346159

CRA EXPLORATION PTY. LIMITED

DRILL-HOLE SUMMARY LOG

Graphic Log

HOLE NAME: ZD95 ZG413 | AMG | EAST 363690 | NORTH 5349350

PROSPECT GRIEVES | GRID | EAST ~~[illegible]~~ | NORTH 47200N

EL: ZEEHAN 4 EL38/89 | RL 60748 RL=127.5 | DEPTH 301.2

DATE DRILLED: MAY 1995

LOGGED BY: RGP

DRILLING CO.: ALMAC

DRILL TYPE: DD

DRILL RIG: LY44

LOC DRILL CORE: ZEEHAN

SURVEYS: DEPTH	AZIM (AMG)	DIP	DEPTH	AZIM (AMG)	DIP
0	143	-70	250	154	-66.5
50	142	-71	300	162°	-65°
100	145	-70			
150	145	-69			
200	154.5?	-68.5			

OBJECTIVES OF HOLE:

To test interpreted down-plunge extension of Grieves "Middle Zone" mineralisation exposed in costean 47100N (20m @ 7% Zn).

LITHOGICAL SUMMARY:

FROM	TO	FORM CODE	COMMENTS
0	30.8	Ogsi	SILTSTONE
	35.1	Ogdl	LEACHED DOLARENITE
	63.7	Ogul	CALCARENITE / CALCRUDITE
	78.55	Ogmv	LAMINATED MICRITE
	268.2	Ogul	LIMESTONE
	274.2	Ogdl	DOLOMITE BRECCIA
	283.75	Ogul	LIMESTONE BRECCIA
	301.2	Ogul	LIMESTONE

MINERALISATION SUMMARY:

FROM	TO	COMMENTS
		NO VISIBLE MINERALISATION.

CONCLUSIONS:

HOLE FAILED TO INTERSECT "MIDDLE ZONE".

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GRIEVES PROSPECT — C.R.A. EXPLORATION PTY. LIMITED DRILL CORE LOG

SHEET No. 1 of 4

TENEMENT NAME GRIEVES No.

PLAN – MAP REFERENCE

CO-ORDINATES 363090E 5349350N AZIMUTH 143 AMG DRILLERS ALMAC COMMENCED DEPTH 301.2 HOLE No. ZG413

RL COLLAR INCLINATION -70° DRILL TYPE LY44 COMPLETED 3/6/95 CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	Core Rec %	RQD DATA	LITH Graphic Log CODE	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)
0	12.8				PRECOLLAR - no core.					
12.8	30.8		3F	Qgsi	SILTSTONE Dark grey massive carbonaceous siltstone. Moderately fractured.					
30.8	35.1		3F	Qgdl	LEACHED DOLARENITE Light grey coarse grained (1-2 mm g/s) dolarenite, comprised of bioclastic debris. Core extremely leached and porous.					
35.1	63.7		2F/4F	Qgul	CALCARENITE TO CALCRUDITE Grey weakly to moderately dolomitised. Unit comprised of large coral and stromatoporoid frags, whole - fragmented mollusc shells in gritty calc-dolarenite matrix. Unit characterised by pale yellow-grey to dark yellow-brown irregular patches of soft clayey material, possibly infill of stromatactis cavities. Unit is strongly fractured with numerous small - large cavities. Gradational contact with unit below. May be reef, or reef talus?					
63.7	78.55		1F/4x	Qgmu	LAMINATED MICRITE Light grey weakly dolomitised micrite. Planar laminated algal bands, grading into stylolaminated, disrupted - stylobrecciated micrite. Minor massive micrite with some bird's eye textures. Narrow bioclastic beds.					

ASSAY VALUES (Analysed by ..... DRILL RQDs) TO	RQ	REC	
0	12.8	0	-	
	13.2	4x	0.4	
	14.3	|	0.8	
	15.6	|	0.95	
	16.8	|	1.0	
	20.2	3F	1.9	
	21.2	4F	1.1	
	22.2	3F	0.9	
	25.2	3F	2.5	
	26.6	3x	1.1	
	29.3	3F	1.15	
	31.2	|	1.4	
	34.2	|	1.4	
	37.2	|	1.5	
	41.8	5	2.6	2m cavity
	43.2	5x	0.2	
	44.9	5x	0.75	
	46.2	5x	0.7	
	48.1	4x	2.0	
	50.3	3x	2.1	
	52.2	3x	1.7	
	54.2	3x	1.8	
	54.7	5x	0.4	
	57.8	3x	2.4	
	59.7	4x	1.7	
	60.9	4x	0.8	
	63.0	3x	2.0	
	64.2	1F	1.2	
	66.1	|	1.9	
	67.2	|	1.2	

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

SHEET No. 2 of 4

TENEMENT NAME GRIEVES No.

PLAN – MAP REFERENCE

CO-ORDINATES 363690E 5349350N AZIMUTH 143 AMG DRILLERS ALMAC COMMENCED 29.5.95 DEPTH 301.2 HOLE No. ZG413

RL COLLAR INCLINATION -70° DRILL TYPE LY44 COMPLETED 3.6.95 CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	Core Rec. %	RQD DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)
					64.1 S_o – C.A ∢ 58°					
					65.2 S_o	60°				
					66.0 S_o	60°				
					70.9 S_o	65°				
78.55	98.55		3F	Ogul	CALCARENITE Grey medium to coarse calcarenite with characteristic light brown patches & bands of clayey material similar to 35.1–63.7m. No obvious reef-building organisms.					
98.55	124.4		1B	Ogul	FOSSILIFEROUS BANDED LIME MUDSTONE Banded limestone comprised of light grey 100mm–300mm fine calcarenite separated by 10–30mm bands of dark grey lime mud. Common bands of bivalve debris. 110.2 S_o – C.A ∢ 64°					
124.4	138.25		2F	Ogul	CALCITE VEINED LIMESTONE Grey limestone cut by stockwork of 0.2–5mm white calcite veins.					
138.25	257.4		2F	Ogul	FOSSILIFEROUS BANDED LIME MUDSTONE Similar to 98.55–124.4, but bivalve bands are rare. Instead unit has minor bands of round to elongate fossil fragments 5–10mm in diameter. Becomes more strongly nodular (nodules 5–10mm) below 200m. Black carbonaceous band 243.45–244.2, almost sooty in appearance.					

ASSAY VALUES (Analysed by.....)

DRILL RUNS

TO	RQ	REC
70.2	3X	2.4
71.9	4X	1.0
73.2	4X	1.1
74.8	2B	1.5
REDUCE TO NQ		
76.2	2B	1.2
79.2	2F	2.75
82.2	3F	2.75
84.8	2F	2.1
87.6	3F	1.25
88.9	4X	0.65
91.2	3F	1.6
92.2	4F	0.6
94.0	3F	1.0
95.6		0.75
96.8		0.8
98.1		0.8
100.2		2.05
101.7		1.4
104.7	1B	3.05
106.2	2B	1.45
109.2	1B	3.0
112.2		2.9
115.2		3.05
118.2		3.0
121.2		3.0
124.2	3B	3.0
127.2	2F	3.0
129.8	2F	2.7
131.1	3F	0.85

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

SHEET No. 3 of 4

TENEMENT NAME GRIEVES No.

PLAN – MAP REFERENCE

CO-ORDINATES 363690 E 5349350 N AZIMUTH 143 AMG DRILLERS ALMAC COMMENCED 29.5.95 DEPTH 301.2 HOLE No. ZG413

RL COLLAR INCLINATION -70° DRILL TYPE LY44 COMPLETED 3.6.95 CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	Core Rec.	RQD DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)
					142.0 S_o - c.A	∡ 66°				
					140.9	65°				
					153.2	68°				
					159.2	60°				
					189.5	62°				
					196.5	65°				
					220.0	70°				
					253.6	70°				
257.4	268.2		2F	Cgul	FOSSILIFEROUS CALCARENITE Grey ~~micrite~~ calcarenite with large coral? fragments. Also interval contains micritic limestone breccia fragments with white calcite matrix? Minor banded lime mudstone. 259.5 S_o 70° 265.0 68°					
268.2	274.2		3X	Cgdl	CARBONATE BRECCIA Dark grey to black breccia comprised of angular dolomite and ? carbonaceous siltstone? fragments in carbonaceous matrix. Some algal laminations preserved. Possibly syn-sedimentary fault? 1.5m cavity approx 272.7 – 274.2 m. 269.8 S_o 62°					
274.2	283.75		1F	Cgdl Cgul	LIMESTONE BRECCIA Grey limestone comprised of irregular breccia blocks, fossil debris and coarse calcarenite. Some calcarenite is planar banded. Reef breccia or reef talus?					

ASSAY VALUES (Analysed by .....)

DRILL RUNS

To	RQ	REC
138.2	2V	2.1
136.2	2V	2.95
138.9	3V	2.45
141.9	2B	100%
145.0	1B	
148.1	2B	
151.2	3V	
154.2	2B	
157.2	2B	
160.2	2B	
163.2	2B	
166.2	3F	
169.2	2B	
172.2	2V	
175.2	1F	
178.2	2F	
181.2	2F	
184.2	1B	
187.2	1B	
190.2	2F	
193.2	1F	
196.2	2F	
199.2	2B	
202	1F	
205	1F	
208	1B	
211	3V	
214	2V	
217.1	3F	

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

SHEET No. 4 of 4

TENEMENT NAME GRIEVES No.

363690 E
CO-ORDINATES 5349350N AZIMUTH 143 AMG DRILLERS ALMAC COMMENCED 29.5.95 DEPTH 301.2 HOLE No. ZG413

PLAN – MAP REFERENCE

RL COLLAR INCLINATION -70° DRILL TYPE LY44 COMPLETED 3.6.95 CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	Core Rec - / -	RQD DATA	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)
					280.4 S_o - CA ∡ 66°					
283.75	301.2		1F	Ogul	NODULAR + BANDED LIME MUDSTONE					
	EOH				Grey limestone characterised by 2-10mm subrounded to subangular limestone nodules. Could be ~~round~~ rolled algal balls? Angular nodules are due to stylolitic margins. Nodules define a crude layering. Minor beds of coarse calcarenite.					
					289.8 S_o	66°				
					298.0	63°				

ASSAY VALUES (Analysed by .....)
DRILL RUNS

TO	RQ	REC	
220.2	2V	~~Void~~ 2.6	(0.5m CAVITY)
223.2	3V	100%	
226.2	3B	|	
229.2	2F	|	
232.2	2V	|	
235.2	3V	|	
238.2	3V	~~1.8~~	
241.2	1F	2.85	
244.2	3V	~~2.4~~	(2.6m CAVITY)
247.2	4V	0.60	↓ ↓
250.2	2F	2.95	
253.2	2V	~~1.8~~ 2.2	
256.2	2F	100%	
259.2	3F	100%	
262.2	2F	|	
265.2	|	|	
268.2		|	
270.6	3X	2.45	
274.2	3X	2.0	(1.5m CAVITY)
277.2	1F	100%	
280.2	1F	|	
283.2	1B	|	
286.2	1F	|	
289.2	|	|	
292.5?	|	|	
295.8?	|	|	
298.2	|	|	
301.2	|		