of calcite veins.				
27.0	32.4	65	2F	Ogul	Grey - pale grey calcarenite with intercalated dark brown clays (20-30cm horizons) Argillaceous stylolites occur frequently	Abundant pyrite, often with calcite pressure shadows around the py aggregates. Possible fault zone @ base of section.	5852504	30.5	31.2	

ASSAY VALUES (Analysed by Mag SUS.)

Depth	Value	Depth	Value
0.5	c/L	16.0	4
1.0	c/L	16.5	2
1.5	8	17.0	0
2.0	c/L	17.5	0
2.5	c/L	18.0	0
3.0	c/L	18.6	0
3.5	c/L	19.0	5
4.0	c/L	19.5	0
4.5	c/L	20.0	0
5.0	c/L	20.5	2
5.5	c/L	21.0	0
6.0	c/L	21.5	0
6.5	c/L	22.0	0
7.0	c/L	22.5	5
7.5	c/L	23.0	0
8.0	5	23.5	5
8.5	5	24.0	2
9.0	0	24.5	0
9.5	c/L	25.0	c/L
10.0	2	25.5	c/L
10.5	0	26.0	0
11.0	c/L	26.5	0
11.5	0	27.0	0
12.0	0	27.5	0
12.5	2	28.0	c/L
13.0	c/L	28.5	0
13.5	2	29.0	c/L
14.0	0	29.5	c/L
14.5	5	30.0	0
15.0	0	30.5	0
15.5	c/L	31.0	0

Depth From	Depth To	Rec (m)	%
0	1.5	0	0
1.5	8.0	0.6	9
8.0	9.0	0.9	90
9.0	10.5	1.2	80
10.5	12.0	0.7	47
12.0	13.7	1.1	65
13.7	14.7	1.0	100
14.7	16.8	1.6	76
16.8	18.0	1.1	92
18.0	21.0	2.4	80
21.0	24.0	2.8	93
24.0	27.0	2.0	66
27.0	30.0	1.5	50
30.0	33.0	2.5	83
33.0	36.0	3.0	100
36.0	38.0	2.4	80
38.0	42.0	2.8	93
42.0	44.5	2.5	100
44.5	46.0	1.5	100
46.0	47.7	0.6	35
47.7	51.0	2.2	96
51.0	53.6	1.3	50
53.6	57.0	1.6	47
57.0	60.0	2.0	66
60.0	63.0	1.9	63
63.0	66.0	2.3	73
66.0	68.0	1.7	57
68.0	71.0	2.7	90
71.0	73.0	2.2	73
73.0	78.0	2.0	66
78.0	81.0	3.0	100
81.0	84.0	3.0	100

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32103

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

SHEET No. 2/4

TENEMENT NAME KING BILLY No. 3418S

PLAN – MAP REFERENCE

CO-ORDINATES AMG 371212E 5351970N AZIMUTH 168° (Mag) DRILLERS DDTAS COMMENCED 20/3/1996 DEPTH 113.7m HOLE No. DD96ZK123

RL COLLAR 145m INCLINATION 60° DRILL TYPE LY 38 COMPLETED 26/3/1996 CASING LEFT DPO No(s) 82157

DEPTH From (M)	DEPTH To(M)	Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)
32.4	37.0	90	2F	Ogul	Grey uniform calcarenite with ≤30% argillaceous component. Minor biocast occurrence <0.5cm (tetradium?)	Pyrite common on fracture surfaces. Minor calcite veining. Cleavage 10° to C/A.				
37.0	39.5	90	4X	Ogfz	As above, slightly coarser + core very broken up. With a 20cm zone of dark brown sandy clays	Minor fault zone. Minor pyrite. Some synsed. deformation of bedding features @ 35° angle to C/A.	5852505	39.0	40.1	
39.5	42.0	85	2F	Ogul	Grey fine grained calcarenite + argillaceous bands up to 5cm + argillaceous stylolites.	Abundant calcite veining + regions of pyrite occuring along fractures/veins. Areas of broken core/fracturing				
42.0	44.6	100	3F	Ogul	Grey calcarenite with relatively high silt content + fine grained.	Clean Calcite vaning. B/Ps @ = 55° to C/A. Minor pyrite content				
44.6	46.5	30	1F	Ogmc	Laminated pale grey micritic horizon containing minor bioclasts (bivalves)	Significant Calcite veins Minor pyrite.	5852506	46.0	47.7	
46.5	53.0	75	4X	Ogul	Grey calcarenite with minor shear zones + sand filled cavities.	Calcite veining B/Ps @ 55° to C/A. Broken core towards base	5852507	47.7	51.0	
53.0	66.1	62	5X	Ogul (Ogfz)	Grey calcarenite, locally micritic, with common argillaceous bands & stylolites Possible tetradium? Various pale grey clay horizons occur.	Fault zone. Minor calcite veining Minor pyrite occurrence.	08	51.0	53.6	
							09	53.6	57.0	
							10	57.0	60.0	
							11	60.0	63.0	
							12	63.0	66.0	

ASSAY VALUES (Analysed by RECOVERY)

Mag Sus. Depth	Value	Depth	Value	From	To	m	%
31.5	0	47.0	cl	84.0	87.0	3.0	100
32.0	cl	47.5	4	87.0	90.0	3.0	100
32.5	0	48.0	18	90.0	93.0	3.0	100
33.0	5	48.5	5	93.0	96.0	1.8	60
33.5	10	49.0	cl	96.0	99.0	0.8	27
34.0	8	49.5	8	99.0	101.6	2.6	100
34.5	10	50.0	cl	101.6	104.5	2.9	100
35.0	5	50.5	0	104.5	108.0	3.0	86
35.5	20	51.0	0	108.0	111.0	3.0	100
36.0	0	51.5	22	111.0	113.7	2.7	100
36.5	8	52.0	cl				
37.0	cl	52.5	cl				
37.5	3	53.0	cl				
38.0	cl	53.5	10				
38.5	6	54.0	2				
39.0	5	54.5	cl				
39.5	10	55.0	cl				
40.0	cl	55.5	0				
40.5	9	56.0	cl				
41.0	10	56.5	cl				
41.5	15	57.0	0				
42.0	5	57.5	5				
42.5	5	58.0	cl				
43.0	6	58.5	0				
43.5	10	59.0	cl				
44.0	10	59.5	cl				
44.5	5	60.0	0				
45.0	0	60.5	0				
45.5	5	61.0	cl				
46.0	4	61.5	cl				
46.5	cl	62.0	cl				

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 3/4

TENEMENT NAME KING BILLY No. .....

PLAN – MAP REFERENCE EL 34/88

AMG 371212E

CO-ORDINATES 5351970N AZIMUTH 168° (Mag) DRILLERS DDTAS COMMENCED 20/3/1996 DEPTH 113.7m HOLE No. DD962K123

RL COLLAR 145m INCLINATION 60° DRILL TYPE LY38 COMPLETED 26/3/1996 CASING LEFT ..... DPO No(s) 82157

DEPTH From (M)	DEPTH To(M)	Core Rec. %	RQD	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)
66.1	69.0	57	2F	Ogmu	Dismicrite horizon. Pale grey clay rich lacking the distinct micrite laminations. Minor argillaceous stylolites + burrows? (or anhydrite after gypsum) oriented // parallel to the core axis.	Significant calcite veining	5852513	66.0	69.0	
69.0	71.8	90	3X	Ogmu	Pale grey/grey micrite with faint laminations @ 60° to C/A.	Minor pyrite within calcite veins present.	14	69.0	71.7	
71.8	74.7	73	4X	Ogfz	Dark grey calcarenite with high (≤ 60%) argillaceous content. Core is very broken.	Pyrite occurs on fracture surfaces in small quantities.	15	71.7	75.0	
74.7	78.8	70	5X	Ogul	Grey/dark grey clay zone, still calcareous. Increasing iron content towards base (brown colouration)		16	75.0	77.0	
							17	77.0	78.8	
78.8	82.4	100	5X	Ogdc	Variably stained clays with regions of competent calcarenite (30cm) + remnants of original quartz/calcite veins. Competent calcarenite is relatively dense + may have undergone some sidentic alteration	Sidentic zone from 80.9m → 81.3m	18	78.8	80.9	
							19	80.9	81.3	
							20	81.3	82.4	
82.4	83.4	100	2F	Ogsd	Zone of sidentic alteration. Dense altered limestone, grey/brown in colour.		21	82.4	83.4	

ASSAY VALUES (Analysed by .....)

Mag Sus Depth	Value	Depth	Value
62.5	5	78	6
63.0	0	78.5	cl
63.5	5	79	0
64.0	cl	79.5	cl
64.5	5	80	0
65	cl	80.5	0
65.5	5	81	25
66	0	81.5	150
66.5	5	82	160
67	cl	82.5	0
67.5	cl	83	200
68	cl	83.5	0
68.5	0	84	0
69	0	84.5	0
69.5	6	85	0
70	10	85.5	0
70.5	cl	86	0
71	0	86.5	0
71.5	10	87	0
72	10	87.5	10
72.5	cl	88	0
73	4	88.5	0
73.5	cl	89	5
74	cl	89.5	cl
74.5	6	90	12
75	0	90.5	10
75.5	0	91	10
76	0	91.5	8
76.5	cl	92	2
77	0	92.5	0
77.5	cl	93	0

321037

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 4/4

TENEMENT NAME KING BILLY No. 3488

PLAN – MAP REFERENCE

AMG

CO-ORDINATES 371212E 5351970N AZIMUTH 168°(Mag) DRILLERS DDTAS COMMENCED 20/3/1996 DEPTH 113.7m HOLE No. DD96ZK123

RL COLLAR 145m INCLINATION 60° DRILL TYPE LY38 COMPLETED 26/3/1996 CASING LEFT DPO No(s) 82157

DEPTH From (M)	DEPTH To(M)	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.....) Mag Sus. Depth	Value	Depth	Value
83.4	87.6	100	5X	Ogfc	Alternating brown ferruginous clays and dark grey/ black non calcareous rotted limestones. Increasing amounts of ferruginous material towards base.		5852522	83.4	84.7		93.5	0	109	20
							23	84.7	85.5		94	CL	109.5	18
							24	85.5	87.0		94.5	CL	110	5
							25	87.0	87.6		95	CL	110.5	25
											95.5	CL	111	10
											96	0	111.5	5
											96.5	CL	112	0
87.6	94.5	90	5X	Ogfc	Ferruginous/limonitic sandy clays/siltstones + fine grained sandstones		26	87.6	88.6		97	CL	112.5	2
							27	88.6	90.0		97.5	CL	113	CL
						A zone of	28	90.0	91.9		98	CL	113.5	0
94.5	99.5	50	3F	0M	First unit of cohesive sst.	V. broken core + poor	29	91.9	93.0		98.5	0	114	0
					Orange brown coloured, coarse grained sandstone	core recovery towards base.	30	93.0	94.5		99	0		
							31	94.5	96.0		99.5	30		
99.5	101.0	100	2F	0m	Dark Red coarse grained sandstone (arkosic in nature) contains grains of sub rounded/sub angular quartz < 0.5cm ø.		32	96.0	99.5		100	27		
							33	99.5	101.0		100.5	25		
							34	101.0	101.6		101	30		
											101.5	0		
											102	6		
101.0	101.6	100	5X	0m	Fissile ferruginous siltstone zone Dominant limonite + phyllitic material.	Minor quartz veins					102.5	0		
											103	0		
											103.5	0		
											104	CL		
101.6	113.7	92	3F	0m	Red sandstone medium - coarse grained arkosic in nature Minor intercalated siltstones towards top of section	B/Ps @ 70-75° to C/A. Fault zone filled with fault gouge = 105-106m. ^of fault contacts = top contact - 70° to C/A. bottom contact - 70 to 75° to C/A	35	101.6	103.8		104.5	CL		
							36	103.8	104.6		105	15		
							37	104.6	107.0		105.5	CL		
							38	107.0	109.0		106	CL		
							39	109.0	111.8		106.5	10		
							40	111.0	113.7		107	5		
											107.5	CL		
											108	19		
											108.5	0		

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