Mc ARTHUR RIVER MINING

DIAMOND DRILL HOLE HEADER SUMMARY SHEET

HOLE I.D. : **00_14**

GRID AZIMUTH : **93.5**

COLLAR INCLINATION : **+13.5**

SURVEYED COLLAR CO-ORDINATES

EASTING : **7859.59**

NORTHING : **1940.64**

RL : **9636.74**

HOLE/CORE SIZE(S) : **LTK 48**

LOGGED BY : **SP**

D/HOLE SURVEY METHOD **:EASTMAN SS**

LOCATION (eg.drive name) : **2M2 Pad**

DESIGN DEPTH (m) : **140**

TOTAL DEPTH (m) : **153.3**

DATE STARTED **14/02/2000**

DATE FINISHED : **16/02/2000**

DRILLED BY : **Boart Longyear**

CORE INTERVALS ASSAYED:

88.7-89.1	**I23**
89.1-89.6	**FLT**
89.6-95.65	**2**
95.65-96.65	**I12**

LOCAL MAG. DEV. : **+ 5**
(add to downhole survey azim. reading)

RAW DOWNHOLE SURVEY DATA

Depth (m)	Azimuth(Mag)	Dip	Depth (m)	Azimuth(Mag)	Dip
0	93.5	13.5			
30	93.5	13.5			
60	92.5	13.75			
90	94	13.25			
120	93.5	13			
153.3	93.5	13			

Surveyed Collar & Geology Entered Into Vulcan Database : April 2000

Assays Entered Into Vulcan Database : April 2000

Comments:

Note: **From** & **Interval** are calculated fields. Do not overwrite!

Mc ARTHUR RIVER MINING

DIAMOND DRILL CORE SAMPLING SHEET

DATE:	
SAMPLER:	JWR
Sample Type:	1/2 LTK 48

							ASSAYS					
HOLE No.	**FROM (m)**	**TO (m)**	**INTERVAL**	**SAMPLE No.**	**LITHCODE**	**BCA**	**Zn(%)**	**Pb(%)**	**Ag(g/t)**	**Fe(%)**	**Cu(ppm)**	**COMMENTS**
00/14	**88.7**	**89.1**	**0.4**	26122	**I23B**		15.27	5.77	56	7.86	2700	
00/14	**89.1**	**89.6**	**0.5**	26123	**FLT**		8.51	1.93	16	9.69	1000	
00/14	**89.6**	**90.45**	**0.85**	26124	**2B**	**65**	15.74	5.52	54	9.07	2900	
00/14	**90.45**	**92.3**	**1.85**	26125	**2C**	**60**	15.88	5.89	61	9.05	2700	
00/14	**92.3**	**95.65**	**3.35**	26126	**2D**	**60**	15.66	5.83	61	5.29	2000	
00/14	**95.65**	**95.8**	**0.15**	26127	**I12A**		5.72	1.56	14	5.02	300	
00/14	**95.8**	**95.9**	**0.1**	26128	**I12B**		1.19	0.32	5	3.63	400	
00/14	**95.9**	**96.4**	**0.5**	26129	**I12C**	**70**	1.08	0.28	5	5.25	200	
00/14	**96.4**	**96.65**	**0.25**	26130	**I12D**		0.38	0.11	5	2.39	100	
Wt Av #2 OB intersection			**6.05**			**62**	**15.74**	**5.81**	**60**	**6.97**	**2340**	
	True Thickness		**5.33**									

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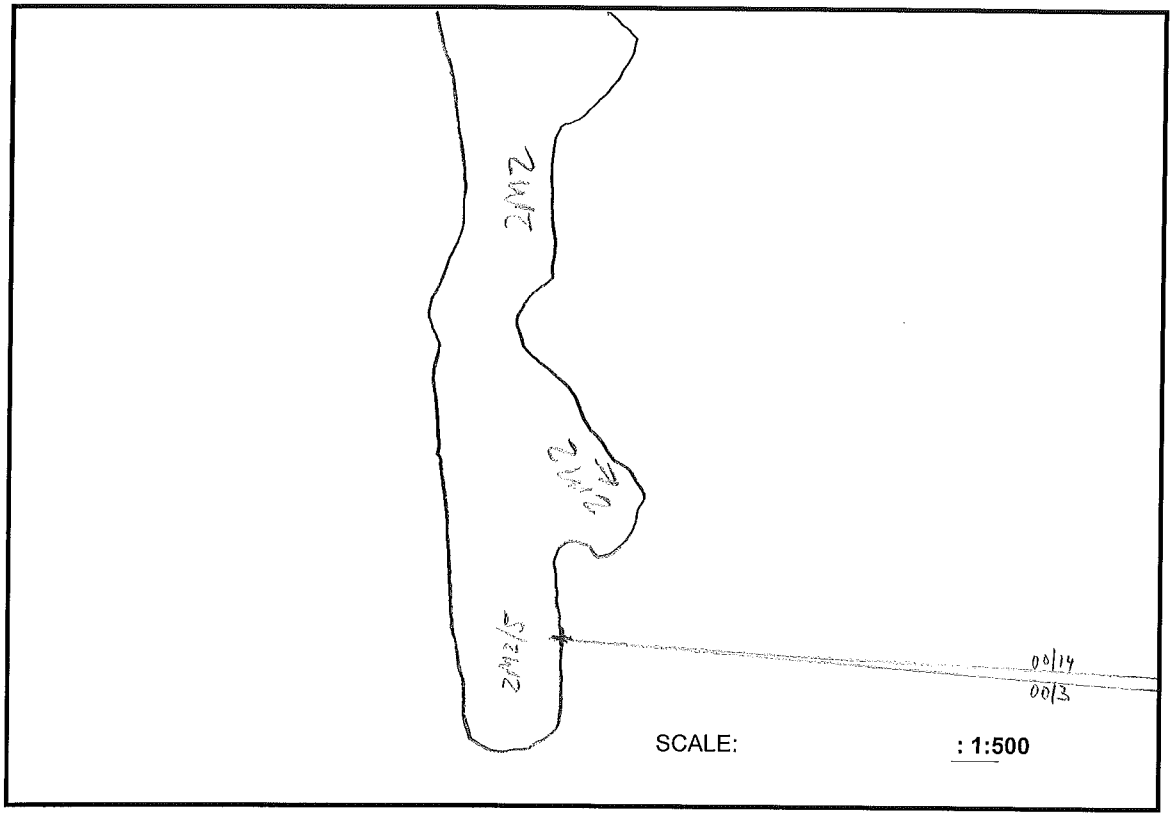
DIAMOND DRILL HOLE PROPOSAL FORM

HOLE I.D.	: 00/14	LOCATION (eg.drive name)	:2M2 PAD
PROPOSED START DATE	13-Feb-00	DESIGN AZIMUTH (GRID)	:093.5
DESIGN DEPTH	:100m (140m)	DESIGN AZIMUTH (MAG)	: 88.5
ESTIMATE COLLAR CO-ORDINATES		DESIGN INCLINATION	: +13.5
EASTING	:7859.3	SURVEYED COLLAR CO-ORDINATES	
NORTHING	:1942.0	EASTING	: 7859.62
RL	:9636.6	NORTHING	: 1940.56
GEOLOGIST	:MF	RL	: 9637.04
LOCATION SKETCH		SURVEYOR	: JM



Comments: SURVEY AT 6m THEN EVERY 30m

EOH UNDER GEOLOGICAL CONTROL

February 20, 2000 — McARTHUR RIVER MINING LOWER FOLD ZO... DRILLING — GEOLOGICAL LOG SHEET

GEO: Steph...vely | HOLE: | 00/14 | VERSION
DATE: 20/02/00 | PAGE: 1 of 2 | 23/01/00

							LITHOLOGY			ALTERATION				SULPHIDES		FAULTING		GEOTECHNICAL			STRUCTURE				COMMENTS
FROM	TO	INT	COL	WTH	CODE	G	LITH	TEX	DOL	VEIN	NO	CR	CO	PY	MIN	TYPE	NAME	REC	CORE	BCA	A1	OTH	D	A2	
7			5	3	4	1	5	3	3	4	3	3	3	2	3	3	3	5	4	3	3	3	3	3	30
0.00	2.05	2.05	DGY	FR	2C		H	L						M	I			>95	LTK 48	30					
2.05	5.10	3.05	DGY	FR	2B		H	L						M	I			>95	LTK 48	38					
5.10	5.40	0.30	DGY	FR	2A		H	L			W	W		M	S			>95	LTK 48						
5.40	7.70	2.30	YLBN	FR	I23D		H	L			M	M		S	W			>95	LTK 48	40					
7.70	9.99	2.29	YLBN	FR	I23C		H	L			I	I		S	W			>95	LTK 48						
9.99	10.00	0.01	GY	FR	I23B		TP	L										>95	LTK 48						
10.00	10.90	0.90	YLBN	FR	I23B		H	L			S	S		S				>95	LTK 48	40					
10.90	10.91	0.01	GY	FR	I23B		TP	L										>95	LTK 48						
10.91	12.35	1.44	GY	FR	I23B		H	L			S	S	W	S				>95	LTK 48						
12.35	15.30	2.95	LGY	FR	I23B		TH	M										>95	LTK 48	40					
15.30	15.80	0.50	DGY	FR	FLT			XT								FLT		>95	LTK 48						I23A /3LD faulted out. Flt normal to CA?
15.80	15.95	0.15	DGY	FR	3LD		H	L		5-10%				S	S			>95	LTK 48	60					
15.95	17.85	1.90	DGY	FR	3LC		SX20	M										>95	LTK 48						
17.85	19.15	1.30	DGY	FR	3LC		GB	M										>95	LTK 48						
19.15	21.85	2.70	DGY	FR	3LC		H	L						S	S			>95	LTK 48	45					
21.85	23.85	2.00	LGY	FR	3LB		TH	M										>95	LTK 48						
23.85	28.85	5.00	DGY	FR	3LB		H	L						S	S			>95	LTK 48	40					
28.85	32.80	3.95	GYBN	FR	3LA		H	L						S	S			>95	LTK 48	30					
32.80	36.25	3.45	DGY	FR	3MB		SL	M										>95	LTK 48						
36.25	41.05	4.80	YLBN	FR	3MA		H	L						I	W			>95	LTK 48	30					3MA chert @ 40.0
41.05	50.20	9.15	DGY	FR	3UA		H	L						S	S			>95	LTK 48	0					fold axis at approx 47-48m
50.20	53.00	2.80	YLBN	FR	3MA		H	L						I	W			>95	LTK 48	50					
53.00	55.30	2.30	DGY	FR	3MB		SL	M										>95	LTK 48						
55.30	58.10	2.80	DGY	FR	3LA		H	L						S	S			>95	LTK 48	70					
58.10	61.60	3.50	DGY	FR	3LB		H	L						S	S			>95	LTK 48	70					
61.60	63.10	1.50	LGY	FR	3LB		TH	M										>95	LTK 48	50					
63.10	68.25	5.15	DBN	FR	3LC		H	L						S	S			>95	LTK 48	45					
68.25	69.50	1.25	GY	FR	3LC		GB	M										>95	LTK 48						
69.50	71.05	1.55	GY	FR	3LC		SX20	C										>95	LTK 48						
71.05	72.70	1.65	DGY	FR	3LD		H	L						S	S			>95	LTK 48	70					stgly folded nod sh.
72.70	76.50	3.80	YLBN	FR	I23A		H	L			I	I		S	W										
76.50	78.80	2.30	DGY	FR	I23A		TH	M										>95	LTK 48						speckled tuff
78.80	79.80	1.00	YLBN	FR	I23A		H	L			S	S	W	S				>95	LTK 48						
79.80	81.80	2.00	LGY	FR	I23B		TH	M										>95	LTK 48						
81.80	88.69	6.89	DGY	FR	I23B		H	L			S	S		S	M			>95	LTK 48						stgly folded upper I23B
88.69	88.70	0.01	DGY	FR	I23B		TH	L										>95	LTK 48						thin fissile clay tuff
88.70	89.10	0.40	DGY	FR	I23B		H	L		5-10%	S	S						>95	LTK 48						
89.10	89.60	0.50	LGY	FR	FLT			XT		40-50%						FLT		>95	LTK 48						flt vein set striking 065 dipping steeply SE
89.60	90.45	0.85	DGY	FR	2B		H	L						I	I			>95	LTK 48	65					I23C,I23D, top of #2 ob faulted out
90.45	92.30	1.85	DGY	FR	2C		H	L						I	I			>95	LTK 48	60					
92.30	95.65	3.35	DGY	FR	2D		H	L						I	I			>95	LTK 48	60-10					2D thickened due to folding
95.65	95.80	0.15	GY	FR	I12A		NOD	L			I	I			W			>95	LTK 48						
95.80	95.90	0.10	LGY	FR	I12B		SL	B										>95	LTK 48						
95.90	96.40	0.50	BL	FR	I12C		H	L								W		>95	LTK 48	70					
96.40	96.65	0.25	LGY	FR	I12D		SX20	C																	fold @ 98.7?
96.65	103.40	6.75	DGY	FR	0		H	L					S							60					f/w conc bl sh & speckled tuffs
103.40	103.60	0.20	LGY	FR	I12D		SX20	C																	
103.60	103.80	0.20	BL	FR	I12C		H	L												75					
103.80	103.80	0.00	LGY	FR	I12B		SL	B																	
103.80	104.15	0.35	GY	FR	I12A		NOD	L			I	I													
104.15	106.50	2.35	DGY	FR	2D		H	L						I	I					60					fold @ 105.55
106.50	107.00	0.50	LGY	FR	I12A		NOD	L			I	I													
107.00	107.20	0.20	BL	FR	I12C		H	L																	
107.20	107.70	0.50	LGY	FR	I12D		SX20	C																	
107.70	108.10	0.40	BL	FR	I12C		H	L												65					I12B missing
108.10	108.40	0.30	LGY	FR	I12D		SX20	C																	
108.40	116.00	7.60	BL	FR	0		H	L					S												Bl sh with conc/dolomite blocks
116.00	121.00	5.00	GNBL	FR	WFS		H	L												60					
121.00	126.00	5.00	GNBL	FR	WFS		H	L												50					
126.00	131.00	5.00	GNBL	FR	WFS		H	L												25					stgly crenulated bedding/foliation
131.00	136.00	5.00	GNBL	FR	WFS		H	L												10					ditto
136.00	141.00	5.00	GNBL	FR	WFS		H	L												50					
141.00	145.40	4.40	GNBL	FR	WFS		H	L												60					
145.40	147.00	1.60	GNBL	FR	WFS		SX100	C																	dol frags in bl sh (dwn facing?)
147.00	153.30	6.30	GNBL	FR	WFS		H	L					S					>95	LTK 48	40-5					Bl sh with conc/dolomite blocks EOH

MRM GEOTECHNICAL CORE LOG

Hole No: 00/14
Location: 2M2
Dip / Azimuth:
Core Size:

Logged By: SGP
Date: 20/02/00
Sheet of

joint roughness number		joint alteration number	
discontinuous joints	A	tightly healed, hard	A
rough,irregular,undulating	B	unaltered joint walls, staining	B
slickensided undulating	C	slightly altered, non-softening	C
rough or irregular, planar	D	silty, sandy-clay	D
smooth,planar	E	softening, low friction, clay	E
slickensided,planar	F	fault fill, gouge, breccia, calcite	F

Depth *From (m)*	Depth *To (m)*	Depth *Interval (m)*	Core *Loss (m)*	Strat *Code*	Lithology *Code*	Weather / Alteration	RQD *Total (m)*	RQD *%*	Bedding Breaks	Joint *Breaks (No.)*	Joint *Roughness*	Joint *Alteration*	CBA	Comments
72.7	76.50	3.8		I23A	H	FR	2.9	76%	18					folded throughoout
76.5	78.80	2.3		I23A	TH	FR	1.3	57%	7	4	D	B		broken contacts
78.8	79.80	1		I23A	H	FR	0.7	70%	6					
79.8	81.80	2		I23B	TH	FR	1.95	98%	3	1	D	F		joints more common in mas
81.8	88.69	6.89		I23B	H	FR	5.9	86%	20					minor cb veining
88.69	88.70	0.01		I23B	TH	FR	0	0%	2					
88.7	89.10	0.4		I23B	H	FR	0.4	100%	1					I23C&D fualted out

RQD Total (m) is the sum of all lengths greater than 10cm
RQD % is the Total (m) / intersection length