

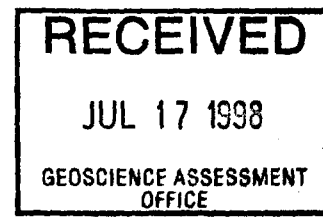


31M04SW2012 2.18658 CHAMBERS

010

**ASSESSMENT REPORT
DIAMOND DRILLING ON THE
CHAMBERS GRID, 1998
TEMAGAMI, ONTARIO**

NTS 31M4/5



APRIL 14, 1998

2 18658

FALCONBRIDGE LIMITED
TIMMINS EXPLORATION OFFICE
571 Moneta Avenue
Timmins, Ontario, P4N 7H9

PASCAL PRINCE



31M04SW2012 2.18658 CHAMBERS

010C

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LIST OF FIGURES

GEOLOGIC SECTIONS

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COMPILATION MAP: Chambers Property

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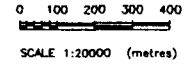
GEOLOGIC SECTIONS

TOWNSHIP OF CYNTHIA

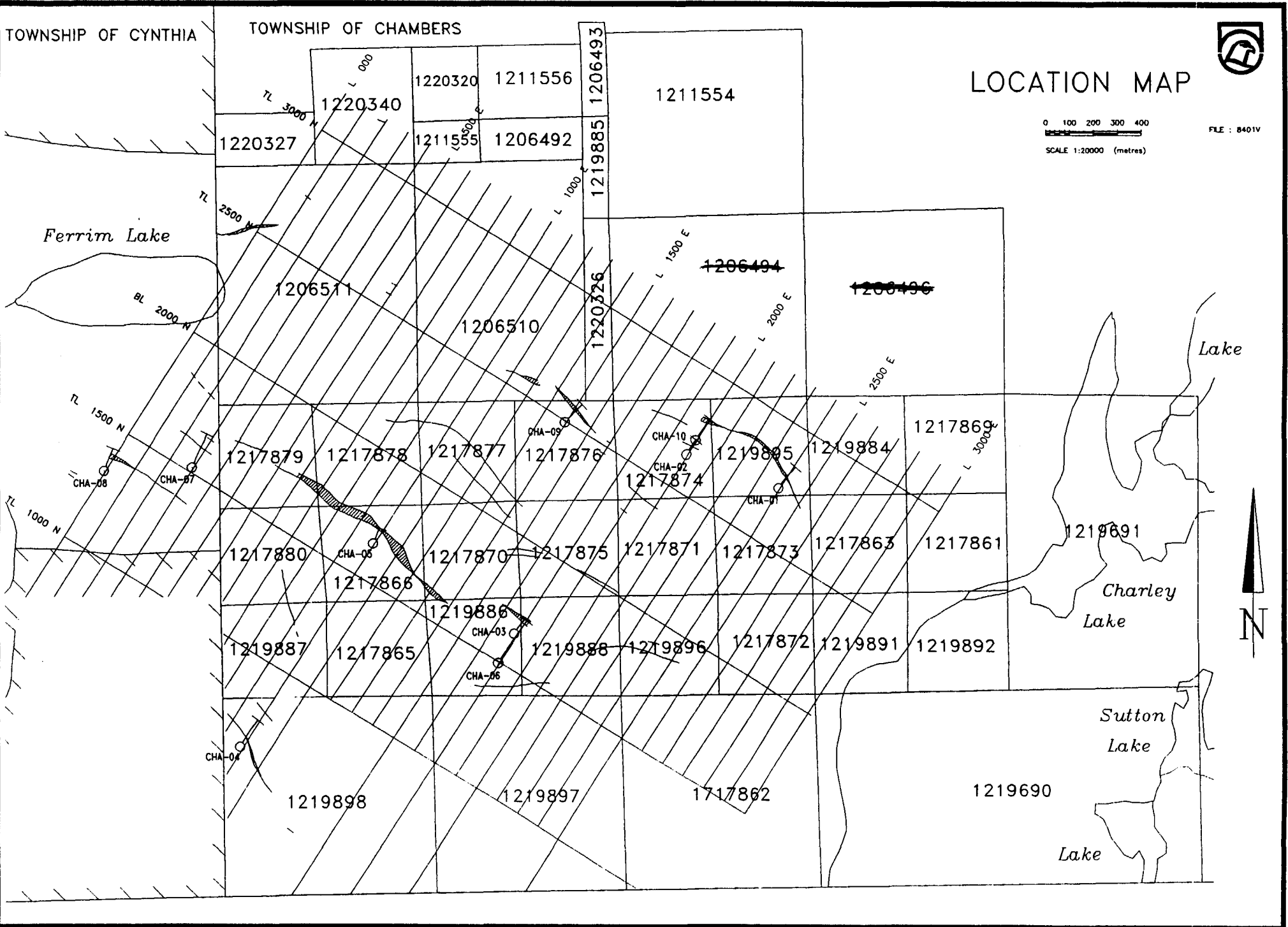
TOWNSHIP OF CHAMBERS



LOCATION MAP



FILE : 8401V



HLEM 222

Profile Scale : 1cm = 10%

1217873

CHA-01

L 2500 E , 2565mN (577401.05mE , 5213476.73mN)
Az. 32° , Dip -60°

STRONG MAX-MIN CONDUCTOR

SURFACE

SURFACE

300m

300m

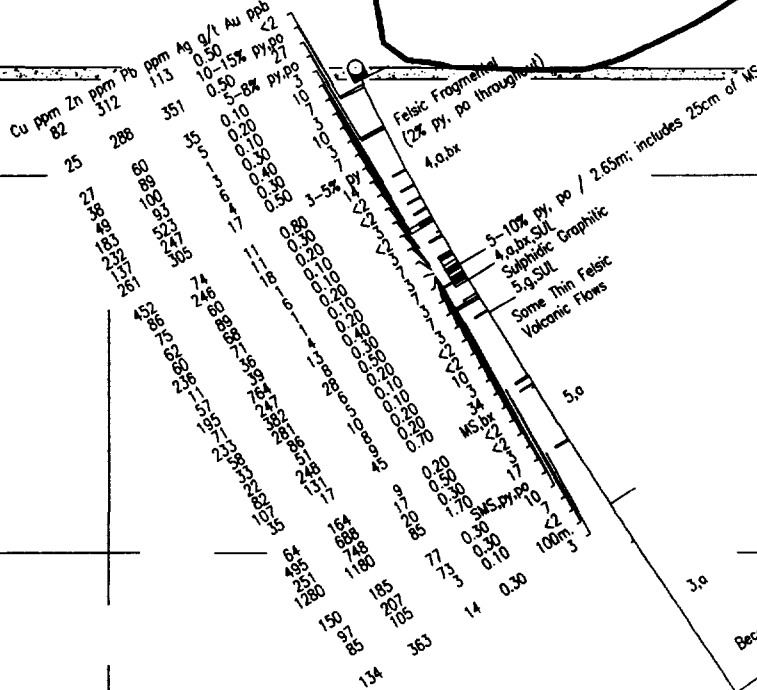
200m

200m

100m

100m

0m



Becoming More mafic
199.95m.

SEE LEGEND ON SEPARATE PAGE

TL 2500 N

FALCONBRIDGE LIMITED

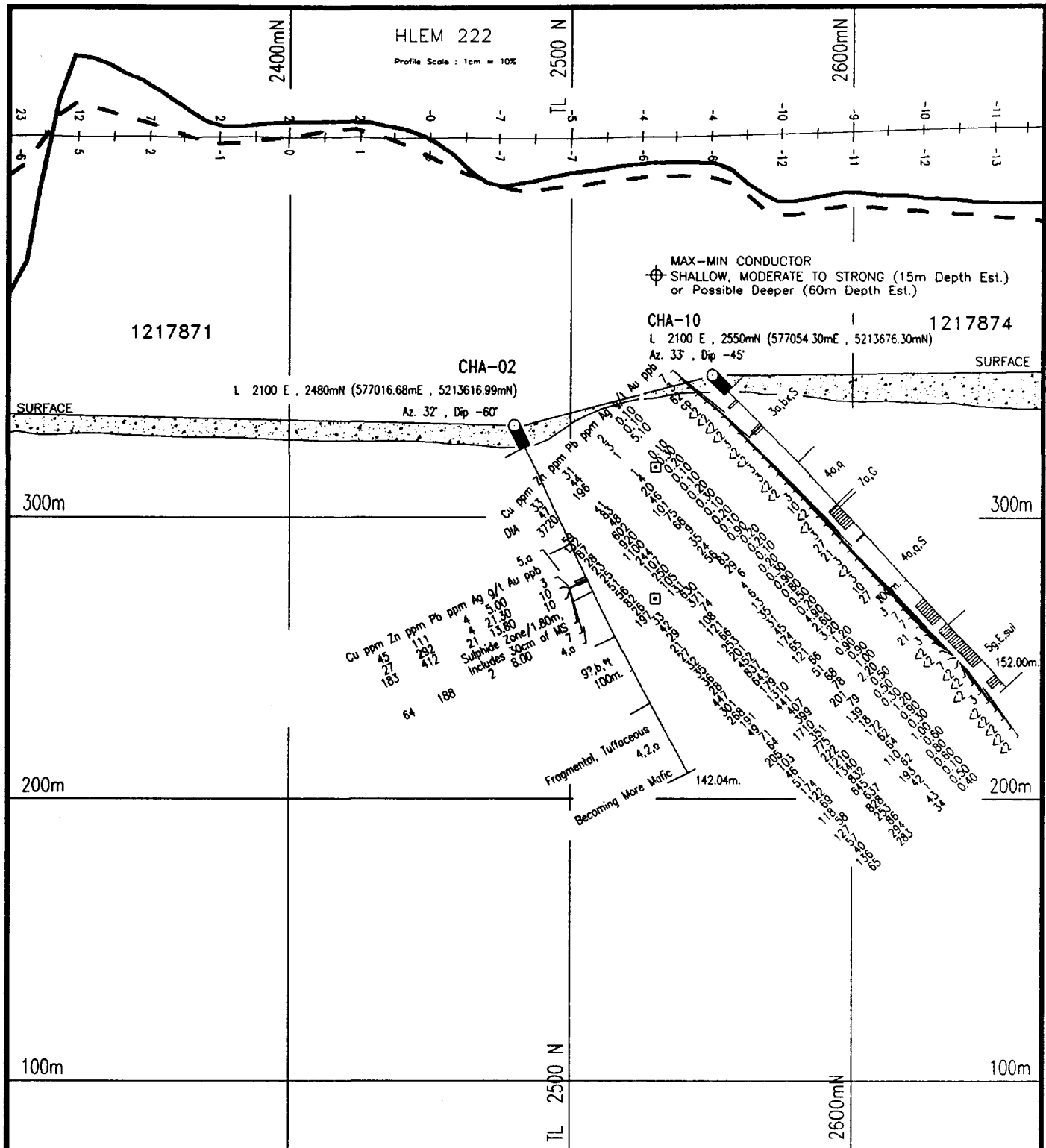
Exploration Division Timmins ONTARIO

CHAMBERS GRID
TEMAGAMI AREA

CHA-01 DRILL SECTION
L 2500 E

LOOKING 302° CHAMBERS Twp.

TRACED: PRODES	DATE: 01/04/97	NTS: 32-M/04	PROJECT: 8401
DRAWN: d e l	DATE: 20/05/98	MAP No:	FILE: 8401 C
SUPERVISED: R Foy	DATE: 01/04/97	SCALE 1:2 000 (metres)	
REVISED: P Prince	DATE: 03/04/98	0 10 20 30 40	



1217871

1217874

HLEM 222

Profile Scale : 1cm = 10%

SURFACE

SURFACE

CHA-02

CHA-10

L 2100 E, 2480mN (577016.68mE, 5213616.99mN)
Az. 32°, Dip -60°

L 2100 E, 2550mN (577054.30mE, 5213676.30mN)
Az. 33°, Dip -45°

300m

300m

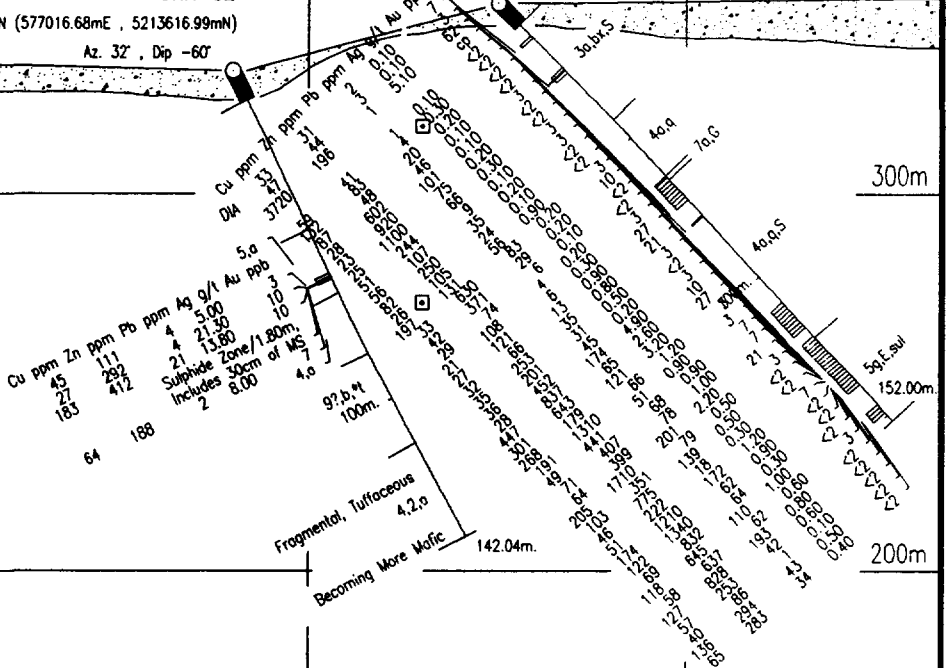
200m

200m

100m

100m

0m



Cu ppm Zn ppm Pb ppm Ag g/1 Au ppb
 45 111 4 5.00
 27 282 21 21.30
 183 412 2 13.80
 64 188
 Sulphide Zone/1.80m
 Includes 30cm of Mn
 8.00

97.5m
100m

142.04m

152.00m

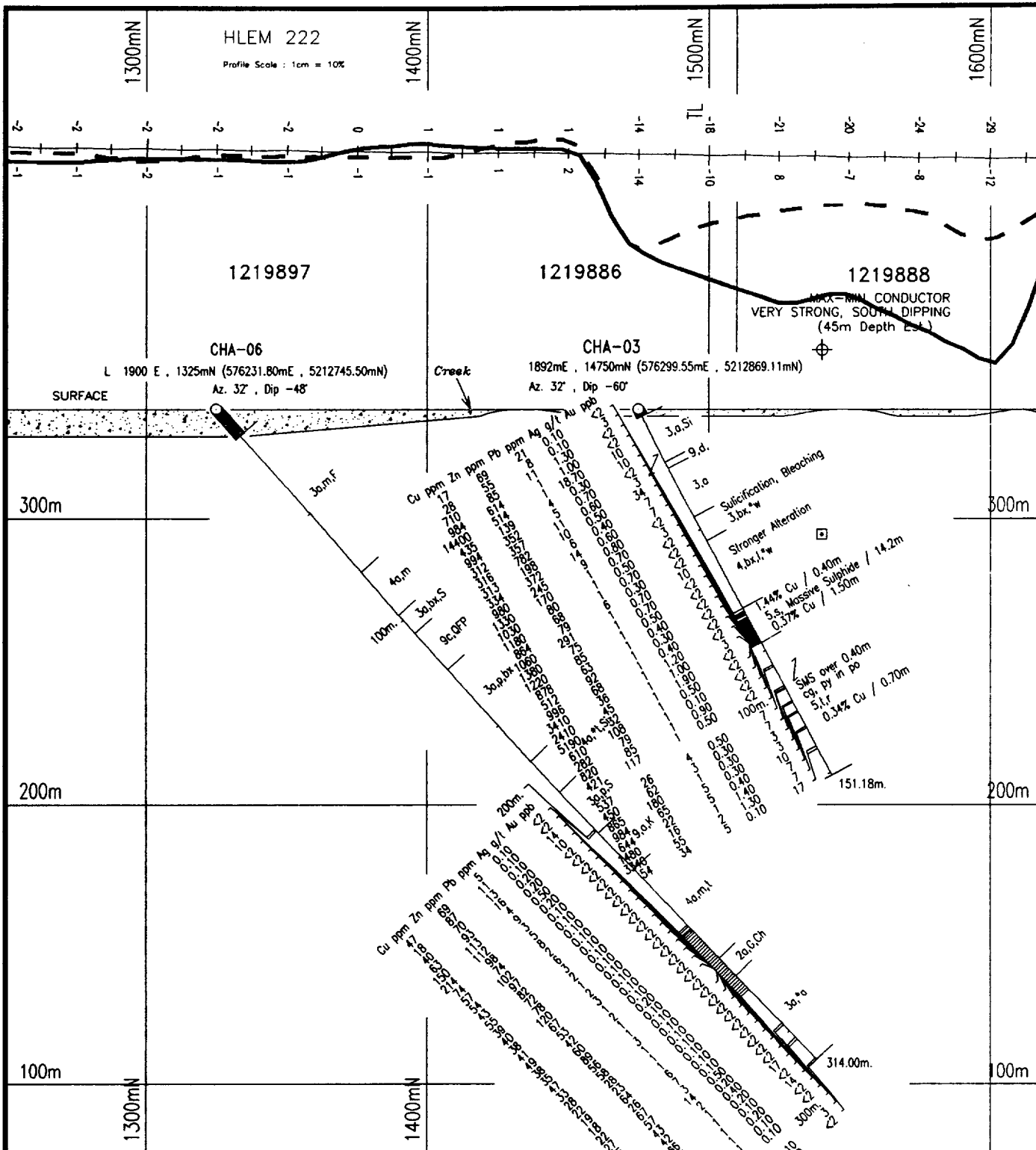
TL 2500 N

2600mN

2400mN

SEE LEGEND ON SEPARATE PAGE

FALCONBRIDGE LIMITED		
Exploration Division	Timmins ONTARIO	
CHAMBERS GRID TEMAGAMI AREA		
CHA-02 & 10 DRILL SECTION L 2100 E		
LOOKING 302°		CHAMBERS Twp.
TRACED: PRODES	DATE: 03/04/98	NTS: 32-M/04 PROJECT: 8401
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SUPERVISED: R Fay	DATE: 01/04/97	SCALE 1:2 000 (metres)
REVISED: P Prince	DATE: 03/04/98	0 10 20 30 40



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Exploration Division Timmins ONTARIO

CHAMBERS GRID
TEMAGAMI AREA

CHA-03 & 06 DRILL SECTION
L 1900 E

LOOKING 302° CHAMBERS Twp.

TRACED: PRODES	DATE: 06/04/98	NTS: 32-M/04	PROJECT: 8401
DRAWN: d e l	DATE: 20/05/98	MAP No:	FILE: 8401 P
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REVISED: P Prince	DATE: 07/04/98	0 10 20 30 40	

TL 1500mN

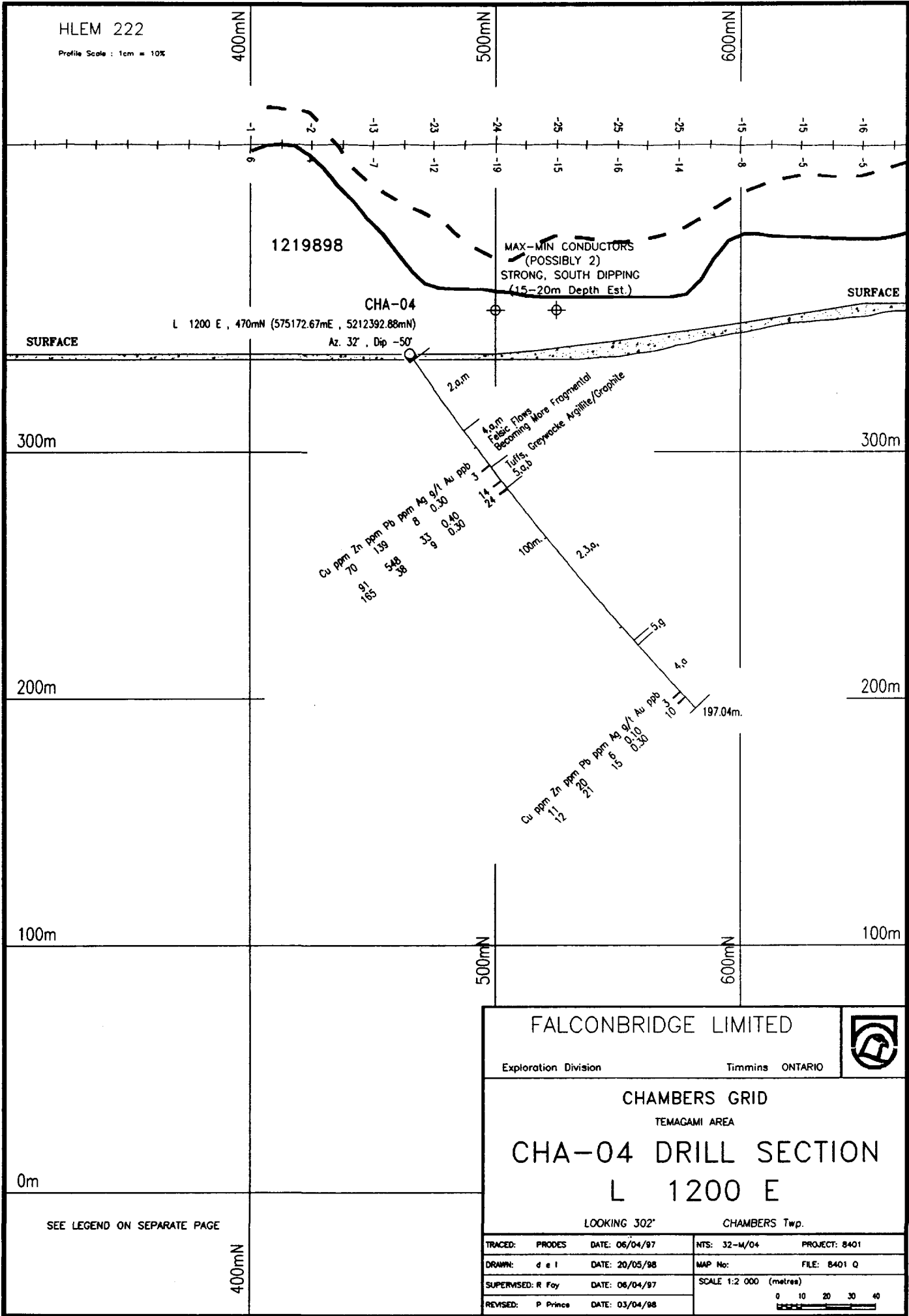
SEE LEGEND ON SEPARATE PAGE

1600mN

0m

HLEM 222

Profile Scale : 1cm = 10%



1219898

MAX-MIN CONDUCTORS
(POSSIBLY 2)
STRONG, SOUTH DIPPING
(15-20m Depth Est.)

CHA-04

L 1200 E , 470mN (575172.67mE , 5212392.88mN)
Az. 32° , Dip -50°

SURFACE

SURFACE

300m

300m

200m

200m

100m

100m

0m

500mN

600mN

400mN

SEE LEGEND ON SEPARATE PAGE

FALCONBRIDGE LIMITED

Exploration Division

Timmins ONTARIO



CHAMBERS GRID

TEMAGAMI AREA

CHA-04 DRILL SECTION

L 1200 E

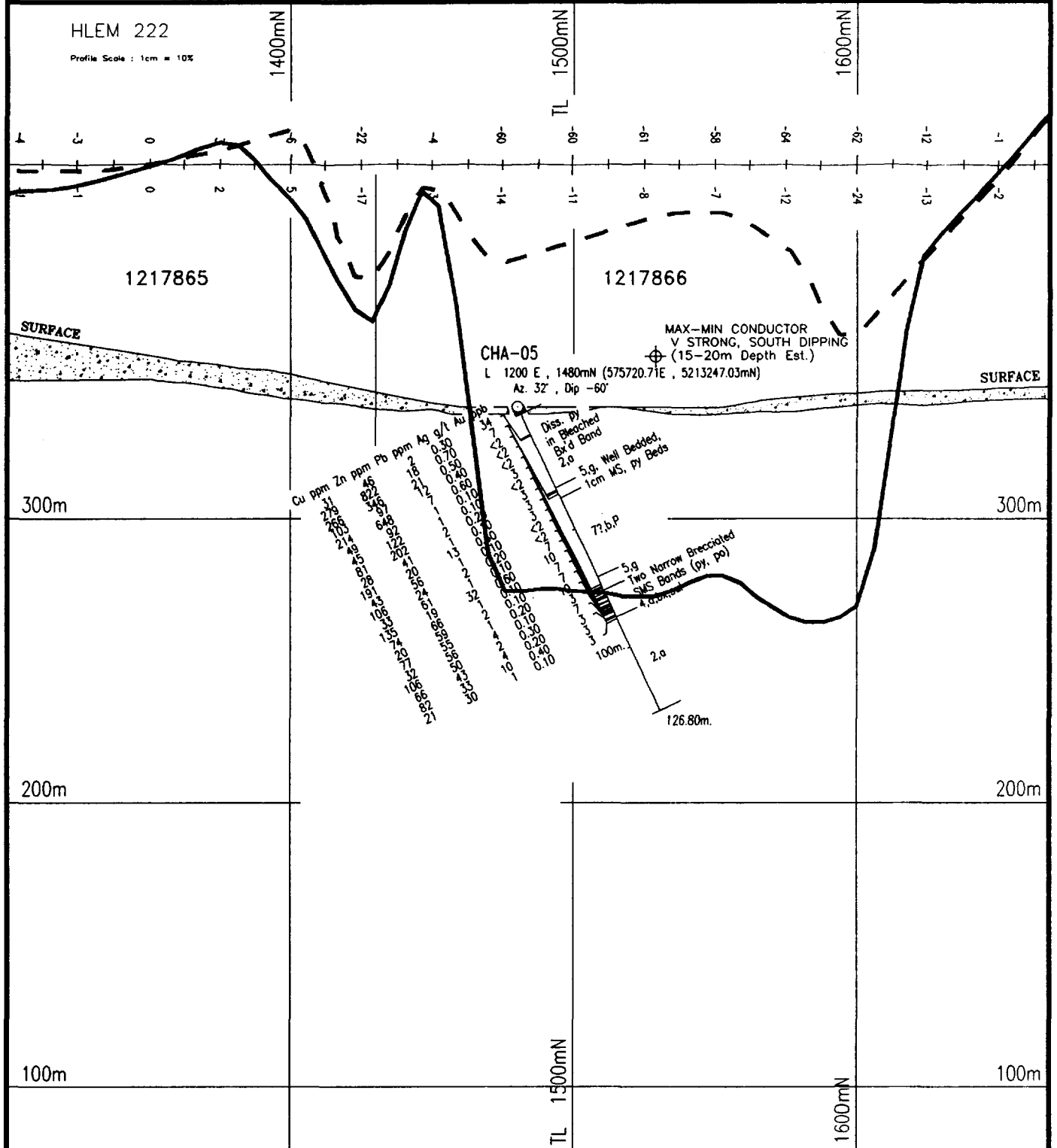
LOOKING 302°

CHAMBERS Twp.

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SUPERVISED: R Foy	DATE: 06/04/97	SCALE 1:2 000 (metres)	
REVISED: P Prince	DATE: 03/04/98	0 10 20 30 40	

HLEM 222

Profile Scale : 1cm = 10%



300m

300m

200m

200m

100m

100m

0m

TL 1500mN

1600mN

1400mN

SEE LEGEND ON SEPARATE PAGE

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Exploration Division

Timmins ONTARIO

CHAMBERS GRID

TEMAGAMI AREA

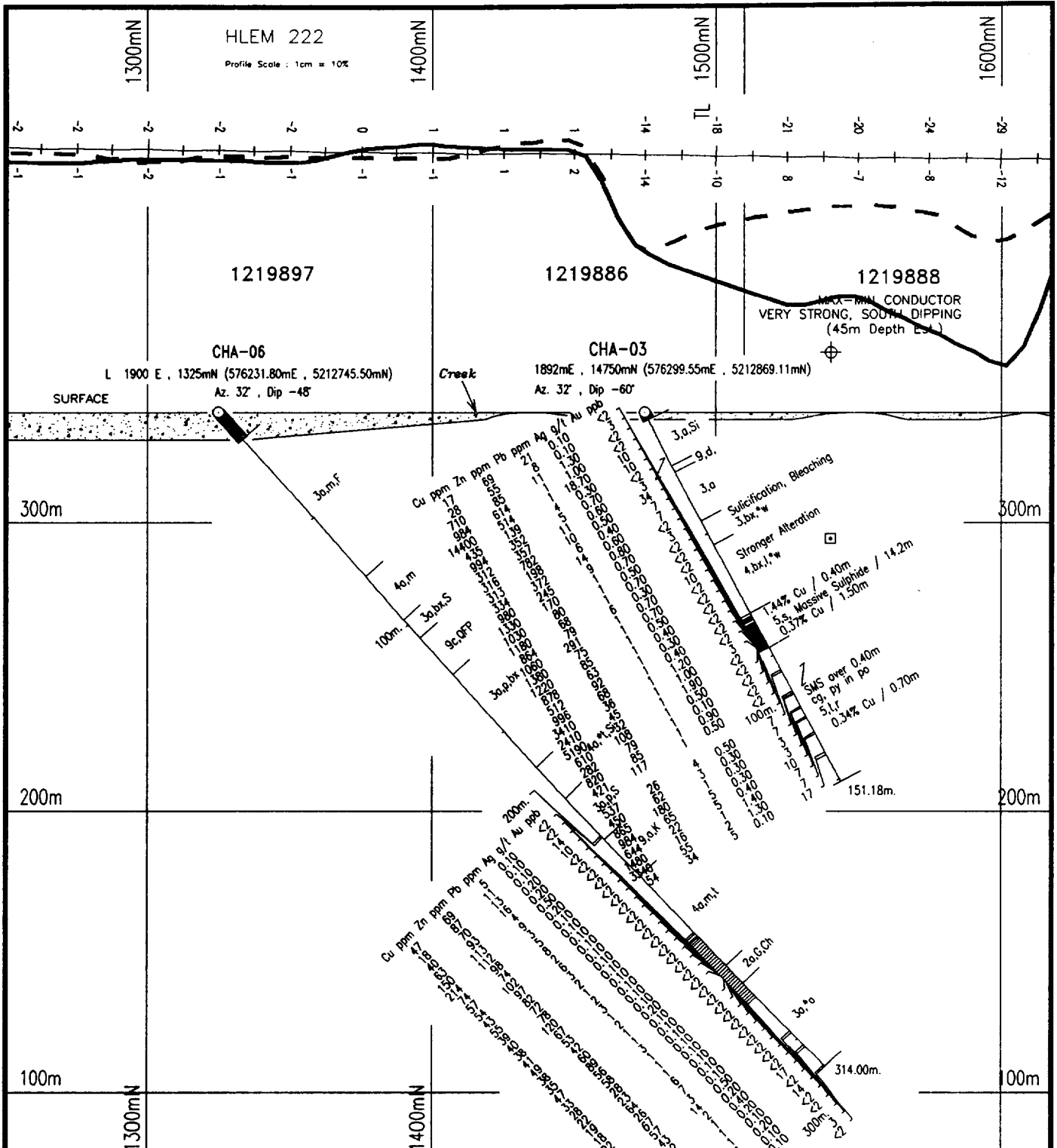
CHA-05 DRILL SECTION

L 1200 E

LOOKING 302°

CHAMBERS Twp.

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DRAWN:	d e l	DATE: 20/05/98	MAP No:	FILE: 8401 R
SUPERVISED:	R Foy	DATE: 01/04/97	SCALE 1:2 000 (metres)	
REVISED:	P Prince	DATE: 03/04/98	0 10 20 30 40	



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CHAMBERS GRID
TEMAGAMI AREA

CHA-03 & 06 DRILL SECTION
L 1900 E

LOOKING 302° CHAMBERS Twp.

TRACED:	PRODES	DATE: 06/04/98	NTS: 32-M/04	PROJECT: 8401
DRAWN:	d e l	DATE: 20/05/98	MAP No:	FILE: 8401 P
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REVISED:	P Prince	DATE: 07/04/98	0 10 20 30 40	

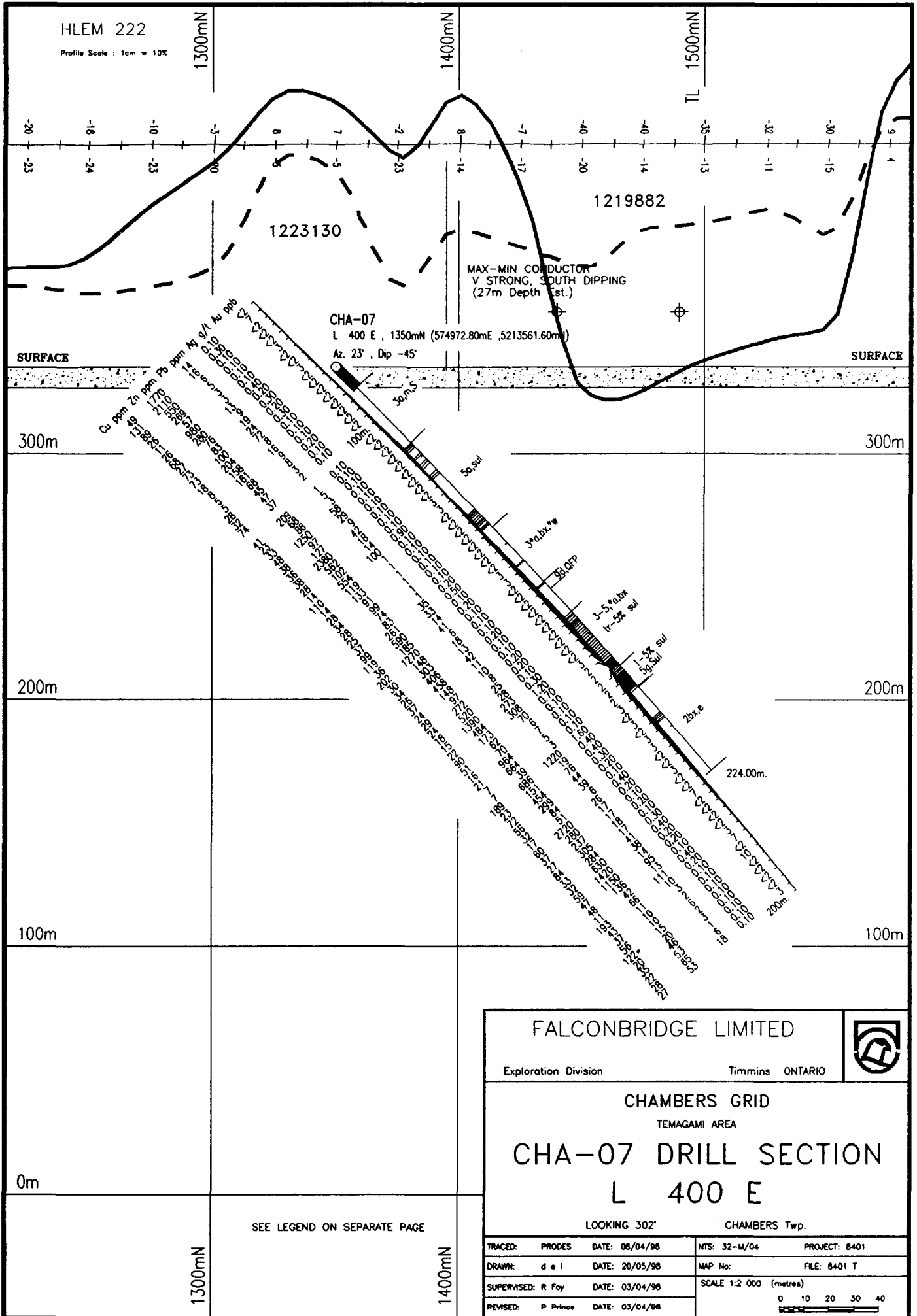
TL 1500mN

SEE LEGEND ON SEPARATE PAGE

1600mN

HLEM 222

Profile Scale : 1cm = 10%



HLEM 222

Profile Scale : 1cm = 10%

1100mN

1200mN

1300mN

1223130

1217882

1219882

CHA-08

L 100 E , 1145mN (574609.50mE , 5213547.00mN)

Az. 21° 30' , Dip -45°

MAX-MIN CONDUCTOR
V STRONG, SOUTH DIPPING
(15-20m Depth Est.)

SURFACE

SURFACE

300m

300m

200m

200m

100m

100m

0m

1300mN

1100mN

1200mN

SEE LEGEND ON SEPARATE PAGE

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Exploration Division

Timmins ONTARIO



CHAMBERS GRID

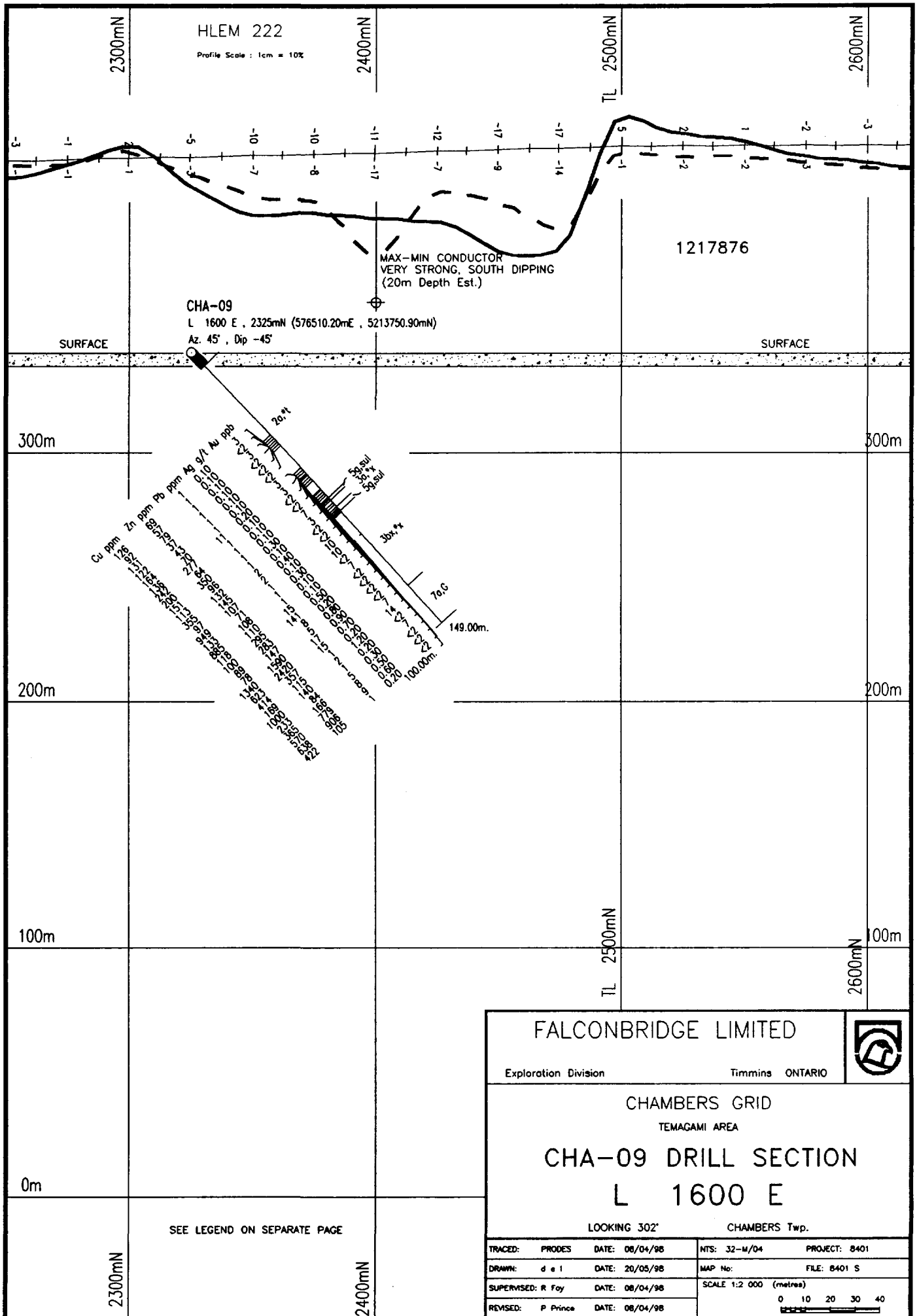
TEMAGAMI AREA

CHA-08 DRILL SECTION
L 100 E

LOOKING 302°

CHAMBERS Twp.

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DRAWN: d e l	DATE: 20/05/98	MAP No:	FILE: 8401 U
SUPERVISED: R Foy	DATE: 01/04/97	SCALE 1:2 000 (metres)	
REVISED: P Prince	DATE: 03/04/98	0 10 20 30 40	



FALCONBRIDGE LIMITED

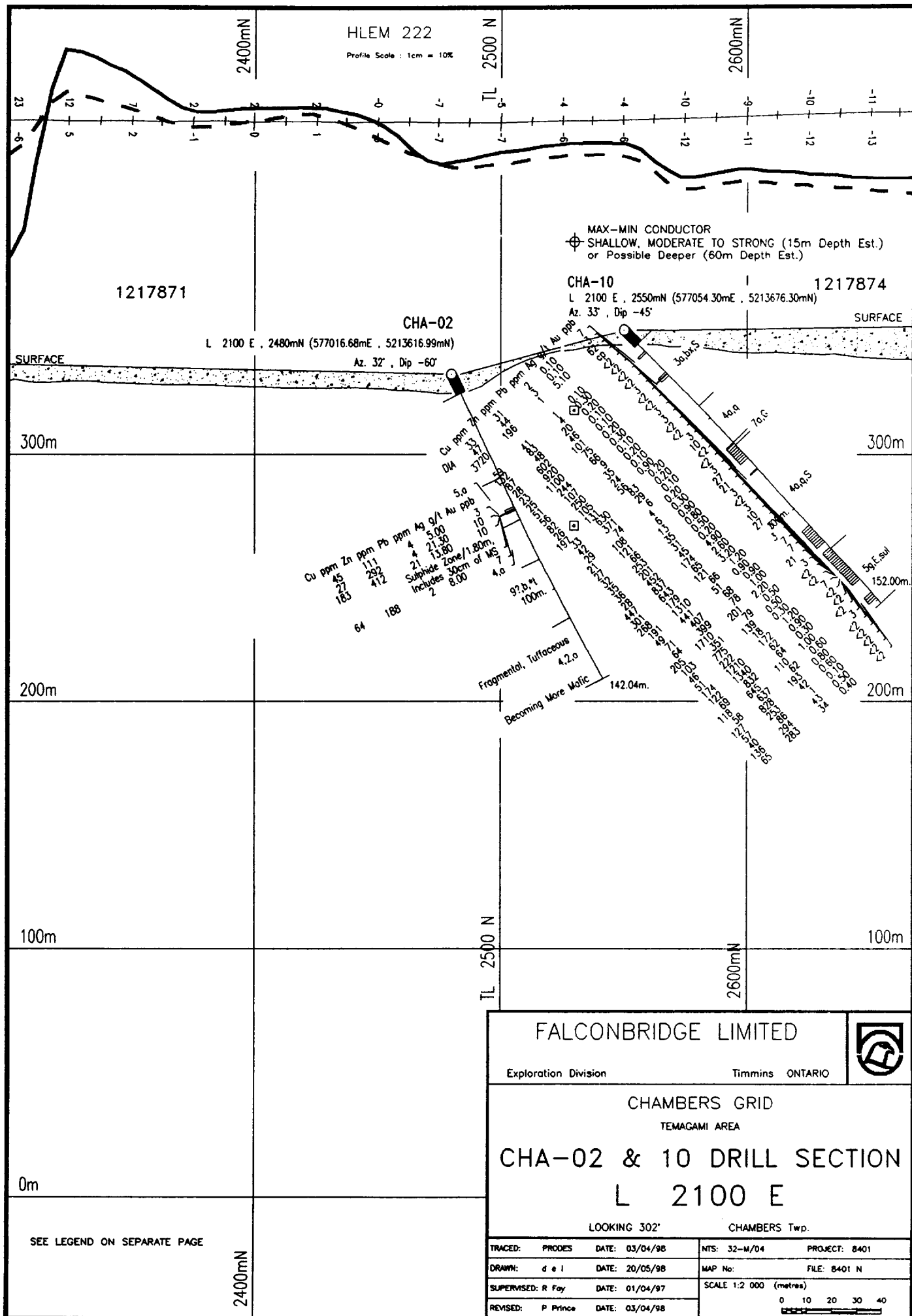
Exploration Division Timmins ONTARIO

CHAMBERS GRID
TEMAGAMI AREA

CHA-09 DRILL SECTION
L 1600 E

LOOKING 302° CHAMBERS Twp.

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DRAWN: d e l	DATE: 20/05/98	MAP No:	FILE: 8401 S
SUPERVISED: R Foy	DATE: 06/04/98	SCALE 1:2 000 (metres)	
REVISED: P Prince	DATE: 06/04/98	0 10 20 30 40	



FALCONBRIDGE LIMITED		
Exploration Division Timmins ONTARIO		
CHAMBERS GRID TEMAGAMI AREA		
CHA-02 & 10 DRILL SECTION L 2100 E		
LOOKING 302°		CHAMBERS Twp.
TRACED: PRODES	DATE: 03/04/98	NTS: 32-M/04 PROJECT: 8401
DRAWN: d e l	DATE: 20/05/98	MAP No: FILE: 8401 N
SUPERVISED: R Foy	DATE: 01/04/97	SCALE 1:2 000 (metres)
REVISED: P Prince	DATE: 03/04/98	0 10 20 30 40

SEE LEGEND ON SEPARATE PAGE

DIAMOND DRILL LOGS

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.66	Overburden «{OB}»					
3.66 TO 60.80	Felsic Volcanic, Fragmental «4,a,bx»	Fine grained, greyish, brittle, fractured, inhomogenous, mottled, altered, mineralized. Variably light to dark grey. Hard, siliceous with brittle fracturing throughout. Felsic fragmental/breccia, mottled nature, indistinct to good fragments.		Epidote, chlorite, carbonate. Fine epidote throughout varies from 0% to 15%. Lomafic volcanical sections of chlorite alteration. Carbonate veins, fracture fills and local pervasive flooding. Carb frags upto 1.5cm wide at 20 CA.	1-3% py,po throughout as fracture fills, irregular replacement blebs up to 1.5 cm round (1-3 per metre). 5.00-5.80 «10-15% py,po» as irreg mass and diss aggregates upto 5 cm in well dev felsic bx. 17.60-18.30 «5-8% py,po» as fract controlled veinlets upto 1cm wide. 45.60-46.90 «3-5% py» as blebs (upto 1cm) and fracture fills (2-4mm @ 10 CA), includes 5 cm SMS band (46.50m).	
60.80 TO 65.55	Sulphide Zone «4,a,bx ,SUL»	Similar to above unit but has increase abundance of sulphide (5% to SMS) and larger felsic fragments forming breccia. Narrow interflow sed horizons with sulphides.		Albite, minor epidote, carbonate.	5% to SMS of py,po, occur as large blebs (up to 2x2cm, fragment??), as MS bands (beds?) upto 2cm at 90 to CA, as irregular aggregates interstitial to bx fragments. 63.85-64.15 «MS,bx» 80% MS (py,po) as insitu? bx fragments.	
65.55 TO 76.50	«5,g,SUL»	Mixed unit of Greywacke and black Argillite with Sulphides. Sections vary from well bedded to disrupted, fractured, and altered.		carbonate veins in disrupted argillite sections.	massive beds of po,py in argillite at 80 to CA in discreet sections upto 60 cm. 70.80-71.60 «SMS,py,po» as narrow (1cm) contorted disrupted beds in argillite.	
76.50 TO 137.90	«5,a»	Massive grey-green greywacke with faint bedding, local sections of argillite beds(upto 20cm, every 3-5m). Greywack is locally disrupted, fractured, ghostly bx, some sulfs. Some thin felsic volcanic portions. 101.00-108.20 «DIA» 118.90-124.60 «ARG» 124.60- mixed beds of coarse geywacke/Arkose (QFP-look) and finer clastics and argillite.		some minor carb veining.	narrow bands of 20-30% po,py over 10-15cm occur every 2-6m.	
137.90 TO 199.95	«3,a»	Intermediate or silicified mafic volcanic, massive with common interflow bands locally developing weak bx texture. Some portions looking more felsic i.e.		silicification, some carbonate veining becoming more common from 174.0 to EOH.	trace to nil.	

HOLE NUMBER: CHA-01

DRILL HOLE RECORD

DATE: 03/05/1998

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
199.95 TO 199.95	«EOH»	162.7-163.8. Becoming more mafic at 174.0m.				

HOLE NUMBER: CHA-01

DRILL HOLE RECORD

LOGGED BY: R. POY

PAGE: 3

HOLE NUMBER : CHA-01

ASSAYS SHEET

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est. Ni %	Est. Po %	Est. Py %	Est. Cp %	Est. Sp %	Est. Gn %	ROCK TYPE	Comments
AT07211	5.00	5.80	0.80	82	312	113	94	<2	0.5					5.60												
AT07212	17.60	18.30	0.70	25	288	351	28	27	0.5					3.43												
AT07213	30.60	31.00	0.40	27	60	35	25	3	0.1					1.34												
AT07214	35.50	35.80	0.30	38	89	5	38	10	0.2					4.41												
AT07215	39.30	39.60	0.30	49	100	1	31	7	0.1					1.48												
AT07216	42.60	43.00	0.40	183	93	3	67	3	0.3					4.13												
AT07217	45.50	45.80	0.30	232	523	6	79	10	0.4					4.22												
AT07218	45.80	46.10	0.30	137	247	4	42	3	0.3					2.57												
AT07219	46.10	46.40	0.30	261	305	17	56	7	0.5					4.83												
AT07220	46.40	46.60	0.20	452	74	11	151	14	0.8					17.00												
AT07221	46.60	46.90	0.30	86	246	11	33	<2	0.3					2.28												
AT07222	51.20	51.70	0.50	75	60	18	29	<2	0.2					1.96												
AT07223	56.20	56.70	0.50	62	89	1	33	3	0.1					2.64												
AT07224	56.70	57.20	0.50	60	68	6	27	<2	0.1					1.72												
AT07225	57.20	57.50	0.30	236	71	1	38	3	0.2					8.85												
AT07226	57.50	59.00	1.50	11	36	1	10	7	0.1					0.16												
AT07227	59.00	60.00	1.00	57	39	4	21	3	0.2					1.60												
AT07228	60.00	60.50	0.50	195	764	13	46	7	0.4					5.77												
AT07229	60.50	60.80	0.30	71	247	8	27	3	0.3					3.16												
AT07230	60.80	61.10	0.30	233	382	28	87	7	0.5					15.80												
AT07231	61.10	61.60	0.50	58	281	6	29	3	0.2					3.13												
AT07232	61.60	62.60	1.00	33	86	5	15	<2	0.1					1.22												
AT07233	62.60	63.00	0.40	22	51	10	13	<2	0.1					0.89												
AT07234	63.00	63.50	0.50	82	248	8	41	10	0.2					5.63												
AT07235	63.50	63.85	0.35	107	131	9	32	3	0.2					7.99												
AT07236	63.85	64.15	0.30	35	17	45	45	34	0.7					44.15												
AT07237	64.15	64.75	0.60	64	164	9	31	<2	0.2					9.12												
AT07238	64.75	65.55	0.80	495	688	17	59	<2	0.5					5.49												
AT07239	69.90	70.80	0.90	251	748	20	64	3	0.3					5.08												
AT07240	70.80	71.60	0.80	1280	1180	85	195	17	1.7					25.30												
AT07241	75.60	75.90	0.30	150	185	77	40	10	0.3					8.85												
AT07242	96.50	97.00	0.50	97	207	73	37	7	0.3					6.92												
AT07243	99.00	99.30	0.30	85	105	3	63	<2	0.1					1.48												
AT07244	116.80	117.20	0.40	134	363	14	68	3	0.3					5.61												

HOLE NUMBER : CHA-01

ASSAYS SHEET

PAGE: 4

HOLE NUMBER : CHA-01

GEOCHEMICAL ASSAY

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	SI02 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AT05521	11.00	14.00	3.00	73.40	10.80	3.06	2.17	0.29	2.46	4.99	0.54	0.16	0.10	0.05	2.85	100.87	18	154		15	130	25			3,8j	186
AT05522	22.20	26.20	4.00	70.24	11.04	4.29	2.38	0.26	2.36	5.56	0.55	0.22	0.11	0.14	2.87	100.02	14	135		15	110	<5			3,8j	160
AT05523	32.30	35.40	3.10	72.43	10.24	3.23	2.02	0.39	1.96	5.13	0.47	0.20	0.09	0.08	2.59	98.83	14	141		20	45	50			4,9jA	184
AT05524	41.10	43.80	2.70	49.27	10.38	6.08	4.21	0.24	0.30	24.19	0.58	0.10	1.19	0.05	3.54	100.13	10	79		5	160	5			2,7jv	157
AT05525	53.60	56.70	3.10	70.43	10.83	2.94	2.25	0.66	1.76	7.52	0.50	0.18	0.18	0.06	2.91	100.22	22	145		15	45	40			3,8(j)	202
AT05526	59.70	62.70	3.00	70.88	10.71	3.25	1.84	0.48	2.10	5.45	0.50	0.20	0.12	0.11	2.48	98.12	4	122		30	170	90			3,8j	184
AT05527	78.00	81.10	3.10	66.19	12.11	4.97	2.26	0.89	1.70	8.11	0.71	0.30	0.22	0.06	2.75	100.27	10	142		10	270	60			3,8jy	160
AT05528	90.20	93.30	3.10	76.21	11.29	2.15	1.13	0.62	2.44	3.25	0.18	0.10	0.09	0.14	2.23	99.83	18	65		<5	1225	25			4,9(h)	217
AT05529	142.00	145.10	3.10	65.09	12.29	6.22	2.24	2.12	0.48	9.77	0.83	0.40	0.22	0.08	1.25	100.99	4	118		45	260	115			3,8jy	139
AT05530	157.30	160.30	3.00	65.67	11.21	7.81	2.57	1.78	0.92	7.67	0.71	0.28	0.15	0.13	1.76	100.66	10	121		30	260	75			3,8j	107
AT05531	181.70	184.70	3.00	67.87	11.63	6.45	1.82	2.24	1.12	5.67	0.75	0.26	0.11	0.09	1.10	99.11	20	135		30	95	70			3,8(j)	119
AT05532	193.80	196.90	3.10	57.58	10.85	7.50	4.15	1.65	0.74	12.09	1.50	0.42	0.18	0.14	1.95	98.75	16	129		50	210	85			2,7jyB	110

HOLE NUMBER : CHA-01

GEOCHEMICAL ASSAY

PAGE: 5

HOLE NUMBER : CHA-01

GEOCHEMICAL ASSAYS

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HP PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM		
AT05521	11.00	14.00	3.00						17		0.52	45																			
AT05522	22.20	26.20	4.00						26		0.49	90																			
AT05523	32.30	35.40	3.10						21		0.71	50																			
AT05524	41.10	43.80	2.70						13		0.47	110																			
AT05525	53.60	56.70	3.10						18		1.10	40																			
AT05526	59.70	62.70	3.00						19		1.17	85																			
AT05527	78.00	81.10	3.10						23		0.09	115																			
AT05528	90.20	93.30	3.10						23		0.37	25																			
AT05529	142.00	145.10	3.10						39		0.01	160																			
AT05530	157.30	160.30	3.00						37		0.01	140																			
AT05531	181.70	184.70	3.00						29		0.01	105																			
AT05532	193.80	196.90	3.10						44		<0.01	195																			

HOLE NUMBER: CHA-01

GEOCHEMICAL ASSAYS

PAGE: 6

HOLE NUMBER : CHA-01

GEOCHEMICAL ASSAYS

DATE: 05/03/1991

Sample	From (M)	To (M)	Leng. (M)	SM PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT05521	11.00	14.00	3.00														2						8		0.51	0.28	12	58	448
AT05522	22.20	26.20	4.00														1						5		0.50	0.39	2	51	423
AT05523	32.30	35.40	3.10														2						8		0.48	0.32	25	52	115
AT05524	41.10	43.80	2.70														1						6		0.29	0.59	1	42	667
AT05525	53.60	56.70	3.10														3						8		0.41	0.27	18	53	68
AT05526	59.70	62.70	3.00														1						6		0.44	0.30	49	51	354
AT05527	78.00	81.10	3.10														2						6		0.40	0.41	27	40	303
AT05528	90.20	93.30	3.10														3						4		0.45	0.19	22	56	1976
AT05529	142.00	145.10	3.10														2						9		0.35	0.51	51	25	123
AT05530	157.30	160.30	3.00														2						9		0.44	0.70	29	27	146
AT05531	181.70	184.70	3.00														3						11		0.43	0.55	38	25	42
AT05532	193.80	196.90	3.10														2						12		0.45	0.69	20	35	127

HOLE NUMBER : CHA-01

GEOCHEMICAL ASSAYS

PAGE: 7

HOLE NUMBER : CHA-01

GEOCHEMICAL ASSAYS

DATE: 05/03/19

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AT05521	11.00	14.00	3.00		<20	
AT05522	22.20	26.20	4.00		20	
AT05523	32.30	35.40	3.10		<20	
AT05524	41.10	43.80	2.70		20	
AT05525	53.60	56.70	3.10		<20	
AT05526	59.70	62.70	3.00		<20	
AT05527	78.00	81.10	3.10		<20	
AT05528	90.20	93.30	3.10		<20	
AT05529	142.00	145.10	3.10		<20	
AT05530	157.30	160.30	3.00		<20	
AT05531	181.70	184.70	3.00		<20	
AT05532	193.80	196.90	3.10		<20	

HOLE NUMBER: CHA-01

GEOCHEMICAL ASSAYS

PAGE: 8

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

HOLE NUMBER: CHA-02

DATE: 07/14/1998

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: CHAMBERS
PROJECT NUMBER: 8401
CLAIM NUMBER: 1217871
LOCATION: CHAMBERS TWP

PLOTTING COORDS GRID: UTM
NORTH: 5213616.99N
EAST: 577016.68E
ELEV: 332.00

ALTERNATE COORDS GRID: CHAMBERS
NORTH: 24+80N
EAST: 21+ 0E
ELEV: 332.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 142.04M
START DEPTH: 0.00M
FINAL DEPTH: 142.04M

COLLAR ASTRONOMIC AZIMUTH: 32° 0' 0"

GRID ASTRONOMIC AZIMUTH: 302° 0' 0"

DATE STARTED: 11/26/1996
DATE COMPLETED: 11/27/1996
DATE LOGGED: 02/14/1996

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: DOMINIK
CASING: 9.00m
CORE STORAGE: KIDD MINE SITE
UTM COORD.:

COMMENTS : TESTED MODERATE MAX-MIN CONDUCTOR ALONG ALTERED FELSIC/MAPIC CT; HIT NARROW SULF ZONE AT CT.
WEDGES AT:

DIRECTIONAL DATA:

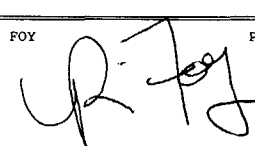
Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	29° 0' 0"	-60° 0' 0"	S	OK		-	-	-	-	-	
120.00	39° 0' 0"	-59° 0' 0"	S	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	

HOLE NUMBER: CHA-02

DRILL HOLE RECORD

LOGGED BY: R. FOY

PAGE: 1



HOLE NUMBER: CHA-02

DRILL HOLE RECORD

DATE: 03/05/1998

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 9.00	«OB»					
9.00 TO 47.70	«DIA»	massive homogenous, uniform, coarse grained, dark green, typical diabase dyke.				
47.70 TO 67.20	«5,a»	finw grained, dark clastic sediments well bedded at 40 to CA, becoming very disrupted and altered at 55.0m.		hornfels through most of section, granitised, some carbonate veining.	61.00-62.80 sulphide zone, py, po as as semi-continuous 1cm bands at 80 to CA, and as replacement of some clasts/fragments??. 62.20-62.50 «MS» py bands at 80 to CA in fg po.	
67.20 TO 85.70	«4,a»	very fractured, broken granitized felsic volcanic.		epidotised, carbonated, silicified	trace to nil	
85.70 TO 113.40	«97,b,*t»	medium grained felsic intrusive?, pervasive strong foliation at 45 to CA, dark with ghostly pink porphytic texture throughout. Foliated but has general massive, uniform appearance.				
113.40 TO 142.04	«4,2,a»	Alternating mix of felsic flows and fragmental units with mafic fragmentals. Tuff and pyroclastic textures throughout. Strong foliation/banding at 50 to CA. Becoming more mafic dominated downhole.				
142.04 TO 142.04	«EOH»					

HOLE NUMBER: CHA-02

DRILL HOLE RECORD

LOGGED BY: R. FOY

PAGE: 2

HOLE NUMBER : CHA-02

ASSAYS SHEET

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S ‰	Se ppm	As ppm	Hg ppb	Sb ppm	Est. Ni ‰	Est. Po ‰	Est. Py ‰	Est. Cp ‰	Est. Sp ‰	Est. Gn ‰	ROCK TYPE	Comments	
AT07245	61.00	61.90	0.90	45	111	4	92	3	5.0					2.85													
AT07246	61.90	62.20	0.30	27	292	4	43	10	21.3					9.67													
AT07247	62.20	62.50	0.30	183	412	21	91	10	13.8					31.50													
AT07248	62.50	62.80	0.30	64	188	2	27	7	8.0					7.11													

HOLE NUMBER: CHA-02

ASSAYS SHEET

PAGE: 3

HOLE NUMBER : CHA-02

GEOCHEMICAL ASSAY

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	CR2O3 %	LOI %	SUM %	Y PPM	Zr PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AT05533	65.80	68.90	3.10	69.70	10.58	3.04	2.12	0.38	4.08	6.97	0.60	0.26	0.20	0.07	1.88	99.88	18	220		25	120	55			3,8j	141
AT05534	84.10	87.20	3.10	73.73	11.23	1.82	1.90	0.29	3.00	5.88	0.45	0.18	0.11	0.09	2.11	100.79	12	106		15	110	40			4,9jA	220
AT05535	108.50	111.60	3.10	70.24	10.69	4.84	2.31	0.35	2.68	4.74	0.40	0.14	0.10	0.08	2.12	98.69	10	98		10	75	45			4,9jA	136

HOLE NUMBER : CHA-02

GEOCHEMICAL ASSAY

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HOLE NUMBER : CHA-02

GEOCHEMICAL ASSAYS

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM		
AT05533	65.80	68.90	3.10						17		0.64	45																			
AT05534	84.10	87.20	3.10						21		0.12	75																			
AT05535	108.50	111.60	3.10						15		<0.01	55																			

HOLE NUMBER: CHA-02

GEOCHEMICAL ASSAYS

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HOLE NUMBER : CHA-02

GEOCHEMICAL ASSAYS

DATE: 05/03/1994

Sample	From (M)	To (M)	Leng. (M)	SM PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MG#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT05533	65.80	68.90	3.10														2						6		0.42	0.29	26	64	316
AT05534	84.10	87.20	3.10														2						5		0.43	0.16	21	70	379
AT05535	108.50	111.60	3.10														2						5		0.54	0.45	19	49	214

HOLE NUMBER: CHA-02

GEOCHEMICAL ASSAYS

PAGE: 6

HOLE NUMBER : CHA-02

GEOCHEMICAL ASSAYS

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AT05533	65.80	68.90	3.10		<20	
AT05534	84.10	87.20	3.10		<20	
AT05535	108.50	111.60	3.10		<20	

HOLE NUMBER : CHA-02

GEOCHEMICAL ASSAYS

PAGE: 7

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	*OB*					
3.00 TO 22.00	*3,a,Si*	broken, fractured, veined silicified intermediate to felsic volcanic, sediment??. Granitized, some feldspar laths speckled throughout.		silicified, carbonated	trace py smears on fracture surfaces.	
22.00 TO 24.50	*9,d,*	unit is mix of porphytic sections (veins) in fractured altered intermediate volcanic.		fracturing and bleaching of intrusive and host.	nil to trace.	
24.50 TO 44.80	*3,a*	similar to previous section. massive intermediate volcanic cut by discreet QFP veins (account for 10-20% of unit). Fractured by hairline veinlets.		carbonate fills veinlets upto 5mm wide at various CA, throughout.	minor to trace sulphides in QFP veins.	
44.80 TO 54.70	*3,bx,*w*	Agglomerate or felsic fragmental: 30-40% oblong felsic volcanic fragments in a dark fg intermediate matrix. Becoming more felsic downhole. Cut by well developed Feldspar porphyry veins/dykes up to 1.5m long. Some tuff beds at 45 CA.		silicifications and bleaching throughout most of unit.	trace minor 1-3mm thick py fg py beds in tuff sections.	
54.70 TO 82.40	*4,bx,l,*w*	similar to overlying unit, more felsic but with some narrow mafic bands. Also has feldspar porphyry dykes. Strong flow banding? and bedding (tuffs) at 20-40 CA. Flow banding getting more prominent downhole.		similar to above, stronger bleached look.	trace sulfs.	
82.40 TO 96.60	*5,s*	Sulphide Zone: section is 80% massive sulphides with some felsic volcanic, chert, carbonate, and possible iron formation section comprising the remaining 20%. Low base metal content and BIF portion at 84.2-84.5 and 96.5-96.0 and underlying IF sections indicates unit is a probable sulphide facies IF		Garnet porphorblasts in felsic volcanic portions.	massive sulphides start at 83.9m to 95.4 and occur as massive po with exsolved py as 1cm stringers, euhedral crystals upto 1cm, as subhedral aggregates upto 3cm. minor cpy on fracture veinlets and surfaces.	
96.60 TO 151.18	*5,t,r*	Unit is mixed bag of pyroclastics,tuffs and narrow IF beds cut by irregular altered not well developed felsic intrusive. General bedding at 20-30 CA. Seds becoming finer grained, more massive with more frequent magnetite-rich sections; some		some carbonate fracturing and veining throughout	narrow (upto 40cm) bands of bedded sedimentary magnetite-rich py,po,with trace cpy. 134.3-135.9 some sulphide (po,py) pieces (1x3cm) in agglomerate portion.	

HOLE NUMBER: CHA-03

DRILL HOLE RECORD

DATE: 03/05/1998

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
151.18 TO 151.18	«EOH»	greywacke beds.				

HOLE NUMBER: CHA-03

DRILL HOLE RECORD

LOGGED BY: R. FOY

PAGE: 3

HOLE NUMBER : CHA-03

ASSAYS SHEET

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est.Ni †	Est.Po †	Est.Py †	Est.Cp †	Est.Sp †	Est.Gn †	ROCK TYPE	Comments	
AT07249	82.40	83.40	1.00	17	69	21	45	<2	0.1					1.37													
AT07250	83.40	83.90	0.50	28	55	8	37	3	0.1					2.19													
AT07274	83.90	84.20	0.30	710	85	11	461	<2	1.3					26.45													
AT07275	84.20	84.50	0.30	984	614	1	67	<2	1.0					3.31													
AT07276	84.50	84.90	0.40	14400	514	1	297	10	18.7					8.26													
AT07277	84.90	86.00	1.10	435	139	4	217	10	0.3					0.87													
AT07278	86.00	86.50	0.50	994	352	5	686	<2	0.7					30.83													
AT07279	86.50	87.00	0.50	312	357	11	265	3	0.6					42.65													
AT07280	87.00	87.50	0.50	316	782	10	291	34	0.5					37.93													
AT07281	87.50	88.00	0.50	313	198	6	288	7	0.4					39.95													
AT07282	88.00	88.50	0.50	334	372	14	285	7	0.6					42.90													
AT07283	88.50	89.00	0.50	980	245	9	279	<2	0.8					48.60													
AT07284	89.00	89.50	0.50	1330	170	1	1560	3	0.7					32.70													
AT07285	89.50	90.00	0.50	1030	80	1	1730	<2	0.5					30.80													
AT07286	90.00	90.40	0.40	1180	68	1	1690	<2	0.7					32.70													
AT07287	90.40	90.70	0.30	864	79	6	116	<2	0.3					1.97													
AT07288	90.70	91.00	0.30	1060	291	1	1130	10	0.7					16.20													
AT07289	91.00	91.50	0.50	1380	75	1	1490	<2	0.7					27.20													
AT07290	91.50	92.00	0.50	1220	85	1	1270	<2	0.5					16.50													
AT07291	92.00	92.50	0.50	878	63	1	1470	<2	0.4					26.30													
AT07292	92.50	93.00	0.50	512	92	1	1220	<2	0.3					18.70													
AT07293	93.00	93.50	0.50	996	68	1	1030	<2	0.4					15.05													
AT07294	93.50	94.00	0.50	3410	36	1	1850	<2	1.2					28.10													
AT07295	94.00	94.50	0.50	2410	45	1	1640	3	1.0					21.55													
AT07296	94.50	95.00	0.50	5190	32	1	1410	<2	1.9					26.80													
AT07297	95.00	95.50	0.50	610	108	1	891	<2	0.5					20.20													
AT07298	95.50	96.00	0.50	282	79	1	675	<2	0.1					1.86													
AT07299	96.00	96.30	0.30	820	85	1	2490	<2	0.9					5.66													
AT07300	96.30	96.60	0.30	421	117	1	870	<2	0.5					2.63													
AT06818	105.80	106.50	0.70	537	26	4	595	7	0.5					11.90													
AT06819	114.30	115.00	0.70	450	62	3	735	7	0.3					14.35													
AT06820	115.25	115.50	0.25	865	180	1	689	3	0.3					13.10													
AT06821	120.40	120.60	0.20	984	65	5	1560	3	0.3					13.90													
AT06822	120.60	121.00	0.40	644	22	5	1760	10	0.4					31.95													
AT06823	124.70	125.20	0.50	1480	16	1	665	7	1.4					12.20													
AT06824	131.00	131.70	0.70	3340	55	2	1830	7	1.3					14.40													
AT06825	139.00	140.10	1.10	54	34	5	232	17	0.1					8.47													

HOLE NUMBER : CHA-03

ASSAYS SHEET

PAGE: 4

HOLE NUMBER : CHA-03

GEOCHEMICAL ASSAY

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	CR2O3 %	LOI %	SUM %	Y PPM	Zr PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AT05536	22.00	24.00	2.00	66.06	12.00	5.84	1.59	2.78	1.44	5.45	0.65	0.18	0.06	0.14	1.62	97.81	<2	47		25	100	55			3,8j	119
AT05537	59.70	62.80	3.10	78.20	11.11	1.64	1.36	0.57	3.18	2.17	0.04	0.06	0.06	0.07	2.03	100.49	38	70		<5	100	30			4,9HB	206
AT05538	75.00	78.00	3.00	79.11	9.85	2.56	0.51	1.34	2.78	2.28	0.02	0.06	0.05	0.21	1.13	99.90	46	70		5	100	35			4,9HB	147

HOLE NUMBER: CHA-03

GEOCHEMICAL ASSAY

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HOLE NUMBER : CHA-03

GEOCHEMICAL ASSAYS

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	
AT05536	22.00	24.00	2.00						27		0.23	90																		
AT05537	59.70	62.80	3.10						9		<0.01	15																		
AT05538	75.00	78.00	3.00						26		0.01	30																		

HOLE NUMBER : CHA-03

GEOCHEMICAL ASSAYS

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	SM PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT05536	22.00	24.00	2.00														2						5		0.41	0.49	35	26	36
AT05537	59.70	62.80	3.10														3						3		0.60	0.15	22	67	175
AT05538	75.00	78.00	3.00														4						3		0.35	0.26	69	46	75

HOLE NUMBER: CHA-03

GEOCHEMICAL ASSAYS

PAGE: 7

HOLE NUMBER : CHA-03

GEOCHEMICAL ASSAYS

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AT05536	22.00	24.00	2.00		<20	
AT05537	59.70	62.80	3.10		<20	
AT05538	75.00	78.00	3.00		<20	

HOLE NUMBER: CHA-03

GEOCHEMICAL ASSAYS

PAGE: 8

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	<{OB}>					
3.00 TO 40.80	<2,a,m>	mafic to intermediate volcanic, typically fractured and vein. some narrow more felsic bands.		low density carbonate veinlets throughout	nil to trace py, smeared along fracture and slip surfaces.	
40.80 TO 60.90	<4,a,m>	felsic volcanic flows, generally massive and indistinct, to becoming more fragmental at bottom of unit. Distinct agglomerate fragments and possible sulphide clasts. Becoming more mixed in downhole portion, hosting sedimentary beds, narrow (4cm) graphite horizons.		weak seritization.	1% py as oval clasts? (1x2cm) in fragmetal portion of unit. 1-2% disseminated py,po in felsic portions.	
60.90 TO 72.10	<5,a,b>	Mixed bag of mostly medium to coarse clastics and tuffs?, some greywacke portions and argillite sections, later hosting sulphide beds and graphite. Some sections have dirty felsic volcanic appearance.		low density carbonate vein(lets) throughout	1-2% disseminated py,po in felsic portions. 5% py,po beds upto 1cm in argillite portions.	
72.10 TO 158.30	<2,3,a,>	Variably textured intermediate volcanics with some felsic portion, some mg feldpar-phyric portions. low density of fractures, veins, weakly altered		some weak silification, carbonate veining	trace to minor py,po smeared on slip surfaces.	
158.30 TO 160.90	<5,g>	silified black argillite/chert unit locally disrupted/intercalated with felsic fragmental/agglomerate beds/bands.		pervasive silicification	1-3% py,po as irregular blebs and as smears along fracture surfaces.	
160.90 TO 197.04	<4,a>	fg felsic volcanic flows and ghostly fragment. Typically massive felsic flow portions seperated by ghostly fragmental sections with very dark silicious matrix to clasts?		weak silification, sericitization	<1% vfg disseminated py in very felsic portions.	
197.04 TO 197.04	<EOH>					

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Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est. Ni %	Est. Po %	Est. Py %	Est. Cp %	Est. Sp %	Est. Gn %	ROCK TYPE	Comments	
AT06826	59.75	60.05	0.30	70	139	8	59	3	0.3					7.06													
AT06827	68.00	68.40	0.40	91	548	33	128	14	0.4					2.25													
AT06828	72.25	72.85	0.60	165	38	9	71	24	0.3					5.23													
AT06829	187.30	187.70	0.40	11	20	6	13	3	0.1					0.13													
AT06830	190.50	190.80	0.30	12	21	15	26	10	0.3					0.46													

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GEOCHEMICAL ASSAY

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Sample	From (M)	To (M)	Leng. (M)	SI02 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AT05539	4.90	7.90	3.00	60.48	11.27	6.05	4.17	2.67	0.98	9.03	0.84	0.22	0.12	0.05	2.09	97.97	20	121		30	140	90			2,7(j)	116
AT05540	20.10	23.20	3.10	55.57	11.10	7.84	4.22	2.07	1.16	9.90	0.77	0.20	0.15	0.05	5.96	98.99	14	111		25	125	65			2,7jv	100
AT05541	35.40	38.40	3.00	60.11	11.52	7.15	3.46	2.62	0.36	10.24	0.84	0.22	0.15	0.08	2.02	98.77	18	122		20	145	60			2,7(j)	114
AT05542	56.70	59.70	3.00	69.60	11.25	5.14	1.72	1.81	1.72	4.61	0.46	0.20	0.09	0.13	1.89	98.62	8	95		15	60	35			4,9JA	130
AT05543	78.00	81.10	3.10	65.39	11.26	8.66	2.24	1.50	0.90	6.45	0.51	0.16	0.10	0.10	1.91	99.18	8	91		35	85	65			3,8j	102
AT05544	102.40	105.50	3.10	65.33	12.02	8.41	2.38	1.88	0.78	7.21	0.53	0.12	0.11	0.15	1.89	100.81	10	101		30	100	60			3,8j	109
AT05545	120.70	123.80	3.10	62.14	12.08	10.47	2.40	1.67	0.80	7.25	0.51	0.16	0.12	0.11	1.68	99.39	8	93		35	80	65			3,8j	93
AT05546	135.90	139.00	3.10	63.97	12.39	6.84	2.58	2.48	0.70	7.23	0.55	0.16	0.11	0.10	1.70	98.81	10	97		25	245	65			3,8j	124
AT05547	154.20	157.30	3.10	63.95	12.15	8.15	2.40	1.93	0.82	6.85	0.51	0.12	0.10	0.09	1.70	98.77	10	97		30	100	50			3,8j	111
AT05548	168.50	171.50	3.00	77.56	10.25	2.63	0.68	2.51	1.36	2.96	0.16	0.06	0.05	0.09	1.17	99.48	52	100		15	80	55			4,9hB	158

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Sample	From (M)	To (M)	Length (M)	RH PPM	SR PPM	CO2 %	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	IIF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM		
AT05539	4.90	7.90	3.00						31		0.37	175																			
AT05540	20.10	23.20	3.10						28		0.54	145																			
AT05541	35.40	38.40	3.00						33		0.14	175																			
AT05542	56.70	59.70	3.00						26		0.53	90																			
AT05543	78.00	81.10	3.10						31		0.08	110																			
AT05544	102.40	105.50	3.10						40		0.16	115																			
AT05545	120.70	123.80	3.10						30		0.13	110																			
AT05546	135.90	139.00	3.10						32		0.05	110																			
AT05547	154.20	157.30	3.10						30		0.08	110																			
AT05548	168.50	171.50	3.00						17		0.45	40																			

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DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	SM PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT05539	4.90	7.90	3.00														2						14		0.52	0.54	22	37	52
AT05540	20.10	23.20	3.10														2						14		0.50	0.71	15	35	60
AT05541	35.40	38.40	3.00														2						14		0.44	0.62	17	28	55
AT05542	56.70	59.70	3.00														2						7		0.47	0.46	20	33	33
AT05543	78.00	81.10	3.10														2						9		0.45	0.77	29	24	57
AT05544	102.40	105.50	3.10														2						9		0.44	0.70	25	23	53
AT05545	120.70	123.80	3.10														2						10		0.44	0.87	27	21	48
AT05546	135.90	139.00	3.10														2						10		0.46	0.55	25	26	99
AT05547	154.20	157.30	3.10														2						10		0.45	0.67	21	24	52
AT05548	168.50	171.50	3.00														2						5		0.35	0.26	81	28	32

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DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AT05539	4.90	7.90	3.00		<20	
AT05540	20.10	23.20	3.10		<20	
AT05541	35.40	38.40	3.00		<20	
AT05542	56.70	59.70	3.00		<20	
AT05543	78.00	81.10	3.10		<20	
AT05544	102.40	105.50	3.10		<20	
AT05545	120.70	123.80	3.10		<20	
AT05546	135.90	139.00	3.10		<20	
AT05547	154.20	157.30	3.10		<20	
AT05548	168.50	171.50	3.00		<20	

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HOLE NUMBER: CHA-05

DRILL HOLE RECORD

DATE: 03/05/1998

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	{OB}					
3.00 TO 32.90	*2,a*	mafic volcanic flows, fractured, veined, locally altered, unmineralized. Varies from dark feldspar-phyric sections to moderately bleached and silicified. Veining generally at 45 & 20 to CA. Generally massive with some narrow bands of weakly developed foliation at 30 CA. Some narrow 10-20cm weakly developed bx bands. 30.40-32.90 *2,t* section appears as a strongly bedded/laminated (at 30 CA) fragmental at base of mafic sequence.		some silicification over 0.5m sections. Common carbonate vein(lets) throughout at 40 & 20 to CA.	nil to trace. 17.10-19.00 3-5% disseminated py in narrow bleached bx band.	
32.90 TO 37.10	*5,g*	black well bedded (at 40 CA) argillite with sulphide and some carbonate beds upto almost 1cm.			2-4% euhedral py 1-2mm disseminated along beds and as massive beds up to almost 1 cm thick at about 40 CA.	
37.10 TO 70.70	*77,b,P*	massive intrusive or very thick flow. Diabase textured matrix hosting 20-25% feldspar laths and aggregates from 2-12mm, typically 3-4mm. Downhole contact sharp marked by carbonate band at 20 to CA.		some minor carbonate veinlets	nil	
70.70 TO 76.10	*5,g*	black well bedded argillite locally disrupted and micro-fractured. Some carbonate and sulphide beds at 50-60 CA.			2-4% py,po as disseminations along beds and massive (upto 1cm) beds.	
76.10 TO 87.50		felsic fragmental unit with some narrow sections of semi-massive bx'd po,py.		minor, local sericite alteration	2-4% po,py throughout as disseminations, blebs and massive narrow bx bands (@ 78.5m & 81.9m).	
87.50 TO 126.80	*4,a,bx,sul *2,a*	massive uniform mafic volcanic flows locally disrupted by interflow sediments, minor veining, fracturing, quartz/carbonate. Flow contacts generally at 45 to CA. Some interflow sedimentary bands occur starting at 120.6m as fragmental (pyroclastic) beds.		local discreet quartz and/or carbonate veining.	nil except for minor py associated with quartz/carbonate veins.	
126.80 TO 126.80	*EOH*					

HOLE NUMBER: CHA-05

DRILL HOLE RECORD

LOGGED BY: R. FOY

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HOLE NUMBER : CHA-05

ASSAYS SHEET

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments
AT06831	11.30	11.60	0.30	31	46	2	26	34	0.3					1.01												
AT06832	33.80	34.50	0.70	279	822	18	92	7	0.7					3.89												
AT06833	34.50	35.50	1.00	266	346	21	113	<2	0.5					3.73												
AT06834	73.50	74.50	1.00	103	97	12	59	<2	0.4					5.31												
AT06835	74.50	75.00	0.50	214	648	7	125	<2	0.6					11.80												
AT06836	75.00	75.85	0.85	49	92	1	59	3	0.1					3.33												
AT06837	75.85	77.00	1.15	45	122	1	69	<2	0.1					3.32												
AT06838	77.00	78.00	1.00	81	202	2	70	3	0.2					5.66												
AT06839	78.00	78.50	0.50	28	41	1	71	3	0.1					2.22												
AT06840	78.50	78.80	0.30	191	20	13	273	3	0.6					29.30												
AT06841	78.80	80.30	1.50	43	56	1	68	<2	0.1					2.34												
AT06842	80.30	80.60	0.30	106	24	2	95	<2	0.2					7.63												
AT06843	80.60	81.90	1.30	33	61	1	72	7	0.1					2.73												
AT06844	81.90	82.30	0.40	135	19	32	147	10	0.6					21.20												
AT06845	82.30	82.80	0.50	74	66	1	74	7	0.1					4.58												
AT06846	82.80	83.60	0.80	20	59	2	48	7	0.1					1.59												
AT06847	83.60	84.15	0.55	77	55	1	83	10	0.2					6.66												
AT06848	84.15	84.80	0.65	32	56	4	56	3	0.1					2.05												
AT06849	84.80	85.20	0.40	106	50	2	98	7	0.3					7.06												
AT06850	85.20	86.60	1.40	66	43	4	53	3	0.2					3.17												
AT05564	86.60	87.20	0.60	82	33	10	134	3	0.4					13.00												
AT05565	87.20	88.20	1.00	21	30	1	37	3	0.1					0.31												

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HOLE NUMBER : CHA-05

GEOCHEMICAL ASSAY

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	LOI %	SUM %	Y PPM	Zr PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AT05549	17.10	19.00	1.90	63.06	10.33	6.99	1.53	2.69	0.80	9.77	1.17	0.28	0.21	0.07	1.78	98.68	26	144		25	210	15			2,7(j)	99
AT05550	38.40	41.40	3.00	58.36	11.10	8.55	3.39	2.10	0.64	12.98	1.05	0.28	0.24	0.10	1.79	100.58	26	149		30	180	75			2,7(j)	98
AT07601	79.50	82.50	3.00	66.66	10.53	3.48	2.66	2.01	1.16	8.69	0.68	0.18	0.11	0.08	2.76	99.00	16	122		15	335	60			2,7j	158
AT07602	91.00	93.30	2.30	65.25	11.61	4.04	3.63	2.34	1.12	9.18	0.74	0.20	0.17	0.08	2.41	100.77	18	142		10	125	55			2,7j	155
AT07603	108.50	111.60	3.10	67.39	11.08	4.13	3.08	3.28	0.82	8.34	0.69	0.20	0.13	0.15	1.32	100.61	16	128		20	120	80			2,7j	135

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HOLE NUMBER : CIA-05

GEOCHEMICAL ASSAYS

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	AG PPM	AU PFB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	
AT05549	17.10	19.00	1.90						30		0.46	260																		
AT05550	38.40	41.40	3.00						36		0.27	200																		
AT07601	79.50	82.50	3.00						15		2.11	130																		
AT07602	91.00	93.30	2.30						25		0.15	130																		
AT07603	108.50	111.60	3.10						36		0.15	140																		

HOLE NUMBER: CIA-05

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HOLE NUMBER : CHA-05

GEOCHEMICAL ASSAYS

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	SH PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT05549	17.10	19.00	1.90														3						15		0.27	0.68	10	19	78
AT05550	38.40	41.40	3.00														2						16		0.38	0.77	22	27	86
AT07601	79.50	82.50	3.00														2						11		0.42	0.33	23	41	167
AT07602	91.00	93.30	2.30														2						12		0.48	0.35	15	43	53
AT07603	108.50	111.60	3.10														2						12		0.47	0.37	26	34	37

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HOLE NUMBER : CHA-05

GEOCHEMICAL ASSAYS

DATE: 05/03/1998

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AT05549	17.10	19.00	1.90		<20	
AT05550	38.40	41.40	3.00		<20	
AT07601	79.50	82.50	3.00		<20	
AT07602	91.00	93.30	2.30		<20	
AT07603	108.50	111.60	3.10		<20	

HOLE NUMBER : CHA-05

GEOCHEMICAL ASSAYS

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 12.80	<{ob}>	-Boulder rich overburden				
12.80 TO 77.40	Interm. to mafic volcanic <3a,m,F>	-Fine to medium grained medium to dark grey coloured intermediate to mafic volcanic -Massive, no notable schistosity -Fractured and veined: abundant thin carbonate and qtz veinlets evident throughout. Minor bleaching associated with veining -Locally blocky due to extensive jointing at 30 to 50 TCA -Interlayered with thin reddish felsic intrusion and medium grey coloured feldspar porphyries -From 20.4 to 20.9m: felsic dyke, hematite stained, with rare fine pyrite and magnetite crystals. Upper and lower contacts at 45 TCA -From 41.3 to 41.8m: Feldspar porphyry, upper and lower contacts at 10-20 TCA -From 57.7 to 58.0m and 64.7 to 65.5m: thin siliceous zones, rhyolitic - 69.6-75.5 *9-8,QFP*: Feldspar porphyry -Lower contact with rhyolite at 77.4m is sharp at 40 TCA.		-Weak pervasive chlorite alteration -Fracture filling carbonate and locally epidote bearing veinlets are present	-Trace amounts of fracture controlled pyrite mineralization	
77.40 TO 97.50	Felsic volcanic <4a,m>	-Fine grained light grey-green coloured rhyolite -Massive with a mottled texture due to fracture controlled alteration, giving a "ghostly brecciated texture" to the rock -Fractured and veined: minor quartz-carbonate veining -From 85.1 to 85.8m: quartz vein at 10 TCA, with single speck of chalcopyrite, and thin chloritic slip (minor gouge) -Weakly schistose at 45 to 50 TCA throughout unit -Lower contact is sharp at 97.5m at 70 TCA		-Moderate to strong pervasive silicification and sericitization -Weak fracture controlled chlorite alteration -Minor quartz and carbonate veining evident throughout	-Trace amounts of sulphides	
97.50 TO 106.20	Interm. to mafic volcanic <3a,bx,S>	-Fine grained, dark grey coloured -Locally brecciated with distinct bleached fragments: subangular, 0.5 to 4.0cm diameter -Fractured and veined: quartz and carbonate veining with associated bleaching of host rock -Lower contact is sharp at 70 TCA at 106.2m		-Locally bleached along fractures -Weak pervasive chloritization -Quartz and carbonate veining is abundant	-Trace amounts of flacky pyrite along fractures	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
106.20 TO 123.40	Feldspar porphyry, intrusion *9c,QFP*	-Coarse grained feldspars in finer siliceous, grey, ground-mass -Minor amounts of fine leucoxenes -Interlayered with thin units of mafic volcanic and finer grained, reddish (hematized) silicified zones -Weakly schistose at 50 TCA -Lower contact is sharp and bulbous at 30 deg. TCA		-Weak pervasive chloritite alteration -Minor quartz and carbonate veining, locally iron-carb is evident	-Trace fracture controlled pyrite	
123.40 TO 167.00	Interm. to mafic volcanic *3a,p,bx*	-Fine grained, dark greenish-grey coloured -Rare thin pillow salvages with minor pyrite within -From 154.1 to 167m: brecciated texture, fractures, veinlets and angular fragments are evident -Fractured and veined: abundant thin carbonate, quartz, and locally epidote veinlets evident -Lower contact with fault / shear zone at 167m		-Weakly chloritic -Minor epidote veinlets -Quartz and carbonate veining	-Trace pyrite along fractures and pillow salvages -Traces of pyrrhotite and rare fleck of chalcopyrite along qtz-carb filled fracture at 150-150.1m	
167.00 TO 181.90	Shear zone Felsic volcanics *4a,*t,Si*	-Fine grained, strongly silicified rhyolite -Moderate to strong schistosity at 40 to 70 deg. TCA -[[167-169.8]]*FAI*]: broken core (grind), accompanied with red-orange oxidation along fractures (iron-carb, hematite?). No visible sulphides noted -Lower contact is brecciated and grinded, may be thin fault separating felsics with down hole mafic volcanics		-Strong silicification -Locally moderate sericite alteration -Quartz and carbonate veining, minor thin iron-carb filled fractures -Bleaching and rust staining associated with fault	-Trace fracture controlled pyrite	
181.90 TO 201.90	Interm. to mafic volcanic *3a,p,S*	-Fine grained, dark grey-green coloured pillowed mafics -Minor fine albite crystals are evident -Fractured and veined; abundant fine quartz and carbonate veinlets, minor reddish-stained felsic dykes -Lower contact is gradational, where pinkish felsic intrusions become increasingly abundant and thicker		-Moderately chloritized throughout -Locally, bleaching and iron-carbonate alt. are seen bordering pillow salvages	-Trace py and po along fractures and veinlets	
201.90 TO 220.00	Felsic intrusive *9,a,K*	-Fine to medium grained, pinkish coloured intrusive -From 201.9 to 209m: interlayered pinkish felsic intrusive and intermediate to mafic volcanics		-Potassic alt.? (pink colour) -Minor chlorite filled fractures and fine chloritic spotting -Minor quartz veining		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		(approx. 50% of each) -Broken core throughout, abundant joint and diskings evident -Lower contact is sharp at 40 deg. TCA		-Weak iron carbonate alt. along fractures		
220.00 TO 263.60	Felsic volcanics, mineralized «4a,m,t»	-Fine grained, light to dark grey coloured -Locally interbeds of more intermediate rocks are evident -Minor amounts of fragments, felsic and mafic composition, are present -Rhyolite is mainly massive with fracture controlled alteration resulting in a mottled texture of silicified and sericitized zones -From 247.3 to 263.6m: rhyolite is fractured, locally brecciated, with pyrite and pyrrhotite mineralization (1-15%) -Moderate schistosity is evident throughout at 50 to 70 TCA -Fractured and veined: minor qtz and carbonate veining -Lower contact is sharp at 25 deg. TCA		-Strong pervasive silica and localized sericite alterations -Locally moderate to strong chloritic alteration, increasingly strong through mineralization	-Pyrite and pyrrhotite (magnetic) mineralization occurs along fractures and as replacement of fragments. Minor amounts of primary sulphide fragments -From 247.3 to 250.3m: 10-15% pyrite -From 250.3 to 251.7m: 8-10% pyrrhotite, 2-3% pyrite -From 251.7 to 263.6m: 1-5% combined pyrite and pyrrhotite	
263.60 TO 272.30	Mafic volcanic «2a,G,Ch»	-Fine grained dark green coloured mafic -Abundant very fine pinkish blebs, leucoxenes -Fractured and veined: thin carbonate veinlets and minor epidote filled fractures -Moderate schistosity at 45 TCA -Lower contact is sharp at 25 deg. TCA		-Strongly chloritic -Fracture filling carbonate, locally iron carb., and weak epidote alteration	-Minor sulphide mineralization occurs along fractures and foliation (bedded) -1-5% combined pyrite and pyrrhotite throughout	
272.30 TO 314.00	Interbedded mafic to intermed. tuffs, «3a,*a»	-Fine grained, dark grey coloured -Faint traces of bedding are evident at 30-45 deg. TCA -Thin units of intermediate and mafic looking tuffs are interbedded. Sediment? -Increasingly mafic looking rock, down hole -Garnet porphyroblasts and magnetite rich intervals are locally evident -Weak to moderate schistosity is parallel to bedding, 30-45 TCA -Fractured and veined: carbonate veining, minor fracture filling iron-carb, and fracture controlled epidote-rich zones are evident		-Moderate to strong chlorite alteration throughout -Locally zone of silica, epidote and carbonate alterations are evident -Carbonate veining is present throughout	-Fracture controlled pyrite and pyrrhotite. Locally appears to be along bedding/foliation planes -Fine grained magnetite is locally evident -From 271.5 to 275m: 5% pyrite and 2-3% pyrrhotite -From 275 to 314m: trace to 2% sulphides disseminated throughout thin tuffaceous beds	

HOLE NUMBER: CHA-06

DRILL HOLE RECORD

DATE: 04/14/1998

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
314.00 TO 314.00	*E.O.H.*					

HOLE NUMBER: CHA-06

DRILL HOLE RECORD

LOGGED BY: P. Prince

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HOLE NUMBER : CHA-06

ASSAYS SHEET

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn ppm	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments
AU00051	200.00	200.80	0.80	47	69	5	21	<2	0.1			19		0.21			<5									
AU00052	247.30	248.00	0.70	18	87	11	49	<2	0.1			12		2.95			<5									
AU00053	248.00	248.90	0.90	40	70	13	77	14	0.1			21		8.37			12									
AU00054	248.90	249.50	0.60	63	93	16	103	10	0.2			31		16.00			53									
AU00055	249.50	250.30	0.80	150	113	4	262	<2	0.2			21		6.18			<5									
AU00056	250.30	251.00	0.70	214	112	9	442	<2	0.5			38		16.80			<5									
AU00057	251.00	252.00	1.00	74	98	3	165	<2	0.2			30		7.53			<5									
AU00058	252.00	253.00	1.00	57	74	5	145	<2	0.1			22		3.69			<5									
AU00059	253.00	254.00	1.00	54	102	8	161	<2	0.1			21		2.89			<5									
AU00060	254.00	255.00	1.00	43	97	2	188	<2	0.1			23		2.10			<5									
AU00061	255.00	256.00	1.00	55	82	6	225	<2	0.1			25		3.59			<5									
AU00062	256.00	257.00	1.00	39	72	3	183	<2	0.1			26		1.64			<5									
AU00063	257.00	258.00	1.00	40	78	2	216	<2	0.1			27		1.70			<5									
AU00064	258.00	259.00	1.00	38	120	1	171	<2	0.1			26		2.28			<5									
AU00065	259.00	260.00	1.00	41	67	2	163	<2	0.1			27		3.49			<5									
AU00066	260.00	261.00	1.00	49	53	3	143	<2	0.1			28		3.41			<5									
AU00067	261.00	262.00	1.00	38	42	1	150	<2	0.1			26		1.72			<5									
AU00068	262.00	263.00	1.00	35	60	2	160	<2	0.1			26		1.00			<5									
AU00069	263.00	264.00	1.00	47	89	1	129	<2	0.2			20		0.85			<5									
AU00070	264.00	265.00	1.00	33	56	1	77	<2	0.1			11		1.32			<5									
AU00071	265.00	266.00	1.00	28	58	3	78	<2	0.1			10		1.12			<5									
AU00072	266.00	267.00	1.00	22	28	1	94	<2	0.1			10		1.08			<5									
AU00073	267.00	268.00	1.00	19	23	1	54	<2	0.1			7		1.43			<5									
AU00074	268.00	269.00	1.00	18	64	1	67	<2	0.1			9		1.41			<5									
AU00076	269.00	270.00	1.00	22	26	6	61	<2	0.1			7		1.28			<5									
AU00077	270.00	271.00	1.00	27	67	7	76	<2	0.1			11		1.02			<5									
AU00078	271.00	272.00	1.00	35	57	3	222	<2	0.1			14		2.85			<5									
AU00079	272.00	273.00	1.00	74	43	14	527	<2	0.5			17		4.50			<5									
AU00080	273.00	274.00	1.00	148	42	2	1690	<2	0.2			91		2.75			<5									
AU00081	274.00	275.00	1.00	291	66	1	2860	<2	0.4			135		7.15			<5									
AU00082	275.00	276.00	1.00	166	46	1	1490	17	0.2			75		2.16			<5									
AU00083	276.00	277.00	1.00	145	43	1	1650	<2	0.1			83		1.84			<5									
AU00084	277.00	278.00	1.00	335	53	1	1800	14	0.2			102		2.12			<5									
AU00085	278.00	279.00	1.00	165	34	1	1220	<2	0.1			74		1.19			<5									
AU00086	296.00	296.90	0.90	269	63	1	1270	<2	0.1			94		0.41			<5									
AU00087	303.00	304.00	1.00	273	69	6	1160	3	0.1			88		0.27			<5									
AU00088	313.30	314.00	0.70	160	51	4	815	<2	0.1			74		0.20			<5									

HOLE NUMBER : CHA-06

ASSAYS SHEET

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HOLE NUMBER : CHA-06

GEOCHEMICAL ASSAY

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AU00001	14.00	17.00	3.00	59.08	15.66	5.76	4.20	3.58	0.78	7.91	0.67	0.13	0.09	0.12	1.75	99.73	15	130		5	15	72			3,8j	155
AU00002	44.00	47.00	3.00	58.96	15.77	5.51	4.21	3.23	0.95	8.11	0.71	0.13	0.11	0.13	2.01	99.83	15	130		20	25	72			3,8j	163
AU00003	71.00	74.00	3.00	64.27	16.78	3.82	1.63	5.30	1.51	3.84	0.55	0.07	0.04	0.09	1.56	99.46	5	60		5	15	25			3,8j	158
AU00004	89.00	92.00	3.00	75.94	12.70	0.95	0.34	3.35	3.99	1.26	0.05	<0.01	0.02	0.12	0.94	99.67	35	80		<5	<5	15			4,9hB	153
AU00005	116.00	119.00	3.00	66.21	16.88	3.88	1.15	5.40	1.17	2.76	0.34	0.05	0.03	0.11	1.52	99.50	<5	70		<5	20	18			4,9jA	162
AU00006	149.00	152.00	3.00	56.91	15.49	4.71	4.72	3.82	1.43	8.65	1.46	0.29	0.12	0.07	1.93	99.60	25	160		20	75	75			2,7(j)	156
AU00007	178.00	181.00	3.00	74.63	13.02	1.17	0.46	2.64	4.73	1.27	0.02	<0.01	0.02	0.16	1.39	99.52	30	60		<5	30	11			4,9hB	152
AU00008	209.00	212.00	3.00	73.85	13.96	0.29	0.10	3.94	6.06	0.71	0.03	<0.01	0.01	0.07	0.49	99.52	5	40		<5	<5	10			4,9i	136
AU00009	242.00	245.00	3.00	76.11	13.14	1.04	0.47	4.69	2.21	1.15	0.01	<0.01	0.02	0.13	0.83	99.81	30	60		<5	10	12			4,9hB	165
AU00010	266.00	269.00	3.00	59.15	10.37	3.30	2.95	1.92	2.25	17.56	0.26	0.09	1.01	0.07	0.97	99.90	10	140		<5	10	52			4,9jA	139
AU00011	299.00	302.00	3.00	48.66	5.77	5.42	10.99	0.57	2.62	21.68	1.34	0.13	0.76	0.29	1.21	99.44	10	80		195	55	1378			1,6H	67

HOLE NUMBER : CHA-06

GEOCHEMICAL ASSAY

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HOLE NUMBER : CHA-06

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	
AU00001	14.00	17.00	3.00						35		0.01	150																		
AU00002	44.00	47.00	3.00						40		0.01	155																		
AU00003	71.00	74.00	3.00						25		0.04	75																		
AU00004	89.00	92.00	3.00						15		0.01	25																		
AU00005	116.00	119.00	3.00						20		0.01	55																		
AU00006	149.00	152.00	3.00						55		0.02	220																		
AU00007	178.00	181.00	3.00						15		0.01	30																		
AU00008	209.00	212.00	3.00						5		0.01	15																		
AU00009	242.00	245.00	3.00						15		0.01	25																		
AU00010	266.00	269.00	3.00						15		1.04	50																		
AU00011	299.00	302.00	3.00						140		0.32	210																		

HOLE NUMBER : CHA-06

GEOCHEMICAL ASSAYS

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HOLE NUMBER : CHA-06

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SM PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MGOW	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AU00001	14.00	17.00	3.00														5						15		0.56	0.37	17	35	4
AU00002	44.00	47.00	3.00														5						15		0.55	0.35	17	37	8
AU00003	71.00	74.00	3.00														5						5		0.50	0.23	15	26	3
AU00004	89.00	92.00	3.00														<5						5		0.39	0.07	44	50	1
AU00005	116.00	119.00	3.00														<5						5		0.50	0.23	16	20	4
AU00006	149.00	152.00	3.00														5						20		0.56	0.30	16	42	20
AU00007	178.00	181.00	3.00														<5						<5		0.46	0.09	24	58	11
AU00008	209.00	212.00	3.00														<5						<5		0.25	0.02	100	59	1
AU00009	242.00	245.00	3.00														<5						<5		0.49	0.08	26	32	2
AU00010	266.00	269.00	3.00														<5						5		0.28	0.32	18	50	5
AU00011	299.00	302.00	3.00														5						25		0.55	0.94	125	69	96

HOLE NUMBER: CHA-06

GEOCHEMICAL ASSAYS

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HOLE NUMBER : CHA-06

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AU00001	14.00	17.00	3.00			<10
AU00002	44.00	47.00	3.00			<10
AU00003	71.00	74.00	3.00			<10
AU00004	89.00	92.00	3.00			<10
AU00005	116.00	119.00	3.00			<10
AU00006	149.00	152.00	3.00			10
AU00007	178.00	181.00	3.00			<10
AU00008	209.00	212.00	3.00			<10
AU00009	242.00	245.00	3.00			<10
AU00010	266.00	269.00	3.00			<10
AU00011	299.00	302.00	3.00			<10

HOLE NUMBER : CHA-06

GEOCHEMICAL ASSAYS

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 12.00	«- ob »					
12.00 TO 43.00	Mafic to intermed. volcanic «3a,m,S»	-Fine grained, medium grey coloured -Massive looking, fractured and veined: abundant fine quartz-carbonate (calcite) veins -Locally medium grained albite blebs 1-10mm diameter -From 38 to 39.3m: joint parallel to CA, associated qtz-calcite vein -Lower contact is sharp with down hole sediments at 70 deg. TCA		-Weakly to moderately chloritic -Fracture controlled carbonate alteration, abundant calcitic veining	-Trace amounts of fracture controlled pyrite	
43.00 TO 91.30	Graphitic argillite, graywacke «5a,sul»	-Fine grained, light grey to black coloured -Bedded at 35 to 60 deg. TCA -Interbedded argillite, graywacke, chert and graphitic zone -Minor fracture and cavity filling pyrite mineralization -From 60.3 to 80.2m: tuffaceous looking rock (3-5,a), calcite filled amygdules, minor rounded fragments, strongly fractured with epidote, calcite and qtz veinlets. Upper contact is sharp at 55 deg. TCA, -Fractured and veined: abundant fine calcitic veins, locally filling brecciated rock -From 52.9 to 58.1m: locally broken core, may be weak fault zone -Lower contact is gradational at 91.3m with down hole fragmental unit		-Locally graphitic -Fracture filling carbonate (calcite) throughout -From 60.3 to 80.2m: epidote veinlets are evident	-Minor pyrite concentrated along fractures and cavities (voids) -Locally trace amounts of disseminated fine euhedral pyrite crystals (1-3mm) -From 81 to 87.4m: graphitic argillite with 1-5% pyrrhotite (magnetic, conductor), trace pyrite	
91.30 TO 121.80	Intermed. to felsic fragmental «3*a,bx,*w»	-Fine grained light grey coloured tuffaceous matrix, with felsic, bleached (mafic?) and silicified fragments. Some bleached fragments have fine quartz-filled pores -Clasts vary from angular to subrounded, 0.1 to 4.0cm diameter, flattened along weak foliation at 30 to 40 deg. TCA -Locally calcitic blebs (amygdale-like) are evident in thin zones -Weak schistosity at 30-40 deg. TCA -Fractured and veined: abundant thin qtz-calcite		-Weakly chloritic -Locally silicified -Fine qtz-calcite veinlets throughout	-Traces of sulphides along fractures (joints) and thin quartz veinlets. Pyrrhotite, pyrite and minor chalcocopyrite are locally visible	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		veinlets -Lower contact is sharp at 60 deg. TCA				
121.80 TO 125.90	Feldspar porphyry, felsic intrusive «9d,QFP»	-Medium grained, light grey coloured feldspar porphyry -Upper contact is bleached, with minor amounts of pinkish leucoxene-blebs along a chlorite bearing vein -Fractured and veined: quartz-calcite veining throughout with minor associated chlorite -Lower contact is sharp along quartz vein		-Moderately silicified	-Minor sulphide mineralization along fractures and quartz veins, pyrite and pyrrhotite, speck of chalcocopyrite	
125.90 TO 167.80	Intermed. to mafic fragmental sediment «3-5,*a,bx»	-Fine grained, light to dark grey coloured tuffaceous matrix hosting silicified, bleached, felsic clasts. Locally bedded and brecciated argillitic rock is evident -Fragments vary 0.1 to 5.0cm diameter, subrounded, flattened parallel to a weak foliation at 50 deg. TCA, some clasts have quartz-filled pores - 151.2-152.1 «5g» with minor sulphides, py-po -From 143 to 160.3m: 3-5a,bx sediment-tuff, fractured and veined, brecciated, fine grained, light to dark grey coloured -Fractured and veined: abundant fine quartz and calcite veins with associated fracture controlled sulphide mineralization -Weak schistosity at 45-50 deg TCA -Lower contact is sharp at 45 deg TCA with down hole graphitic argillite		-Moderate chlorite alteration and locally silicified -Abundant quartz and calcite veining throughout -Graphitic	-Fracture controlled sulphide mineralization throughout, dominantly associated with thin quartz-calcite veins. Mainly pyrite and pyrrhotite, with trace amounts of sphalerite and isolated specks of chalcocopyrite -Locally (through more sedimentary units) very fine disseminated pyrite and pyrrhotite crystals (blebs) are evident -From 163.4 to 167.8m: nodular to lenticular pyrite and pyrrhotite is present (maybe primary sulphide fragments or replacement of clasts) - 138.5-167.8 «tr-5% sul»: fracture controlled py-po & tr sph-cpy, minor diagenetic py-po	
167.80 TO 179.40	Graphitic argillite «5g,Sul»	-Fine grained, dark grey to black coloured -Bedded at 40 to 50 deg TCA -Fractured and veined: fine quartz-calcite veinlets present throughout, locally with minor associated sulphide mineralization -Lower contact is sharp at 40 deg TCA		-Locally graphitic -Moderate chloritic alteration -Fine quartz-calcite veinlets throughout	-Pyrite and pyrrhotite occur dominantly as nodular and lenticular textured masses -Minor fracture controlled sulphides, as fine stringers and along qtz-calcite veinlets, are evident. Pyrite, pyrrhotite and trace amounts of sphalerite and chalcocopyrite - 167.8-179 «1-5% sul»: diagenetic py-po, fracture controlled py-po, trace sph-cpy	

HOLE NUMBER: CHA-07

DRILL HOLE RECORD

DATE: 04/14/1998

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
179.40 TO 224.00	Interm. to mafic volcaniclastic «2bx,e»	-Fine grained, light grey-green coloured volcaniclastic breccia (mafic) -Locally brecciated: angular fragments (0.1 to 3.0 cm wide) with light grey coloured matrix -Vesicular: minor silica filled amygdules (0.5 to 1.5cm diameter) -From 181.7 to 182m: variolitic texture. Where round slightly flattened spherules, of same composition as its host rock, are evident -Very fine pinkish blebs are locally present, appear to be leucoxenes -Fractured and veined: Minor quartz and carbonate veining -Blocky core (poor RQD), due to minor jointing at 20 to 30 deg TCA		-Moderate chlorite alteration -Locally weakly siliceous -Minor quartz and carbonate veining throughout	-Minor fracture controlled pyrite and pyrrhotite mineralization	
224.00 TO 224.00	«E.O.H.»					

HOLE NUMBER: CHA-07

DRILL HOLE RECORD

LOGGED BY: P. Prince

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HOLE NUMBER : CHA-07

ASSAYS SHEET

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments		
AU00089	43.00	43.70	0.70	49	1770	14	38	<2	0.1			21		0.76												<5		
AU00090	44.40	45.40	1.00	131	2110	16	46	7	0.3			27		1.76													<5	
AU00091	48.50	49.40	0.90	89	550	6	18	<2	0.1			15		0.91													<5	
AU00092	52.20	53.20	1.00	26	269	5	73	<2	0.1			23		0.60													11	
AU00093	53.20	54.20	1.00	11	57	3	20	<2	0.1			14		0.17													<5	
AU00094	58.00	59.00	1.00	26	980	3	24	3	0.1			20		0.34													<5	
AU00095	59.00	60.00	1.00	68	280	13	46	<2	0.4			43		1.74													<5	
AU00096	80.80	81.50	0.70	27	76	9	31	<2	0.2			17		0.31													<5	
AU00097	81.50	82.20	0.70	73	83	19	153	3	0.3			34		2.95													<5	
AU00098	82.20	83.00	0.80	73	100	24	90	<2	0.2			22		1.39													<5	
AU00099	83.00	84.00	1.00	18	204	72	190	<2	0.3			47		0.72													50	
AU00101	84.00	85.00	1.00	8	158	8	46	<2	0.1			33		0.06													37	
AU00102	85.00	86.00	1.00	5	161	16	21	<2	0.1			28		0.04													20	
AU00103	86.00	86.60	0.60	5	68	9	33	<2	0.1			20		0.53													4	
AU00104	86.60	87.40	0.80	28	45	8	73	<2	0.2			24		3.39													<5	
AU00105	88.50	89.00	0.50	32	47	3	62	<2	0.1			20		1.20													<5	
AU00106	89.00	89.50	0.50	74	37	2	98	<2	0.1			33		1.17													<5	
AU00107	109.70	110.20	0.50	41	209	1	78	<2	0.1			30		0.04													<5	
AU00108	122.00	122.50	0.50	23	68	5	29	<2	0.1			20		0.14													<5	
AU00109	138.50	139.50	1.00	33	88	3	68	<2	0.1			26		0.49													<5	
AU00110	139.50	140.00	0.50	48	1250	58	175	<2	0.1			40		0.96													<5	
AU00111	140.00	141.00	1.00	38	97	29	80	<2	0.1			32		0.90													<5	
AU00112	141.00	142.00	1.00	36	127	9	82	<2	0.1			30		1.07													<5	
AU00113	142.00	142.50	0.50	38	2380	42	76	<2	0.1			25		1.34													<5	
AU00114	142.50	143.00	0.50	28	562	18	71	<2	0.1			29		1.01													<5	
AU00115	143.00	143.80	0.80	14	102	14	55	<2	0.1			16		0.68													<5	
AU00116	143.80	144.50	0.70	110	554	100	75	3	0.9			48		12.24													<5	
AU00117	144.50	145.50	1.00	14	119	1	15	3	0.1			20		0.35													<5	
AU00118	145.50	146.50	1.00	28	133	1	16	<2	0.1			23		0.22													<5	
AU00119	146.50	147.50	1.00	34	91	1	13	<2	0.1			23		0.20													<5	
AU00120	147.50	148.50	1.00	28	99	1	16	<2	0.1			24		0.13													<5	
AU00121	148.50	149.50	1.00	25	74	1	13	<2	0.1			26		0.07													<5	
AU00122	149.50	150.50	1.00	37	83	1	17	<2	0.1			26		0.54													<5	
AU00123	150.50	151.50	1.00	99	261	35	15	<2	0.2			21		1.45													<5	
AU00124	151.50	152.00	0.50	119	590	33	38	<2	0.5			31		2.55													<5	
AU00125	152.00	153.00	1.00	36	185	14	18	<2	0.1			23		0.66													<5	
AU00126	153.00	154.00	1.00	202	1270	41	25	3	0.2			40		1.21													12	
AU00127	154.00	155.00	1.00	30	148	6	11	3	0.1			20		0.36													<5	
AU00128	155.00	156.00	1.00	34	303	18	20	<2	0.1			24		0.33													<5	
AU00129	156.00	157.00	1.00	26	406	13	13	<2	0.1			23		0.25													<5	
AU00130	157.00	158.00	1.00	37	458	42	15	<2	0.2			24		0.29													<5	
AU00131	158.00	159.00	1.00	24	148	11	11	<2	0.1			20		0.12													<5	
AU00132	159.00	160.00	1.00	29	97	10	13	<2	0.1			21		0.40													<5	
AU00133	160.00	161.00	1.00	24	272	8	5	<2	0.2			11		0.57													<5	
AU00134	161.00	162.00	1.00	18	520	25	20	<2	0.2			21		0.45													<5	
AU00135	162.00	163.00	1.00	15	1390	28	27	<2	0.1			15		0.42													<5	
AU00136	163.00	163.50	0.50	22	484	273	45	<2	0.3			22		2.54													<5	

HOLE NUMBER : CHA-07

ASSAYS SHEET

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HOLE NUMBER : CHA-07

ASSAYS SHEET

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments		
AU00137	163.50	164.00	0.50	90	173	308	103	<2	1.2			52		13.20												<5		
AU00138	164.00	164.50	0.50	51	62	70	67	3	0.7			63		7.83													<5	
AU00139	164.50	165.00	0.50	16	70	6	38	2	0.1			18		1.36													<5	
AU00140	165.00	165.50	0.50	21	964	7	34	2	0.1			17		3.82													<5	
AU00141	165.50	166.00	0.50	7	664	5	18	2	0.1			13		0.20													<5	
AU00142	166.00	166.50	0.50	7	39	3	30	2	0.1			11		0.22													<5	
AU00143	166.50	167.00	0.50	189	686	1220	77	2	1.6			68		8.61			28										<5	
AU00144	167.00	167.70	0.70	23	151	19	21	3	0.4			12		0.92													<5	
AU00145	167.70	168.50	0.80	72	454	76	57	<2	0.4			26		2.98			8										<5	
AU00146	168.50	169.20	0.70	56	299	44	35	3	0.3			21		2.20													<5	
AU00147	169.20	170.00	0.80	32	84	39	7	<2	0.2			11		0.81													11	
AU00148	170.00	170.50	0.50	17	51	6	9	3	0.1			9		0.51			12										<5	
AU00149	170.50	171.00	0.50	60	2720	26	28	3	0.4			12		2.22													<5	
AU00151	171.00	171.50	0.50	37	280	17	13	<2	0.2			9		1.19													<5	
AU00152	171.50	172.00	0.50	27	237	17	7	<2	0.1			7		0.84													<5	
AU00153	172.00	172.50	0.50	84	305	18	34	3	0.2			19		3.96													<5	
AU00154	172.50	173.00	0.50	33	284	17	44	<2	0.1			21		2.32			29										<5	
AU00155	173.00	173.50	0.50	32	630	41	77	<2	0.3			33		3.72			65										<5	
AU00156	173.50	174.00	0.50	59	1420	38	102	7	0.4			39		4.51			162										<5	
AU00157	174.00	174.50	0.50	47	1150	14	55	<2	0.2			17		1.95			55										<5	
AU00158	174.50	175.00	0.50	48	136	95	31	<2	0.2			16		1.87													<5	
AU00159	175.00	175.50	0.50	11	42	13	9	<2	0.1			10		0.53			8										<5	
AU00160	175.50	176.00	0.50	193	66	111	56	<2	0.4			17		2.81													<5	
AU00161	176.00	176.50	0.50	43	11	10	40	3	0.2			13		2.13													<5	
AU00162	176.50	177.00	0.50	37	10	3	37	7	0.1			12		1.34													<5	
AU00163	177.00	177.50	0.50	56	10	2	31	<2	0.1			10		1.40													<5	
AU00164	177.50	178.00	0.50	122	15	6	53	10	0.1			15		2.13													<5	
AU00165	178.00	179.00	1.00	20	20	2	46	<2	0.1			16		0.72													<5	
AU00166	192.50	193.30	0.80	35	46	3	61	<2	0.1			24		0.46													<5	
AU00167	193.30	194.00	0.70	22	53	1	65	<2	0.1			26		0.05													<5	
AU00168	194.00	194.80	0.80	28	65	6	72	<2	0.1			25		0.12													<5	
AU00169	194.80	195.50	0.70	27	53	18	63	3	0.1			21		0.63													<5	

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ASSAYS SHEET

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HOLE NUMBER : CHA-07

GEOCHEMICAL ASSAY

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SI02 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AU00012	20.00	23.00	3.00	59.51	14.65	5.46	3.49	3.50	1.11	6.11	0.80	0.17	0.16	0.08	4.75	99.79	20	140		<5	30	56			3,8(j)	145
AU00013	71.00	74.00	3.00	54.23	18.18	4.52	2.22	7.34	0.21	8.14	1.08	0.20	0.17	0.02	3.55	99.86	25	230		<5	35	16			2,7i	151
AU00014	104.00	107.00	3.00	63.53	15.15	2.57	3.10	4.46	1.81	6.22	0.60	0.11	0.09	0.08	1.94	99.66	15	140		5	25	73			3,8j	171
AU00015	134.00	137.00	3.00	63.45	15.62	2.72	3.49	2.49	2.82	6.13	0.62	0.12	0.08	0.05	1.96	99.55	15	140		5	30	65			3,8j	195
AU00016	185.00	188.00	3.00	64.15	15.13	1.56	3.90	4.21	1.47	5.89	0.59	0.11	0.08	0.10	2.45	99.64	15	140		10	30	97			3,8j	209
AU00017	218.00	221.00	3.00	60.08	15.19	5.87	3.30	3.97	1.80	6.32	0.58	0.11	0.10	0.12	2.20	99.64	15	140		35	35	59			3,8j	130

HOLE NUMBER: CHA-07

GEOCHEMICAL ASSAY

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HOLE NUMBER : CHA-07

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM		
AU00012	20.00	23.00	3.00						30		0.02	155																			
AU00013	71.00	74.00	3.00						30		0.05	145																			
AU00014	104.00	107.00	3.00						30		0.07	125																			
AU00015	134.00	137.00	3.00						25		0.02	125																			
AU00016	185.00	188.00	3.00						35		0.26	115																			
AU00017	218.00	221.00	3.00						35		0.47	120																			

HOLE NUMBER: CHA-07

GEOCHEMICAL ASSAYS

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HOLE NUMBER : CHA-07

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SM PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AU00012	20.00	23.00	3.00														5							15	0.58	0.37	16	34	9
AU00013	71.00	74.00	3.00														5							20	0.39	0.25	7	17	5
AU00014	104.00	107.00	3.00														5							15	0.54	0.17	24	41	6
AU00015	134.00	137.00	3.00														5							15	0.58	0.17	19	55	12
AU00016	185.00	188.00	3.00														5							10	0.61	0.10	25	48	7
AU00017	218.00	221.00	3.00														5							15	0.55	0.39	18	34	9

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GEOCHEMICAL ASSAYS

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HOLE NUMBER : CHA-07

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AU00012	20.00	23.00	3.00		<10	
AU00013	71.00	74.00	3.00		<10	
AU00014	104.00	107.00	3.00		<10	
AU00015	134.00	137.00	3.00		<10	
AU00016	185.00	188.00	3.00		<10	
AU00017	218.00	221.00	3.00		<10	

HOLE NUMBER: CHA-07

GEOCHEMICAL ASSAYS

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	«Job»					
3.00 TO 20.60	Mafic volcanics? sediments «2bx,5g,a»	-Fine grained dark grey-green coloured mafic volcanics? Fractured to brecciated, with fine black coloured graphitic fracture filling. -Locally isolated amygdules, calcite filled, are evident -Fractured and veined: with abundant fine quartz and calcite veinlets, graphitic fracture filling also present -Lower contact is sharp at 50-60 deg TCA. From 20.4 to 20.6m rock is strongly graphitic.		-Moderate chlorite alteration -Fracture filling graphite -Abundant fine quartz-calcite veinlets throughout	-Minor fracture controlled sulphides present throughout, mainly pyrite along qtz-calcite veinlets	
20.60 TO 21.80	Feldspar porphyry «9b,D,Se»	-Medium to coarse grained, light green-grey coloured feldspar porphyry -Feldspar crystals (1-10mm wide) within siliceous and sericitic finer grained matrix -Minor fine grained buff coloured leucoxenes are evident near upper and lower contacts -Fractured and veined: thin quartz-calcite veins throughout -Lower contact is sharp at 70 deg TCA, 2-5cm of chilled margin (non-porphyratic) at upper and lower contacts		-Moderate pervasive sericite alteration -Minor qtz-calcite veining	-Minor disseminated sulphides, pyrite and pyrrhotite. Also fracture controlled pyrite, along thin veins	
21.80 TO 23.30	Graphitic sediment, cherty «5g,E»	-Very fine grained, dark grey to black coloured sediments. Thin strongly graphitic beds within moderately graphitic and cherty unit -Bedded at 30 to 50 deg TCA -Fractured and veined: quartz-carbonate veining throughout, minor porosity within veins. -Lower contact is gradational at 23.3m with down hole rhyolite		-Moderately to strongly graphitic	-Mainly fracture controlled pyrite mineralization -Rare bedded pyrite with graphitic bed	
23.30 TO 45.40	Felsic volcanic flow «4a,l,q»	-Very fine grained, yellow-green coloured rhyolite -Locally flow banded at 30 to 70 deg TCA, with massive intervals also present -Quartz phyric throughout, minor amount of fine rounded phenocrysts		-Moderately silicified -Very fine grained yellow-green pervasive alteration, sericite -Locally rusty-brown staining is evident (iron-carb, potassic?)	-Minor fracture controlled pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		<ul style="list-style-type: none"> -Fractured and veined: abundant quartz and carbonate veining, locally pinkish carb. veins (dolomite-looking) -Locally minor rusty-brown staining of rhyolite, along carbonate veins -From 36.5 to 37m: joint at 5 deg TCA -Lower contact is sharp at 40 deg TCA along thin siliceous zone. 				
45.40 TO 51.50	Graphitic argillite «5g,sul»	<ul style="list-style-type: none"> -Fine grained, dark grey to black coloured -Thin graphitic intervals with chloritized argillite -Bedded at 30-40 deg TCA 		<ul style="list-style-type: none"> -Strongly graphitic -Moderate to strong chlorite alteration of argillite -Quartz-carbonate veining throughout 	<ul style="list-style-type: none"> -Fracture controlled pyrite mineralization, along thin fractures and qtz-carb. veins -Locally thin pyrite-rich graphitic beds 	
51.50 TO 74.50	Felsic volcanics «4a,S,Se»	<ul style="list-style-type: none"> -Fractured and veined: abundant quartz and carbonate veining with associated pyrite mineralization -Lower contact is sharp along quartz vein at 25 deg TCA -Similar as above rhyolite, no flow banding evident -Very fine grained, green-brown coloured rhyolite -Rare quartz phenocryst is evident 		<ul style="list-style-type: none"> -Strong pervasive alteration, silicification, sericitization and iron or potassium staining are evident -Down hole, fracture controlled chlorite alteration increases, filling of micro-fractures -Quartz and carbonate veining is abundant 	<ul style="list-style-type: none"> -Minor fracture controlled pyrite mineralization 	
74.50 TO 83.20	Graphitic argillite «5g,sul»	<ul style="list-style-type: none"> -Rock is intensely fractured: abundant quartz and carbonate veining, tension fractures (veinlets), stockwork of micro-fractures -Locally core is broken due to jointing -Lower contact is sharp at 50 deg TCA at 74.5m -Fine grained, dark grey to black coloured sediments -Bedded at 50 to 60 deg TCA -From 77.5 to 79.9m: strongly graphitic interval -Mainly fracture controlled pyrite mineralization -Fractured and veined: abundant thin quartz-carbonate veins throughout -Locally weak to moderate schistosity parallel to bedding at 45-50 deg TCA is evident -From 77.5 to 78.7m: core is broken through strongly graphitic section, with minor black gouge material. Shear zone at 60 deg TCA, with 		<ul style="list-style-type: none"> -Locally strongly graphitic -Argillite is weakly chloritic -Thin carbonate (minor quartz) veins are present throughout 	<ul style="list-style-type: none"> -Minor (1-5%) fracture controlled pyrite mineralization 	

HOLE NUMBER: CHA-08

DRILL HOLE RECORD

DATE: 04/14/1998

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		thin brecciated interval -{77.5-78.7}{*}{FAI}{*} -Lower contact is gradational and brecciated at 83.2m, where argillite, bleached and silicified fragments are present. Clasts are flattened parallel to foliation, 50-60 deg TCA				
83.20 TO 149.00	Mafic to interm. volcaniclastic «2f,*x»	-Fine grained, light green coloured matrix (tuff), hosting dominately bleached fragments -Fragments are bleached, angular, 0.1 to 5.0cm wide, weakly flattened along foliation at 50-60 deg TCA. Minor quartz-filled pores are evident within clasts (devitrification texture?). Also minor light green-grey coloured clasts are present, angular and weakly chloritized -Large fragment at 124.8m, showing variolitic texture -From 145.6 to 147.3m: Bleached and silicified, fractured interval -Fractured and veined: quartz-carbonate (calcite) veining is present throughout -Weak schistosity at 50 deg TCA -Minor jointing is evident throughout at 25-45 deg TCA		-Moderate pervasive chlorite alteration -Locally bleached and silicified -Quartz-calcite veining	-Trace fracture controlled pyrite and locally sphalerite mineralization -From 84.7 to 87m: 1-5% pyrite	
149.00 TO 149.00	«E.O.H.»					

HOLE NUMBER: CHA-08

DRILL HOLE RECORD

LOGGED BY: P. Prince

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HOLE NUMBER : CHA-08

ASSAYS SHEET

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments	
AU00170	15.00	15.50	0.50	50	120	1	40	7	0.1			25		0.43		10											
AU00171	20.00	20.60	0.60	87	3250	6	46	3	0.3			29		0.89		19											
AU00172	20.60	21.20	0.60	26	1490	4	31	7	0.1			16		0.29		9											
AU00173	21.20	21.80	0.60	42	1720	5	30	<2	0.1			15		0.80		28											
AU00174	21.80	22.40	0.60	24	18	4	19	17	0.1			16		0.52		<5											
AU00176	22.40	23.00	0.60	20	9	8	21	3	0.2			12		0.60		<5											
AU00177	23.00	23.30	0.30	12	4	30	49	7	0.7			15		1.12		<5											
AU00178	23.30	24.00	0.70	10	410	18	20	3	0.1			17		0.21		<5											
AU00179	24.00	25.00	1.00	5	249	10	14	<2	0.1			12		0.19		<5											
AU00180	28.00	28.70	0.70	4	311	22	20	3	0.1			17		0.24		<5											
AU00181	44.00	45.00	1.00	5	141	3	16	<2	0.1			12		0.12		<5											
AU00182	45.00	46.00	1.00	44	800	13	32	<2	0.3			19		0.98		<5											
AU00183	46.00	47.00	1.00	96	56	21	37	<2	0.3			19		1.48		10											
AU00184	47.00	48.00	1.00	33	216	9	25	3	0.1			12		0.87		<5											
AU00185	48.00	49.00	1.00	22	201	7	5	14	0.1			5		0.74		12											
AU00186	49.00	50.00	1.00	33	192	5	7	7	0.1			7		0.74		<5											
AU00187	50.00	51.00	1.00	20	19	8	19	3	0.1			13		1.58		17											
AU00188	51.00	52.00	1.00	11	2150	5	21	<2	0.1			12		0.59		<5											
AU00189	52.00	53.00	1.00	15	648	17	40	<2	0.3			18		1.24		49											
AU00190	53.00	54.00	1.00	10	316	10	23	<2	0.3			16		0.55		20											
AU00191	54.00	55.00	1.00	9	88	11	22	<2	0.5			11		0.60		<5											
AU00192	55.00	56.00	1.00	6	71	11	21	<2	0.2			16		0.37		21											
AU00193	73.00	74.00	1.00	7	7	3	6	7	0.1			6		0.39		29											
AU00194	74.00	75.00	1.00	21	36	9	27	<2	0.2			15		1.38		116											
AU00195	75.00	76.00	1.00	18	44	4	47	10	0.1			17		1.01		41											
AU00196	76.00	77.00	1.00	10	192	1	32	<2	0.1			12		0.45		16											
AU00197	77.00	78.00	1.00	21	178	33	89	<2	0.8			21		2.27		<5											
AU00198	78.00	79.00	1.00	42	275	24	88	<2	0.4			29		2.21		101											
AU00199	79.00	80.00	1.00	21	123	4	30	<2	0.2			18		1.19		48											
AU00201	84.70	85.50	0.80	172	801	8	137	<2	0.2			38		1.87		<5											
AU00202	85.50	86.50	1.00	55	1020	5	72	<2	0.2			22		0.79		<5											
AU00203	86.50	87.00	0.50	48	820	14	92	<2	0.1			29		0.64		<5											

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HOLE NUMBER : CHA-08

GEOCHEMICAL ASSAY

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AU00018	8.00	11.00	3.00	60.98	13.63	4.02	3.18	3.62	0.95	7.49	0.79	0.17	0.16	0.04	4.65	99.68	20	130		<5	150	35			3,8(j)	159
AU00019	35.00	38.00	3.00	78.93	11.30	0.42	0.20	2.34	4.57	0.79	0.04	<0.01	0.01	0.14	0.71	99.46	20	80		<5	5	11			4,9(h)	154
AU00020	68.00	71.00	3.00	78.23	11.23	0.34	0.42	0.55	6.27	1.20	0.04	<0.01	0.01	0.11	1.10	99.51	65	80		<5	<5	18			4,9hz	157
AU00021	119.00	122.00	3.00	61.59	14.43	4.35	4.17	2.90	1.86	6.48	0.58	0.12	0.11	0.07	2.85	99.51	15	130		<5	20	95			3,8j	158

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GEOCHEMICAL ASSAY

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HOLE NUMBER : CHA-08

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM		
AU00018	8.00	11.00	3.00						30		0.16	130																			
AU00019	35.00	38.00	3.00						15		0.04	25																			
AU00020	68.00	71.00	3.00						10		0.17	20																			
AU00021	119.00	122.00	3.00						30		0.01	125																			

HOLE NUMBER : CHA-08

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SM PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AU00018	8.00	11.00	3.00														5							15	0.50	0.29	11	35	41
AU00019	35.00	38.00	3.00														<5							<5	0.37	0.04	55	63	2
AU00020	68.00	71.00	3.00														<5							5	0.45	0.03	43	88	9
AU00021	119.00	122.00	3.00														5							15	0.61	0.30	23	45	7

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GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AU00018	8.00	11.00	3.00		<10	
AU00019	35.00	38.00	3.00		<10	
AU00020	68.00	71.00	3.00		<10	
AU00021	119.00	122.00	3.00		<10	

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GEOCHEMICAL ASSAYS

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 7.50	«{ob}»					
7.50 TO 80.40	Mafic volcanics, schistose «2a,*t»	-Fine grained, grey-green coloured mafic volcanics -Locally brecciated -Foliated throughout at 40 to 60 deg TCA -Fractured and veined: thin quartz-carbonate veinlets mainly oriented along schistosity -From 46.9 to 51.1m: zone of strong quartz veining, with minor pyrrhotite -From 77.9 to 80.4m: brecciated and silicified interval -Lower contact is sharp at 50 deg TCA		-Chloritic -Thin bleached laminations parallel to foliation -Quartz-carbonate veining throughout -Locally silicified	-Locally minor fracture controlled pyrrhotite (trace pyrite), along quartz-carbonate veinlets -From 64-71m: 1-5% pyrrhotite, trace chalcopyrite -From 75.5-80.4m: 1-5% pyrrhotite, trace chalcopyrite	
80.40 TO 81.70	Graphitic argillite «5g,sul»	-Fine grained, black coloured graphitic sediments -Isolated mafic fragment near lower contact -Bedded at 50-60 deg TCA -Pyrrhotite mineralization occurs as bedded sulphides and fracture filling -Minor thin quartz-carbonate veinlets -Lower contact is brecciated		-Graphitic -Thin quartz-carbonate veinlets	-Bedded and fracture controlled sulphide mineralization is evident -10-15% pyrrhotite and trace chalcopyrite	
81.70 TO 85.20	Intermed. volcaniclas tic «3a,*x»	-Fine grained, light grey-green coloured matrix hosting bleached and silicified clasts -Fragments are dominately bleached (buff coloured), rounded, 1 to 5cm diameter, flattened along weak foliation at 50 deg TCA -Minor, finer grained, more felsic (siliceous) looking clasts are also evident -Matrix is siliceous and moderatly chloritic -Weakly schistose at 50 deg TCA -Lower contact is sharp at 30 deg TCA		-Moderate chlorite and silica alterations	-Minor pyrrhotite mineralization along very thin quartz filled fractures	
85.20 TO 87.50	Graphitic argillite «5g,sul»	-Fine grained, black coloured graphitic sediments similar uphole (5g) unit -Strongly fractured, locally brecciated, with abundant fracture filling quartz-calcite -Bedding varies between 40 to 70 deg TCA, increasing down hole -Thin graphitic gouge (1cm wide) at 85.2m -Lower contact is sharp at 60 deg TCA		-Graphitic -Quartz-calcite veining throughout	-Fracture controlled and bedded pyrrhotite is evident throughout, 10-15% po	

HOLE NUMBER: CHA-09

DRILL HOLE RECORD

DATE: 04/14/1998

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
87.50 TO 128.30	Intermed.? breccia *3bx,*x*	-Fine grained, light grey silicified matrix hosting dominately bleached (mafic looking) fragments -Minor isolated quartz phenocrysts are evident -Localized fine grained white coloured leucoxenes -Breccia fragments are mainly bleached subrounded to angular, up to 5cm diameter, and flattened along foliation at 60 deg TCA		-Breccia fragments are dominately bleached -Matrix is silicified -Weak to moderate fracture controlled chlorite alteration -Down hole, fracture-foliation controlled sericite alteration increases		
128.30 TO 149.00	Mafic intrusive *7a,G*	-Fine grained, dark green coloured, massive mafic intrusive -Fine white coloured leucoxenes throughout -Fractured and veined: quartz and calcite veining are present -Weak to moderate schistosity at 60 to 70 deg TCA -From 131.1 to 132m: Joint at 0 to 5 deg TCA		-Chloritic -Quartz and calcite veining	-Minor remobilized pyrrhotite and trace chalcopyrite along quartz veins	
149.00 TO 149.00	*E.O.H.*					

HOLE NUMBER: CHA-09

DRILL HOLE RECORD

LOGGED BY: P. Prince

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HOLE NUMBER : CHA-09

ASSAYS SHEET

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments
AU00249	46.00	47.00	1.00	126	69	1	95	3	0.1		47			0.49												
AU00251	47.00	48.00	1.00	92	57	1	71	<2	0.1		31			0.30												
AU00252	48.00	49.00	1.00	131	79	1	107	3	0.1		40			0.48												
AU00253	49.00	50.00	1.00	122	37	1	113	<2	0.1		51			0.68												
AU00254	50.00	51.00	1.00	164	43	1	159	<2	0.1		72			0.42												
AU00255	51.00	52.00	1.00	136	70	1	147	<2	0.1		65			0.60												
AU00256	64.00	65.00	1.00	242	277	11	94	3	0.2		45			1.19												
AU00257	65.00	66.00	1.00	200	64	1	104	3	0.1		42			1.61												
AU00258	66.00	67.00	1.00	151	350	1	121	<2	0.1		50			1.10												
AU00259	67.00	67.50	0.50	113	96	1	92	<2	0.1		31			0.28												
AU00260	67.50	68.00	0.50	355	132	1	128	7	0.3		46			1.30												
AU00261	68.00	69.00	1.00	97	145	2	81	3	0.1		30			0.19												
AU00262	69.00	70.00	1.00	949	107	2	163	<2	0.4		85			2.60												
AU00263	70.00	71.00	1.00	133	71	1	101	<2	0.1		42			0.54												
AU00264	75.50	76.00	0.50	885	108	1	137	10	0.3		58			1.26												
AU00265	76.00	77.00	1.00	118	110	1	99	10	0.1		38			0.18												
AU00266	77.00	78.00	1.00	100	295	15	112	<2	0.1		51			1.43			9									
AU00267	78.00	79.00	1.00	89	283	141	51	7	0.5		36			3.03												
AU00268	79.00	80.00	1.00	78	147	8	31	<2	0.2		26			2.24												
AU00269	80.00	80.40	0.40	1340	1590	5	105	<2	0.8		71			5.91												
AU00270	80.40	81.00	0.60	623	2420	17	156	<2	0.9		207			5.56			211									
AU00271	81.00	81.70	0.70	414	357	15	120	<2	0.7		146			2.83			162									
AU00272	81.70	83.00	1.30	169	115	1	60	7	0.2		40			0.80			37									
AU00273	83.00	84.00	1.00	1000	140	2	42	14	1.2		25			0.97			81									
AU00274	84.00	85.20	1.20	233	84	1	57	<2	0.2		22			1.20			8									
AU00276	85.20	86.00	0.80	365	166	5	124	7	0.3		144			2.12			167									
AU00277	86.00	86.70	0.70	570	779	8	188	<2	0.5		117			5.75			108									
AU00278	86.70	87.50	0.80	638	906	9	121	<2	0.6		119			5.64			78									
AU00279	87.50	88.00	0.50	422	105	1	55	<2	0.2		25			1.30			<5									

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HOLE NUMBER : CHA-09

GEOCHEMICAL ASSAY

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AU00028	14.00	17.00	3.00	49.93	15.78	8.67	5.09	1.19	2.02	11.51	0.87	0.08	0.21	0.06	4.30	99.71	15	60		20	60	65			2,7(h)	133
AU00029	41.00	44.00	3.00	49.55	15.31	9.68	5.14	0.83	2.68	13.02	0.84	0.07	0.28	0.06	2.17	99.63	15	50		65	60	103			2,7(h)	116
AU00030	95.00	98.00	3.00	66.77	14.22	5.08	3.63	0.70	2.70	3.61	0.45	0.13	0.05	0.07	2.45	99.86	15	230		<5	20	13			4,9jA	168
AU00031	131.00	134.00	3.00	49.73	14.59	7.74	9.73	1.47	1.39	11.53	0.92	0.07	0.12	0.03	2.58	99.90	15	50		<5	20	66			2,7(h)	138

HOLE NUMBER : CHA-09

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM		
AU00028	14.00	17.00	3.00						35		0.07	230																			
AU00029	41.00	44.00	3.00						45		0.24	235																			
AU00030	95.00	98.00	3.00						15		<0.01	35																			
AU00031	131.00	134.00	3.00						40		<0.01	245																			

HOLE NUMBER: CHA-09

GEOCHEMICAL ASSAYS

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HOLE NUMBER : CHA-09

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SM PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AU00028	14.00	17.00	3.00														<5						30		0.51	0.55	13	42	50
AU00029	41.00	44.00	3.00														<5						35		0.48	0.63	20	43	72
AU00030	95.00	98.00	3.00														<5						5		0.71	0.36	4	52	29
AU00031	131.00	134.00	3.00														<5						35		0.67	0.53	7	55	14

HOLE NUMBER : CHA-09

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HOLE NUMBER : CHA-09

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AU00028	14.00	17.00	3.00		<10	
AU00029	41.00	44.00	3.00		10	
AU00030	95.00	98.00	3.00		10	
AU00031	131.00	134.00	3.00		10	

HOLE NUMBER: CHA-09

GEOCHEMICAL ASSAYS

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HOLE NUMBER: CHA-10

DRILL HOLE RECORD

DATE: 04/14/1998

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 8.00	«{ob}»					
8.00 TO 43.50	Intermed. volcanic, fractured- brecciated «3a,bx,S»	-Fine grained, light to dark grey coloured -Silicified throughout, looks like "curdy-textured" felsics -Locally fine white coloured leucoxenes are evident -Fractured and veined: locally fracturing is very strong giving brecciated texture to rock, quartz calcite veining throughout, minor fracture controlled mineralization mainly pyrite and pyrrhotite -«11-11.3 »-«FAI »: thin fault with minor chloritic gouge. Fault is at 30 deg TCA -Jointing occurs throughout dominately at 10 to 30 deg TCA -Lower contact is gradational from 43.5 to 44.6m, where intermediate volcanics become increasingly felsic		-Moderate silica and sericite alteration -Minor fracture controlled chlorite alt. -Quartz-calcite veining throughout	-Minor fracture controlled pyrite and pyrrhotite evident throughout, mainly along quartz-calcite veinlets -«24.8-25.1 »-«cp»: Stringer chalcopyrite mineralization, 3-5% cp over 30cm	
43.50 TO 63.50	Felsic volcanic, Quartz porphyry «4a,q»	-Fine grained, light grey coloured -Quartz? phenocrysts are present throughout, varying from 0.1 to 0.8cm diameter, locally hexagonal crystals (basal sections) are evident -Appears massive, shallow intrusion? -Abundant fine micro-fractures parallel to foliation at 60 deg TCA -Weak schistosity at 60 deg TCA -From 47.3 to 54.8m: core is locally broken, mainly due to jointing and mechanical grinding, with minor gouge at 50.1m, may be weak fault -Jointing at 0 to 30 deg TCA is evident throughout		-Moderate silica and sericite alteration -Minor thin qtz-carbonate veinlets	-Trace sulphides, pyrite and pyrrhotite, along fine quartz veinlets	
63.50 TO 64.90	Mafic dyke «7a,G»	-Fine grained, grey-green coloured mafic intrusion -Upper and lower contacts are poorly defined, interfingered with adjacent rhyolites -Fine white coloured leucoxenes are evident -Weakly schistose at 60 deg TCA		-Chlorite and sericite altered	-fine grained fracture controlled pyrrhotite and trace chalcopyrite	

HOLE NUMBER: CHA-10

DRILL HOLE RECORD

LOGGED BY: P. Prince

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
64.90 TO 121.60	Felsic to intermed. volcanics «4a,q,S»	-Fine grained, light grey coloured, similar to up hole rhyolite -Occasional fragments are evident: bleached, silicified clasts, flattened along schistosity 60 deg TCA -Quartz phyrlic, abundant fine phenocrysts -Weak to moderate schistosity at 60 deg TCA -From 66.5 to 86m: core is blocky, poor RQD, broken parallel to schistosity, no gouge evident -From 93.7 to 99.7: quartz-calcite filled fracture at 0-5 deg TCA, thin fault, with minor associated pyrite -Fractured and veined: abundant micro-fractures throughout, quartz-calcite veining, fracture controlled sericite alteration, and fracture controlled sulphide mineralization - 110-121.6 «3,a,G»: down hole rock looks increasingly intermediate volcanic, where phenocrysts are absent and fine white and pink leucoxenes are evident -Lower contact is brecciated		-Fracture and foliation controlled sericite alteration (light grey-green bands parallel to schistosity) -Locally silicified -Minor fracture filling chlorite (localized and weak) -Quartz-calcite veining	-Fracture controlled pyrite and pyrrhotite mineralization -Sulphide replacement of fragments, pyrite and pyrrhotite -Increasingly pyritic down hole, where fragment replacement is more abundant and thin (5-10cm wide) massive pyrite intervals are evident	
121.60 TO 152.00	Sediments, graphitic argillite, chert «5g,E,sul»	-Fine grained, light grey to black coloured -Sedimentary bedding is evident throughout, varying from 45 to 80 deg TCA -Evidence of uphole and downhole fining are noted, inconclusive tops direction -From 121.6 to 129.4m: strongly graphitic and pyrite rich interval -From 137.3 to 137.7m: semi-massive pyrite -From 137.7 to 138.25m: thin felsic volcanoclastic unit, with subrounded, bleached and silicified fragments -From 146.9 to 148.5m: thinly laminated cherty section, bedded at 70 deg TCA, localized thin fuchsite altered bed -Fractured and veined: quartz-calcite veining, fracture controlled sulphide mineralization		-Graphitic -Locally silicified with thin fuchsite bed -Quartz-calcite veining throughout	-Bedded sulphides (1-5% pyrite) throughout graphitic argillite and cherty sections -Locally semi-massive pyrite: from 122.7 to 123.3m and 137.3 to 137.7m	
152.00 TO 152.00	«E.O.H.»					

HOLE NUMBER : CHA-10

ASSAYS SHEET

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S %	Se ppm	As ppm	Hg ppb	Sb ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments		
AU00204	12.10	12.90	0.80	33	31	2	16	7	0.1			13																
AU00205	24.00	24.70	0.70	47	44	3	25	3	0.1			20																
AU00206	24.70	25.10	0.40	3720	196	1	21	62	5.1			18																
AU00207	25.10	26.00	0.90	59	41	1	20	<2	0.1			18																
AU00208	63.50	64.00	0.50	132	83	4	101	<2	0.3			31																
AU00209	64.00	65.00	1.00	87	48	20	40	<2	0.2			39																
AU00210	65.00	66.00	1.00	28	602	46	17	<2	0.1			16																
AU00211	66.00	67.00	1.00	23	920	101	21	3	0.1			21																
AU00212	67.00	68.00	1.00	25	1100	75	18	<2	0.2			34																
AU00213	68.00	69.00	1.00	51	244	66	26	<2	0.3			23																
AU00214	69.00	70.00	1.00	56	107	9	18	3	0.1			15																
AU00215	70.00	71.00	1.00	82	250	35	24	3	0.2			29																
AU00216	71.00	72.00	1.00	26	105	24	21	<2	0.1			25																
AU00217	77.50	77.90	0.40	197	131	56	71	<2	0.9			63																
AU00218	109.00	110.00	1.00	33	630	83	22	3	0.2			22																
AU00219	110.00	111.00	1.00	42	371	29	28	10	0.2			29																
AU00220	111.00	112.00	1.00	29	74	6	19	<2	0.1			20																
AU00221	112.00	113.00	1.00	21	108	4	18	<2	0.2			16																
AU00222	113.00	114.00	1.00	27	121	6	21	3	0.3			17																
AU00223	114.00	115.00	1.00	32	66	13	35	27	0.9			39																
AU00224	115.00	116.00	1.00	35	253	35	33	21	0.8			37																
AU00226	116.00	117.00	1.00	36	201	31	29	3	0.5			33																
AU00227	117.00	118.00	1.00	28	452	45	13	<2	0.2			13																
AU00228	121.00	122.00	1.00	447	837	174	61	3	4.9			51																
AU00229	122.00	123.00	1.00	301	643	65	79	10	2.6			66																
AU00230	123.00	124.00	1.00	268	179	121	140	27	3.2			89																
AU00231	124.00	125.00	1.00	191	1310	66	93	3	1.2			61																
AU00232	125.00	126.00	1.00	49	441	51	66	3	0.9			65																
AU00233	126.00	127.00	1.00	71	407	68	69	7	0.9			51																
AU00234	127.00	128.00	1.00	64	399	78	51	7	1.0			44																
AU00235	128.00	129.00	1.00	205	1710	201	95	21	2.2			79																
AU00236	129.00	130.00	1.00	103	351	79	44	3	0.5			31																
AU00237	130.00	131.00	1.00	46	775	139	17	<2	0.5			17																
AU00238	131.00	132.00	1.00	51	222	18	21	<2	0.3			22																
AU00239	132.00	133.00	1.00	174	1210	172	52	7	1.2			37																
AU00240	133.00	134.00	1.00	122	1340	62	45	<2	0.9			30																
AU00241	134.00	135.00	1.00	69	832	64	23	<2	0.3			26																
AU00242	135.00	136.00	1.00	118	645	110	30	<2	1.0			33																
AU00243	136.00	137.00	1.00	58	637	62	19	3	0.6			21																
AU00244	137.00	138.00	1.00	127	828	193	39	<2	0.8			27																
AU00245	138.00	139.00	1.00	57	253	42	40	<2	0.6			28																
AU00246	146.00	147.00	1.00	40	86	1	20	<2	0.1			15																
AU00247	147.00	148.00	1.00	136	294	43	75	<2	0.5			61																
AU00248	148.00	149.00	1.00	65	283	34	80	<2	0.4			31																

HOLE NUMBER: CHA-10

ASSAYS SHEET

PAGE: 4

HOLE NUMBER : CHA-10

GEOCHEMICAL ASSAY

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	CR2O3 %	LOI %	SUM %	Y PPM	Zr PPM	BA PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AU00022	14.00	17.00	3.00	68.35	13.53	1.68	2.13	0.16	6.20	4.97	0.45	0.14	0.17	0.08	1.70	99.56	15	230		<5	90	19			4,9jA	168
AU00023	47.00	50.00	3.00	68.77	14.97	2.67	2.17	0.23	4.05	3.81	0.36	0.08	0.10	0.04	2.26	99.51	5	110		<5	25	15			4,9jA	215
AU00024	63.60	64.00	0.40	45.94	18.22	8.36	6.82	0.16	2.75	11.98	1.13	0.10	0.22	0.07	4.02	99.77	15	70		80	60	132			2,7(h)	162
AU00026	89.00	92.00	3.00	72.18	14.10	1.09	1.20	0.92	3.28	4.00	0.35	0.08	0.07	0.04	2.21	99.52	10	130		5	155	10			4,9jA	267
AU00027	116.00	119.00	3.00	70.06	14.22	1.89	2.75	0.37	3.34	3.90	0.42	0.11	0.08	0.04	2.70	99.88	10	160		<5	10	15			4,9jA	254

HOLE NUMBER: CHA-10

GEOCHEMICAL ASSAY

PAGE: 5

HOLE NUMBER : CHA-10

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM		
AU00022	14.00	17.00	3.00						15		0.04	40																			
AU00023	47.00	50.00	3.00						10		<0.01	45																			
AU00024	63.60	64.00	0.40						50		1.18	295																			
AU00026	89.00	92.00	3.00						15		0.67	30																			
AU00027	116.00	119.00	3.00						10		0.34	50																			

HOLE NUMBER: CHA-10

GEOCHEMICAL ASSAYS

PAGE: 6

HOLE NUMBER : CHA-10

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	SM PPM	EU PPM	GD PPM	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	MG0#	CA/AL	NI/MGO	ISHIKW	ZN/NA2	
AU00022	14.00	17.00	3.00														<5						5		0.50	0.12	9	82	563	
AU00023	47.00	50.00	3.00														<5						5		0.58	0.18	7	68	109	
AU00024	63.60	64.00	0.40														5						35		0.58	0.46	19	53	375	
AU00026	89.00	92.00	3.00														<5								<5	0.42	0.08	8	69	168
AU00027	116.00	119.00	3.00														<5							5		0.63	0.13	5	73	27

HOLE NUMBER: CHA-10

GEOCHEMICAL ASSAYS

PAGE: 7

HOLE NUMBER : CHA-10

GEOCHEMICAL ASSAYS

DATE: 14/04/1998

Sample	From (M)	To (M)	Leng. (M)	YB PPM	NB PPM	HG PPB
AU00022	14.00	17.00	3.00		10	
AU00023	47.00	50.00	3.00		10	
AU00024	63.60	64.00	0.40		10	
AU00026	89.00	92.00	3.00		<10	
AU00027	116.00	119.00	3.00		<10	

HOLE NUMBER: CHA-10

GEOCHEMICAL ASSAYS

PAGE: 8

APPENDIX I

Summary of expenditures

Summary of Expenditures
Chambers Drilling 1996-98

Drill Hole	CHA-01	CHA-02	CHA-03	CHA-04	CHA-05	CHA-06	CHA-07	CHA-08	CHA-09	CHA-10	TOTAL	
Length (m)	200	142	151	197	127	314	224	149	146	152	1802	metres
\$/m	<u>\$64.89</u>	<u>\$64.89</u>	<u>\$64.89</u>	<u>\$64.89</u>	<u>\$64.89</u>	<u>\$57.23</u>	<u>\$56.59</u>	<u>\$55.17</u>	<u>\$57.56</u>	<u>\$60.84</u>	<u>\$60.78</u>	\$/m
Total \$ Coring	\$12,978	\$9,214	\$9,798	\$12,783	\$8,241	\$17,970	\$12,676	\$8,220	\$8,404	\$9,248	\$109,533	Total \$ Coring
Samples	46	7	40	15	27	49	86	36	33	48	387	No. of Samples
@ \$20/sample	\$920	\$140	\$800	\$300	\$540	\$980	\$1,720	\$720	\$660	\$960	\$7,740	Total \$ Samples
Geologist Days	3	2	2	4	3	7	7	4	3	3	38	Geologist Days
@ \$250/day	\$750	\$500	\$500	\$1,000	\$750	\$1,750	\$1,750	\$1,000	\$750	\$750	\$9,500	Total \$ Geologist
Technician Days	2	1	1	2	1	3	3	2	3	2	20	Technician Days
@ \$150/day	\$300	\$150	\$150	\$300	\$150	\$450	\$450	\$300	\$450	\$300	\$3,000	Total \$ Technician
Truck Rental	3	2	2	4	3	7	7	4	3	3	38	Truck Rental Days
@ \$75/day	\$225	\$150	\$150	\$300	\$225	\$525	\$525	\$300	\$225	\$225	\$2,850	Total \$ Truck Rental
Field Expenses	3	2	2	4	3	7	7	4	3	3	38	Field Days
@ \$100/day	\$300	\$200	\$200	\$400	\$300	\$700	\$700	\$400	\$300	\$300	\$3,800	Total \$ Field Expenses
											\$136,423	
Total Hole	\$15,473	\$10,354	\$11,598	\$15,083	\$10,206	\$22,375	\$17,821	\$10,940	\$10,789	\$11,783	\$136,423	
Claim Number	1217873	1217871	1219886	1219898	1217866	1219897	1223130	1223130	1217876	1217874		
% of work	100%	35%	50%	100%	100%	35%	30%	50%	100%	100%		
\$ of work	\$15,473	\$3,624	\$5,799	\$15,083	\$10,206	\$7,831	\$5,346	\$5,470	\$10,789	\$11,783	\$91,405	
Claim Number		1217874	1219888			1219886	1219882	1217882				
% of work		65%	50%			50%	70%	50%				
\$ of work		\$6,730	\$5,799			\$11,188	\$12,475	\$5,470			\$41,662	
Claim Number						1219888						
% of work						15%						
\$ of work						\$3,356					\$3,356	\$136,423

APPENDIX II

Statement of qualifications

STATEMENT OF QUALIFICATIONS

I, Pascal Prince, of Timmins, Ontario hereby certify that:

1. I graduated from McGill University with a Bachelor of Science degree in geology (1997).
2. I am a contract geologist employed by Falconbridge Limited of 571 Moneta Avenue, Timmins, Ontario.
3. I have been practicing my profession for the past year.
4. I have no financial interest in the claims involved in this report, or in Falconbridge Limited.

Dated in Timmins, Ontario this 15 day of July 1998.

A handwritten signature in cursive script that reads "Pascal Prince".

Pascal Prince
Geologist

APPENDIX III

Rock type, alteration, mineralization modifiers



Ministry of Northern Development and Mines

Declaration of Assessment Work Performed on Mining Land

and 06(3), R.S.O. 1990

ANORE/MNOM

Transaction Number (office use) W9870.00389 Assessment File Research Imaging



31M04SW2012 2.18658 CHAMBERS

900

05(2) and 06(3) of the Mining Act. Under section 8 of the Mining Act, all work and correspond with the mining land holder. Questions about development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury,

Amendment

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240. - Please type or print in ink.

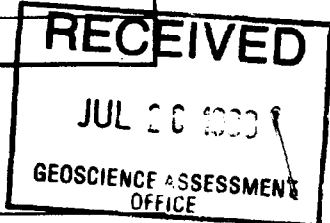
1. Recorded holder(s) (Attach a list if necessary)

Name: FALCONBRIDGE LIMITED, Client Number: 130679, Address: Suite 1200 - 95 Wellington Street West, Toronto, Ontario, M5H 2V4, Telephone Number: (416) 956-5700, Fax Number: (416) 956-5757

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

Geotechnical: prospecting, surveys, assays and work under section 18 (regs) [X] Physical: drilling stripping, trenching and associated assays [] Rehabilitation [] Work Type: Ten Diamond Drill Holes - CHA-01 to CHA-10, 1,802m, Office Use, Commodity, Total \$ Value of Work Claimed: 136 423, Dates Work Performed: From 23 11 1996 To 19 03 1998, Mining Division, Resident Geologist District

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required; - provide proper notice to surface rights holders before starting work; - complete and attach a Statement of Costs, form 0212; - provide a map showing contiguous mining lands that are linked for assigning work; - include two copies of your technical report.



3. Person or companies who prepared the technical report (Attach a list if necessary)

Name: Robert Foy, Telephone Number: (705) 267-1188 ext. 243, Address: PO Box 1140, Timmins, Ontario, P4N 7H9, Fax Number: (705) 267-6080

4. Certification by Recorded Holder or Agent

I, Robert Foy, do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent, Date: July 15, 1998, Agent's Address: PO Box 1140, Timmins, Ontario, P4N 7H9, Telephone Number: (705) 267-1188 ext. 243, Fax Number: (705) 267-6080

002/004

FALCONBRIDGE EXP

705 267 1188

10:21

07/20/98

4. Certification by Recorded Holder or Agent

I, Robert Foy, do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Oct. 18/98

Signature of Recorded Holder or Agent, Date: July 15, 1998, Agent's Address: PO Box 1140, Timmins, Ontario, P4N 7H9, Telephone Number: (705) 267-1188 ext. 243, Fax Number: (705) 267-6080

0241 (03/97)

Final Amendment

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank Value of work to be distributed at a future date	
1	1217873 ✓	1	\$15,473	\$1600	\$13,873	\$0
2	1217871 ✓	1	\$3,624	\$1600	\$2,024	\$0
3	1217874 * ✓	1	* \$18,784	\$1600	* \$15,290	* \$423
4	1219886 * ✓	1	* \$16,987	\$1600	\$15,387	\$0
5	1219888 * ✓	1	* \$9,155	\$1600	\$7,555	\$0
6	1219898 ✓	4	\$15,083	\$6400	\$8,683	\$0
7	1217866 ✓	1	\$10,206	\$1600	\$8,606	\$0
8	1219897 ✓	1	\$7,831	\$6400	\$1,431	\$0
9						
10						
11	1223130 * ✓	2	* \$10,816	\$3200	\$7,616	\$0
12	1219882 ✓	1	\$12,475	\$1600	\$10,875	\$0
13						
14	1217882 ✓	1	\$5,470	\$1600	\$3,870	\$0
15	1217876 ✓	1	\$10,789	\$1600	\$9,189	\$0
16						
	* CORRECTED TOTALS					
17	1219690	8		\$6400		
18	1717862	4		\$6400		
	Column Sub-Totals	28	\$136,423	\$43,200	\$104,400	* \$423

I, Robert Foy, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing _____ Date July 15, 1998

6. Instruction for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp 0241 (02/97)	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

07/20/98 13:46 705 264 6080 FALCONBRIDGE EXP @ 003/005

followed by option number 2 if necessary.

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

Final Amendment

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank Value of work to be distributed at a future date
19	1219691	6	\$6400		
20	1219892	1	\$1600		
21	1219891	1	\$1600		
22	1217872	1	\$1600		
23	1219896	1	\$1600		
24	1217865	1	\$1600		
25	1219887	1	\$1600		
26	1217861	1	\$1600		
27	1217863	1	\$1600		
28	1217875	1	\$1600		
29	1217870	1	\$1600		
30	1217880	1	\$1600		
31	1217869	1	\$1600		
32	1219884	1	\$1600		
33	1219895	1	\$1600		
34	1217877	1	\$1600		
35	1217878	1	\$1600		
36	1217879	1	\$1600		
Column sub-Totals		51	\$136,423	\$43,200	* \$423

2.18658

I, Robert Foy, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing: _____ Date: July 15, 1998

6. Instruction for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

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- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

0241 (03/97) FALCONBRIDGE EXP 705 264 6080 13:46 07/20/98

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

0241 (03/97)

Final Amendments

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank Value of work to be distributed at a future date
37	1220326	1	\$1600		
38	1206510	5	\$8000		
39	1206511	6	\$9600		
40	1211554	4	\$3200		
41	1219885	1	\$800		
42	1206493	1	\$800		
43	1206492	1	\$800		
44	1211556	1	\$800		
45	1211555	1	\$800		
46	1220320	1	\$800		
47	1220340	1	\$800		
48	1219899	1	\$1600		
49	1219900	1	\$1600		
50	1217881	1	\$1600		
51	1217883	1	\$1600		
52	1206504	6	\$9600		
53	1206476	10	\$8000		
54	1217867	9	\$7200		
Column sub-Totals	103	\$136,423	\$43,200	\$104,400	* \$423

I, Robert Foy (Print Full Name), do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing

Date July 15, 1998

6. Instruction for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
2. Credits are to be cut back starting with the claims listed last, working backwards; or
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For Office Use Only

Received Stamp

Deemed Approved Date	Date Notification Sent
Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)	

0241 (03/97)

005/005

FALCONBRIDGE LTD

07/20/98 13:46 705 264 6080

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp

Deemed Approved Date	Date Notification Sent
Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)	

0241 (03/97)

Personal information collected on this form is obtained under the authority of subsection 6 (1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, this information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Work Type	Units of work Depending on the type of work, list the number of hours/day worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
Diamond Drilling	1802 metres	\$60.78/m	\$109,533
Core Samples (Assays & Whole Rock)	387 Samples	\$20/sample	\$7,740
Geologist -- Logging Core, Spotting Holes, Supervision, etc	38 Days	\$250/day	\$9,500
Technician -- Splitting Core, Draftsman, Assist Geologist, etc	20 Days	\$150/day	\$3,000
		sub-total	\$129,773.00
Associated Costs (e.g. supplies, mobilization and demobilization).			
Transportation Costs			
	Truck Rental + gas (38 days)	\$75/day	\$2,850
Food and Lodging Costs			
	Field Expenses -- Accomodation, Food, 38 Days	\$100/day	\$3,800
Total Value of Assessment Work			\$136,423

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total \$ value of worked claimed.

Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, Robert Foy, do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying

Declaration of Work form as Agent (Project Geologist, Falconbridge Limited) I am authorized to make this certification.

(recorded holder, agent, or state company position with signing authority)

Signature	Date July 10, 1998
-----------	-----------------------

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (888) 415-9846
Fax: (877) 670-1555

September 28, 1998

FALCONBRIDGE LIMITED
SUITE 1200, 95 WELLINGTON STREET WEST
TORONTO, ONTARIO
M5J-2V4

Visit our website at:
www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Dear Sir or Madam:

Submission Number: 2.18658

Status

Subject: Transaction Number(s): W9870.00389 Deemed Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Bruce Gates by e-mail at gatesb2@epo.gov.on.ca or by telephone at (705) 670-5856.

Yours sincerely,



ORIGINAL SIGNED BY
Blair Kite
Supervisor, Geoscience Assessment Office
Mining Lands Section

Work Report Assessment Results

Submission Number: 2.18658

Date Correspondence Sent: September 28, 1998

Assessor: Bruce Gates

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9870.00389	1217873	CHAMBERS, CYNTHIA	Deemed Approval	September 25, 1998

Section:
16 Drilling PDRILL

Correspondence to:

Resident Geologist
Kirkland Lake, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):

Robert Foy
TIMMINS, ONTARIO, CANADA

FALCONBRIDGE LIMITED
TORONTO, ONTARIO

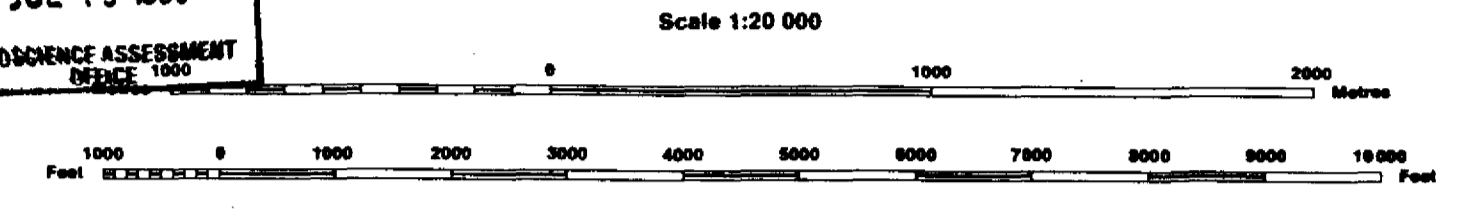
INDEX TO LAND DISPOSITION

PLAN
G-3416
TOWNSHIP

M.N.R. ADMINISTRATIVE DISTRICT
TEMAGAMI
MINING DIVISION
SUDBURY
LAND TITLES/REGISTRY DIVISION
NIPISSING

CHAMBERS

RECEIVED
JUL 15 1998
PROSPECTION ASSESSMENT OFFICE



IN SERVICE JANUARY 10, 1990

AREAS WITHDRAWN FROM DISPOSITION

- MRO - Mining Rights Only
- SRO - Surface Rights Only
- M + S - Mining and Surface Rights

Description	Order No.	Date	Disposition	File No.
SEC 317/90	0-1-22782	08/28/88	M + S	10462
SEC 317/90	0-1-22782	08/28/88	M + S	10464
SEC 351/90	W-QT-77194	MAY-27-84	MRO	19080

THIS TOWNSHIP FALLS WITHIN THE TEMAGAMI COMPREHENSIVE PLANNING AREA. SPECIAL WORKING CONDITIONS MAY APPLY TO EXPLORATION ACTIVITIES. FOR MORE DETAILS PLEASE CONTACT: DISTRICT MANAGER, NORTH BAY DISTRICT, MINISTRY, NATURAL RESOURCES

SYMBOLS

- Boundary: Township, Meridian, Baseline
- Road allowance: surveyed, shoreline
- Lot/Concession: surveyed, unsurveyed
- Parcel: surveyed, unsurveyed
- Right-of-way: road, railway, utility
- Reservation
- Cut, Pit, Pile
- Contour: Interpolated, Approximate, Depression
- Control point (horizontal)
- Flooded land
- Mine head frame
- Pipeline (above ground)
- Railway: single track, double track, abandoned
- Road: highway, county, township, access, trail, bush
- Shoreline (original)
- Transmission line
- Wooded area

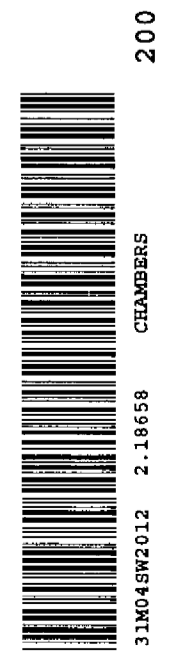
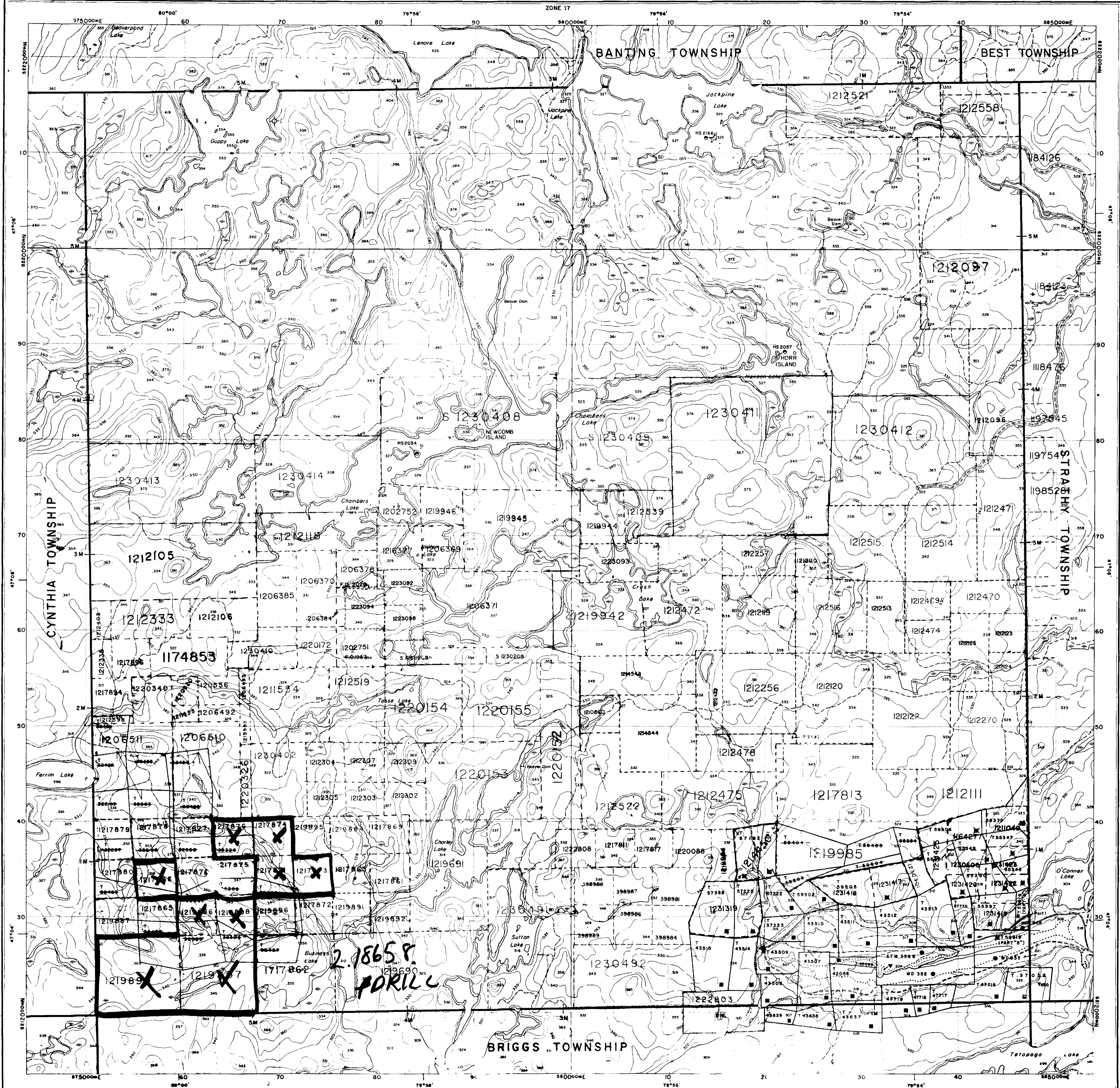
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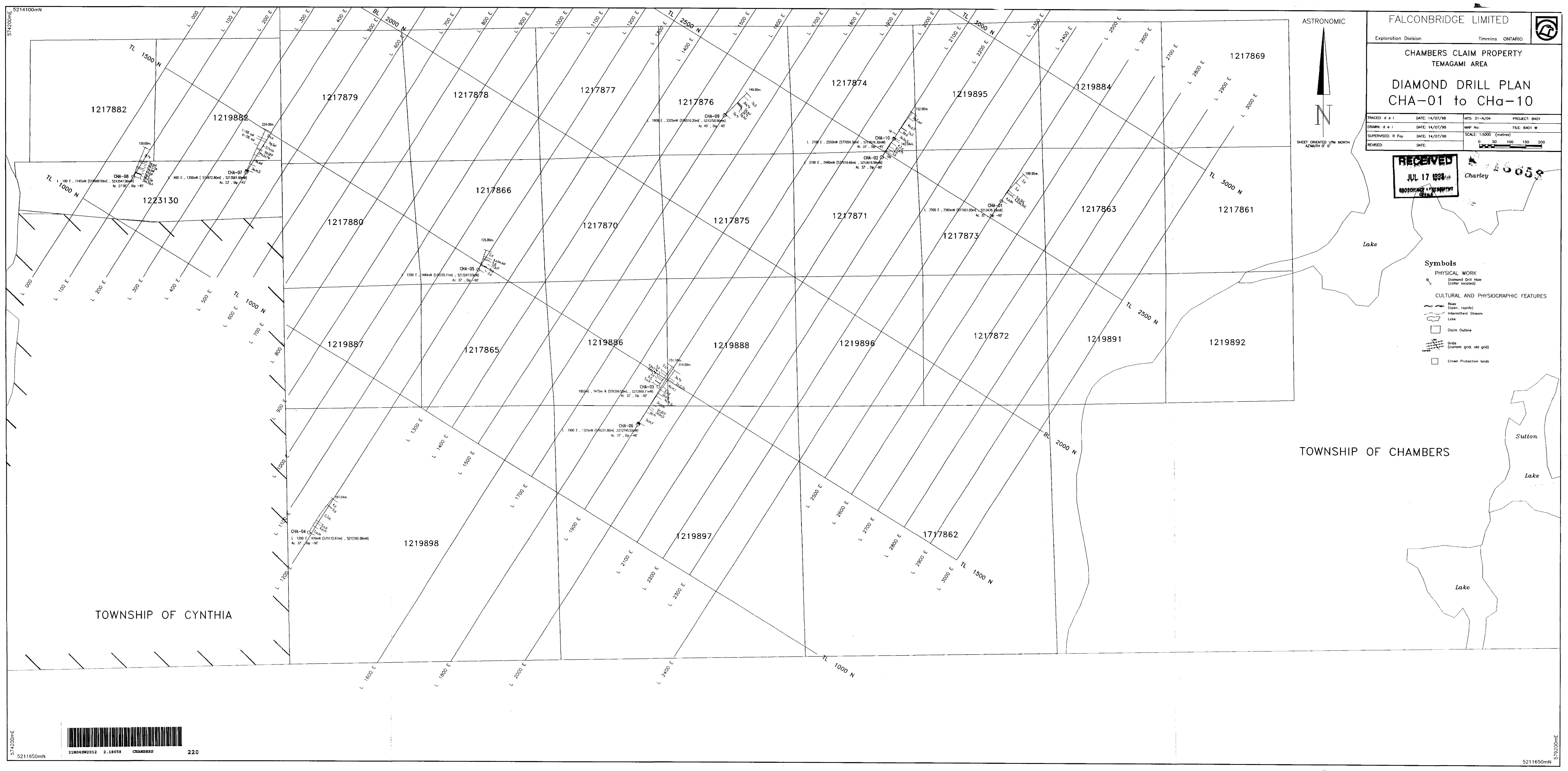
* JUNE 1, 1994 OPENINGS ONTARIO GAZETTE VOL. 127-20 MAY, 1994, PAGE 1575

DISPOSITION OF CROWN LANDS

- Patent: Surface & Mining Rights, Surface Rights Only, Mining Rights Only
- Lease: Surface & Mining Rights, Surface Rights Only, Mining Rights Only
- Licence of Occupation
- Order-in-Council
- Cancelled
- Reservation
- Sand & Gravel
- LAND USE PERMIT

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON



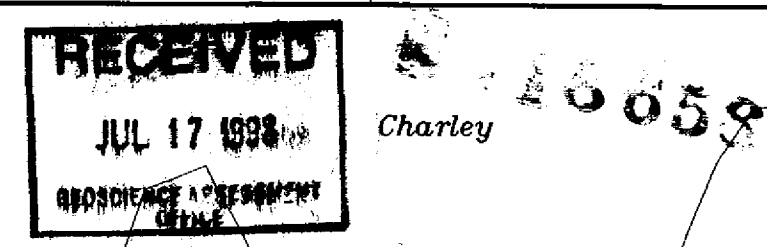
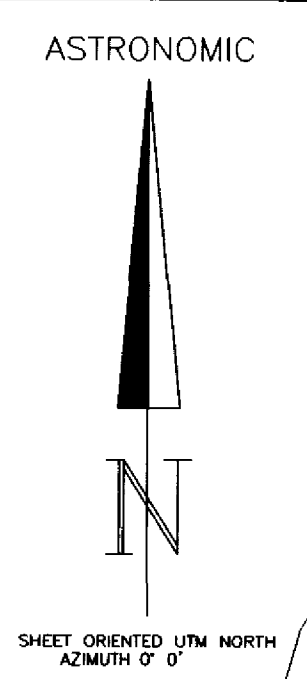


FALCONBRIDGE LIMITED
 Exploration Division Timmins ONTARIO

**CHAMBERS CLAIM PROPERTY
 TEMAGAMI AREA**

**DIAMOND DRILL PLAN
 CHA-01 to CHA-10**

TRACED: d e i	DATE: 14/07/98	NTS: 31-N/04	PROJECT: 8401
DRAWN: d e i	DATE: 14/07/98	MAP No:	FILE: 8401 W
SUPERVISED: R Foy	DATE: 14/07/98	SCALE: 1:5000 (metres)	0 50 100 150 200
REVISED:	DATE:		



- Symbols**
- PHYSICAL WORK**
 Diamond Drill Hole (color located)
- CULTURAL AND PHYSIOGRAPHIC FEATURES**
 River (open, rapids)
 Intermittent Stream
 Lake
 Claim Outline
 Grids (current grid, old grid)
 Crown Protection lands

