OVERBURDEN DRILLING REPORT

ON THE

ZAP, CONE, SIN, IS AND TER CLAIMS

090787

BEMA
Industries Ltd.

OVERBURDEN DRILLING REPORT

ON THE

ZAP, CONE, SIN, IS AND TER CLAIMS

Mayo Mining Division

N.T.S.: 105 M/13

63°55' Latitude, 135°45' Longitude

ZAP and CONE Claims Owned by:

CANADA TUNGSTEN MINING CORPORATION LIMITED
Executive Office
Box 12525, Oceanic Plaza
Ste. 1600-1066 W. Hastings Street
Vancouver, B.C. V6E 3X1

SIN, IS and TER Claims Optioned from:

ARCHER, CATHRO & ASSOCIATES LTD.
510 W. Hastings Street
Vancouver, B.C.

Work by:

BEMA INDUSTRIES LTD.
19945-56th Avenue
Langely, B.C. V3A 3Y2

M.D. Philpot, B.Sc.

March, 1981

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ON THE

ZAP, CONE, SIN, IS AND TER CLAIMS

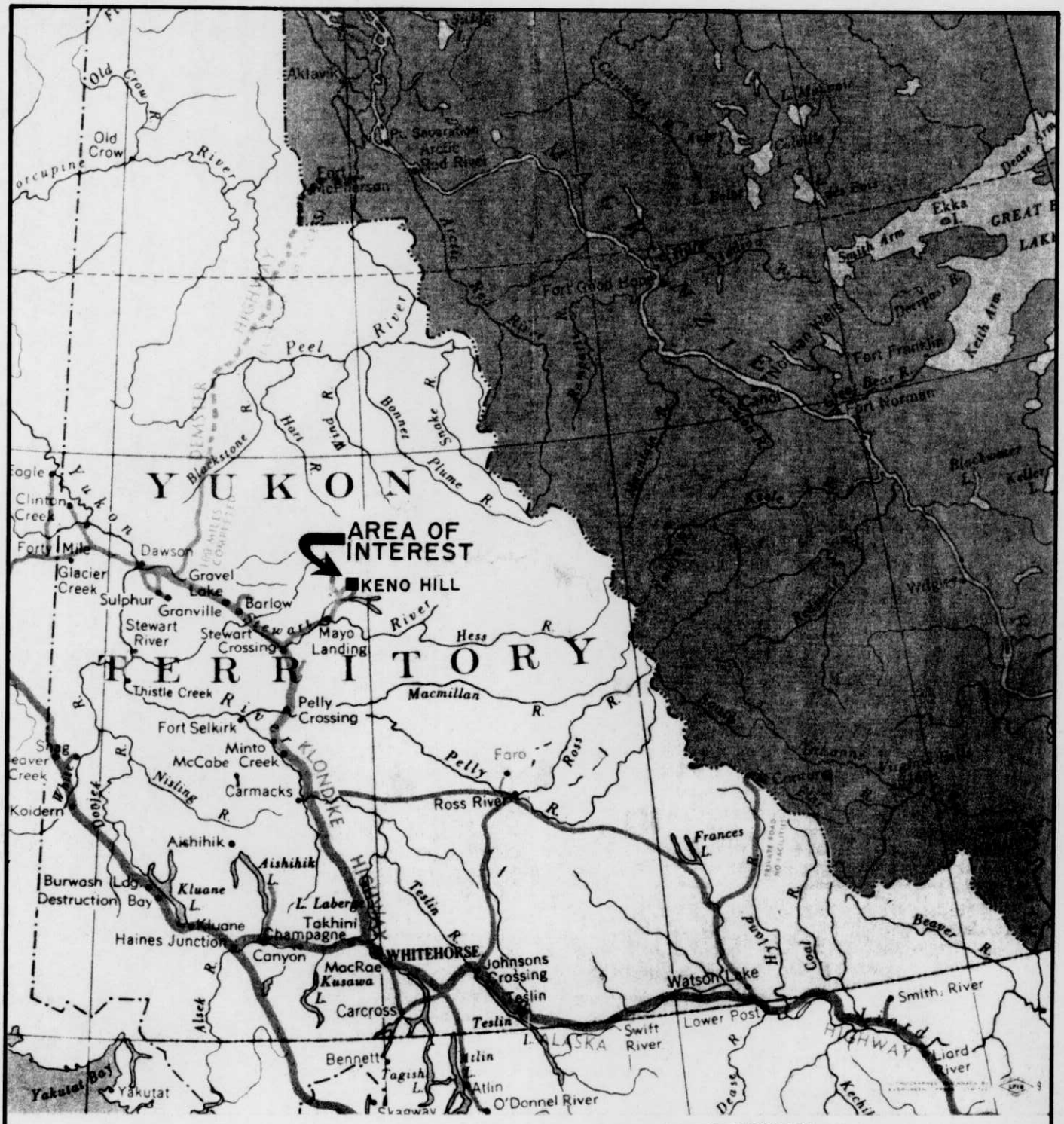
Bema Industries Ltd. was engaged by Canada Tungsten Mining Corporation Limited to carry out an overburden drill program on their wholly owned ZAP and CONE claims and the optioned SIN, IS and TER claims.

Six hundred and twenty-seven (627) ZAP claims and eighty-eight (88) ZAP fractions lie within the boundaries of the McQuesten Valley between Mt. Haldane and the Hansen Lake area. Twenty-one (21) CONE claims and one (1) CONE fraction are located on the northwestern boundary of the ZAP claims in the area of Proctor Lake.

The SINISTER group includes forty (40) SIN claims and two (2) SIN fractions, thirty-two (32) IS claims and twenty-four (24) TER claims which occupy a narrow strip of land along the Haldane Creek Valley and are joined to the southwestern boundary of the ZAP claims. The SINISTER claim group is owned by Archer, Cathro & Associates Ltd. and was optioned to Canada Tungsten Mining Corporation Limited in April 1979. See Figure 1.

The overburden drilling was done on the following claims: ZAP 2, 3, 4, 6, 8, 9, 11, 21, 22, 23, 24, 25, 26, 41, 1012 Fr., 1015 Fr., 1018 Fr., and SIN 10, 11 and 12.

Bema Industries Ltd. carried out a unique deep overburden drill program which commenced on June 4 and terminated August 9, 1980. Sixty-seven (67) overburden drill holes were drilled, of which fifty-three (53) were successful in intersecting bedrock. See Figure 2, Overburden Drill Hole Location Map. The concept of overburden drilling involves tracing clastic mechanical dispersion trains of silver, lead and zinc mineralization within the basal till.



CANADA TUNGSTEN MINING CORPORATION

KENO HILL Y·T·

1980 GEOLOGICAL EXPLORATION PROGRAMME

ZAP, SINISTER AND CONE CLAIMS

KEY MAP

DATE: *FEBRUARY 1981*	JOB NO.: **80-09-A**
REVISED BY:	FIG. NO.: **1**

BEMA INDUSTRIES LTD.

Heath and Sherwood Drilling Limited were contracted to supply an Acker Mark IV, track mounted, dual-tube reverse circulation rotary drill system. The orientation drill program was designed with a certain amount of flexibility so that it could be modified to follow-up anomalous areas. Initially four exploration lines were laid out approximately seven hundred (700) metres apart with one hundred and fifty (150) metre hole spacings. These holes were located to obtain the following information:

a) test soil geochemical anomalies;

b) confirm the existence of the Central Quartzite formation;

c) determine the type of overburden material;

d) determine the depth to bedrock and bedrock lithology;

e) locate lead, zinc and silver geochemical and mechanical dispersion trains from up-ice vein structures.

The dual-tube drilling system assures that a continuous and representative sample can be obtained from any desirable sample interval. Overburden samples are collected from three (3) metre intervals in glaciofluvial deposits, one (1) metre intervals in glacial tills or at lithological contacts. The slurry is logged on the drill by a geologist. When the desired sample interval has been drilled, the geologist, with aid from a helper, changes two sample buckets and replaces them with two clean buckets. One sample bucket contains -10 to +180 mesh material and the second bucket contains -80 to +250 mesh material. While the geologist continues to log the new slurry, the helper collects proportionally, two identical samples from both buckets.

The first bucket is covered by a +10 mesh screen, fragments larger than +10 mesh are retained on this screen, while -10 mesh material passes through into the first bucket. This system provides a quick and efficient way of rejecting oversize material. The majority of the +10 mesh bedrock material is disgarded but a small proportion is kept for whole rock analysis, logging and identification purposes. The -10 mesh to +180 mesh material sinks to the bottom of the bucket while the finer suspended material, -180 mesh, flows from the first bucket by way of an overflow valve into a second bucket. The second bucket acts

like a settling pond collecting the -180 to +250 mesh material. Any overflow from the second bucket into the drills' water-tank consists only of the finest (-250 mesh) clay particles.

The -10 mesh to +180 mesh sample is split into two portions. One of the two -10 mesh to +180 mesh samples collected is run over the concentrating table and the other sample is stored. A portion of the heavy mineral concentrate obtained from the -10 mesh to +180 mesh sample was sent to Bondar-Clegg & Company, Whitehorse for silver, lead, zinc, copper and gold geochemical analyses. A two hundred and fifty (250) gram sample of the -180 to +250 mesh fine sample was collected in a Kraft sample bag, dried and then shipped to Bondar-Clegg & Company, Whitehorse for silver, lead, zinc and copper geochemical analyses. The geochemical values for heavy mineral concentrates and -250 mesh samples are tabulated with the overburden lithologic drill logs. See Appendix I.

Report by: M.D. Philpot

M.D. Philpot, B.Sc.
Geologist

K.E. Northcote

K.E. Northcote, Ph.D.,P.Eng.
Geological Supervisor

MDP/pcd

APPENDIX I

DRILL HOLE LOGS

OVERBURDEN DRILLING REPORT

ON THE

ZAP, SIN, IS, TER AND CONE CLAIMS

090787

LEGEND

A	Upper Till	$\Delta_1\Delta_1$
B	Lower Till	$\Delta_2\Delta_2$
C	Glaciofluvial	
D	Glaciolacustrine	
E	Bedrock	

4.5	Heavy mineral concentrate sample
0.4*	-250 mesh sample
0.9**	Bedrock sample

NOTE: All overburden samples are stored at Bema Industries Ltd.'s warehouse in Mayo, Yukon Territory.

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 8 1980

SHIFT HOURS
_____ TO _____

TOTAL HOURS
6.00 hours

CONTRACT HOURS
6.00 hours

HOLE NO. 01 LOCATION Western Zap L 10+730 , 1800 S
GEOLOGIST G. Rodgers DRILLER A. Strojny BIT NO. 79501 BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL 10:25 - 11:25 (slow - weak hydraulics)
MECHANICAL DOWN TIME 7:40 - 8:30 (compressor; 9:40-10:05 (compressor)
DRILLING PROBLEMS _____
OTHER Travel (7:00 - 7:40)
MOVE TO NEXT HOLE 12:30 - 1:20 pulling rods, 1:20 - 1:30 move to #2

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 1.4 Poor return	0.3*	40*	15*	85*		
1			01	1.4 - 7.3 Gravel	0.5	61	25	75		20
2				1.5-3.0 80% greenstone, 10% bull quartz	0.4*	32*	16*	51*		
3			02	4.5-6.0 even distribution of material, quartzite, greenstone, bull quartz, and phyllite	1.0	72	40	128		65
4										
5				7.3 - 20.0 Cobble - Pebble Till						
			03	7.3-14.0 lithology: greenstone (70%) quartzite (20%) bull quartz (10%)	0.2*	37*	12*	58*		
6					0.5	75	20	100		10
			04	14.0-20.0 matrix moderate; clay rich, up to 50%, +10 moderate, pebbles % greater than cobbles %, lithology phyllite, quartzite	0.5*	29*	54*	47*		80
7										
8			05		0.4*	22*	8*	48*		20
9										
			06		0.5*	23*	30*	40*		110
10										
11					0.2*	38*	10*	38*		
12			07		2.2	181	60	141		2335
13										
14										
15			08		0.3*	21*	9*	36*		
					1.0	91	63	160		25
16			09		0.2*	21*	8*	40*		
17					2.8	250	296	171		50
18										
19			10		0.3*	18*	8*	30*		
					0.8	83	68	127		35
20			11							

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__
SHIFT HOURS
_____ TO _____
TOTAL HOURS
_____
CONTRACT HOURS
_____

HOLE NO. 01 con't LOCATION _____
GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			11	20.0 - 23.3 Interbedded Fluvial and Lacustrine Clay	0.4* 4.0	16* 110	6* 70	80* 1190		 130
22			12		0.4*	28*	8*	135		
23				23.3 - 32.6 Pebble - Cobble Till % of quartzite increases down section from 80% to 100%; matrix moderate and consists of clay (5 - 15%)	6.0	121	100	830		100
24			13		0.3* 9.3	26* 150	10* 128	180* 458		 550
25			14	32.6 - 35.9 Bedrock silver-grey phyllite with local siliceous layers; trace of arsenopyrite, pyrrhotite	0.4*	34*	17*	205*		
26					12.8	202	223	406		935
27			15		0.4*	32*	11*	170*		
28					10.5	147	108	500		1920
29			16		0.3* 7.0	30* 207	12* 210	140* 350		 30
30			17		1.1* 9.0	43* 225	230* 130	175* 430		 450
31			18		0.3* 7.0	56* 212	10* 338	120* 470		 4575
32			19		0.4* 3.5	55* 210	20* 50	320* 300		 130
33										
34			20		0.9**	19**	12**	76**		65**
35										
36										
37										
38										
39										
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 9 1980

SHIFT HOURS
7:30 TO 11:45

TOTAL HOURS
4.25 hours

CONTRACT HOURS
3.25 hours

HOLE NO. 02 LOCATION Western Zap 1073 E , 1+650 S

GEOLOGIST Thompson DRILLER Strojny BIT NO. 79501 BIT FOOTAGE

MOVE TO HOLE

DRILL 8:30 - 11:00 Pull rods 11:00 - 11:45

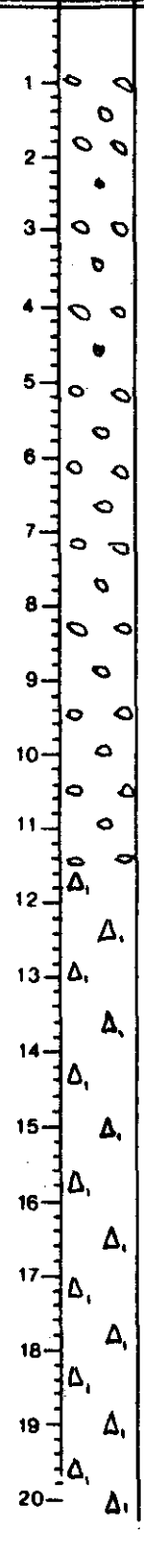
MECHANICAL DOWN TIME Service rig 7:30 - 8:30

DRILLING PROBLEMS

OTHER Travel 7:00 - 7:30

MOVE TO NEXT HOLE

Repair rod guide place 11:45 - 3:00 - charge to mobilization



SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
	0 - 0.9 Discard - gravel at surface, poor return						
01	0.9 - 11.5 Pebble - Cobble Gravel 0.9-4.6 cobbly gravel with coarse sand matrix - 20% greenstone, 40% grey quartzite, 20% quartz, 10% other sediments, grey clay bed at 1.2	0.2* 1.8	32* 57	20* 48	72* 100		 60
02	4.6-11.5 pebbly gravel with abundant medium sand matrix, lithology as 0.9-4.6 and changing with depth to 30% greenstone, 60% quartzite and 10% quartz, clay bed at 10.0 metres	0.2* 1.0	24* 93	16* 50	50* 208		 210
03	11.5 - 20.4 Cobble Till moderate fine sand and grey silt matrix; 60% greenstone, 30% quartzite, cobbles entirely greenstone, section of coarser cobbles at 14.6-20.4, minor smooth clay at 17.9, locally this section contains minor fine sand matrix and resembles a gravel	0.3* 5.0	27* 131	12* 140	40* 159		 50
04		0.2* 1.3	27* 181	10* 73	40* 266		 150
05		0.2* 0.8	31* 92	13* 50	30* 112		 320
06							

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 02 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
0			06	20.4 - 28.3 <u>Gravel</u>	0.2*	25*	10*	40*		
					0.5	121	20	80		15
1				20.4-21.9 small pebbles, abundant medium sand matrix, 60% quartzite, 10% quartz 10% greenstone	0.2*	25*	10*	78*		
2			07		0.5	32	25	145		10
3				21.9-23.4 medium grained sand, thin grey clay bed at 23.4						
4				23.4-24.0 gravel as at 20.4 - 21.9	0.2*	25*	8*	120*		
5				24.0-24.4 grey clay bed with quartzite cobble at 24.4	0.5	33	13	150		40
6			08	24.4-28.3 fine sand and silt with local thin pebbly beds and thin clay beds, clay beds thicker and more common with depth						
7										
8				28.3 - 30.5 <u>Cobble Till</u>						
				moderate fine sand silt matrix (grey); 70% quartzite, 10% greenstone, 5% schists, cobbles all quartzite	0.2*	27*	10*	105*		
9			09		0.8	40	10	125		395
10										
11			10	30.5 - 35.1 <u>Bedrock</u>	0.2**	6**	2**	10**		
					0.1*	21*	8*	38*		L5**
				quartzite (grey) with thin quartz veins, amber quartz veins 31.7-32.6 and 33.6 and 34.3-34.7; grey phyllite at 32.6, thin phyllite beds at 34.7 - 35.1, graphitic phyllite ground to black clay at 34.7	0.5	25	5	24		10
12			11		0.2**	4**	2**	9**		
					0.1*	22*	5*	41*		L5**
13					0.5	27	5	27		30
14			12		0.1**	3**	2**	6**		L5**
					0.3	70	5	38		20
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 9 19 80

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
3 hours

HOLE NO. 3 LOCATION Western Zap L10+730 , 1+500 S

GEOLOGIST M. Philpot DRILLER Strojny BIT NO. 020050 BIT FOOTAGE _____

MOVE TO HOLE 3:00 - 3:15

DRILL 3:30 - 6:00

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER Clean tanks 3:15 - 3:30

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 1.5 Swampy and organic						
1				1.5 - 3.5 No return						
2				3.5 - 5.5 Pebble - Cobble Till	0.3*	33*	10*	43*		
			01	even mixture of lithology: greenstone (40%) quartzite (30%) bull quartz (15%) beige sandstone	2.0	257	75	372		30
3										
4										
5				5.5 - 10.5 Pebble Till						
				6.5-8.5 boulders near top grading into cobbles, possibly the ablation phase of a till	0.3*	33*	15*	45*		
6			02							
				8.5-9.0 clay rich matrix, lumpy and grey	1.0	100	35	191		475
7				9.0-10.5 clay decreases and matrix becomes more sandy						
8			03		0.3*	31*	9*	33*		
				10.5 - 14.5 Pebble - Cobble Till	2.0	91	45	130		20
9				12.5-13.5 clay rich matrix lithology: quartzite (30%) greenstone (40%)	0.2*	24*	8*	30*		
10			04		2.3	190	75	295		45
				13.5-14.0 slab of clay incorporated in the till						
11				14.0-14.5 blocky clay with small pebbles in it						
12					0.1*	36*	10*	40*		
			05	14.5 - 15.5 Cobble Till						
13				generally poor matrix, sometimes clay rich	2.0	311	120	330		170
14			06	15.5 - 18.0 Fluvial	0.2*	35*	10*	50*		
				15.5-16.3 sand and gravel	0.8	62	55	210		20
15			07	16.3-18.0 blocky dark beige clay, thin black beds observed	0.2*	73*	8*	42*		
					2.3	390	120	178		40
16				18.0 - 24.5 Pebble - Cobble Till	0.1*	24*	8*	40*		
			08	18.0-19.8 clay-silt matrix, grey, lithology: quartzite (60%) greenstone (30%)	1.0	108	128	110		10
17										
18										
19			09							
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__
SHIFT HOURS
_____TO _____
TOTAL HOURS
_____
CONTRACT HOURS
_____

HOLE NO. 3 (con't) LOCATION _____
GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21	Δ_2		09	19.8-20.9 quartzite dominant, clay matrix continues	0.2*	26*	10*	43*		
					0.5	118	30	215		15
22			10	20.9-22.9 no clay, increasing quartzite, greater than 80% pebbles	0.2*	32*	10*	60*		
					2.0	221	55	500		45
23				22.0-24.5 cobbles increase, matrix sandy, arsenopyrite found						
24			11	24.6 - 26.5 Bedrock	0.3*	41*	31*	95*		
				phyllitic quartzite, (minor pyrite) intercalated with quartzite	3.3	204	35	325		45
25			12		0.2**	24**	4**	19**		
26				25.5-25.7 graphitic phyllite						
				phyllitic quartzite						
27				25.7-26.5 thin section of about 1% pyrite near top						
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 10 19 80

SHIFT HOURS
7:30 TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO. 04 LOCATION Western Zap 10+730E, 1+350 S

GEOLOGIST G. Rodgers DRILLER A. Strojny BIT NO. 020050 BIT FOOTAGE 92.0

MOVE TO HOLE _____

DRILL 8:30 - 10:00

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS 7:40 - 8:30 (frozen water line, cold compressor)

OTHER 10:00 (Broken bit --- pulling rods)

MOVE TO NEXT HOLE _____

Travel time: 7:00 - 7:30

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 2.8 Poor return, minor sand and clay matrix	0.8*	20*	10*	38*		
			01	2.8 - 14.4 Cobble - Pebble Till	0.3	51	20	75		475
				matrix silt and minor clay, lithology: greenstone (60%) quartzite (30%)						
				14.4 - 17.0 Fluvial						
				almost all matrix silt and fine grained sand	3.2*	16*	12*	29*		
			02		67.0	246	103	205		L40
				15.2-15.4 thin clay layer						
				17.0 - 20.4 Cobble Till						
				lithology: Quartzite (light grey) (40%), greenstone (very fine grain and dark grey) (30%), siliceous phyllite (20%), bull quartz (10%); silty matrix local greenstone boulders	0.5*	25*	8*	21*		
			03		1.5	80	85	53		5
					0.4*	12*	11*	25*		
			04		4.0	102	63	130		1390
					0.4*	12*	8*	31*		
			05		0.8	36	20	75		5
					0.3*	18*	5*	41*		
			06		0.5	49	73	100		60
					0.3*	12*	4*	50*		
			07		1.5	473	8	123		25
					0.2*	68*	12*	107*		
			08		1.3	590	15	125		11,100
					0.4*	92*	6*	148*		
			09		0.5	463	10	152		715

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 10 1980

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO. 04A LOCATION Western Zap 10+730E , 1+335 S

GEOLOGIST G. Rodgers DRILLER A. Stroiny BIT NO. 020049 BIT FOOTAGE 0

MOVE TO HOLE ____

DRILL 11:20 - 12:05 , 12:30 - 1:25

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS 12:05 - 12:30 (plugged --- broken 'O' ring -- pulled

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
20			09	20.2-20.4 black graphitic clay						
21				20.4 - 22.9 Bedrock	0.5*	22*	3*	40*		15
22			10	dark grey quartzite interbedded with phyllite	0.2**	10**	4**	26**		L5**
23										
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 10 19 80

SHIFT HOURS
1:45 TO 7:10

TOTAL HOURS
5.50 hours

CONTRACT HOURS
5.50 hours

HOLE NO. 5 LOCATION Western Zap 10+730 E, 1+200 S
GEOLOGIST G. Norman DRILLER A. Strojny BIT NO. 79474 BIT FOOTAGE 24.4m
MOVE TO HOLE 1:45 - 2:00
DRILL 2:00 - 6:20 pull rods 6:20 - 6:40
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS Bit clogged with clay, necessary to pull
OTHER
MOVE TO NEXT HOLE 6:40 - 7:15

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - .6 No return						
				.6 - 8.8 Cobble Till						
				fine silt and sand matrix (2m of clay as soft gritty lumps)	0.3*	16*	12*	32*		
			01	lithology: quartzite (60%) greenstone (20%) quartz (5%)	0.5	51	30	108		25
				2.7-4.6 cobbles of beige rock						
				4.6-5.5 boulders of greenstone						
			02	5.5-5.8 boulders of diorite	0.3*	28*	10*	33*		
				5.8-6.7 diorite cobbles	1.0	78	13	75		15
				6.7-7.0 large cobbles of arkose, brown grey	0.2*	16*	8*	34*		
			03	7.0-7.6 uniform with: quartzite (30%) beige (10%) diorite (30%) quartz (10%)	0.5	45	20	85		10
				7.6-8.2 higher percentage of quartzite, about 70%	0.3*	13*	7*	31*		
			04	8.2-8.8 large quartzite cobble	0.8	70	40	90		10
				8.8 - 9.6 Fluvial?						
				high percentage of silt and sand	0.3*	14*	6*	29*		
			05		0.8	75	20	100		15
				9.6 - 16.4 Cobble Till						
				9.6-11.5 granodiorite, greenstone cobbles, higher percentage of greenstone; fine silt matrix,	0.2*	26*	4*	30*		
			06	lithology: greenstone (40%) quartzite (20%) arkose (10%)	1.0	170	30	175		20
					0.2*	33*	8*	32*		
			07	11.5-12.2 few clay clasts	1.5	120	10	55		15
				12.2-15.8 greenstone dominant, quartzite minor; minor silt and sand	0.2*	22*	8*	37*		
			08	15.8-16.4 greenstone dominant	0.8	119	40	70		20
				16.4 - 19.8 Pebble - Cobble Till						
					0.4*	24*	8*	21*		
			09		0.5	85	35	63		35

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__
SHIFT HOURS
_____ TO _____
TOTAL HOURS
_____
CONTRACT HOURS
_____

HOLE NO. 5 (con't) LOCATION _____
GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				19.8 - 20.3 Bedrock Smear	0.2*	63*	9*	46*		L5**
			10	limonitic, brown clay till	1.0	80	8	60		5
				20.3 - 24.4 Bedrock						
				grey-green phyllite? greywacke?, greenstone	0.2*	144*	4*	21*		L5**
			11		0.5	142	5	25		295
				22.8-23.7 clay gouge with limonite rock fragments	0.2**	90**	3**	39**		
				23.7-24.4 same as above greenstone	2.0	95	8	65		
					0.3**	79**	4**	86**		L5**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 11 19 80

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

2.00 hours

HOLE NO. 6 LOCATION Western Zap L10+730 , 1+050 S

GEOLOGIST M. Philpot DRILLER A. Stroiny BIT NO. 020047 BIT FOOTAGE ____

MOVE TO HOLE ____

DRILL 12:00 - 2:00

MECHANICAL DOWN TIME 8:00 - 12:00

DRILLING PROBLEMS ____

OTHER Compressor needed some welding

MOVE TO NEXT HOLE ____

Water may contain Pb due to 500 gallon gas tank

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - .5 No return						
1			01	.5 - 4.5 Cobble Till	0.3*	18*	8*	24*		
				silt matrix	1.5	79	35	100		L20
2				.5-1.0 brown water						
3				1.0-3.0 water return now grey, quartzite cobbles						
			02	3.0-4.5 clay rich matrix, small pebbles, drilling quick	0.4*	17*	10*	36*		
4					15.0	134	65	135		105
				4.5 - 13.5 Pebble - Cobble Till						
5				4.5-9.5 clay matrix moderately grey lithology: quartzite (60%) greenstone (20%) bull quartz (5%) other (15%)						
6			03		0.2*	22*	12*	46*		
7					1.0	70	53	105		20
8				9.5-10.5 fluvial? fragments (90%) pebbles, clay rich matrix						
			04		0.3*	23*	14*	52*		
9					2.8	200	100	450		3235
10				10.5-13.5 pebble-cobble till matrix less clay, more silt lithology: quartzite (45%) greenstone (35%)						
11			05		0.5*	38*	12*	38*		
12				13.5 - 16.5 Pebble Till? Fluvial? clay rich matrix, lumpy, grey, drilling fast, pebbles well rounded	1.0	171	50	225		30
13										
14				16.5 - 20.0 Pebble - Cobble Till	0.2*	18*	10*	39*		
			06	16.5-18.5 matrix contains less clay, pebbles fewer, increasing amount of cobbles, about 50/50	2.3	162	88	405		935
15										
16			07	18.5-19.5 cobbles increase, size is even about 5cm, silt - sandy matrix	0.3*	20*	7*	53*		
					3.3	145	78	335		1870
17										
18			08	19.5-20.0 pebble content increasing, silty matrix, lithology quartzite and greenstone	0.4*	16*	6*	39*		
					2.8	144	70	215		40
19										
					0.1*	16*	7*	26*		
20			09		3.5	158	75	350		45

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 6 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
1	A_1			20.0 - 21.6 **Cobble Till**	0.1*	17*	6*	40*		
	A_2		10	slow drilling, large diorite, silty matrix	1.5	80	20	85		45
2				21.0-21.4 greenstone boulder						
3				21.4-21.6 clay lumpy and grey, gritty sand incorporated	0.2*	28*	10*	30*		3755
			11		1.5	81	20	75		
4				21.6 23.1 **Fluvial?**						
			12	cobbles and pebbles, no clay or silt matrix	0.2**	71**	2**	20**		
5					1.0	112	8	25		4125
				22.9-23.1 very clean clay, grey and smooth						
6				23.1 - 26.0 **Bedrock**						
7				diorite-greenstone, minor limonite on fractures						
8										
9										
10										
11										
2										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 11 19 80

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 07, 07a LOCATION Western Zap

GEOLOGIST D. Bonnar DRILLER A. Stroiny BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE 2:50 - 3:00

DRILL 3:00 - 7:00

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
			01	0 - 1.3 No recovery	0.2*	29*	16*	68*		
1				1.3 - 16.4 Pebble - Cobble Till	1.0	120	70	125		180
2				clay rich matrix, pebbles predominantly greenstone and quartzite, scattered cobbles	0.3*	28*	20*	50*		
3			02		1.0	206	145	150		I.S.
4				3.0-4.6 increase in clay content in matrix	0.2	24*	8*	52*		
			03	4.6-5.2 increase in pebbles, less clay, some cobbles	4.0	316	180	670		100
5				5.2-7.0 increase in clay content						
6				7.0-9.0 increase in pebbles and cobbles						
7				9.0-13.8 increase in clay and silt	0.4*	25*	13*	57*		
8			04	13.8-14.6 decrease in clay, increase in fine sands and pebbles	1.5	441	100	370		45
9				16.4 - 20.4 Gravel	0.3*	20*	6*	43*		
10			05	no clay, sand-silt matrix, abundant pebbles, some cobbles; pebbles are of greenstone, quartzite, chert, jasper etc.	4.8	608	150	1175		120
11					0.3*	18*	8*	51*		
12			06	18.9 - pyrite noted in quartzite cobble	3.8	348	115	715		395
13				19.9 - light grey quartzite cobble with pyrite	0.2*	17*	5*	40*		
14			07		8.0	295	108	640		G15000
15										
16			08		0.4*	18*	5*	40*		
17					5.5	567	173	790		4100
18										
19			09		0.2*	24*	5*	44*		185**
					2.8	253	145	425		485
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 07a con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG		Ag	Cu	Pb	Zn		Au
21			10	20.4 - 34.5	Pebble - Cobble Till	0.2*	19*	6*	38*		
					dominance of clay and silt in matrix varies locally, pebbly with scattered cobbles	3.5	852	230	845		6400
22						0.2*	20*	4*	47*		
23			11	22.0-24.0	increase in clay and pebbles, decrease in cobbles	3.0	260	130	655		175
24						0.2*	20*	5*	33*		
25			12	24.0-25.4	increase in cobbles of greenstone and quartzite	4.8	361	230	480		1045
26				25.5 -	15 cm of clean, grey clay which grades into gritty clay at 25.9						
27						0.3*	23*	10*	51*		
			13	26.0-29.0	increase in cobbles and in fine pebbles	13.3	214	123	565		395
28				27.2 -	pyrite noted in clay						
29				28.0 -	pyrite noted in black quartzite	0.8*	22*	56*	54*		
30			14	29.4-30.0	brown clay bed, slightly gritty	8.0	207	1068	275		4840
31				31.0-34.5	dominantly brown colored clay with small pebbles and few cobbles (mostly quartzite)	0.2*	16*	9*	63*		1735**
32			15			3.0	122	160	235		5595
33				32.0 -	pyrite noted						
34				34.5 - 37.6	Bedrock						
			16		phyllitic quartzite with light brown quartz veins from 34.5 - 35.0	0.3*	28*	8*	49*		
35						3.8	123	133	140		1440
				35.0 -	10cm of clay with limonitic grains - vein?	1.0	132	35	120		L5**
36			17			0.2**	36**	2**	28**		915
				36.0-36.6	grey phyllitic quartzite						
37				36.6-37.2	clayey gouge-graphitic						
				37.2-37.6	medium grey quartzite						
38											
39											
40											

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 12 19 80

SHIFT HOURS
7:30 TO 12:30

TOTAL HOURS
5.20 hours

CONTRACT HOURS
5.20 hours

HOLE NO. 8 LOCATION Western Zap L10+730 , 0+750 S

GEOLOGIST M. Philpot DRILLER A. Stroiny BIT NO. 59256 BIT FOOTAGE 19.8

MOVE TO HOLE 59325 13.7

DRILL 8:30 - 12:30

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Bit no. 59256 broke at 13.7 m

OTHER Move drill 5 m east

MOVE TO NEXT HOLE 12:35 - 12:50

IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - .5 No return (65%) (35%)	0.2*	15*	12*	34*		
1			01	.5 - 3.5 Pebble Cobble Till	1.3	69	50	115		20
2				.5-1.5 rich clay matrix, grey, lumpy, lithology: quartzite (50%) greenstone (30%) bull quartz (5%)						
3			02		0.3*	32*	9*	30*		
4				1.5-2.5 poor return, substantial drill movement	1.5	771	115	125		120
5				2.5-3.0 gritty clay (brown-grey), (soupy)	0.5*	16*	10*	30*		
6			03	3.0-3.5 clay rich matrix (grey, lumpy) (25%) (75%)	2.8	108	90	90		50
7				3.5 - 7.5 Pebble - Cobble Till	0.2*	15*	10*	32*		
8			04	3.5-4.5 clay content decreasing, large consistant sized cobble till, matrix sandy, lithology: light grey quartzite (15%) grey quartzite (35%) greenstone (25%) bull quartz (10%)	3.8	56	105	400		55
9										
10			05		0.5*	15*	10*	38*		
11				6.7-7.5 slight increase in clay content, lumpy and grey, matrix still sandy (75%) (25%)	2.3	211	73	365		60
12			06		0.3*	16*	7*	42*		
13				7.5 - 13.6 Cobble - Pebble Till	3.3	423	130	605		975
14				10.6-11.0 matrix consists of clay silt (grey), lithology: quartzite (50%) diorite (30%)	0.4*	21*	8*	36*		
15			07	11.0-13.6 eratic layers of bull quartz, lumpy, grey clay	2.8	245	95	475		1150
16				13.6 - pull rods suspected bit problem move 5 m east	0.3*	18*	11*	47*		
17			08	13.6 - 17.8 Pebble - Cobble Till	2.5	242	110	515		260
18				13.6-15.4 moderate clay matrix (grey)						
19			09	15.4-16.0 cobble % decreases, clay zones are not continuous	0.1**	6**	4**	7**		L5**
20				16.0-17.8 even size of cobbles 3-5cm, good clay matrix lithology: light quartzite (30%) dark quartzite (50%) (minor pyrite)	1.3	160	55	185		64

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 8 (con't) LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				17.8 - 19.7 Bedrock
				17.8-18.3 medium grey quartzite
				18.3-18.4 phyllite
				18.4-19.7 quartzite, weakly sericitic

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 12 19 80

SHIFT HOURS
_____ TO _____

TOTAL HOURS
1.50 hours

CONTRACT HOURS
1.50 hours

HOLE NO. 9 LOCATION Western Zap L 10+730 , 0+600 S
GEOLOGIST M. Philpot DRILLER A. Strojny BIT NO. 020048 BIT FOOTAGE _____
MOVE TO HOLE 12:35 - 12:50
DRILL 1:15 - 2:30
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS Nil
OTHER _____
MOVE TO NEXT HOLE 2:40

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
		.5 - 2.2		Fluvial?	0.4*	15*	10*	32*		
1			01	fine sand matrix, pebble - cobble size fragments	1.0	110	70	250		170
2		2.2 - 3.2		Pebble - Cobble Till						
			02	minor clay matrix	0.4*	13*	8*	23*		
3					0.3	52	43	100		15
		3.2 - 6.6		Bedrock						
4		3.2-3.4	03	dark phyllitic quartzite	0.2**	3**	6**	8**		165
		3.4-4.8		light blue-grey quartzite, minor limonite on fractures weakly sericitic	7.6	440	80	370		L5**
5					0.6**	4**	5**	9**		L5**
			04		10.0	144	66	150		80
6		4.8-4.9		quartz vein (white with rusty coating)						
7		4.9-5.0		graphitic shear zone						
		5.0-6.6		light grey quartzite (Central Quartzite type) occasionally grading into a gritty buff-grey quartzite						
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 12 19 80

SHIFT HOURS
2:55 TO 4:25

TOTAL HOURS
2.75 hours

CONTRACT HOURS
2.75 hours

HOLE NO. 10 LOCATION Western Zap L 10+730 , 0+625 S

GEOLOGIST M. Philpot DRILLER A. Strojny BIT NO. 020048 BIT FOOTAGE

MOVE TO HOLE 2:45 - 2:55

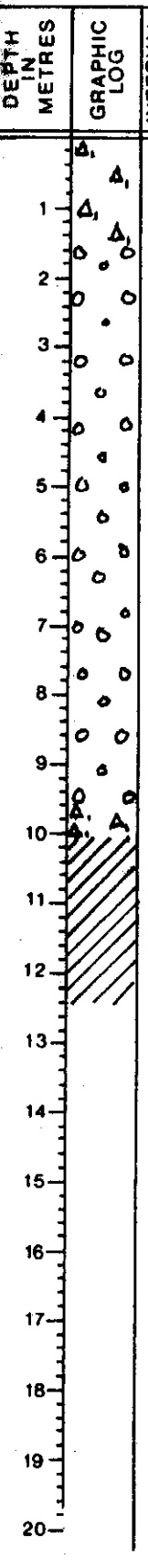
DRILL 2:55 - 4:25

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER

MOVE TO [redacted] road 4:25 - 5:30



DESCRIPTIVE LOG	SAMPLE NO	Ag	Cu	Pb	Zn		Au
0 - 1.5 **Pebble Till?** minumum return, minor clay and pebbles							
1.5 - 9.6 **Fluvial** few organic layers, silt and sand - brown colored water, easy drilling, slow and poor return	01	0.3*	12*	11*	31*		
		1.0	50	20	125		195
7.4-9.5 pebbles increase slowly downwards							
9.5-9.6 thin bed of lacustrine clay (grey), fine and slippery							
9.6 - 10.0 **Pebble Till** thin bed of pebbly till, silty matrix	02	0.2*	8*	6*	22*		
		0.5	56	75	120		
10.0 - 12.1 **Bedrock** gritty quartzite (tan-light grey)	03	0.4*	12*	4*	28*		
		0.5	100	30	160		25
10.2-12.1 medium grey blue quartzite slightly limonitic on fractures, one wad box work left behind by pyrite	04	0.3*	6*	8*	13*		L5
		0.5	77	30	295		
	05	0.3**	4**	4**	8**		L5**
10.7 - quartz vein							
12.1-12.4 greenish quartzite grading into a light white-grey quartzite							

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____TO_____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 10 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				4:45 - 5:30
2				Move rig to road for fill-up, clean out and minor servicing.
3				
4				5:30 - 6:00
5				Travel from drilling site to camp.
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 13 1980

SHIFT HOURS
7:30 TO 3:15

TOTAL HOURS
7.75 hours

CONTRACT HOURS
7.75 hours

HOLE NO. 11 LOCATION Western Zap L 9+725E , 500N
GEOLOGIST G. Norman DRILLER A. Stroiny BIT NO. 020048 / 794680 BIT FOOTAGE 157' / 73'
MOVE TO HOLE 7:30 - 8:00
DRILL 9:15 - 3:15
MECHANICAL DOWN TIME
DRILLING PROBLEMS Wait for water 10:05 - 10:20 and 10:55 - 11:15
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 0.9 No recovery - although surface to 0.9 is medium grained sand	0.4*	25*	9*	64*		
			01	0.9 - 8.5 Fluvial						
				0.9-3.1 medium grained brown sand, 1mm grains	0.3	52	15	115		15
				3.1-8.5 sand matrix; lithology: quartzite (40%) greenstone (30%) quartz (5%) other (25%)	0.6*	19*	12*	49*		
			02		2.3	48	230	125		15
				5.5 - 5 cm clay bed (clean) grey-brown						
			03	7.6 - 10 cm cobble grey quartzite	0.3*	18*	9*	32*		
				8.5 - 19.8 Pebbly Coarse Gravel						
				pebbles 1"; coarse sand 10% matrix, lithology: quartzite (70%) greenstone (10%) other (brown quartz) (20%)	0.8	60	80	130		L50
			04	9.4 - cobble consists of greenstone, high % of pebble in gravel; 80% very coarse sand	0.5*	29*	50*	132*		30
				13.4 - cobble of brown quartz-rich porphyry intrusives						
			05	16.4 - uniform lithic, quartz, greenstone and others; some chert pebbles, quite a few metasediments of different types; some bull quartz	0.6*	22*	12*	43*		40
			06	15.8-16.7 poor recovery-pumping water down hole faster than pumping it in; wait for water 10:05 - 10:20	0.5*	23*	15*	54*		20
				19.2 - very coarse pebbles (1") little sand						
			07		0.5*	19*	18*	53*		L25

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 11 (con't) LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
			07	19.8 - 26.2 <u>Pebble - Cobble Gravel</u>						
				19.8 - lithic cobbly gravel, 40% quartzite pebbles 60% others 10% bull quartz	0.5*	20*	11*	46*		
			08	22.2 - diorite cobble 4"	0.5	97	75	120		15
				22.5 - quartzite cobble 2" 20% quartzite 60% other 10% diorite, very coarse	0.4*	36*	19*	71*		
				22.8-24.0 no return	0.8	131	170	200		20
			09	24.7-25.3 greenstone cobbles about 5"						
				25.9 - uniform lithology, pebbles 1", little sand matrix						
				26.2 - 28.3 <u>Fine Pebble Gravel</u>						
				pebbles 1/4" 10% quartzite 10% bull quartz, minor phyllite 80% other						
				28.3 - change bit 11:30 - 12:45						
				Lost hole; drill a hole 3.1 m away got down to 22.2m and lost hole due to perma frost tightening on rods						

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 14 19 80

SHIFT HOURS
7:45 TO 2:15

TOTAL HOURS
6.50 hours

CONTRACT HOURS
6.50 hours

HOLE NO. 12 LOCATION Western Zap L9+725 , 200N
GEOLOGIST D. Bonnar DRILLER A. Strojny BIT NO. 59326 BIT FOOTAGE
MOVE TO HOLE
DRILL 7:45 - 2:15
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS Nil
OTHER Hole stopped due to probable bending of rods
MOVE TO NEXT HOLE 2:15 - 2:45

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - .2 No recovery						
1			01	.2 - 1.8 Clay	0.3*	12*	5*	32*		
2				.2 - .9 brown clay, compact, dense, clean						
3			02	.9-1.2 grey clay, slippery,clean	0.3*	19*	15*	45*		
				1.2-1.8 medium sand						
4				1.8 - 4.6 Grey Till?	1.8	34	30	90		20
5				clay-silt-sand matrix, pebbly with scattered cobbles of greenstone						
6			03	4.6 - 36.8 Gravel	0.4*	22*	17*	57*		
7				sandy matrix, very pebbly, scattered cobbles, abundant quartz throughout section	1.3	65	500	92		85
			04		0.5*	15*	11*	37*		
8					2.0	109	44	84		15
9			05	4.5-5.8 cobbly; greenstone, quartzite	0.3*	16*	8*	27*		
					2.4	192	46	82		1935
10			06	6.1-7.6 cobbly, mostly greenstone, sandy matrix	0.3*	33*	14*	35*		
11				7.6-15.2 cobbly, 75% +10 mesh ie. little matrix cobbles consist of greenstone and quartzite	1.0	74	39	77		L50
12			07	15.2 - grey-brown clay bed, silty 10cm	0.2*	25*	13*	48*		
13					4.6	99	649	48		I.S.
14				16.7-18.6 grey-black clay, clean						
15			08	18.6-22.8 pebbly gravel, little matrix, increase in quartzite cobbles with depth, some phyllitic cobbles (about 5%)	0.3*	26*	10*	41*		
16					0.6	77	25	62		L25
17										
18			N/S							
19			09		0.3*	12*	6*	26*		
20					4.2	55	396	48		L25

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 12 (con't) LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

Water may contain Pb due to 500 gallon gas tank

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
1			10	22.8-23.4 abundant sand, few pebbles, cobbles of greenstone and quartzite	0.3*	11*	6*	20*		
2				23.4-25.9 increase in pebbles, still sandy	1.4	34	26	41		L25
3			11	25.9-28.6 cobbly section, abundant quartzite	0.3*	13*	8*	25*		
4				28.6-32.0 pebbly section, coarse sand matrix, no cobbles	1.4	47	45	90		L15
5			12	32.0-33.6 abundant quartzite pebbles and cobbles with about 20% graphitic phyllites	0.4*	21*	6*	30*		
6					1.0	60	16	68		L25
7				33.6-36.6 quartzite cobbles and pebbles						
8			13	35.4 - pyrite found	0.9	34	18	92		L10
9				36.3 - poor recovery						
10				36.6 - five centimetres of fine sand underlain by 1 cm. bed clean grey clay						
11			14		1.0	67	34	152		L25
12										
13										
14			15		9.3	158	114	428		G15000
15										
16			16							
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 14 1980

SHIFT HOURS
2:15 TO 3:00

TOTAL HOURS
.75 hour

CONTRACT HOURS
.75 hour

HOLE NO. 13 LOCATION Western Zap L9+725 , 0+016 S

GEOLOGIST D. Bonnar DRILLER A. Stroiny BIT NO. 59330 BIT FOOTAGE

MOVE TO HOLE 2:15 - 2:45

DRILL 2:45 - 3:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE 3:00 - 3:15

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - .6 No recovery						
1				.6 - 6.1 Gravel	0.3*	11*	9*	37*		
2			01	pebbly to cobbly, sandy matrix	0.8	71	103	175		20
3				.6 - 3.1 pebbly						
				3.1-4.6 cobbly						
4				4.6-6.1 pebbly, sand-silt matrix						
				6.1 - 7.6 Bedrock	0.3*	10*	8*	34*		
5			02	massive quartzite; medium grey, vein (at 7.3m) about 5 cm wide, limonitic quartz with minor clay gouge	1.3	49	108	115		290
6										
7			03		0.1*	2*	6*	8*		
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 14 1980

SHIFT HOURS
3:00 TO 3:45

TOTAL HOURS
.75 hours

CONTRACT HOURS
.75 hours

HOLE NO. 14 LOCATION Western Zap L9+725 , 116S

GEOLOGIST D. Bonnar DRILLER A. Stroiny BIT NO. 59330 BIT FOOTAGE

MOVE TO HOLE 3:00 - 3:15

DRILL 3:15 - 3:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 3:45 - 4:15

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
			01	0 - .2 No recovery	0.2*	9*	7*	28*		
1				.2 - 1.5 Gravel	0.8	48	35	120		15
2				pebbly with a few cobbles, sandy matrix						
3			02	1.5 - 4.6 Bedrock	0.4**	10**	6**	10**		5**
4				massive, grey quartzite; some quartz veining						
				2.4 - 5 cm quartz vein						
5				3.1-3.7 sericitic quartzite						
6				3.7 - 5 cm quartz vein, limonitic						
				4.6 - 5 cm quartz vein, limonitic						
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 14 1980

SHIFT HOURS
3:45 TO 5:30

TOTAL HOURS
1.75 hours

CONTRACT HOURS
1.75 hours

HOLE NO. 15 LOCATION Western Zap L 9+725 , 216S
GEOLOGIST D. Bonnar DRILLER A. Stroiny BIT NO. 59330 BIT FOOTAGE
MOVE TO HOLE 3:45 - 4:15
DRILL 4:15 - 4:45
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER 4:45 - 5:30 Servicing
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
			N/S	0 - 2.1 Organic Material						
				frozen						
				2.1 - 4.6 Bedrock						
				grey, massive sericitic quartzite						
			01	3.2 - graphitic layer (10 cm)	0.3**	10**	4**	11**		
				4.0 - limonitic quartz vein (5 cm)						70
				4.2 - limonitic quartz vein (5 cm)						

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 15 19 80

SHIFT HOURS
8:30 TO 10:50

TOTAL HOURS
2.50 hours

CONTRACT HOURS
2.50 hours

HOLE NO. 16 LOCATION Western Zap L9+725 , 0+085

GEOLOGIST M. Philpot DRILLER A. Strojny BIT NO. 59330 BIT FOOTAGE

MOVE TO HOLE 8:30 - 9:30

DRILL 9:30 - 10:50

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER

MOVE TO NEXT HOLE 10:50 - 11:50

Water may contain Pb due to a 500 gallon gas tank

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
			01	.7 - 1.5 Sandy matrix; pebbly brown water return	0.5*	19*	9*	38*		
				1.5 - 11.4 Fluvial minor limonite	0.5	92	58	135		50
				1.5-4.3 start of cobbles; sandy matrix, drilling slower, cobbles about 10 - 15 cm in size, lithology varies: greenstone, quartzite, beige sediment	0.3*	23*	14*	41*		
			02		1.5	97	425	125		2490
				4.3-5.0 cobble fragments lessen, sandy matrix	0.3*	22*	9*	39*		
			03							
				5.0-6.5 increasing amount of cobbles	0.8	58	58	175		30
			04	6.5-7.0 sand layer with few small pebbles	0.4*	13*	8*	28*		
					1.3	99	100	175		5
				7.0-7.2 clay (lumpy, clean, grey)						
				7.2-9.2 cobbles within sandy matrix, lithology: greenstone (40%) quartzite - phyllite (35%) other (25%)	0.3*	14*	9*	40*		
			05		9.3	136	180	200		15
				9.2-9.4 clay bed	0.4*	12*	8*	27*		
			06	9.4-11.4 small cobbles, quartzite dominant, sandy matrix	0.5	83	80	205		I.S.
			07	11.4 - 13.5 Bedrock	0.4**	16**	12**	74**		
				11.4-11.6 phyllitic quartzite						10**
				11.6-13.5 light grey quartzite (weakly sericitic); rusty along fractures						

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 15 19 80

SHIFT HOURS
10:50 TO 1:00

TOTAL HOURS
2.16 hours

CONTRACT HOURS
2.16 hours

HOLE NO. 17 LOCATION Western Zap L9+725, 0+316 S

GEOLOGIST M. Philpot DRILLER A. Strojny BIT NO. 59330 BIT FOOTAGE

MOVE TO HOLE 10:50 - 12:10

DRILL 12:10 - 1:00

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER

MOVE TO NEXT HOLE 1:00 - 1:30

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 3.6 Mulk: black organics and wood						
				3.6 - 5.8 Pebble - Cobble Gravel	0.4*	22*	7*	32*		
				poor matrix, majorite (+10), high % greenstone (diorite) grey-brown quartzite, and bull quartz	2.3	119	40	100		10300
				5.8 - 13.7 Bedrock						
			01	5.8-8.5 brown-grey quartzite, gritty and somewhat phyllitic						
				8.5-10.6 graphitic phyllite with quartz lense at 8.6						
				8.5-13.1 light grey quartzite with sericite partings						
			02	8.5-12.2 80% bull quartz	0.2**	6**	4**	8**		L5**
				13.1-13.7 grey-black graphitic phyllite, bull quartz, very graphitic at 13.4						
			03		0.3**	8**	6**	30**		5**

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 15 19 80

SHIFT HOURS
1:00 TO 2:30

TOTAL HOURS
2.50 hours

CONTRACT HOURS
2.50 hours

HOLE NO. 18 LOCATION Western Zap L9+725 , 0+416 S

GEOLOGIST M. Philpot DRILLER A. Strojny BIT NO. 59330 BIT FOOTAGE

MOVE TO HOLE 1:00 - 1:30

DRILL 1:30 - 2:30

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER

MOVE TO NEXT HOLE 2:30 - 2:40

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 2.0 Poor return, organic rich						
				2.0 - 4.8 Fluvial						
				fine silt						
			01	2.6-2.8 thin layer of smooth, clean clay	0.5*	26*	8*	34*		
					1.3	108	40	125		10
				2.8-4.5 cobbly and a few boulders; poor - moderate reture due to water escaping; matrix consists of coarse sand, quartzite dominant (45%) biotite granodiorite, bull quartz						
			02		0.4**	4**	6**	14**		5**
				4.5-4.8 quartzite cobbles dominant						
				4.8 - 7.6 Bedrock						
				4.8-6.2 medium, grey quartzite; limonite staining on fractures						
				6.2-6.4 graphite rich zone						
				6.4 - quartz vein						
				6.5-7.6 light grey quartzite						

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 15 19 80

SHIFT HOURS
2:30 TO 4:00

TOTAL HOURS
1.50 hours

CONTRACT HOURS
1.50 hours

HOLE NO. 19 LOCATION Western Zap L9+725 , 0+516 S
GEOLOGIST M. Philpot DRILLER A. Strojny BIT NO. 59330 BIT FOOTAGE
MOVE TO HOLE 2:30 - 2:40
DRILL 2:40 - 4:00
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS Nil
OTHER
MOVE TO NEXT HOLE 4:00 - 4:10

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				.8 - 1.4 Small clay (brown) bed about 4m thick at 1.0 below organics						
				1.4 - 2.5 Poor return	0.3*	14*	12*	28*		
				2.5 - 4.7 Cobble Till						
				drill bouncing, water return brown-grey, large-medium cobbles, greenstone dominant, coarse sand matrix; minor clay	0.5	122	38	140		30
			01							
			02	4.7 - 4.9 same as above, no clay	0.5*	83*	11*	53*		
				4.9 - 5.7 Pebble Till	3.0	640	68	350		207S
				clay (lumpy and rich), phyllite dominant	0.2**	12**	4**	25**		L5**
			03	5.7 - 7.6 Fluvial?						
				cobbly, no clay, coarse sandy matrix	5.3	14,400	38	260		25
				7.6 - 12.2 Bedrock						
				clay material (hard, lumpy brown-grey)						
				7.6-8.0 ground bedrock						
				8.0-9.3 small fragment, greenish alter or breakdown to clay sheared greenstone? phyllite? chlorite-quartz schist?						
				9.3-9.7 harder fragments, green						
				9.7-10.7 light green clay						
				10.7-10.9 limonitic clay (hard, lumpy) fault zone?						
				10.9-11.8 dark grey phyllite						
				11.8-12.2 rusty phyllite						

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 15 19 80

SHIFT HOURS
4:00 TO 6:30

TOTAL HOURS
2.50 hours

CONTRACT HOURS
2.50 hours

HOLE NO. 20 LOCATION L 9+725 , 0+616 S

GEOLOGIST M. Philpot DRILLER A. Stroiny BIT NO. 59330 BIT FOOTAGE

MOVE TO HOLE 4:00 - 4:10

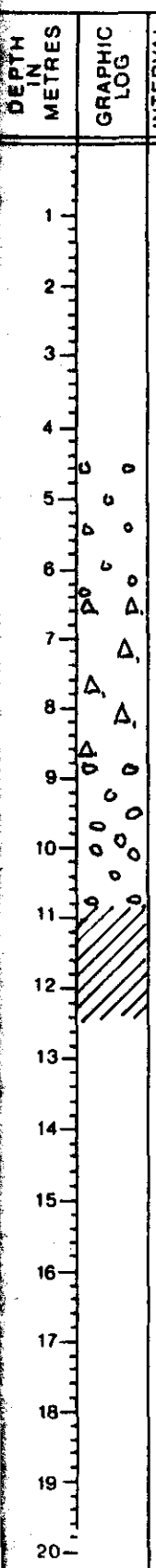
DRILL 4:10 - 5:30

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER

MOVE TO NEXT HOLE 5:30 - 6:30 clean, refuel and service



DEPTH IN METRES	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
			0 - 1.5 No return						
			1.5 - 4.5 Brown water return, fine sand, poor return; quick drilling, small pebble towards bottom	0.3*	12*	6*	26*		
				0.8	321	20	125		1650
		01	4.5 - 6.4 Fluvial						
			cobbly, water clear, beige quartzite, grey quartzite, bull quartz, cobble lithology varies						
		02	6.4 - 8.7 Cobble Till	0.2*	31*	8*	26*		
				1.5	1980	43	140		20
			water color changes dramatically (grey, soupy) clay matrix 20% (lumpy) a few large greenstone boulders; lithology: quartzite (45%) greenstone (30%) phyllite	0.2*	30*	7*	34*		
		03		2.8	248	85	270		100
		04		0.2*	19*	8*	24*		
				2.3	486	188	145		435
			8.7 - 10.8 Fluvial Gravel	0.2*	24*	13*	54*		
		05	large volume of +10, slow drilling, coarse sand matrix, gravel dominant in phyllite	5.3	210	478	395		1350
		06		0.2**	124**	4**	72**		L5**
			10.8- 12.4 Bedrock						
			10.8-12.0 blue-grey clay (graphitic zone) grading into a phyllitic quartzite						
			12.0-12.2 graphitic zone						
			12.2-12.4 flaggy phyllitic quartzite						

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 19 19 80

SHIFT HOURS
7:45 TO 11:30

TOTAL HOURS
2.75 hours

CONTRACT HOURS
2.75 hours

HOLE NO. 21 LOCATION Western Zap 9+725 , 0+716 S

GEOLOGIST M. Philpot DRILLER G. Dudgeon BIT NO. 79470 BIT FOOTAGE 28.8 m

MOVE TO HOLE 7:45-9:45 Service and move 9:45-11:00 Drill 11:00-11:30 Pul

DRILL 9:45 - 11:00

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER

MOVE TO NEXT HOLE 11:30 - 11:45

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 1.5 Poor return, minor organics and clay (60%) (40%)						
			01	1.5 - 4.5 Pebble - Cobble Till clay lumps (50%); lithology quartzite (40%) greenstone (25%) bull quartz (5%) other (30%)	0.2*	14*	10*	38*		
					4.5	199	110	125		120
			02	matrix silt - sand, salt and pepper, water generally soupy grey (70%) (30%)	0.1*	12*	7*	30*		
					2.3	270	133	325		1520
				4.5 - 9.6 Cobble - Pebble Till						
			03	4.5-7.6 lithology varies: clay lumps (5 - 10%) quartzite, dark (20%) quartzite, medium (15%) quartzite, light (10%) greenstone (25%) diorite (15%) other (15%)	0.2*	15*	8*	36*		
					8.5	330	770	525		1200
			04	matrix medium to coarse sand	0.1*	17*	9*	35*		
					3.5	262	185	470		85
				6.2 - clay (20%) large greenstone cobble						
			05	7.8-9.6 large cobble 12cm, low matrix, water return low, greenstone dominates (20%) (80%)	0.2*	16*	8*	44*		
					9.8	415	298	590		1047
				9.6 - 10.5 Cobble - Pebble Till Fluvial?						
			06	pebble increase in last metre, volume of matrix increases, matrix generally coarse, lithology varies with greenstone dominant (45%) water return grey	0.5**	50**	4**	118**		30
				10.5 - 11.0 pebbles con't, matrix high and sandy						
				11.0 - 12.4 cobble content increases, dark quartzite (40%) dark phyllite (25%)						
				12.4 - 15.0 Bedrock dark grey, thin bedded phyllite; weakly graphitic few quartz rich sections veins? sweats?						

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 19 19 80

SHIFT HOURS
_____ TO _____

TOTAL HOURS
3.00 hours

CONTRACT HOURS
3.00 hours

HOLE NO. 22 LOCATION Western Zap L 9+725 , 0+816S

GEOLOGIST M. Philpot DRILLER G. Dudgeon BIT NO. 79470 BIT FOOTAGE 28.8 m

MOVE TO HOLE 11:30 - 11:45

DRILL 11:45 - 12:45

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER _____

MOVE TO NEXT HOLE 12:45 - 2:30 (includes rolling up water line)

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 4.3 Poor return, few organics, grey water return, very fine silt, sand matrix						
			01	4.3 - 4.5 (15%) clay lumps with a few fragments (80%) (20%)	0.1*	10*	5*	39*		
				4.5 - 11.6 Pebble - Cobble Till	1.0	124	60	165		15
				4.5-4.9 up to (40%) clay lumps						
			02	4.9-7.2 pebble content decreasing, clay (5%), matrix medium to coarse sand, minor silt, lithology varies	0.2*	10*	6*	28*		
				7.2-7.4 up to (30%) clay	3.0	211	103	290		160
			03	7.4-10.6 less than (5%) clay; medium to coarse sand matrix, greenstone dominant in top of section, quartzite in bottom	0.2*	17*	6*	32*		
				10.6-11.6 sandy matrix, dark quartzite and dark grey phyllite dominant, up to (60%); minor clay	4.0	270	265	485		270
			04		0.2*	20*	6*	34*		
				11.6 - 13.6 Bedrock	9.3	457	205	425		2520
			05	light grey green phyllite, quartz-sericite schist? intermittent zones of quartz at 13.0 layer of weakly graphitic phyllite	0.3**	4**	2**	10**		L5**

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 19 19 80

SHIFT HOURS
2:30 TO 6:30

TOTAL HOURS
4.00 hours

CONTRACT HOURS
4.00 hours

HOLE NO. 23 LOCATION Western Zap L9+725 , 0+300N
GEOLOGIST M. Philpot DRILLER G. Dudgeon BIT NO. 59328 BIT FOOTAGE 43.6
MOVE TO HOLE 11:45 - 2:30
DRILL 2:30 - 3:30 and 4:45 - 6:25
MECHANICAL DOWN TIME 3:30 - 4:45 hydraulic problems
DRILLING PROBLEMS Nil
OTHER Bedrock could not be reached due to excess pressure on rods.
MOVE TO NEXT HOLE new head rod with shell extrema grease.

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
1–20				.5 - 31.2 Gravel						
			01	.5-1.5 +10 volume large, few cobbles, fast drilling medium sand matrix	0.2*	17*	12*	38*		
					1.3	61	98	85		100
				3.4-4.0 fine silt						
				4.3-4.5 (40%) clay with small pebbles, grey and lumpy, lithology of gravel varies						
			02	4.5-7.6 sandy matrix	0.2*	14*	11*	31*		
				7.6-11.7 drilling rate slower, poorly developed matrix, little sand	2.3	160	60	150		225
				11.7-13.5 matrix poor, +10 volume large						
			03	13.5-16.6 drilling slow but steady, little - no matrix, large +10 volume; lithology: greenstone (20%) quartzite (20%) other (60%)	0.1*	18*	9*	38*		
					0	0	0	0		15
			04	16.6-19.7 matrix poor, sandy; lithology: quartzite (30%) greenstone (20%) other (50%)	0.2*	22*	8*	60*		
					0	0	0	0		5
			05		0.1*	24*	12*	58*		
					0	0	0	0		615
			06		0.1*	26*	8*	40*		
					0	0	0	0		270

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 23 (con't) LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			07	19.7-22.7 quartzite and phyllite prominant, +10 volume large, matrix poor	0.1*	25*	10*	35*		
					2.8	11	105	100		2300
22				22.7-25.8 greenstone (15%) quartzite (15%) other (60%)						
23					0.3*	18*	5*	47*		
24			08	26.0-28.8 poor return, no matrix, a bit of gravel, possible loss of material due to discontinuous permafrost	2.0	167	80	150		5
25										
26				31.2 - can no longer penetrate overburden any further	0.1*	15*	6*	43*		
27			09		0.8	47	25	90		1190
28										
29					0.3*	18*	11*	46*		
30			10		0.8	41	30	110		180
31										
32										
33										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 20 19 80

SHIFT HOURS
7:30 TO 11:30

TOTAL HOURS
4.00 hours

CONTRACT HOURS
4.00 hours

HOLE NO. 24 LOCATION Western Zap L10+730 , 0+500

GEOLOGIST M. Philpot DRILLER B. Thorpe BIT NO. 59328 BIT FOOTAGE 43.6 m

MOVE TO HOLE 7:30 - 9:00 9:00 - 9:30 wait for water

DRILL 9:30 - 10:45 10:45 - 11:15 pull rods

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER Bit good for short hole

MOVE TO NEXT HOLE 11:15 - 11:30

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 1.5 Poor return, frozen organics, minor silt	0.1*	16*	11*	36*		
				1.5 - 3.5 Pebble Till						
				clay rich (40 - 70%)	2.0	250	60	240		5
			01	3.5 - 4.5 Fluvial? Till?						
				gravelly with silt-sand matrix, +10 volume moderate (30%) (70%)	0.3*	15*	7*	30*		
			02	4.5 - 7.6 Pebble - Cobble Till						
				4.5-5.5 clay content (5-10%), (grey and lumpy), silty matrix	1.0	98	160	115		335
			03	5.5-7.6 lithology:	0.1*	17*	8*	35*		
				clay content (5 - 15%)	0.8	93	60	205		20
				quartzite (30%)						
				greenstone (20%)						
			04	other (45%)	1.1**	6**	8**	21**		5**
				7.8 - 12.4 Bedrock						
				7.8-8.2 dark grey phyllite						
				8.2-8.6 dark grey quartzite						
				8.6-10.2 phyllite	0.3**	25**	4**	70**		L5**
			05	10.2-10.6 phyllitic quartzite						
				10.6-11.0 light-medium grey quartzite						
				11.0-11.2 phyllitic quartzite						
				11.2-12.4 light-medium grey quartzite						

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 20 19 80

SHIFT HOURS
_____ TO _____

TOTAL HOURS
5.75 hours

CONTRACT HOURS
5.75 hours

HOLE NO. 25 LOCATION Western Zap L 10+730 , 0+400 S

GEOLOGIST M. Philpot DRILLER B. Thorpe BIT NO. 79469 BIT FOOTAGE 31.4 m

MOVE TO HOLE 11:15 - 11:30

DRILL 12:00 - 4:00 pull rods 4:00 - 5:00

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER 11:30 - 12:30 water stand by 2:30 - 3:00 contamination by water tank?

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 2.4 Poor return, minor clay (50%) (50%)						
				2.4 - 10.6 Pebble - Cobble Till						
				2.4-4.5 large cobbles, matrix sandy, less than (5%) clay, moderate return	0.1*	27*	12*	36*		
			01	4.5-8.6 cobbles decreasing in size, clay (5-15%), matrix medium sand-silt	1.0	132	253	145		30
				8.6-10.6 dark grey quartzite, up to (80%) greenstone (15 - 20%), other (25%)	0.2*	14*	10*	28*		
			02		1.0	153	100	110		130
				10.6 - 31.4 Pebble - Cobble Gravel						
				+10 volume increase, no clay, little matrix, greenstone and quartzite dominant (60%), other (40%) drilling slow but steady	0.1*	10*	7*	29*		
			03		2.3	62	350	85		10
				16.8 - 17.2 Lacustrine Clay						
				clay rich zone, large lumps, brown grey, some areas within clay are gritty	0.2*	19*	6*	30*		
			04		1.0	85	53	125		160
				17.2 - 19.2 rusty gravel, water return noticeably rusty brown, matrix coarse sand, no clay, gravel lithology varies	0.2*	35*	8*	32*		
			05		0.8	94	60	120		70
			06		0.2*	22*	9*	30*		10
			07		0.2*	22*	10*	49*		G20000

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO. 25 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
1–2			08	19.2 - 22.2 +10 volume high, rusty gravel (limonitic staining), phyllite and quartzite dominant, low amount of coarse sand matrix, bull quartz up to (15%), greenstone (20%)	0.2*	29*	10*	116*		15
3–5			09	22.9 - 29.0 dark grey quartzite dominant, greenstone, diorite (25%), heavy limonitic staining, coarse matrix	0.2* 0.8	20* 71	10* 35	114* 225		15
6–8			10	29.0 - 31.4 large medium grey quartzite and diorite cobbles, cobbles 20 - 35 cm, coarse matrix, no limonitic staining	0.1* 3.8	28* 163	13* 151	155 490		10
9			11		0.2*	48*	8*	85*		2285
9–12			12		0.5 0.3* 2.0	168 37* 403	80 8* 55	300 89* 280		755
13–20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 21 19 80

SHIFT HOURS
2:30 TO 9:15

TOTAL HOURS
6.75 hours

CONTRACT HOURS
6.75 hours

HOLE NO. 26 LOCATION Western Zap , L 11+390 , 1+750 S
GEOLOGIST M. Philpot DRILLER B. Thorpe BIT NO. 59258 BIT FOOTAGE 38.4
MOVE TO HOLE
DRILL 2:30 - 8:30
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS Nil
OTHER Pull rods 8:30 - 9:15 Water contamination by water containe
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				.6 - 1.5 Poor return, small fragments of greenstone, very silty matrix, clay (30 - 60%)	0.2*	12*	6*	54*		
			01		2.0	137	58	185		50
				1.5 - 7.6 Pebble - Cobble Till						
				few dark grey quartzite pebbles						
				4.8-6.2 good return, matrix coarse and consists mainly of quartzite rich in pyrite	0.1*	13*	8*	46*		
			02	7.2-7.6 matrix silty, grey clay lumps (10%), pyrite present in quartzite and free quartzite and greenstone dominates (75% combined)	10.5	283	350	635		105
					0.1*	12*	8*	54*		
			03	7.6 - 10.0 Fluvial	5.0	190	165	275		65
				matrix coarse and sandy, +10 low						
				10.0 - 11.3 Lacustrine Clay						
			04	lumpy and smooth, poor return	0.1*	9*	3*	35*		
					3.3	131	88	165		50
				11.3 - 18.5 Gravel						
				11.3-13.5 +10 high, clay disappears, matrix consists of silt and sand, medium grey quartzite (50%), lithology: phyllite (10%) greenstone (15%) bull quartz (up to 20%)	0.2*	19*	6*	31*		
			05		2.3	232	45	65		90
			06	note: possibly fluvial due to high +10, however lithology indicates till	0.3*	38*	7*	43*		
					4.5	836	185	125		2050
				13.5-16.5 quartzite medium-dark grey (70%), small cobbles 2-8cm matrix medium-coarse sand	0.1*	18*	6*	47*		
			07		3.5	198	38	125		2775
				16.5-18.5 +10 high large, lithology quartzite rich (75%) bull quartz (10%) greenstone (15%)						
					0.2*	20*	13*	64*		205
			08	18.5 - 23.8 Cobble Till						
				19.1-19.8 gritty clay (5 - 20%) quartzite (60%)						

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 26 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
*				19.8-20.0 hard lumpy clay						
21				20.0-23.8 clay lumps at top, the rest very fine silt, no +10 volume	0.1*	12*	8*	36*		45
22										
23			09	23.8 - 35.8 Quartzite Gravel						
24				23.8-25.8 +10 high, no clay, medium sand matrix, quartzite (75%) ± pyrite						
25				25.8-29.0 matrix medium-coarse sand no clay, up to (85%) quartzite, medium/light/ dark grey colors bull quartz (10%), +10 very high	0.2*	23*	10*	62*		735
26			10							
27										
28				33.0-35.0 up to (1%) pyrite in medium light quartzite, bull quartz (30%)						
29				35.0-35.8 greenstone cobbles and quartzite cobbles, pyrite increase in quartzite up to (3%)	0.8*	48*	23*	317*		
30										
31			11	35.8 - 38.4 Bedrock	10.0	186	285	2445		870
32				medium grey quartzite, sometimes weakly phyllitic or sericitic, pyrite found along fractures and foliation						
33										
34				37.8-38.0 (5%) pyrite in crystalline form, open space filling, eg. (Silver King), quartz stockwork usually not mineralized	1.3*	46*	24*	571*		
35			12		14.0	191	335	8100		5200
36					0.6**	46**	5**	185**		15**
37			13							
38			14		0.6**	29**	4**	116**		5**
39										
40										

REVERSE CIRCULATION DRILL HOLE LOG

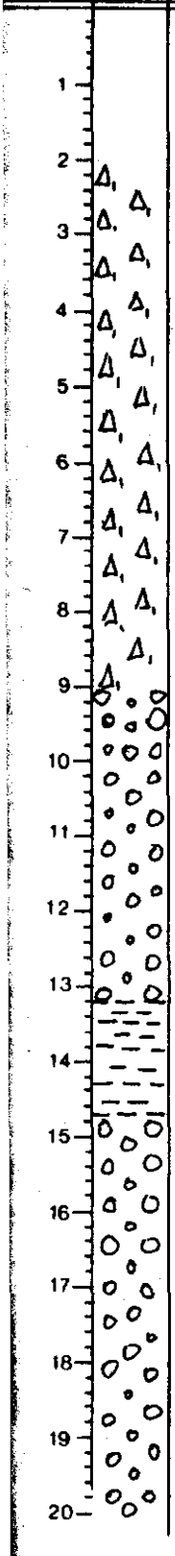
DATE June 22 1980

SHIFT HOURS
7:45 TO 2:15

TOTAL HOURS
~~6.50 hours~~

CONTRACT HOURS
6.50 hours

HOLE NO. 27, 27a LOCATION Western Zap, L 11+390, 1+650 S
GEOLOGIST M. Philpot DRILLER B. Thorpe BIT NO. B59905 BIT FOOTAGE 23
MOVE TO HOLE 7:45 - 8:30
DRILL 8:30 - 11:10 12:00 - 12:45 2:15 - 3:15
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS Rods and bit plugged due to clay
OTHER 11:10 - 12:00 , 12:45 - 2:15 Pull rods
MOVE TO NEXT HOLE



INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
		0 - 2.0 Organics very poor return (40%) (60%)						
		2.0 - 9.0 Pebble - Cobble Till						
		2.0-4.5 start of return, clay lumps (gritty, brown-grey) few cobbles	0.2*	13*	8*	33*		
	01	4.5-7.6 poor return, few quartzite and other cobbles; rich, lumpy, gritty clay	2.3	170	83	450		1290
		7.6-9.0 poor return, minor clay						
		9.0 - 13.1 Pebble - Cobble Gravel						
		9.0-10.5 +10 increase, matrix medium-coarse sand, no clay, lithology: quartzite (40%) greenstone (20%) other (40%)	0.2*	19*	8*	56*		
	02	10.5-13.1 lithology: dark grey quartzite (35%) diorite-greenstone (25%) bull quartz (15%) other (25%)	4.8	221	150	850		95
	03	water return brown; matrix medium-coarse sand, some silt, +10 volume large	0.2* 2.3	10* 105	7* 80	38* 330		1040
		13.1 - 14.7 Lacustrine Clay						
	04	13.1-13.6 clay rich zone, water grey, matrix fine-medium grained silt sand; +10 volume low	0.2* 2.8	11* 113	6* 145	30* 565		210
		13.6-14.7 +10 volume high	0.2*	24*	26*	42*		
	05	14.5-14.7 clay rich zone - gritty and lumpy	3.0	222	203	140		570
		14.7 - 22.3 Pebble - Cobble Gravel						
		14.7-19.6 +10 volume increase, medium sand matrix; lithology: medium-dark quartzite (35%), bull quartz (15%), greenstone-diorite (25%), phyllite and other (25%)	0.2*	14*	8*	37*		
	06		7.0	117	115	155		185
	07							

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 27, 27a con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21				19.7-22.3 matrix medium sand, +10 volume large, lithology: quartzite (65%) bull quartz (15%) greenstone (10%)	0.2*	13*	12*	40*		
22			08		4.0	188	125	130		25
23				22.3 - 32.2 Pebble - Cobble Till						
24			09	22.3-22.7 clay rich zone, minor silt	0.1* 0.5	14* 59	4* 14	42* 61		I.S.
25			N/S	26.0-27.6 +10 moderate, greenstone, quartzite dominant, lithology: matrix consists of a grey, gritty clay						
26			10		0.2* 0.2	13* 22	4* 12	44* 72		L50
27			11	28.4-32.2 clay content increases up to (90%) in local horizons	0.5* 4.7	22* 115	13* 126	51* 141		L50
28			12		0.4* 5.5	23* 152	6* 68	45* 300		L50
29			13		0.4*	21*	13*	50*		
30					1.3	160	45	362		L50
31			14		0.3*	22*	6*	64*		
32					2.2	289	110	860		L50
33										
34										
35										
36										
37										
38										
39										
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 27, 27a con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				23.0 Bit plugged -- seized
2				Hole No: 27a
3				Bit No: 79471
4				Drill: 2:15 - 3:15
5				Pull: 3:15 - 3:45
6				Service for 3:45 - 4:15 problem and move to #28
7				Shift Hours
8				2:15 - 4:15
9				Total Hours
10				2 hours
11				Contract Hours
12				1 hour 30 minutes
13				
14				
15				Note: June 21
16				Lost 1 bit (well used)
17				1 sub
18				1 rod
19				Not charged.
20				

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 23 19 80

SHIFT HOURS
7:10 TO 7:00

TOTAL HOURS
9.50 hours

CONTRACT HOURS
9.50 hours

HOLE NO. 28 LOCATION Western Zap L 11+390 , 1500 S

GEOLOGIST G. Rodgers DRILLER O. Vanasse BIT NO. 79471 BIT FOOTAGE 50.0

MOVE TO HOLE

DRILL 8:45 AM - 8:05 PM , 4:30 - 5:20

MECHANICAL DOWN TIME

DRILLING PROBLEMS 8:30 - 8:45 cleaning and exchanging 9 rods over

OTHER Travel 7:10 - 8:30 , 5:50 - 7:00

MOVE TO NEXT HOLE 4:00 - 4:30 , 5:45 - 5:50

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 1.4 Poor return, minor organics and clay						
				1.4 - 12.1 Pebble - Cobble Till	0.3*	22*	10*	34*		
			01	1.4-5.2 matrix consists mostly of sand, +10 moderate and consists of equal portions of pebbles and cobbles, lithology: quartzite, greenstone, beige sediment, bull quartz	3.5	141	75	220		110
			02	5.6-12.1 clay content increases to 10%, matrix low - moderate +10 moderate; % cobbles greater than % pebbles	0.2*	20*	8*	30*		
					5.5	239	140	235		515
			03	12.1 - 24.0 Fluvial Sand and Gravel +10 high, matrix high; clay content = 0, silt-sand size matrix; gravels lithology consists of quartzite (60%), phyllite (20%) and bull quartz	0.2*	16*	4*	39*		
					2.0	119	80	160		55
			04		0.2*	24*	13*	49*		
					1.5	140	45	95		5655
			05		0.2*	16*	8*	43*		
					1.0	72	40	90		1145
			06		0.2*	17*	11*	50*		
					2.5	320	80	110		855
			07							

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 28 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			07	24.0 - 26.2 <u>Lacustrine Clay</u>	0.2*	18*	15*	57*		
				dark brown, smooth and uniform in texture	0.8	49	40	105		120
22				26.2 - 42.8 <u>Pebble - Cobble Till</u>	0.1*	16*	7*	52*		
23			08	26.2-32.0 quartzite dominant, phyllite and bull quartz minor; trace pyrite associated with quartzite	1.3	170	63	90		L5
24										
25				32.0-41.0 +10 low to moderate, increasing with depth; quartzite, bull quartz, ± pyrite; matrix high; consist of gritty graphitic? clay (up to 100%)	0.1*	26*	12*	65*		
26			09		5.5	307	165	125		395
27										
28										
29										
30			10		0.2*	22*	8*	47*		
					4.5	218	153	410		2025
31										
32			11		0.2*	27*	8*	89*		
					13.0	361	145	900		6400
33										
34										
35										
36			12		0.2*	34*	14*	99*		
					4.3	272	130	785		245
37										
38										
39			13		0.2*	33*	12*	73*		
					6.0	243	180	1360		400
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 28 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41	Δ_2		14	41.0-42.8 noticeable increase in pyrite (up to 5%) +10 moderate; quartzite, phyllitic quartzite dominant	0.3*	32*	19*	179*		
42	Δ_2				10.8	126	340	1980		435
43	Δ_3		15	42.8 - 43.9 Bedrock graphitic phyllite; siliceous layers intercalated; pyrite less than 1%	0.4*	48*	18*	200*		
44					0.9**	63**	17**	210**		10**
45										
46										
47										
48										
49										
50										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 23 19 80

SHIFT HOURS
7:10 TO 5:50

TOTAL HOURS
10.66 hours

CONTRACT HOURS
10.66 hours

HOLE NO. 29 LOCATION Western Zap L 11+390 , 1200 S
GEOLOGIST G. Rodgers DRILLER O. Vanasse BIT NO. 79475 BIT FOOTAGE 0
MOVE TO HOLE 4:15 (cleaning hydraulics cooling coils)
DRILL 4:30 - 5:20 (cleaning tanks, pulling rods, laying water lines)
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER Travel time 5:50 - 7:00
MOVE TO NEXT HOLE 5:45 - 5:50

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
1				1.0 - 6.1 Pebble Cobble Till matrix low (silty), +10 high, cobbles lithology predominantly quartzite	0.2*	22*	11*	48*		
2										
3				6.1 - 9.2 Bedrock light grey phyllite, trace of limonite on fractures	4.0	280	135	425		415
4			01							
5										
6										
7			02		0.2*	10*	12*	46*		20
					0.4**	6**	4**	19**		L5**
8										
9			03		0.1*	5*	3*	19*		
					0.4**	6**	4**	20**		L5**
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 24 19 80

SHIFT HOURS
8:00 TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO. 30 LOCATION Western Zap L11+390 , 1050 S

GEOLOGIST G. Rodgers DRILLER O. Vanasse BIT NO. 79475 BIT FOOTAGE 34.0

MOVE TO HOLE _____

DRILL 8:45 - 9:25

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER Travel time 7:00 - 8:00

MOVE TO NEXT HOLE 9:40 - 10:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 3.0 Muskeg						
				3.0 - 4.0 Pebble - Cobble Till	0.3*	9*	6*	28*		
				minor clay	1.6	84	32	143		20
				4.0 - 6.1 Bedrock						
			01	dark grey quartzite, slightly phyllitic; minor limonite on fractures						
			02							
					0.1**	3**	4**	8**		L5**

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 24 19 80

SHIFT HOURS
8:00 TO 7:30

TOTAL HOURS
11.50 hours

CONTRACT HOURS
11.50 hours

HOLE NO. 31 LOCATION L 11+390 , 1350 S

GEOLOGIST G. Rodgers DRILLER O. Vanasse BIT NO. 010002 BIT FOOTAGE 0

MOVE TO HOLE

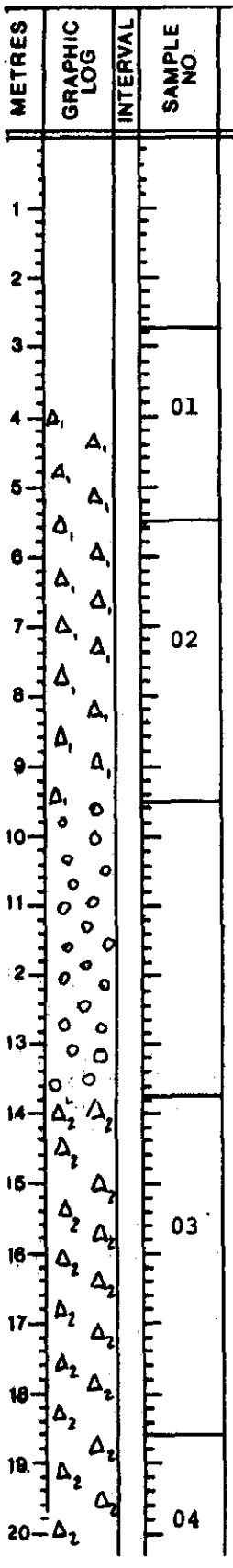
DRILL 10:40 - 12:10 , 1:30 - 6:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS 10:00 - 10:40 plugged rods, 12:10-1:30 plugged rods

OTHER Travel 7:30 - 8:00 (1 1/2 hours total) (rods pulled)

MOVE TO NEXT HOLE 6:50 - 7:30



DESCRIPTIVE LOG		Ag	Cu	Pb	Zn		Au
0 - 3.9	Muskeg (discard)						
3.9 - 9.5	Pebble - Cobble Till	0.1*	16*	9*	35*		
	altered greenstone (very soft) (20% greenstone, quartzite 50%, bull quartz, cobbles and boulders (very little matrix) (greenstone 60%, quartzite 20%)	4.0	149	23	101		I.S.
5.8 -	quartzite boulder						
9.5 - 13.7	Fluvial Sand and Gravel						
	+10 high, matrix high; matrix consists of silt and sand, no clay	0.1*	21*	11*	34*		
13.7 - 34.4	Pebble - Cobble Till	3.2	157	292	136		20
13.7-18.9	cobbles % greater than pebbles %, matrix low - moderate and consists of silt; +10 moderate - high, lithology: quartzite (40%) phyllite (20%) greenstone (20%) bull quartz (20%)						
		0.2*	11*	8*	40*		
		0.5	66	40	99		5

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 31 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

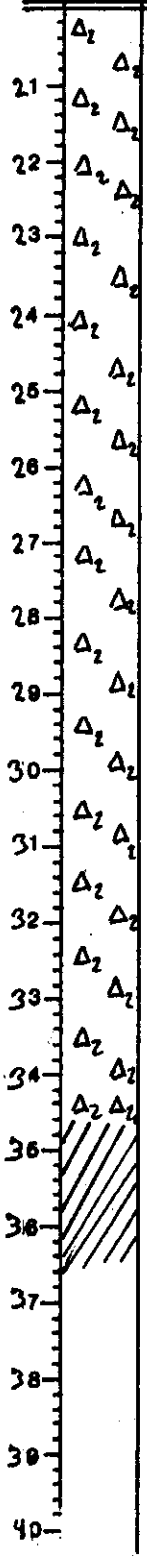
DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____



GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
		04	22.2-24.6 pebbles % greater than cobbles %, lithology predominantly quartzite rich; trace pyrite associated, matrix clay rich (graphitic?), minor silt	0.2*	9*	7*	30*		
				1.0	36	27	72		985
		05	29.3-31.4 quartzite with disseminated pyrite, matrix low	0.2*	32*	18*	100*		
				1.8	102	39	202		1070
		06	31.4-34.4 pebbles and cobbles consist of 100% quartzite ± pyrite; matrix contains graphitic clay	0.2*	34*	8*	52*		
				5.1	343	167	836		60
		07	34.4 - 36.6 <u>Bedrock</u> light grey quartzite, few veins of bull quartz, minor graphitic phyllite grading into phyllitic quartzite, ± pyrite less than 1%	0.2*	26*	15*	73*		
				5.3	388	271	821		145
		08		0.2*	30*	4*	50*		
				5.8	292	390	1288		905
		09		0.2*	34*	10*	87*		
				I.S.	I.S.	I.S.	I.S.		130
		10		0.3**	8**	4**	1195**		L5 **

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 25 19 80

SHIFT HOURS
7:00 TO 8:45

TOTAL HOURS
13.75 hours

CONTRACT HOURS
9.75 hours

HOLE NO. 32 LOCATION Western Zap L 11+600 Stn. 1400 S
GEOLOGIST D. Bonnar DRILLER Oliver BIT NO. B59910 BIT FOOTAGE
MOVE TO HOLE 8:15 - 8:45
DRILL 9:30 - 7:15
MECHANICAL DOWN TIME Serviced Pump 11:30 - 11:45
DRILLING PROBLEMS Blocked rods at 15.5 , 40.2 , 41.1; pulled rods
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 4.6 Muck						
1				4.6 - 16.1 Interbedded Lacustrine Clay and Fluvial						
2			N.S.	4.6- white to light grey clay, clean, hard, slippery, several small darker clay beds, clean, dense						
3										
4				5.5-6.4 grey-brown silt, minor clay						
5				6.4-7.6 medium gravel, sandy matrix 90% small pebbles of quartz and quartzite	0.2*	12*	8*	32*		
6			01		2.4	69	18	101		10
7				7.6-9.3 grey silt, minor clay and fine sand						
8				9.3-12.5 light grey to medium grey clay, clean to slightly gritty	0.1*	14*	4*	41*		
9			02	10.6-10.9 clean grey clay, dense, hard and slippery	3.2	72	34	282		15
10				12.5-13.1 medium textured sand, minor small pebbles						
11				13.1-13.4 light grey clay, slight grit	0.4*	22*	19*	60*		
12			03	13.4-14.0 medium gravel, sandy matrix, 10% pebbly; quartzite, quartz, greenstone	3.8	282	150	562		40
13										
14				14.0-14.3 grey clay, clean	0.4*	27*	14*	69*		
15			04	15.5-16.1 sandy matrix	2.7	256	74	470		60
16				16.1 - 22.8 Pebble - Cobble Till						
			05	clay-sand matrix	0.2*	25*	13*	70*		
17				16.7-17.0 greenstone cobbles	1.9	130	41	264		55
18			06	18.3-19.8 medium grained sand matrix, greenstone (70%) cobbles	0.2*	43*	12*	86*		
19				19.8-21.3 pebbly, sandy clay matrix	3.8	388	93	623		70
20			07							

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 32 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

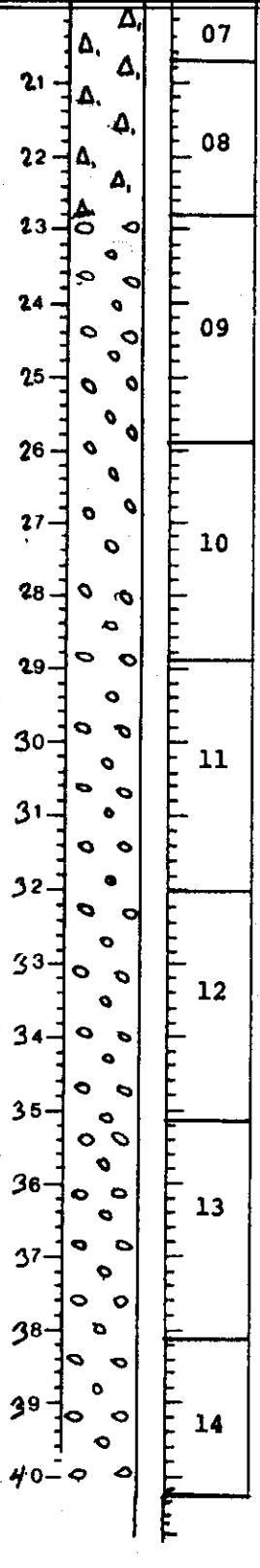
DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____



DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
			07	22.8 - 40.3 Gravel	0.2*	21*	5*	47*		
				sandy matrix, pebbly to cobbly, abundant greenstone and quartzite	11.4	479	177	1094		570
			08		0.2*	17*	8*	36*		
					0.8	37	51	61		L10
				28.3 - coarse sand for 15cm						
				28.5-29.2 pebbly	0.2*	18*	6*	52*		
			09	29.2 - increase in phyllitic quartzite to 10%, greenstone 60%, sandy matrix	0.3	21	10	54		L10
				32.2-35.1 black phyllitic quartzite 50%, greenstone 50%, pebbly and cobbly						
			10	35.1-37.8 very cobbly, medium sand matrix	0.4*	28*	16*	59*		
					1.5	48	18	92		I.S.
				37.8-40.3 cobbly; greenstone, quartzite, quartz in equal proportions; few small pebbles, medium sand matrix						
					0.2*	29*	8*	132*		
			11	40.3 - 42.3 Bedrock	1.4	100	30	175		1335
				graphitic phyllite, pyrite occurs along fractures and in box work form						
			12		0.2*	23*	7*	235*		
					2.3	158	178	334		10
			13		0.2*	12*	8*	54*		
					2.5	15	34	80		1370
			14		0.4*	16*	10*	108*		
					5.8	156	54	129		I.S.

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 32 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41			15	40.3 - 42.3 Bedrock (con't)	0.7**	21**	59**	88**		
42										
43										
44										
45										
46										
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 27 19 80

SHIFT HOURS 7:00 TO 2:00

TOTAL HOURS 7.00 hours

CONTRACT HOURS 6.00 hours

HOLE NO. 33 LOCATION Western Zap. L 11+600 Stn. 1100 S

GEOLOGIST D. Bonnar DRILLER Oliver BIT NO. 020059 BIT FOOTAGE

MOVE TO HOLE

DRILL 8:45 - 1:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER Travel 7:00 - 8:00 Service 8:00 - 8:45

MOVE TO NEXT HOLE 1:45 - 2:00

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 3.1 No recovery						
1				3.1 - 3.7 Gravel						
			01	medium sand matrix, pebbly	0.7*	16*	9*	38*		
2				3.7 - 4.6 Clay Till?	0.9	74	25	89		25
3				grey, gritty, hard clay (60%); quartz, quartzite pebbles (40%)						
4				4.6 - 4.9 Gravel						
5				medium sand matrix, cobbly greenstone and quartzite	0.5*	29*	12*	76*		1445
6			02	4.9 - 7.0 Clay						
				grey, clean, soft						
7				7.0 - 7.6 Clay Till?	0.3*	15*	8*	50*		
8			03	grey, gritty clay 30%, pebbly; greenstone, quartz quartzite, minor cobbles	2.2	108	146	236		L50
9				7.6 - 10.3 Gravel						
10			04	coarse sand matrix, cobbly and black quartzite, coarse grained diorite, quartz; quartzite, minor cobbles	0.4* 0.6	22* 30	10* 24	66* 86		I.S.
11			05		0.6*	53*	24*	131*		
12				10.3 - 15.5 Pebble Till	1.4	68	151	137		20
13				10.3-12.9 brown, sticky, dense, gritty clay 75%, pebbles 25%	0.4*	33*	12*	82*		
14			06	12.8-14.6 grey, silty, gritty, sticky clay 40%; cobbles consist of greenstone, quartz and quartzite	5.4	367	185	952		I.S.
15										
16			07	14.6-15.5 grey-brown gritty clay 20%, 80% pebbles consisting of quartz and quartzite	0.3* 5.2	53* 352	10* 200	81* 797		425
17				15.5 - 28.3 Gravel	0.4*	21*	8*	58*		
18			08	medium sand matrix, pebbles increase with depth; black phyllite, phyllitic quartzite increasing with depth; greenstone decreasing with depth	1.3	38	352	79		L5
19										
20				19.8 - cobbles consisting of quartz, medium grey quartzite, greenstone (dominant)						

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__
SHIFT HOURS
_____ TO _____
TOTAL HOURS
_____
CONTRACT HOURS
_____

HOLE NO. 33 con't LOCATION _____
GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			09	21.3 - increase in phyllite, very pebbly	0.2*	18*	6*	50*		
					0.9	29	30	55		40
22				25.3 - cobbly, abundant phyllite, phyllitic quartzite (medium grey and black)	0.1*	19*	5*	68*		
23			10	28.3 - 30.5 Bedrock	0.5	104	153	108		15
24				medium grey, slightly sericitic quartzite, minor quartz and limonitic veins which appear slightly brecciated						
25					0.4*	38*	4*	60*		
26			11	29.2 - graphitic layer 15cm	1.4	133	61	94		865
27										
28			12		0.3*	29*	4*	41*		
					1.4	133	26	30		215
29			13		0.3**	10**	4**	15**		L5**
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 27 19 80

SHIFT HOURS
1:45 TO 9:45

TOTAL HOURS
8.00 hours

CONTRACT HOURS
7.00 hours

HOLE NO. 34 LOCATION Western Zap 11+600 W , 1250 S
GEOLOGIST D. Bonnar DRILLER Oliver BIT NO. 020017 BIT FOOTAGE
MOVE TO HOLE 1:45 - 2:00
DRILL 3:00 - 9:45
MECHANICAL DOWN TIME 2:00 - 3:00 replaced broken head rod
DRILLING PROBLEMS
OTHER 5:15 - 6:30 stand-by for fuel, 9:45 - 10:30 travel
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 3.7 no recovery						
1				3.7 - 7.6 Lacustrine Clay						
				grey, clean, slippery clay	0.5*	17*	10*	48*		
2				7.6 - 10.9 Gravel	0.5	22	31	79		I.S.
3				medium sand matrix 10 - 20%, very cobbly-dominantly medium coarse grained diorite (60%), medium grey quartzite (20%), phyllite (black), quartz						
4										
5			01							
6				10.9 - 12.8 Lacustrine Clay						
7			02	grey, soft, slippery; minor silt grit, cobble at 12.0m	0.4*	24*	12*	68*		I.S.
8				12.8 - 14.5 Till? Fluvial?						
9			03	grey clay and sand matrix, pebbly, minor cobbles, matrix decreases from 90% to 25% with depth in unit; pebbles greenstone, quartzite, quartz	0.3*	20*	7*	36*		
10					4.4	522	288	691		13160
11				14.5 - 16.4 Clay	0.5*	22*	8*	60*		
12			04	grey, clean slippery at 14.8 black quartzite cobble with pyrite	3.7	161	78	368		20
13				16.4 - 20.4 Pebble Till	0.6*	46*	14*	90*		
14			05	grey, gritty, sticky clay; sand matrix (20%) pebbly; lithology: greenstone, quartzite	3.5	260	85	570		3825
15					0.7*	49*	18*	121*		
16			06	19.8-20.4 minor cobbles; greenstone and phyllite	2.0	97	36	232		L50
17					0.4*	46*	8*	52*		
18			07		4.6	363	398	444		230
19										
20			08							

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 34 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			08	20.4 - 38.9 <u>Gravel</u>	0.3*	16*	8*	48*		
				medium coarse sand, black matrix, pebbly with cobbly sections; black quartzite and phyllite dominant over section	1.2	105	42	69		15
22										
23					0.3*	19*	7*	55*		
			09	25.9-26.8 cobbly, 60% black sericitic phyllite, 30% black quartzite, 10% light grey quartzite	0.6	65	20	230		10
24										
25				27.4-28.9 increase in greenstone to 20%, quartz to 20%, medium sand matrix 10%						
26										
27			10	28.9-32.3 black quartzite 70% - 80%, cobbles	0.4*	30*	9*	48*		
					3.9	326	106	104		1300
28				32.3-35.1 very pebbly, coarse sand matrix 10%						
29				35.1-35.7 silt bed with 2cm clay bed						
30			11	36.9-38.9 all pebbles and cobbles show rusty stains on weathered surface	0.5*	28*	10*	99*		
					7.4	144	158	136		225
31				38.9 - 39.8 <u>Lacustrine Clay</u>						
32				grey, hard, dense, increase in silt with depth						
33			12	39.8 - 41.1 <u>Pebble Till</u>	0.6*	34*	40*	218*		
34				30% clay-sand matrix, 50% very small pebbles mostly medium grey quartzite and greenstone	11.6	402	106	458		15
35										
36			13		0.2*	21*	12*	208*		
					5.1	109	759	349		140
37			14		0.2*	24*	8*	124*		
38					3.6	237	70	371		55
39			15		0.5*	46*	13*	110*		
40					7.5	398	210	950		100

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 34 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

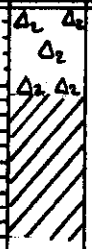
DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41			15	41.1 - 43.0 Bedrock						
42			16	medium grey quartzite, slightly sericitic, massive, minor disseminations of pyrite (less than 1%)	0.2**	5**	4**	21**		L5 **
43										
44										
45										
46										
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 28 19 80

SHIFT HOURS
7:30 TO 1:30

TOTAL HOURS
6.00 hours

CONTRACT HOURS
6.00 hours

HOLE NO. 35 LOCATION Western Zap, 11+600A , 1+000S
GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. B59906 BIT FOOTAGE 41.2
MOVE TO HOLE 7:30 - 8:00 includes cleaning and servicing
DRILL 8:30 - 12:30
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER 8:00 - 8:30 Water standby 12:30 - 1:15 Pull rods
MOVE TO NEXT HOLE 1:15 - 1:30

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 1.5 Poor return, minor organics, clay (60%)						
				1.5 - 4.5 Lacustrine Clay						
				moderate return; smooth, grey, soft clay; few pebbles towards bottom (4.2 - 4.5); water return grey	0.3*	14*	5*	48*		
			01		2.9	91	47	164		10
				4.5 - 5.4 Fluvial						
				coarse sand; no silt, clay; moderate return						
				5.4 - 7.2 Till?						
				5.4-5.8 hard, gritty clay (grey-brown)	0.5*	19*	6*	59*		
			02		2.4	78	32	131		5
				5.8-7.2 +10 high, coarse matrix (65%) (35%)						
			03	7.2 - 12.4 Cobble - Pebble Till	0.2*	20*	5*	40*		
				minimum clay, coarse sand matrix; lithology:	4.2	410	130	686		50
				quartzite (30%)						
				diorite (15%)	0.2*	31*	6*	53*		
			04	greenstone (20%)						
				other (35%)	4.0	300	107	641		25
				9.4 - (60%) clay						
				9.6 - (5 - 10%) clay						
				12.4 - 37.6 Pebble Gravel						
				12.4-16.7 +10 high, lithology varies:						
				dark quartzite (10%)	0.2*	24*	5*	61*		
			05	phyllite (15%)						
				greenstone (15%)	0.4	33	17	59		340
				other (60%)						
				16.7-19.6 coarse matrix, +10 high,						
				dark quartzite (15%)						
				phyllite (15%)						
				diorite (15%)						
				other (55%)						
			06		0.2*	20*	16*	57*		
					8.0	59	1716	84		I.S.

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____TO_____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 35 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			07	19.6-22.2 phyllite, dark grey quartzite, diorite (65%) other (35%),+10 high	0.1*	33*	6*	60*		
22					1.3	210	100	111		75
23			08	22.5-25.6 diorite (35%) phyllite (15%) bull quartz (10%) other (40%) +10 high, matrix medium-coarse sand, steady drilling	0.2*	50*	6*	42*		
24					1.3	392	23	61		L5
25										
26			09	33.8-35.6 medium-light grey quartzite and diorite dominant	0.1*	23*	4*	33*		
27				35.6-35.8 clay rich zone	1.5	256	112	95		L5
28				35.8-37.6 +10 moderate-high, matrix very coarse sand, lithology varies						
29			10	37.6 - 40.4 <u>Pebble Till</u> phyllitic quartzite (85%) bull quartz (15%)	0.4*	26*	4*	38*		
30					2.4	1036	54	99		170
31				40.4 - 41.2 <u>Bedrock</u> medium grey quartzite, weakly graphitic in zones; graphitic quartzite; pyrite about (1 - 2%) disseminated in quartzite						
32			11		0.2*	25*	6*	111*		
33					1.8	134	59	252		10
34			12		0.4*	38*	12*	180*		
35					46.1	155	211	2820		9965
36			13		0.1*	20*	12*	151*		
37					1.0	22	33	164		L25
38										
39			14		0.3*	28*	10*	295*		
40					5.8	81	47	944		4515
41			15		0.3**	12**	4**	144**		L5**
42										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 28 19 80

SHIFT HOURS 1:30 TO 6:45

TOTAL HOURS 5.25 hours

CONTRACT HOURS 4.00 hours

HOLE NO. 36 LOCATION Western Zap L 11+600A , 0+885 S

GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. B59912 BIT FOOTAGE 37.4 m

MOVE TO HOLE 1:15 - 1:30

DRILL 1:30 - 2:30 , 3:45 - 6:15

MECHANICAL DOWN TIME 2:30 - 3:45 broken hydraulic line

DRILLING PROBLEMS Nil

OTHER 6:15 - 6:45 pull rods

MOVE TO NEXT HOLE

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 2.4 Organic, poor return						
				2.4 - 6.8 Fluvial Sand Pebble Gravel						
			01	2.4-3.0 coarse sand, no +10	0.3*	29*	10*	87*		
				3.0-4.5 +10 high, lithology varies	0.5	13	9	40		L25
				4.5-6.8 coarse dirty sand						
				6.8 - 7.2 Lacustrine Clay						
			02	7.2 - 12.4 Pebble Till	0.3*	24*	8*	53*		
				7.2-10.0 clay rich zone (up to 100%) few pebbles	2.0	53	16	60		L25
				10.0-12.4 gritty, quartzite and dark grey quartzite, clay (up to 30%) +10 low (85) (15)	0.5*	25*	8*	60*		
			03	12.4 - 29.3 Pebble - Cobble Gravel	2.6	186	54	467		220
				12.4-19.6 +10 high, dark grey quartzite (40%) diorite (20%), bull quartz (15%) water return browner, matrix low - coarse sand; lithology: dark grey quartzite (30%), diorite (30%), phyllite (G10%), bull quartz (10%); cobbles increase in size	0.3*	24*	9*	57*		
			04		3.3	271	155	593		L25
			05		0.2*	30*	13*	57*		
					2.0	97	30	134		45
					1.1*	45*	8*	61*		
			06		3.2	305	74	120		L50

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 36 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			07	19.6-22.2 dark grey quartzite and diorite (75%)	0.2* 2.6	39* 385	12* 272	46* 121		 10
22				22.2-22.4 clay rich zone, lumpy, grey, moderately hard	0.2*	26*	6*	43*		
23			08	29.3 - 32.3 Lacustrine Clay 32.3 - 53.5 Cobble Gravel	3.0	159	90	128		55
24				32.3-36.0 dark grey quartzite, medium grey quartzite, graphitic phyllite, bull quartz and minor quartz						
25					0.2*	24*	12*	52*		
26			09	36.0-37.4 light buff-grey siliceous phyllite, bull quartz and dark-medium grey quartzite	1.3	104	37	98		L5
27										
28				37.4-49.5 pebble gravel, +10 high, matrix high; lithology:	0.4*	44*	6*	86*		
29			10	buff phyllite (50%) bull quartz (30%) dark quartzite (10%)	5.9	424	191	1248		1275
30										
31										
32										
33					0.2*	16*	8*	41*		
34			11		4.9	236	106	545		150
35										
36					0.3*	13*	7*	71*		
37			12		2.0	167	117	570		155
38										
39					0.3*	5*	1*	56*		
40			13		0.4	69	24	306		L50

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 36 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41				49.5-51.0 sandy layer						
42				51.0-53.4 poor return, +10 low, coarse brown sand						
			14		0.2*	5*	4*	135*		
43					0.5	26	34	169		G15,000
44										
46					0.2*	10*	4*	137*		
			15		0.5	19	30	135		100
47										
48					0.2*	14*	7*	154*		
			16		0.2	40	26	157		L50
50										
51					0.2*	16*	9*	180*		
52			17		0.2	30	46	159		65
53										
54										
56										
58										
57										
58										
59										
60										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 24 19 80

SHIFT HOURS
7:45 TO 3:45

TOTAL HOURS
8.0 hours

CONTRACT HOURS
8.0 hours

HOLE NO. 37 LOCATION Western Zap L 11+600 A , 0+750 S
GEOLOGIST M Philpot DRILLER B. Thorpe BIT NO. 55913 BIT FOOTAGE 45.2
MOVE TO HOLE
DRILL 9:45 - 3:00
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS Nil
OTHER 7:45 - 8:15 Service and move 8:15 - 9:45 Standby water
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				.7 - 1.5 Minor brown-grey clay, poor return						
				1.5 - 5.4 Pebble Gravel						
				1.5-4.8 coarse sand matrix - poorly developed, water return brown	0.3*	30*	9*	70*		
			01		1.0	38	30	52		L5
				4.8-5.1 thin clay bed						
				5.4 - 11.6 Lacustrine Clay						
				grey, hard and soft types	0.4*	25*	8*	58*		
			02							
				11.6 - 15.7 Pebble Gravel	0.6	32	13	41		L25
				matrix - minor coarse sand +10 high, medium and dark grey quartzite (35%), diorite (25%), phyllite (5 - 10%), granodiorite (L5%), other (25%)	0.4*	23*	6*	55*		
			03		1.8	63	20	131		3135
				15.7 - 19.6 Lacustrine Clay						
				15.7-18.2 lumpy, grey and smooth						
				18.2-19.0 lacustrine clay						
				19.0-19.2 pebble layer						
				19.2-19.3 lacustrine clay						
				19.3-19.6 pebble layer						
				* cyclical influx of material at 18.2-19.6	0.4*	20*	16*	42*		
			04		24.4	241	224	394		L25
					0.2*	32*	15*	73*		
			05		1.4	70	32	230		I.S.

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 37 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			06	19.6 - 36.8 **Pebble Gravel**	0.3*	17*	3*	38*		
				19.6-26.0 clay incorporated from above? +10 high, diorite (30%), dark grey quartzite (20%), phyllite (15%) and other (35%)	4.4	167	72	366		1100
23			07	26.0-27.0 few large cobbles of granodiorite and diorite	0.3*	21*	9*	50*		
25				27.0-32.0 coarse sand and gravel, +10 very high, drilling quick	3.6	167	86	350		815
26			08	32.0-36.8 +10 very high and coarse sand, lithology: dark quartzite (35%) phyllite (30%) bull quartz (25%) pebbles well rounded	0.2*	29*	8*	39*		
28					3.8	381	81	250		155
29				36.8 - 45.2 **Interbedded Lacustrine Clay and Fluvial**						
30			09	36.8-39.5 clay rich layers mixed in with thin layers of pebbles	0.5*	24*	8*	53*		
31					3.0	112	31	86		5
32				39.5-40.9 pebble till? pebble gravel?, dark grey quartzite and phyllite (65%) bull quartz (10%) matrix silt-sand ± clay (up to 30%), +10 low						
33			10		0.4*	40*	8*	63*		
34					3.2	806	36	674		115
35										
36			11		0.5*	32*	14*	84*		
37					5.7	326	181	782		220
38										
39			12		0.4*	39*	12*	89*		
40					5.7	338	113	866		90

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 37 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41				40.9-42.2 (100%) soft and lumpy clay						
42			13	42.2-43.6 pebbles and clay, interbedded, dark grey quartzite (60%), phyllite (15%), diorite (10%), bull quartz ± pyrite (15%)	0.3*	26*	16*	72*		
43					6.6	328	106	786		120
44				43.6-45.2 clay						500
45										
46										
47										
48										
49										
50										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 30 19 80

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO. 38 LOCATION Western Zap L 11+600 A, 1+550 S

GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. B59909 BIT FOOTAGE 46.8

MOVE TO HOLE 7:45 - 8:45

DRILL 10:00 - 12:45 Plugged

MECHANICAL DOWN TIME 8:45 - 10:00 Stand by water

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 3.9 Organic rich, frozen peat bog
				3.9 - 6.8 minor silt and few pebbles water return grey, poor return
				6.8 - 18.0 Lacustrine Clay
				hard, lumpy, grey clay, few pebbles interbedded (70%) (30%)
				18.0 - 23.2 Pebble - Cobble Till
				dark and medium grey quartzite (75%), diorite and others (25%) minor pyrite, matrix moderate - silt and sand, clay (10 - 15%)
			01	
			02	
			03	

1.1*	10*	10*	36*		
1.3	108	29	289		30
0.7*	12*	10*	26*		
0.6	28	18	76		L50
1.5*	21*	6*	51*		
2.6	190	92	1031		60

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 38 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			N.S.	19.8-20.2 clay rich zone						
22			04	20.2-23.2 matrix low - medium to coarse sand, +10 low, clay content (0 - 60%), medium-dark grey quartzite (50%) ± pyrite, diorite (25%), bull quartz and phyllite (20%)	0.3*	25*	15*	42*		
23					6.5	166	464	510		120
24			05		0.5*	17*	10*	110*		
25				23.2 - 46.2 Pebble - Cobble Gravel	1.0	66	67	1733		600
26				23.2-29.8 +10 low, matrix varies from good to poor; medium to coarse sand; note: muscovite flakes						
27			06		1.4*	20*	8*	50*		
28				29.8-36.0 +10 high, matrix high with coarse sand, water return brown-grey, drilling fast and steady, dark and medium quartzite (50%), diorite (20%), bull quartz (15%), other (15%)	0.3	40	16	48		25
29					1.2*	24*	7*	40*		
30			07	36.0-37.6 sand and gravel, matrix very high, light and medium grey quartzite ± pyrite (95%), diorite (15%) bull quartz (10%)	1.6	241	408	146		5210
31										
32				37.6-38.7 dark brown-black organic rich clay	0.5*	27*	9*	33*		
33			08		1.0	164	148	84		L50
34										
35					0.7*	28*	8*	46*		
36			09		0.7	110	73	142		G15000
37										
38					0.5*	26*	13*	70*		
39			10		0.4	15	9	71		210
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 38 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

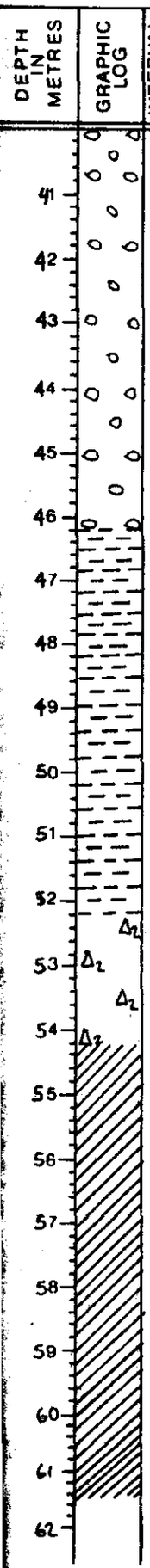
DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____



SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
11	38.7-46.2 pebble gravel, +10 very high, matrix coarse sand	0.5*	21*	10*	54*		
	46.2 - 52.2 Lacustrine Clay	0.8	73	18	108		L25
	few pebbles interbedded, slow drilling, clay-soft, smooth, grey	0.6*	26*	13*	57*		
12	52.2 - 54.2 Pebble - Cobble Till	0.2	30	8	480		L25
	+10 low, minor clay matrix low-moderate, silt sand, lithology: quartzite (55%) diorite (20%) bull quartz (15%)	0.4*	35*	15*	53*		
13	54.2 - 61.5 Bedrock	0.5	104	13	61		L5
	quartzite - medium grey, pyrite disseminations up to (1 - 2%), minor siderite?						
	greenstone - minor pyrite at contact, quartz vein with minor pyrite at 58.3 + red-brown mineral? not sphalerite	0.1* 4.8	26* 280	6* 154	101* 1180		I.S.
14							
15		0.3* 11.1	25* 219	8* 301	115* 1920		I.S.
16		0.1* 4.6	20* 80	2* 170	104* 190		200
17		0.5** 0.5*	12** 21*	39** 9*	77** 72*		5**
18		0.6** 0.1*	80** 71*	71** 12*	109** 175*		5**
19		0.5** 0.1*	112** 178*	46** 15*	73** 107*		L5**

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 38 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				July 13, 1980
				6:45 - 7:30 Travel
				7:30 - 8:00 Clean Engine
				8:00 - 8:30 Prepare casing
				8:30 - 10:30 Case down to 30m
				10:45 - 11:15 Drill
				11:15 - 12:15 Travel to get more casing
				12:15 - 5:30 Case down to 47m
				5:30 - 6:15 Plugged
				6:15 - 7:30 Drill

REVERSE CIRCULATION DRILL HOLE LOG

DATE July 1 1980

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 39 LOCATION Western Zap L 11+850 , 1+385 S

GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. 010003 BIT FOOTAGE 38.6

MOVE TO HOLE _____

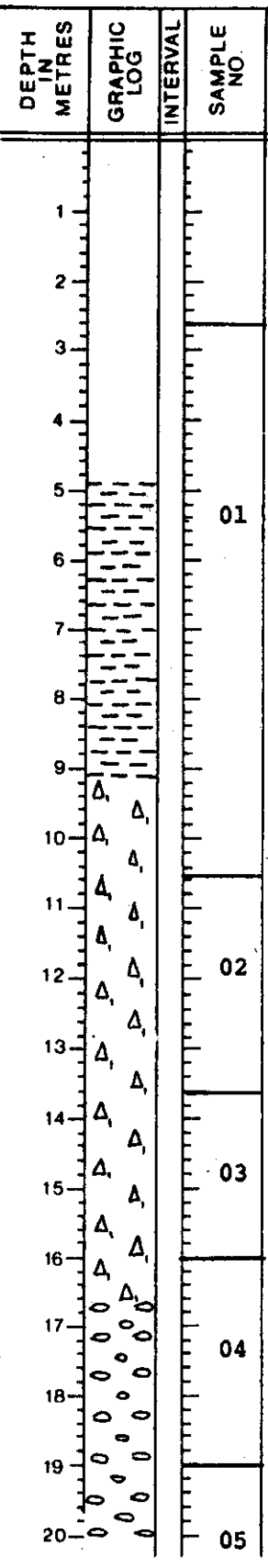
DRILL 2:15 - 6:15

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS 6:15 - 7:15 pull due to clay blockage

OTHER _____

MOVE TO NEXT HOLE _____



DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
0 - 4.9 Poor return, few organics; minor clay, few pebbles						
4.9 - 9.1 Lacustrine Clay hard, grey, lumpy clay						
9.1 - 16.6 Pebble - Cobble Till						
9.1-10.5 +10 low, clay (5 - 35%) poor matrix, fine silt, diorite (45%), dark and medium grey quartzite (55%)	0.5*	25*	16*	64*		
01 10.5-11.0 thin clay bed	1.2	122	99	286		225
12.5-12.7 thin clay bed						
12.7-13.3 greenstone (60%) quartzite (20%) other (20%)						
13.3-13.5 thin clay bed						
14.0-14.5 thin clay bed						
15.0-15.2 thin clay bed						
15.2-16.6 clay (5 - 15% up to 60%) matrix poor, quartzite, dark and medium grey dominates						
	0.6*	28*	8*	27*		
02 16.6 - 35.6 Pebble - Cobble Gravel	2.1	132	198	676		L50
16.6-19.0 phyllite (10%) quartzite (30%) diorite (20%) +10 other (40%)						
	1.0*	18*	6*	30*		
03	3.7	184	100	610		120
	0.5*	12*	13*	38*		
04	1.7	105	62	132		3100
	2.3*	19*	10*	50*		
05	1.2	34	17	107		680

REVERSE CIRCULATION DRILL HOLE LOG

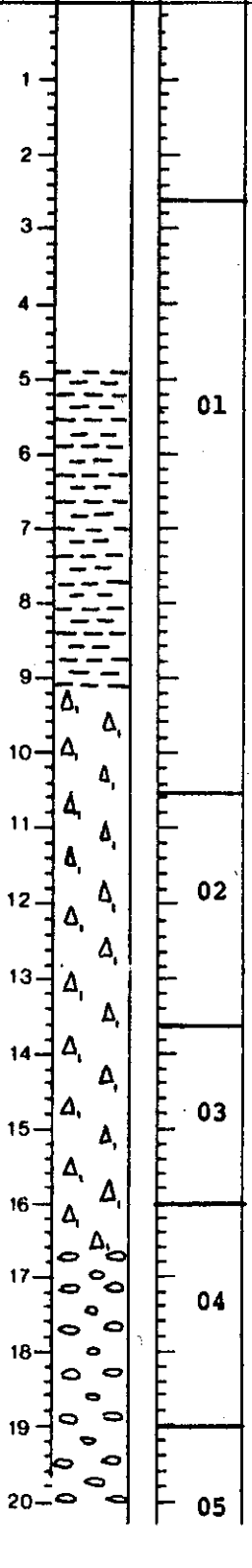
DATE July 1 1980

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO. 39 LOCATION Western Zap L 11+850 , 1+385 S
GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. 010003 BIT FOOTAGE 38.6
MOVE TO HOLE _____
DRILL 2:15 - 6:15
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS 6:15 - 7:15 pull due to clay blockage
OTHER _____
MOVE TO NEXT HOLE _____



SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
	0 - 4.9 Poor return, few organics; minor clay, few pebbles						
	4.9 - 9.1 Lacustrine Clay hard, grey, lumpy clay						
	9.1 - 16.6 Pebble - Cobble Till						
	9.1-10.5 +10 low, clay (5 - 35%) poor matrix, fine silt, diorite (45%), dark and medium grey quartzite (55%)	0.5*	25*	16*	64*		
01	10.5-11.0 thin clay bed	1.2	122	99	286		225
	12.5-12.7 thin clay bed						
	12.7-13.3 greenstone (60%) quartzite (20%) other (20%)						
	13.3-13.5 thin clay bed						
	14.0-14.5 thin clay bed						
	15.0-15.2 thin clay bed						
	15.2-16.6 clay (5 - 15% up to 60%) matrix poor, quartzite, dark and medium grey dominates	0.6*	28*	8*	27*		
02	16.6 - 35.6 Pebble - Cobble Gravel	2.1	132	198	676		L50
	16.6-19.0 phyllite (10%) quartzite (30%) diorite (20%) +10 other (40%)						
		1.0*	18*	6*	30*		
03		3.7	184	100	610		120
		0.5*	12*	13*	38*		
04		1.7	105	62	132		3100
		2.3*	19*	10*	50*		
05		1.2	34	17	107		680

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 39 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21				19.0-35.6 +10 high, matrix high, coarse sand, steady drilling, water return brownish, lithology varies						
22										
23				30.0 - water return black, medium and dark grey quartzite (50%) bull quartz (10%) diorite (25%) phyllite (10%), minor green schist	2.8*	18*	10*	47*		
24			06		0.4	23	12	40		L10
25				34.4 - water return rusty brown						
26				35.6 - 35.8 Clay Layer						
				35.8 - 41.0 Pebble Gravel	0.6*	27*	12*	28*		
27				41.0 - 43.1 Lacustrine Clay	0.2	53	12	54		L25
28			07	hard, grey, non-gritty						
				43.1 - 43.6 Cobble Till?						
29				43.6 - 44.7 Bedrock	0.8*	30*	9*	25*		
30			08	graphitic phyllite - up to 1% pyrite	0.3	94	18	68		L25
31										
32										
33			09		0.5*	25*	11*	26*		
34					1.1	360	11	60		L25
35			10		0.4*	22*	9*	25*		
36					0.4	37	38	112		570
37			11		0.6*	30*	14*	26*		
38					0.5	101	122	101		L50
39			01							
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 39 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21				19.0-35.6 +10 high, matrix high, coarse sand, steady drilling, water return brownish, lithology varies						
22										
23				30.0 - water return black, medium and dark grey quartzite (50%) bull quartz (10%) diorite (25%) phyllite (10%), minor green schist	2.8*	18*	10*	47*		
24			06		0.4	23	12	40		L10
25				34.4 - water return rusty brown						
26				35.6 - 35.8 Clay Layer						
				35.8 - 41.0 Pebble Gravel	0.6*	27*	12*	28*		
27				41.0 - 43.1 Lacustrine Clay	0.2	53	12	54		L25
28			07	hard, grey, non-gritty						
				43.1 - 43.6 Cobble Till?						
29				43.6 - 44.7 Bedrock						
30			08	graphitic phyllite - up to 1% pyrite	0.8*	30*	9*	25*		
31					0.3	94	18	68		L25
32										
33			09		0.5*	25*	11*	26*		
34					1.1	360	11	60		L25
35			10		0.4*	22*	9*	25*		
36					0.4	37	38	112		570
37			11		0.6*	30*	14*	26*		
38					0.5	101	122	101		L50
39			01							
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 39 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				43.6 - 44.7 Bedrock (con't)						
1			02		0.2	57	36	68		120
2					0.1*	30*	10*	75*		
3					0.1**	19**	8**	56**		5**
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

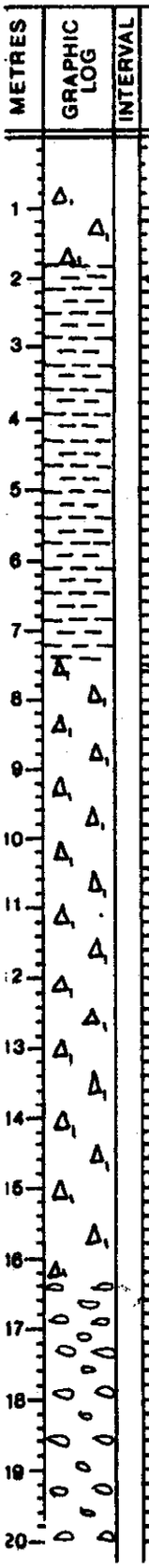
DATE July 2 19 80

SHIFT HOURS
3:00 TO 9:15

TOTAL HOURS
5.25 hours

CONTRACT HOURS
5.25 hours

HOLE NO. 40 LOCATION Western Zap L 11+850 , 1+285 S
GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. B59911 BIT FOOTAGE 33.0
MOVE TO HOLE 2:15 - 3:00
DRILL 3:00 - 6:15 , 7:00 - 7:45 , 8:45 - 9:15
MECHANICAL DOWN TIME 7:45 - 8:00 Blew hose
DRILLING PROBLEMS
OTHER 6:15 - 7:00 pull rods 8:00 - 8:45 pull rods
MOVE TO NEXT HOLE



DESCRIPTIVE LOG		Ag	Cu	Pb	Zn		Au
.7 - 1.8	Pebble Till?	0.2*	30*	20*	48*		
	moderate return, clay rich (20 - 55%) matrix low, silt and sand	0.4	26	21	70		L50
1.8 - 7.4	Lacustrine Clay						
	soft, smooth, lumpy, grey-brown	1.0*	11*	11*	28*		
3.2-4.7	cobble till?, clay (5 - 15%), matrix low-moderate, lithology: greenstone (50%) quartzite (30%)	0.8	82	78	105		L25
4.7-7.4	silt and clay (65%) (35%)						
7.4 - 16.3	Cobble - Pebble Till						
	matrix varies from silt to coarse sand, +10 moderate	1.1*	15*	9*	31*		
7.4-12.0	clay less than 5%	1.0	124	69	113		L50
12.0-16.3	gritty brown clay						
16.3 - 33.5	Gravel						
	distribution of pebbles to cobble = 50/50, +10 high, matrix high and consists of medium-coarse sand; water return brown with a few limonitic oxides; lithology: phyllite and quartzite (60%), diorite and bull quartz (30%)	2.2*	39*	8*	25*		
		0.9	132	387	61		G15000
		0.6*	12*	5*	39*		
		2.5	260	73	319		G15000
		0.5*	21*	11*	38*		
		0.2	22	9	56		L10

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 40 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21				33.5 - 33.8 Lacustrine Clay						
			07	33.8 - 40.0 Pebble - Cobble Gravel	1.0*	33*	7*	44*		
22				lithology: dark phyllite and quartzite 55%, other 30%	0.6	108	32	121		L25
23			08		0.5*	28*	10*	45*		
24					0.2	143	21	127		L50
25										
26			09		1.0*	15*	5*	19*		
27					0.6	44	28	80		L50
28										
29			10		0.5*	24*	6*	31*		
30					1.4	124	76	70		1175
31										
32			N/S							
33										
34			11		0.7*	19*	17*	54*		
					0.7	110	33	137		L50
35			12							
36					0.6*	20*	13*	71*		
37					0.9	96	70	129		L50
38										
39										
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 40 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				July 3, 1980
2				7:30 - 8:30 clean up
3				8:30 - 1 re-drill to 112'
4				10:00 - 11:00 pull rods
5				11:00 - 11:30 blew H20 hose
6				11:30 - 1:00 plugged
7				1:00 - 1:45 re-drill
8				1:45 - 2:30 pull rods
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 40 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				
2				July 5, 1980
3				
4				8:00 - 9:00 change head rod
5				9:00 - 10:15 re-drill to 123'
6				10:15 - 11:00 try to pull rods
7				11:00 - 4:00 phone calls, hydraulic pump gone
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

REVERSE CIRCULATION DRILL HOLE LOG

DATE July 15 19 80

SHIFT HOURS
8:45 TO 7:00

TOTAL HOURS
10.25 hours

CONTRACT HOURS
10.25 hours

HOLE NO. 41 LOCATION Western Zap , 11+860 , 1+400 S
GEOLOGIST M. Philpot DRILLER E. Hall BIT NO. 020018 BIT FOOTAGE 50.4
MOVE TO HOLE 8:45 - 10:00
DRILL 10:00 - 3:45 4:15 - 5:15 6:00 - 7:00 case
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS High torque, had to case
OTHER 3:45 - 4:15 loosen rods for less torque 5:15 - 6:00
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 2.9 Poor - nil return						
				2.9 - 13.5 Lacustrine Clay						L5
			01	2.9-6.8 grey, smooth, lumpy, few bull quartz and quartzite pebbles						
				6.8-7.5 poor return, silt and clay, no pebbles	0.1*	12*	1*	30*		
			02	9.8-10.5 till?, large cobbles of quartzite and diorite	3.0	78	58	375		I.S.
				10.5-13.5 few pebbles towards bottom (interbedded)						
				13.5 - 18.6 Pebble - Cobble Till						
			03	clay rich, +10 moderate to high, matrix - clay (10 - 15%) and up to (80%) fine silt, lithology: quartzite and diorite dominant, bull quartz	0.1*	12*	3*	60*		
					7.1	282	103	676		20
				18.6 - 18.9 Lacustrine Clay						
				18.9 - 35.2 Gravel						
			04	18.9-19.8 +10 high, matrix high, medium coarse sand, lithology varies	0.1*	18*	3*	45*		
					1.2	195	92	481		100
				20.0-29.3 water return brown, +10 high, matrix moderate to high, medium to coarse sand lithology varies: diorite, medium and dark grey quartzite, phyllite bull quartz						
			05		0.1*	24*	4*	50*		
					2.7	270	126	670		100
			06		0.1*	23*	1*	40*		
					2.0	203	54	456		L15

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__
SHIFT HOURS
_____ TO _____
TOTAL HOURS
_____
CONTRACT HOURS
_____

HOLE NO. 41 con't LOCATION _____
GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21				29.3-31.0 dark grey quartzite (70%) bull quartz (10%)	0.1*	15*	2*	45*		
22			06	31.0-34.2 medium and dark grey quartzite (60%), dark phyllite, bull quartz	0.2	17	25	42		L15
23				34.0-34.9 rusty water, underground stream? some pebbles coated with limonite						
24					0.1*	17*	1*	44*		
25			07	35.2 - 39.0 Lacustrine Clay	0.2	26	125	43		50
26				36.6-39.0 dark brown clay, swampy-organic (wood), few pebbles interbedded	0.1*	18*	7*	43*		
27			08	39.0 - 40.8 Quartz Pebble Gravel	0.4	94	91	67		L50
28				medium grey quartzite (70%), diorite, graphitic phyllite-quartzite, bull quartz; +10 high, medium sand matrix						
29					0.1*	29*	1*	39*		
30			09		0.8	190	25	70		15
31										
32					0.1*	24*	3*	38*		
33			10		0.5	94	173	76		15
34										
35					0.1*	8*	1*	30*		
36			11		1.0	50	78	82		25
37										
38					0.1*	9*	7*	60*		
39			12		18.0	47	135	90		150
40										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 41 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41			N/S	40.8 - 44.4 Lacustrine Clay						
42				44.4 - 45.6 Clay Rich Pebble - Cobble Till						
43			13	clay (30 - 60%), lithology: quartzite dominant, bull quartz, diorite	0.1*	37*	6*	97*		
44				45.6 - 50.4 Bedrock	1.7	158	64	300		25
45			14	45.6-46.4 graphitic phyllite-quartzite, greater than 1% pyrite occurring as smears and along fractures, small quartz, siderite (calcite?) pyrite vein	0.1*	34*	1*	81*		
46					4.1	133	77	277		135
47			15		0.1*	10*	1*	20*		
48				46.4-46.8 medium grey quartzite, minor pyrite	0.5**	9**	26**	44**		L5**
49			16	46.8-47.0 graphitic phyllite-quartzite, pyrite increase	0.4*	13*	10*	90*		
50					0.5**	9**	24**	77**		L5**
51				sequence continues with similar characteristics						
52										
53										
54										
55										
56										
57										
58										
59										
60										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 41 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				
2				July 16, 1980
3				7:00 - 7:45 Travel
4				7:45 - 8:45 Short in electrical system (repair)
5				8:45 - 10:45 Case
6				10:45 - 11:45 Pull case for new shoe
7				11:45 - 1:45 Case
8				1:45 - 5:00 Drill
9				5:00 - 5:30 Drill
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

REVERSE CIRCULATION DRILL HOLE LOG

DATE July 17 19 80

SHIFT HOURS
2:00 TO 11:00

TOTAL HOURS
9.00 hours

CONTRACT HOURS
7.75 hours

HOLE NO. 42 LOCATION Western Zap , L 11+850 , 1+485 S
GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. B59916 BIT FOOTAGE 52.2
MOVE TO HOLE 2:00 - 2:30
DRILL 3:45 - 11:00
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS Torque high 2200 at 52.2 m, could not continue
OTHER 2:30 - 3:45 Standby for Oliver - forgot bits at camp
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 3.9 Poor - nil return, organics: moss and peat and wood fragments, water return - dark brown						
				3.9 - 13.7 Interbedded Lacustrine and Fluvial						
				3.9-4.0 thin grey clay bed						
				4.0-4.5 fine silt, no +10						
				4.5-4.8 pebble layer						
			01	4.8-8.2 lacustrine clay	0.3*	18*	3*	40*		
				8.3-8.9 silt and a few pebbles	1.9	220	111	628		2890
				8.9-9.0 thin clay layer						
				9.0-9.8 silt and a few pebbles						
				9.8-10.0 thin clay layer						
			N/S	10.0-13.7 interbedded silt and pebble, layers with clay layers, few cobbles at 10.6 (60%) (45%)						
				13.7 - 16.8 Pebble - Cobble Gravel? Till?						
			02	+10 low to moderate, matrix low, medium coarse sand, lithology: dark and medium quartzite (50%) diorite (30%)	0.4*	11*	1*	50*		
			N/S		2.8	307	96	1042		I.S.
				16.8 - 47.8 Pebble - Cobble Gravel						
			03	+10 high, matrix good, coarse sand	0.1*	11*	1*	46*		
				18.9-19.0 brown clay layer, lithology: diorite dominant (45%), phyllite and quartzite (25%), bull quartz (10%), other (20%)	1.1	109	43	276		15
			04		0.1*	18*	2*	37*		
					0.7	53	18	58		L50
			05		0.1*	11*	1*	32*		
					0.4	40	29	47		3250

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 42 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21				20.2-20.4 thin clay layer						
22				20.4-21.7 +10 moderate, matrix moderate, minor clay						
23			06	21.7-27.0 +10 high, matrix moderate, coarse sand, lithology varies	0.1*	18*	5*	98*		
24				27.0-33.0 water return brown, lithology varies diorite > quartzite > phyllite > bull quartz = (75%) matrix moderate	1.6	104	43	581		L15
25										
26										
27			07	33.0-38.2 +10 high, lithology - dark and medium grey quartzite (35%), bull quartz (15%)	0.1*	13*	1*	42*		
28					0.9	94	16	86		L15
29				38.2-38.4 +10 high, matrix high thin black clay layer grading into sand and gravel, +10 high, matrix high						
30			08		0.1*	25*	38*	129*		
31					9.0	285	4500	1780		L20
32										
33			09		0.1*	24*	5*	40*		
34					2.4	377	259	173		15
35										
36			10		0.1*	13*	1*	39*		
37					5.6	115	277	127		2550
38										
39			11		0.1*	15*	4*	67*		
40					0.3	70	47	181		L20

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 42 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

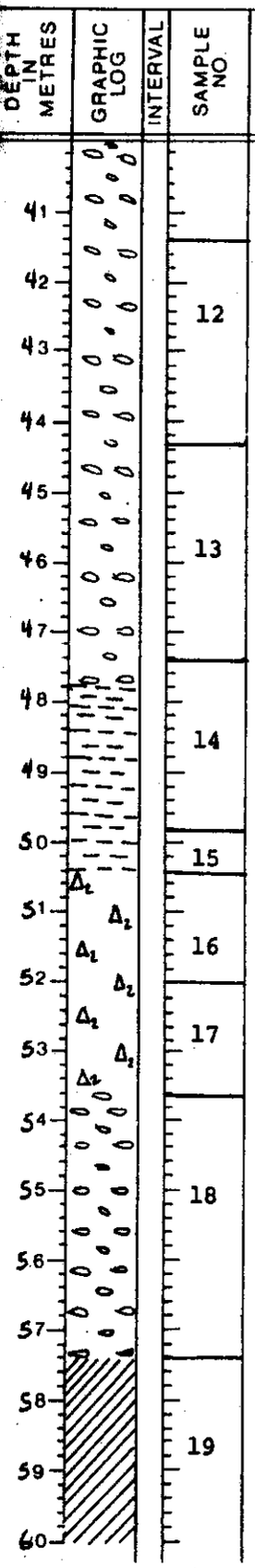
DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____



DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
40.0-47.8 +10 high, matrix moderate, coarse sand, lithology varies						
47.8 - 50.4 Lacustrine Clay						
49.0-50.4 clay interbedded with pebble till?	0.1*	18*	1*	65*		15
	N.S.	N.S.	N.S.	N.S.		
50.4 - 53.5 Pebble - Cobble Till						
greenstone, phyllite, dark quartzite, quartz and siderite, minor pyrite; clay 50 - 80%	0.2*	17*	4*	66*		
	3.4	90	108	129		I.S.
53.5 - 57.4 Quartzite Pebble - Cobble Gravel						
lithology: quartzite ± pyrite (70%), bull quartz (15%), diorite (15%) +10 high, matrix poor	0.1*	41*	10*	124*		
	1.4	105	169	265		I.S.
57.4 - 62.5 Bedrock						
- medium grey quartzite, minor pyrite	0.1*	40*	12*	129*		
	2.2	147	71	303		295
- graphitic quartzite phyllite, good pyrite	0.1*	43*	10*	128*		
	3.0	263	107	633		3925
- graphitic rich zone	0.1*	40*	12*	129*		
	4.9	201	129	870		100
	0.1*	22*	10*	139*		
	5.3	133	106	1328		1715
	0.2*	12*	2*	35*		
	0.3**	8**	24**	38**		L5**

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 42 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
61			20	- graphitic quartzite/phyllite, minor pyrite - medium grey quartzite, calcite on fractures - graphitic quartzite/phyllite - medium grey quartzite, moderate - good pyrite, calcite on fractures	0.1* 0.8**	10* 10**	7* 166**	37* 44**		5**
62										
63										
64										
65										
66										
67										
68										
69										
70										
71										
72										
73										
74										
75										
76										
77										
78										
79										
80										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO. 42 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				July 18
2				8:00 - 9:00 Travel
3				9:00 - 10:00 Reem down to 52m
4				10:00 - 10:30 Drill to 53m
5				10:30 - 11:30 Case
6				11:30 - 12:00 Stand by H_2O Fix H_2O leak in pump
7				12:00 - 2:45 Case to 40m
8				2:45 - 3:15 Try to drill, plugged
9				3:15 - 4:30 Pull rods
10				4:30 - 5:00 Head rod change
11				5:00 - 5:30 Finish pulling rods
12				
13				
14				
15				
16				
17				
18				
19				
20				

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS
_____TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO. 42 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				July 19
2				Put on used bit B59907 (#40)
3				7:00 - 8:00 Check water swivel for damage
4				8:00 - 9:30 Camp - Elsa - Camp Phone call to H & S
5				9:30 - 10:30 Travel
6				10:30 - 11:45 Clean out water tanks and nodwell
7				Fix and check water pump
8				Change water swivel
9				Change O ring's
10				11:45 - 3:15 Back down casing drill to 62.5m
11				3:15 - 4:15 Pull rods
12				4:15 - 5:45 Pull casing
13				
14				
15				
16				
17				
18				
19				
20				

REVERSE CIRCULATION DRILL HOLE LOG

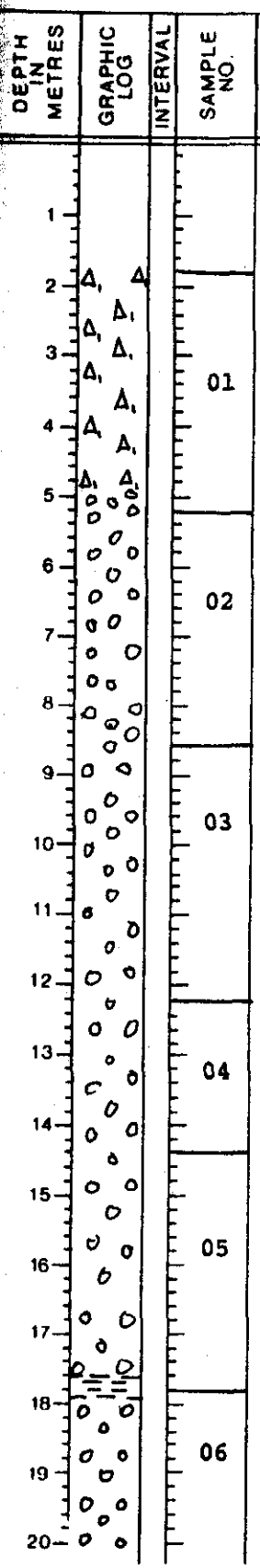
DATE July 21 19 80

SHIFT HOURS
8:00 TO 5:15

TOTAL HOURS
9.75 hours

CONTRACT HOURS
9.75 hours

HOLE NO. 43 A LOCATION Western Zap L 11+390 , 1850 S (+20'N)
GEOLOGIST D. Bonnar DRILLER E. Hall BIT NO. B59914 BIT FOOTAGE
MOVE TO HOLE 9:00 - 9:10
DRILL 9:10 - 3:15
MECHANICAL DOWN TIME 4:00 - 5:00 change head rod
DRILLING PROBLEMS Nil
OTHER Travel 7:00 - 8:00, 5:15 - 6:00 pull rods 8:00 - 9:00, 3:15 - 5:
MOVE TO NEXT HOLE 5:00 - 5:15



DESCRIPTIVE LOG		Ag	Cu	Pb	Zn		Au
0 - 1.7	No recovery						
1.7 - 4.9	Till?						
3.1-3.7	increase in cobbles; greenstone, black quartzite, light grey quartzite	0.1*	15*	4*	46*		
3.7-4.9	gritty, grey-brown clay and silt interbeds	I.S.	I.S.	I.S.	I.S.		L50
4.9 - 17.6	Gravel						
4.9-8.2	pebbly, scattered cobbles; greenstone and medium grey quartzite; medium sand matrix	0.1*	25*	2*	45*		
8.2-9.6	sand, minor pebbles	1.8	85	28	150		L50
10.6-12.5	pebbly, medium-fine sand matrix						
12.5-12.8	minor clay and silt in matrix	0.1*	16*	4*	33*		
13.1-13.4	fine pebbles with coarse sand matrix	1.6	144	45	373		50
14.0-15.2	increase in coarse sand matrix						
17.6 - 17.9	Lacustrine Clay						
	grey, hard, dense, clean, and bedded	0.1*	17*	4*	47*		
17.9 - 25.8	Gravel	2.0	140	69	296		255
	pebbly, scattered cobbles; greenstone, light grey quartzite, grey quartzite, black quartzite; medium-coarse grained sand matrix	0.1*	11*	1*	35*		
		0.5	52	28	131		10
		0.1*	14*	1*	43*		
		0.4	121	18	208		1190

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 43A con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

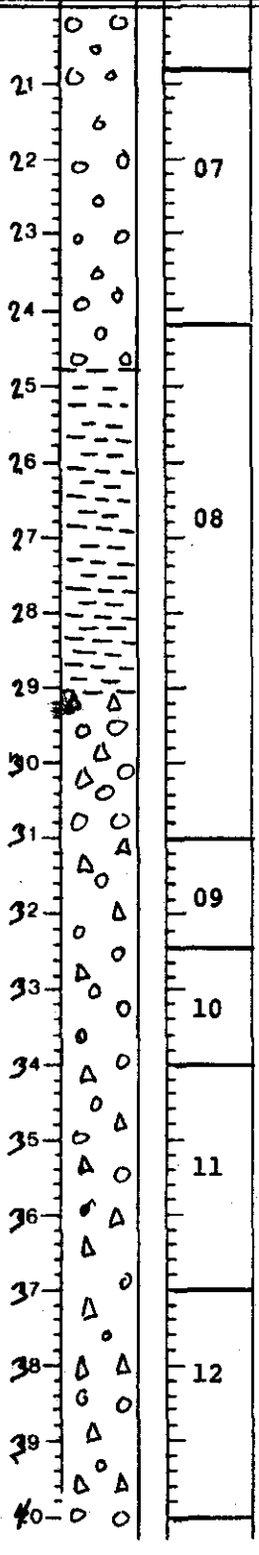
DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____



DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				25.8 - 29.1 **Lacustrine Clay** grey, hard, clean						
			07	29.1 - 40.0 **Gravel** pebbly, scattered cobbles; matrix consists of medium sand; lithology: black quartzite (50%), medium grey quartzite (30%), greenstone (15%)	0.1*	21*	1*	48*		
					1.6	129	79	100		L50
			08		0.5*	21*	3*	69*		
					0.8	75	15	130		L25
			09		0.1*	37*	1*	51*		
					1.1	137	20	178		L50
			10		0.2*	23*	12*	60*		
					0.6	43	28	140		L10
			11		0.2*	15*	2*	183*		
					11.1	295	195	2700		L50
			12		0.2*	24*	10*	232*		
					8.8	214	220	4400		160

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 43A con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41			13	40.0 - 42.7 <u>Bedrock</u> light grey, weakly sericitic quartzite interbedded with a medium dark grey quartzite; pyrite disseminations throughout	0.1*	16*	1*	120*		
42					0.8**	34**	40**	106**		13**
43										
44										
45										
46										
47										
48										
49										
50										
51										
52										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 23 19 80

SHIFT HOURS
11:00 TO 7:15

TOTAL HOURS
8.25 hours

CONTRACT HOURS
8.25 hours

HOLE NO. 44 LOCATION Western Zap
GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. 59915 BIT FOOTAGE 44.4 m
MOVE TO HOLE 11:00 - 12:00
DRILL 12:00 - 7:15
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 3.3 No return						
				3.3 - 6.0 Fluvial						
				water return brown-grey, silt matrix high, +10 low, cobbles towards bottom						
				5.2-6.0 silt and minor clay (60%) (40%)						
			01	6.0 - 15.2 Pebble - Cobble Gravel	0.2*	18*	7*	51*		
				6.0-8.2 +10 high, matrix low, coarse sand, pebbles well rounded and vary in lithology	3.2	256	126	640		90
			02	8.2-13.8 water return rusty brown, pebbles slightly limonitic (coatings) +10 high when cobbles are low, +10 low when cobbles are high, lithology varies	0.4*	16*	6*	40*		
					2.5	320	130	630		L50
			03	10.8-11.1 large white quartzite boulder	0.1*	18*	7*	42*		
				13.8-15.2 sand and gravel	0.5	56	38	121		100
				15.2 - 19.8 Till?						
				15.2-15.3 light brown and gritty clay						
			04	16.2-19.3 clay is soft and mixed in with a few pebbles	0.1*	16*	8*	39*		
				19.3-19.8 brown clay interbedded with a few pebbles	0.8	37	122	197		L50
			05		0.1*	16*	8*	83*		
					0.5	32	25	149		1055
			06							

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 44 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			06	19.8 - 26.1 Lacustrine Clay grey, smooth, compact	0.2* 0.6	15* 29	6* 66	78* 140		 1786
22				22.4-22.6 few quartz pebbles (85%) (15%)						
23				26.1 - 37.3 Pebble - Cobble Gravel +10 low, matrix high, coarse sand, lithology: medium and light grey quartzite (30%) bull quartz (20%) phyllite (15%) diorite (15%) other (20%)	0.1* 0.5	18* 30	8* 21	69* 144		 12,500
24			07							
25										
26										
27				26.2-28.0 few large cobbles	0.4*	25*	13*	96*		
28			08	28.0-32.1 sand and gravel, +10 high, matrix high, few cobbles	4.7	137	73	271		L50
29				32.1-32.0 thin bed of clay						
30				32.0-37.3 sand and gravel	0.1*	36*	6*	44*		
31			09	37.3-37.4 thin bed of clay	0.9	65	23	120		345
32				37.4 - 39.9 Clay Rich Pebble - Cobble Till clay content (60-70%) matrix clay, +10 low, lithology: medium grey quartzite (45%) diorite (30%) bull quartz (20% ± pyrite)						
33					0.2*	16*	5*	50*		
34			10		0.8	33	14	88		120
35										
36			11		0.1* 0.8	19* 52	13* 14	47* 67		 20
37										
38			12		0.2* 2.2	29* 206	10* 45	75* 358		 35
39			13		0.3* 2.4	28* 280	11* 70	61* 520		 50
40			14		0.2* 5.6	24* 148	6* 115	44* 800		 1500

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 44 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41			14	40.3 - 44.4 Bedrock						
42			15	40.3-40.9 medium grey quartzite, minor pyrite along fractures and disseminated	0.2*	16*	4*	70*		
43				40.9-41.1 gritty quartzite	2.4**	16**	663**	81**		L5**
44				41.1-41.9 medium grey quartzite						
45			16	41.9-42.2 dark grey quartzite	0.4*	12*	7*	58*		
46				42.2-42.5 graphitic rich phyllite	7.2**	18**	304**	2740**		L5**
47				42.5-43.4 medium grey quartzite with pyrite along foliation grading into a light grey quartzite						
48				43.4-43.6 graphitic phyllite						
49				43.6-44.4 medium grey quartzite						
50										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO. 44 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				July 24, 1980
2				7:00 - 7:45 Travel
3				7:45 - 9:00 Change frozen water lines
4				9:00 - 10:30 Drill
5				10:30 - 11:15 Pull rods
6				
7				
8				
9				
10				
11				
2				
13				
14				
15				
16				
17				
18				
19				
20				

REVERSE CIRCULATION DRILL HOLE LOG

DATE June 24 19 80

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO. 45 LOCATION Western Zap
GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. ____ BIT FOOTAGE ____
MOVE TO HOLE 11:15 - 12:00
DRILL 12:00 - 6:45
MECHANICAL DOWN TIME Plugged 6:45 - 7:15
DRILLING PROBLEMS ____
OTHER ____
MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 1.3 No return						
1				1.3 - 4.2 Cobble Gravel						
2			01	+10 high, matrix low, lithology: diorite and greenstone (45%), dark and medium grey quartzite (35%) few pebbles, water return color clear to brownish	1.7*	16*	52*	812*		
3					1.8	129	78	149		I.S.
4				4.2 - 9.5 Sand and Gravel						
5			02	+10 low, matrix high, coarse brown sand, minor clay (6.7 - 7.7) (75%) (25%)	0.2*	34*	11*	58*		
6					15.8	255	270	1040		575
7				9.5 - 25.9 Cobble - Pebble Gravel						
8			03	9.5-19.8 +10 high, matrix low, coarse sand, lithology: dark and medium grey quartzite (40%), diorite (30%), bull quartz (5%) other (25%)	0.1*	18*	4*	44*		
9					5.7	283	125	910		I.S.
10										
11			04		0.3*	17*	7*	53*		
12					2.1	251	180	480		I.S.
13										
14			05		0.1*	20*	6*	69*		
15					1.7	162	83	260		5430
16										
17			06		0.1*	14*	5*	48*		
18					0.9	129	88	140		I.S.
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 45 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				19.8-22.3 +10 high, matrix high, coarse sand	0.1*	20*	4*	56*		
			07	22.3-23.2 cobble content increase, lithology: medium grey quartzite, flaggy quartzite diorite	3.8	94	210	153		L50
				25.9 - 31.0 Till?	0.2*	11*	6*	69*		
			08	25.9-26.3 minor clay with sand and pebbles	0.9	62	36	302		L50
				27.8-27.9 thin bed of lacustrine clay?						
				29.2-31.0 diorite cobbles prominant, cobble content increases to (60%), +10 low to moderate, matrix low	0.1*	12*	4*	60*		
			09		1.6	83	115	207		L50
				31.0 - 37.8 Pebble - Cobble Gravel						
				37.8 - 39.2 Lacustrine Clay	0.2*	37*	4*	48*		
			10	39.2 - 49.5 Pebble - Cobble Gravel	1.7	164	41	195		L50
				39.3-41.0 +10 high, matrix high						
					0.2*	13*	3*	41*		
			11		0.8	51	16	79		L50
					0.1*	23*	6*	43*		
			12		0.9	164	28	78		L50
					L0.1*	18*	4*	35*		
			13		1.3	102	67	133		L50
					0.1*	21*	5*	58*		
			14		1.7	165	50	375		300

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 45 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41			14	44.0-47.5 pebble gravel, +10 high, matrix high, coarse sand, salt and pepper texture and color, lithology: light and medium grey quartzite, bull quartz						
42					0.2*	15*	9*	90*		
43			15		7.5	269	270	1820		2190
44				47.5-47.6 thin layer of lacustrine clay						
45				47.6-49.5 fine silt	0.1*	16*	6*	100*		
46			16		9.1	251	230	2980		180
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 45 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG
1				July 25
2				7:00 - 7:45 Travel
3				7:45 - 8:30 Stand by for water
4				8:30 - 9:00 Try to lessen torque
5				9:00 - 10:00 Try to unthread rods
6				10:00 - 2:00 Case 30 m
7				2:00 - 3:00 Drill
8				3:00 - 3:30 Take off rods
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

REVERSE CIRCULATION DRILL HOLE LOG

DATE July 29 19 80

SHIFT HOURS
7:45 TO 12:30

TOTAL HOURS
4.75 hours

CONTRACT HOURS
4.75 hours

HOLE NO. 46 LOCATION Western Zap, L 11+390 , 0+950 S

GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. B59901 BIT FOOTAGE 32.3

MOVE TO HOLE

DRILL 10:45 - 12:10

MECHANICAL DOWN TIME 7:45 - 10:45 Servicing

DRILLING PROBLEMS Nil

OTHER pull 12:00 - 12:15

MOVE TO NEXT HOLE 12:15 - 12:30

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 2.2 Few organics, water return poor, no return (40%) (60%)						
				2.2 - 3.1 Pebble - Cobble Till						
				clay brown and gritty, +10 low, matrix low, silt-sand, lithology varies: bull quartz ± siderite, limonite oxides	0.2*	15*	4*	52*		
			01		0.8	42	19	99		L50**
					1.2**	5**	373**	31**		
			02	3.1 - 6.6 Bedrock	0.1*	2*	L1*	30*		L5**
				3.1-3.6 flaggy quartzite, brown grey iron staining along fractures						
				3.6-5.0 grading into a medium grey quartzite ± bull quartz veining						
				5.0-5.5 light to medium grey quartzite						
				5.5-6.2 flaggy to medium grey quartzite						
				6.2-6.6 flaggy quartzite						

REVERSE CIRCULATION DRILL HOLE LOG

DATE July 29 19 80

SHIFT HOURS
12:30 TO 6:00

TOTAL HOURS
5.50 hours

CONTRACT HOURS
5.50 hours

HOLE NO. 47 LOCATION Western Zap L 11+390 , 0+850 S

GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. 59901 BIT FOOTAGE 32.3

MOVE TO HOLE

DRILL 12:30 - 5:30

MECHANICAL DOWN TIME Nil

DRILLING PROBLEMS Nil

OTHER Pull 5:30 - 6:00

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				1.0 - 1.9 Poor - moderate return, few pebbles and brown gritty clay						
			01	1.9 - 4.2 Pebble - Cobble Till	0.2*	16*	10*	45*		
				moderate return, +10 low, matrix moderate, clay (5 - 15%) silt and sand, bull quartz and siderite	1.7	50	130	70		L50
			02		0.2*	14*	6*	36*		
					1.3	51	88	150		L50
				2.8-3.2 large medium grey boulder						
				4.2 - 23.3 Pebble - Cobble Gravel	0.2*	27*	11*	42*		
			03	4.2-6.9 +10 low to moderate, matrix moderate, lithology varies, diorite, dark grey quartzite, phyllite	0.3	75	31	78		L50
				6.9-7.2 greenstone boulder	0.2*	36*	16*	59*		
			04	7.2-16.2 +10 high, matrix moderate silt and sand, lithology varies, slightly rusty	0.2	56	25	70		60
				16.2-17.0 sand content increases, water return soupy rusty						
				17.0-17.1 thin bed of clay						
			05	17.1-19.8 rusty brown water, most pebbles are coated with limonite, lithology: phyllite, bull quartz, and quartzite dominant	0.2*	35*	13*	120*		
					1.1	58	24	147		L50
			06		0.1*	35*	8*	180*		
					0.5	47	7	151		200
			07		0.2*	29*	12*	377*		
					0.9	40	18	632		2000

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 47 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				19.8-23.3 +10 high, matrix high, coarse sand, water return	0.2*	19*	14*	181*		
			08	rusty brown, lithology: phyllite bull quartz dark quartzite = 75%	3.4	50	29	379		430
				23.3 - 26.1 Bedrock	0.4*	21*	22*	158*		
			09		16.7	58	44	305		G15000
				23.3-23.8 dark-medium grey quartzite						
				23.8-24.6 medium-grey quartzite, minor pyrite disseminated	0.2*	5*	3*	27*		
			10		0.4**	9**	30**	60**		L5**
				24.6-26.1 weakly graphitic phyllite, minor pyrite disseminated (primary?)						

REVERSE CIRCULATION DRILL HOLE LOG

DATE July 30 19 80

SHIFT HOURS
8:00 TO 1:00

TOTAL HOURS
5.00 hours

CONTRACT HOURS
5.00 hours

HOLE NO. 48 LOCATION Western Zap L + 11+110 , 0+815 S
GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. 69367 BIT FOOTAGE 29.4
MOVE TO HOLE
DRILL 10:30 - 1:00
MECHANICAL DOWN TIME Nil
DRILLING PROBLEMS Nil
OTHER Pull 1:00 - 1:30 Roll up and string out. Wait for water, water line 8:00 - 9:30 9:30 - 10:30
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				.8 - 3.1 Poor return (50%) (50%)						
1				3.1 - 6.0 Pebble - Cobble Till						
2			01	+10 low, matrix low, brown gritty clay, lithology: dark quartzite, greenstone, and diorite (75%), bull quartz, other (25%) (60%) (49%)	0.2*	9*	4*	36*		
3	Δ,				4.6	44	84	88		L50
4	Δ,									
	Δ,			6.0 - 10.0 Pebble - Cobble Gravel						
5	Δ,		02	+10 moderate, matrix low, fine-medium grain sand, lithology: diorite dominant, dark grey quartzite	0.1*	11*	6*	31*		
6	Δ,				1.5	131	22	77		L50
7				10.0-13.6 Bedrock	0.1*	43*	8*	52*		
8			03	interbedded graphitic phyllites with medium grey-brown quartzites, graphitic phyllites greater than quartzites	0.5	72	14	63		610
9										
			04		0.2*	68*	5*	68*		
10					0.3	63	9	79		L50
11					0.4**	15**	58**	71**		
12			05		0.3**	14**	6**	30**		L5**
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE July 30 19 80

SHIFT HOURS
1:00 TO 5:30

TOTAL HOURS
4.50 hours

CONTRACT HOURS
4.50 hours

HOLE NO. 49 LOCATION Western Zap L 11+100 , 0+900 S
GEOLOGIST M. Philpot DRILLER O. Vanasse BIT NO. 69367 BIT FOOTAGE 29.4
MOVE TO HOLE 1:00 - 1:30
DRILL 1:45 - 2:00 2:30 - 5:00
MECHANICAL DOWN TIME 2:00 - 2:30 Broken hydraulic line
DRILLING PROBLEMS Nil
OTHER 1:30 - 1:45 Lay out hose 5:00 - 5:30 Pull
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 1.7 No return (45%) (55%)						
				1.7 - 8.0 Pebble - Cobble Till						
			01	brown gritty clay matrix moderate - clay, silt, sand +10 moderate	0.3*	20*	6*	42*		
				1.7-8.0 poor - moderate return	0.5	49	24	162		L50
			02	5.4-6.5 clay content increase (10-15%) to (40-60%), lithology varies	0.2*	19*	L1*	28*		
				6.5-6.6 thin clay bed	0.3	165	8	73		L50
				6.6-8.0 greenstone and diorite (50%) dark quartzite (15%), bull quartz (15%), other (20%)						
			03		0.2*	20*	4*	29*		
				8.0 - 11.2 Clay Rich Till? Interbedded Lacustrine and Fluvial?	3.0	106	520	150		L50
			04	clay grey and gritty, water return grey, pebbles consist of dark grey quartzite and bull quartz	0.1*	19*	5*	41*		
					1.3	89	78	202		L50
				9.6-11.2 pebbles decrease (35%) (65%)	0.2*	20*	2*	22*		
			05	11.2 - 13.8 Pebble - Cobble Till						
				lithology: diorite and greenstone greater than dark and medium grey quartzite ± bull quartz = (75%), matrix moderate, +10 moderate, clay varies (5 - 40%)	0.2	129	59	158		35
			06		0.1**	27**	8**	30**		
					0.4*	15*	4*	40*		L5**
				13.8 - 15.6 Bedrock						
				medium-grey quartzite						

REVERSE CIRCULATION DRILL HOLE LOG

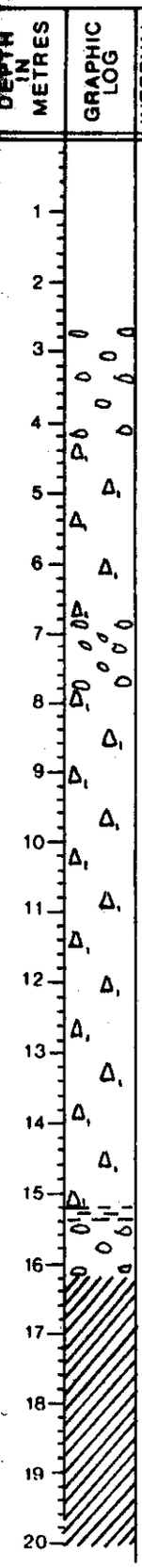
DATE July 31 19 80

SHIFT HOURS
_____ TO _____

TOTAL HOURS
8.00 hours

CONTRACT HOURS
4.50 hours

HOLE NO. 50 LOCATION Western Zap L 11+100 , 1000 S
GEOLOGIST D. Bonnar DRILLER O. Vanasse BIT NO. B59908 BIT FOOTAGE _____
MOVE TO HOLE 11:45 - 12:00
DRILL 12:30 - 3:30
MECHANICAL DOWN TIME 8:15 - 11:45
DRILLING PROBLEMS _____
OTHER Tr. 7:00-8:15, 4:45-5:30 Set up 12:00-12:30 pull rods 3:30-4:00
MOVE TO NEXT HOLE 4:00 - 4:15 set up 4:15 - 4:45



SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
	0 - 2.7 No recovery						
	2.7 - 4.2 Gravel						
01	medium sand matrix, cobbly-bouldery; greenstone, dark grey quartzite	0.3*	14*	6*	30*		
		0.5	74	22	103		50
	4.2 - 6.8 Till						
	grey-brown, gritty clay matrix, about 10% pebbly, abundant grey quartzite	0.3*	16*	7*	41*		
02	5.2-6.0 interbedded clay-rich and clay depleted zones, cobbly	0.9	38	16	68		L50
	6.0-6.8 pebbly, abundant greenstone	0.2*	25*	6*	34*		
03	6.8 - 7.8 Gravel	0.7	66	25	59		I.S.
	cobbly, abundant greenstone and others, well rounded pebbles, medium sand matrix	0.2*	20*	6*	29*		
04		0.3	70	79	56		50
	7.8 - 15.2 Till						
	grey-brown, gritty, silty clay about 20% pebbly; abundant greenstone, dark grey-medium grey quartzite, abundant limonitic quartz and quartzite	0.2*	13*	3*	30*		
05		0.5	137	78	76		L50
	9.1-9.7 cobbly; greenstone and grey quartzite	0.2*	14*	4*	29*		
06	9.7-12.5 very silty matrix	3.6	135	255	180		L50
	12.5-14.0 clay about 30%, fine pebbles	0.2*	16*	4*	57*		
07	14.0-15.2 cobbly	1.1	143	25	178		L50
	15.2 - 15.4 Clay silver grey, clean						
	15.4 - 16.2 Gravel	0.4**	16**	31**	18**		
08	medium sand matrix about 30%	0.5*	13*	2*	23*		5**
	16.2 - 23.1 Bedrock						
	interbedded grey sericitic phyllite, chloritic phyllite, dark and med. grey quartzite						
	17.6-18.9 interbedded dark grey quartzite and dark grey sericite phyllite, minor arkose						
	19.8-21.6 abundant bull quartz with limonite-hematite stains						

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____TO_____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 50 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
1			09	21.9-23.1 chloritic phyllite	0.2**	20**	3**	19**		
2					0.3*	26*	2*	20*		L5**
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE Aug. 1 19 80

SHIFT HOURS
8:00 TO 1:30

TOTAL HOURS
5.50 hours

CONTRACT HOURS
5.50 hours

HOLE NO. 51 LOCATION Western Zap L 11+105 Stn. 11005

GEOLOGIST D. Bonnar DRILLER O. Vanasse BIT NO. 69346 BIT FOOTAGE

MOVE TO HOLE

DRILL 8:30 - 12:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER Tr. 7:00 - 8:00, Set up 8:00 - 8:30, pull rods 12:30 - 1:00

MOVE TO NEXT HOLE 1:00 - 1:30

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 0.9 No recovery	0.4*	16*	8*	52*		
1			01	0.9 - 12.2 Till						
				grey clay; silt matrix about 30%, pebbles well-rounded, black quartzite, greenstone	1.9	34	111	72		L50
2										
3			02	2.7-12.2 cobbly; light brown quartzite, black quartzite, diorite	0.3*	10*	9*	30*		
4					1.4	38	44	102		L50
5			03	4.6-4.9 granodiorite boulder	0.2*	10*	4*	31*		
6				5.2-6.1 abundant greenstone cobbles	0.9	78	22	77		L50
7			04	10.6-11.5 greenstone 70% of +10, return matrix clay silt fine sand about 20%	0.2*	9*	5*	29*		
8				12.2 - 13.4 Gravel	1.5	61	103	121		1280
				medium sand matrix 10%, pebbly						
9					0.5*	14*	4*	32*		
10			05	13.4 - 18.6 Till	0.9	143	56	170		L50
11				clay silt sand matrix 20 - 30%, cobbly; black quartzite, brown quartzite, greenstone						
12			06	18.6 - 19.1 Fluvial Sand	0.2*	11*	5*	29*		
13				19.1 - 22.6 Till	1.9	285	175	333		L50
14				grey clay-silt matrix 30% pebbly scattered cobbles						
15			07		0.2*	10*	2*	25*		
16					3.3	187	136	300		1440
17			08		0.2*	16*	5*	38*		
18					1.8	192	83	265		900
19			09		0.3*	17*	5*	33*		
20					1.2	152	58	206		L50

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 51 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
1			09	20.7-21.3 80% clay, 20% sand and pebbles						
2				21.3-22.2 clay-sand matrix 50%, pebbles 50%						
3			10	22.2-22.6 boulder medium grey, quartzite	0.4*	13*	4*	24*		415
4				22.6 - 24.4 Bedrock	1.0	117	87	158		L5**
				light grey quartzite with minor graphitic interbeds	0.2**	9**	5**	18**		
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 52 LOCATION Western Zap L11+110 Stn. 700 S

GEOLOGIST D. Bonnar DRILLER O. Vanasse BIT NO. 69346 BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 2.7 No recovery						
1				2.7 - 9.5 Pebble Till	0.2*	17*	5*	39*		
			01	2.7-2.8 clay - grey and clean	0.2	81	19	84		L50
2				5.2-7.6 grey-brown clay, silt and sand matrix (about 20%) pebbly to cobbly, abundant greenstone and medium grey quartzite						
3	Δ									
	Δ									
4	Δ									
	Δ			9.5 - 22.5 Gravel	0.2*	16*	6*	31*		
5			02	9.5-19.5 coarse sand matrix, well rounded pebbles, cobbly; abundant dark grey quartzite, greenstone	1.1	101	206	120		L50
	Δ									
6	Δ				0.2*	16*	4*	39*		
			03		0.3	62	29	63		L50
7	Δ			19.5-19.6 thin bed of grey-brown clay						
	Δ									
8	Δ			19.6-19.8 brown medium sand matrix about 30%, small pebbles	0.3*	22*	15*	34*		
	Δ		04		0.2	71	12	46		L50
9	Δ			19.8-20.7 coarse sand, limonitic, less than 10% fine pebbles						
					0.5*	38*	10*	42*		
10			05		3.7	49	92	44		L50
11										
12										
13					0.2*	32*	13*	65*		
			06		3.2	40	65	80		L50
14										
15										
16					0.2*	62*	7*	84*		
			07		0.4	70	18	69		L50
17										
18										
19										
20										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 52 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
21			08	20.7-22.5 medium sand matrix, pebbly	0.2* 0.2	28* 160	2* 2	38* 57		 L50
22				22.5 - 38.2 Lacustrine Clay brown-grey clay with very thin interbeds of silt.	0.1*	8*	2*	51*		
23			09		0.3	21	12	123		L50
24				38.2 - 57.2 Gravel 38.2-41.0 medium-coarse sand, +10 low, sand quartz rich, minor silt	0.2*	6*	3*	60*		
25			10		1.8	20	2	292		2500
26										
27			11		0.1* 1.2	14* 39	2* 6	171* 421		 2860
28										
29					0.2*	11*	4*	212*		
30			12		3.1	29	13	182		L50
31										
32										
33			13		0.2* 0.8	4* 27	2* 14	77* 97		 I.S.
34										
35										
36					0.3*	17*	6*	275*		
37			14		2.0	157	45	451		I.S.
38										
39					0.2*	14*	4*	450*		
40			15		14.9	350	470	1550		555

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 52 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
41				41.0-44.2 silt-sand, +10 low, matrix clean, fine silt to medium sand, quartz sand						
42			16	44.2-46.9 coarse sand, +10 moderate, coarse sand dominant, pyrite and iron oxides abundant	0.2*	17*	2*	555*		
43					15.9	391	210	1850		1660
44				47.9-50.0 same description as 44.2-46.9, less pyrite and iron oxides						
45			17		0.2*	44*	4*	451*		
46				50.0-50.6 abundant pyrite and iron oxides	15.5	313	335	13260		1660
47				53.3-54.6 cobbly; abundant black quartzite, greenstone, medium sand matrix						
48			Lost	57.2 - 70.1 <u>Silt with Thin Clay Interbeds</u>						
49			18		0.2*	44*	4*	252*		
50					6.8	338	373	1277		L50
51			19		0.5*	33*	19*	269*		L50
52			20		45.0	383	1078	868		
53					0.2*	34*	8*	374*		
54					9.6	480	313	4040		6325
55			21		0.2*	73*	12*	650*		
56					5.3	206	188	1804		8345
57			22		0.2*	39*	16*	317*		
58					5.6	232	165	1215		10,400
59										
60										

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 52 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
61			23	60.65-60.96 graphitic clay and minor pebbles	0.2*	56*	12*	527*		
					6.5	206	238	1034		670
62				63.40-64.00 graphitic clay; minor pebbles						
63			24	65.53-68.58 silt and pebbles; pebbles (80% dark grey/ balck quartzite; 10% bull quartz, 5% green-stone	0.4*	46*	9*	430*		
					8.7	225	250	981		505
64										
65										
66			25	69.00-69.19 pyrite about 2%, occasionally coarse about 4mm)	0.2*	40*	11*	273*		
67					4.8	250	185	1048		985
68										
69			26							
70										
71										
72										
73										
74										
75										
76										
77										
78										
79										
80										

REVERSE CIRCULATION DRILL HOLE LOG

DATE Aug. 9 1980

SHIFT HOURS
7:15 TO 6:00

TOTAL HOURS
10.75 hours

CONTRACT HOURS
10.75 hours

HOLE NO. 53 LOCATION Western Zap L 11+110 Stn. 1+750 S

GEOLOGIST G. Norman DRILLER O. Vanasse BIT NO. B59000 BIT FOOTAGE

MOVE TO HOLE

DRILL

MECHANICAL DOWN TIME 7:45 - 8:30 Fix swivel

DRILLING PROBLEMS

OTHER Travel 7:15 - 7:45 5:30 - 6:00

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO	DESCRIPTIVE LOG	Ag	Cu	Pb	Zn		Au
				0 - 1.2 No recovery, surface material is sand and gravel						
				1.2 - 15.8 Fluvial						
			01	3.7-5.8 silt and sand, lithology: quartzite (30%) greenstone (30%) other (60%)	0.2*	20*	8*	64*		
					3.2	90	58	287		615000
				5.8-6.7 thin bed of clay						
			02	6.7-9.8 high % +10, lithology: quartzite (40%) greenstone (30%) other (30%)	0.1*	27*	12*	81*		
					1.0	92	47	185		160
			03		0.2*	16*	6*	70*		
				9.8-11.6 pebble gravel with coarse sand matrix	1.7	91	46	200		I.S.
			04	13.1-14.6 pebble and cobble gravel, quartzite (50%), greenstone (30%), other (20%)	0.1*	18*	6*	48*		
					3.1	155	59	238		2465
				15.8 - 18.0 Pebble - Clay Till						
				40% gritty clay, 30% greenstone, 20% quartzite, 5% bull quartz, 5% other	0.1*	29*	5*	30*		
			05	18.0 - 20.7 Pebble Gravel	3.8	182	110	416		I.S.
				18.9-19.2 sandy with mud balls						
				19.5 - 40% sandy matrix 5% clay balls 25% greenstone 30% quartzite	0.2*	11*	4*	30*		
			06		2.7	94	46	150		1460
					0.3*	11*	4*	30*		
			07		3.4	63	54	123		65
					0.2*	18*	4*	30*		
			08		0.9	71	14	84		45

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 53 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

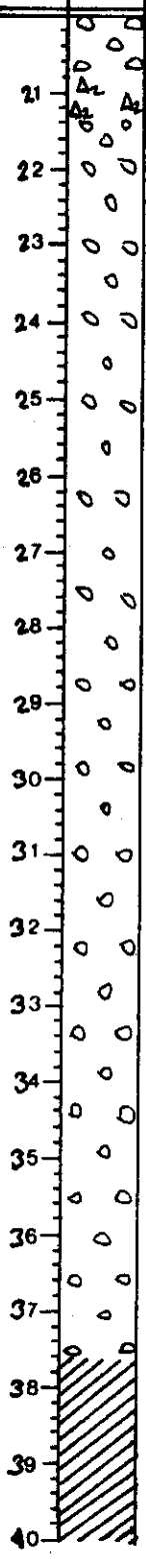
DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____



DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG		Ag	Cu	Pb	Zn		Au
			08	20.7 - 21.3	Pebble - Clay Till						
					gritty clay - 70%						
				21.3 - 37.6	Fluvial	0.2*	16*	4*	42*		
			09	21.3-23.5	medium grained coarse sand mud balls at 21.6 and 22.6	0.4	28	13	58		50
				23.5-24.4	sandy pebble gravel, 90% sand, 10% mixed pebbles	0.2*	21*	4*	41*		
			10	24.4-27.4	pebble gravel mixed composition, 25% quartzite only 5% coarse, 70% other sand matrix	0.5	44	11	69		25
				27.4-31.4	pebble - cobble gravel, 30% quartzite, 60% other, 10% bull quartz	0.1*	11*	6*	41*		
			11	31.4-32.0	pebbly sand, 90% medium-coarse grained sand, 10% pebbles	2.1	39	26	73		30
				34.4-37.6	pebble-cobble gravel, cobbles of greenstone and quartzite	0.2*	12*	4*	34*		
			12	36.6 -	quartzite cobbles increase in quartzite cobble at bedrock interface	1.5	25	30	57		170
				32.7 -	pyrite chunks in gravel up to 0.5cm						
				37.6 - 41.1	Bedrock	0.3*	24*	3*	50*		
			13		quartzite chlorite sercite schist	2.4	76	24	153		25
				39.9-40.8	gougey-sericitic material						
				40.8-41.1	good solid quartz-chlorite sericite schist with quartz, blebs of pyrite	0.3*	26*	9*	73*		
			14	41.1 -	back to gougey material	2.9	42	87	638		I.S.
			15			0.3**	48**	13**	87**		
						0.2*	69*	21*	90*		25**

REVERSE CIRCULATION DRILL HOLE LOG

DATE _____ 19__

SHIFT HOURS

_____TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO. 53 con't LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1			15	quartz chlorite sericite schist con't

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

APPENDIX II

STATEMENT OF COSTS

APPENDIX II

COST STATEMENT

A) Total direct cost of overburden drilling per foot includes:
1) cost per foot drilling
2) cost per foot labour
3) 10% down time
4) mobilization
5) demobilization

(See detailed summary of costs for the overburden drill program.)

$$\frac{\$155,182.43}{6,200'} = \$25.02/\text{foot}$$

B) Overburden disbursements includes all sampling equipment

= 8,452.37

C) Geochemistry:

-250 Mesh - Heavy Mineral Concentrates (H.M.C.)

-250 Mesh: (Ag, Pb, Zn & Cu)

526 x 4.25/sample = 2,235.50

H.M.C.: (Ag, Pb, Zn, Cu & Au)

539 x 8.50/sample = 4,581.50

miscellaneous geochem. 24.85

6,841.85

D) D-6C Caterpillar

$$\frac{\$12,400}{67 \text{ days}} = \$185.07/\text{day}$$

E) Pro-rated Disbursements = $58,166.46

		No. of field man days	x	cost/ man day	=	Cost
a)	camp construction	716		$ 3.06		2,190.96
b)	camp equipment	716		4.56		3,264.96
c)	camp groceries	716		12.37		8,856.92
d)	fuel supplies: diesel,gas	716		7.94		5,685.04
e)	vehicles: rentals	716		9.69		6,938.04
f)	vehicles: maintenance	716		3.82		2,735.12
g)	communication	716		3.59		2,570.44
h)	freight, courier, air, trucking	716		1.79		1,281.64
i)	transportation	716		5.74		4,109.84
j)	accommodation	716		.82		587.12
k)	photocopying	---		----		41.58
l)	expediting	716		4.85		3,472.60
m)	equipment rental (survey equipment, generator, water pump, pressure pump)	716		6.19		4,432.04
n)	office supplies and field equipment	716		14.89		10,661.24
o)	aircraft	716		1.87		1,338.92
						58,166.46

F) Labour (see page 3 for details)

= $80,985 of which $52,183 was applied for assessment to the claims.

LABOUR

PERSONNEL	CLASSIFICATION	RATE (PER DAY)	TOTAL DAYS	TOTAL COST
Field Management				
BELEY, M.J.	Project Management	$ 250	2	500
BARCLAY, R.J.	Project Management	250	3	750
NORTHCOTE, K.,PhD P.Eng	Geological Supervisor	375	3	1,125
NORMAN, G., B.Sc.	Senior Project Geologist	275	45	12,375
PHILPOT, M.	Geologist	175	79	13,825
RODGERS, G.	Geologist	175	21	3,675
JOHNSON, C.	Mayo Expeditor	150	22	3,300
Field				
ADAMS, P.	Geological Assistant #1	95	5	475
BOGDANOVICH, B.	Field Technician #2	110	15	1,650
BONNAR, D.	Sr. Geologist Assistant	110	40	4,400
DONNELLY, J.	Geological Assistant #3	75	59	4,425
DUNNE, P.	Field Technician #2	110	10	1,100
FIELD, M.	Camp Cook Assistant #3	95	30	2,850
GARTNER, M.	Camp Cook #1	150	45	6,750
HARDER, J.	Geologist	175	25	4,375
MARCY, N.	Field Supervisor #3	130	4	520
MacKENZIE, A.	Field Supervisor #3	130	20	2,600
MacRAY, J.	Field Technician #3	95	10	950
McNAMARA, B.	Cat Operator	175	38	6,650
MILROY, S.	Field Technician	110	5	550
NEWTON, P.	Field Technician #3	95	8	760
PIERCE, J.	Surveyor	150	15	2,250
SATCHWELL, J.	Field Technician #2	110	8	880
SCHATZ, O.	Geological Assistant #2	85	50	4,250
			562	80,985
Field Contractors				
HEAT & SHERWOOD LTD.	2 drillers for 67 days		134	
	Drill Supervision		10	
	Drill Mechanic		10	
			154	

Total Cost of Overburden Drill Program (A - F)

A	155,182.43
B	8,452.37
C	6,841.85
D	12,400.00
E	58,166.46
F	52,183.77
	$293,226.88

DETAILED SUMMARY OF COST

FOR THE OVERBURDEN DRILL PROGRAM

ZAP CLAIMS

Claim No.	Hole No.	Overburden & Geochem. Costs/Hole	Prorated Disbursements/ Claim	Labour/ Claim	TOTAL COST/ Claim
2	53	7,315.61	2,326.66	1,811.57	11,453.84
3	1	2,607.02	1,163.33	905.79	4,676.14
4	2	2,544.08	2,908.32	2,264.47	12,966.48
	3	2,096.56			
	4	1,532.71			
	4a	1,620.32			
6	5	1,866.64	2,326.66	1,811.57	11,292.77
	6	1,962.44			
	7	785.46			
	7a	2,540.00			
8	10	1,030.46	581.66	452.89	2,064.95
9	13	696.53	1,163.33	905.79	5,962.33
	14	498.09			
	15	484.40			
	16	1,134.46			
	17	1,079.73			
11	11	2,074.67	2,908.32	2,264.47	13,804.35
	11a	1,582.00			
	12	2,700.09			
	23	2,274.80			
21	26	2,767.65	5,234.98	4,076.05	23,606.81
	27	1,787.62			
	27a	565.52			
	27b	2,852.48			
	43	2,917.80			
	43a	3,404.71			

Detailed Summary of Costs Cont.

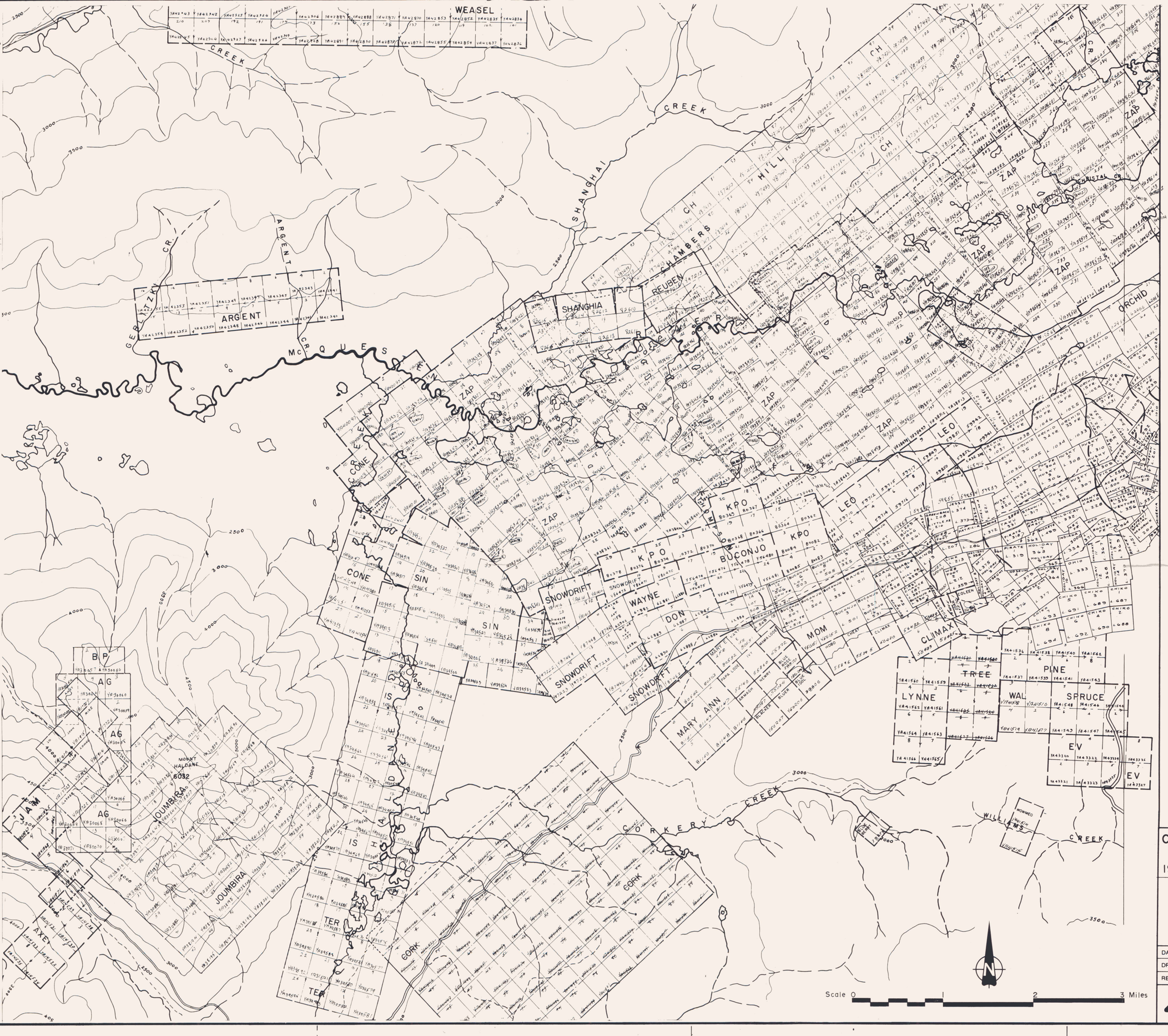
Claim No.	Hole No.	Overburden Geochem. Costs/Hole	Prorated Disbursements/ Claim	Labour/ Claim	TOTAL COST/ Claim
22	38	3,664.64	6,398.31	4,981.83	28,903.49
	38a	6,077.20			
	44	3,718.18			
	45	4,063.33			
23	28	3,139.00	2,326.66	1,811.57	10,782.38
	29	867.27			
	31	2,637.88			
24	32	2,934.21	3,524.88	2,744.53	17,055.70
	32a	1,368.13			
	32b	3,407.71			
	34	3,076.24			
25	30	573.78	9,306.63	7,246.30	43,526.71
	46	670.88			
	47	2,262.32			
	48	1,280.35			
	49	1,432.09			
	50	2,041.54			
	52	18,712.82			
26	33	2,251.68	5,234.98	4,076.05	24,882.60
	35	3,125.32			
	36	2,777.32			
	36a	4,210.07			
	37	3,207.18			
43	39	4,122.66	8,143.30	6,340.52	37,693.67
	39b	4,336.82			
	40	4,253.34			
	41	4,476.73			
	41a	873.62			
	42	5,146.68			

Detailed Summary of Costs Cont.

Claim No.	Hole No.	Overburden & Geochem. Costs/Hole	Prorated Disbursements/ Claim	Labour/ Claim	TOTAL COST/ Claim
F1012	51	2,968.38	1,163.33	905.79	5,037.50
F1015	8	1,250.79	1,163.33	905.79	4,748.63
	8a	1,428.72			
F1018	9	671.89	2,326.60	1,811.57	10,330.51
	24	1,047.52			
	25	2,321.28			
	25a	2,151.65			
		165,271.07	58,201.28	45,316.55	268,788.86
		SIN CLAIMS			
11	18	689.69	2,015.41	2,204.38	5,893.41
	19	983.93			
12	20	1,120.78	1,349.88	1,476.45	3,947.11
10	21	1,290.52	2,913.24	3,186.39	8,514.11
	22	1,123.96			
		5,208.88	6,278.53	6,867.22	18,354.63

March 6, 1981

M. D. Philpot, B.Sc.
Geologist



CANADA TUNGSTEN MINING CORPORATION

KENO HILL Y·T·

1980 GEOLOGICAL EXPLORATION PROGRAMME

ZAP CLAIMS

ASSESSMENT REPORT

CLAIM MAP

DATE: MARCH 1981	JOB NO. 80-09-A	FIG. NO. 2
DRAWN BY:		
REVISED BY:	SCALE 2": 1 MILE	

BEMA INDUSTRIES LTD.

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LEGEND

CLAIM POST

CLAIM BOUNDARY

OVERBURDEN DRILL HOLE
● OBH-80 location

CANADA TUNGSTEN MINING CORPORATION

KENO HILL Y.T.

1980 GEOLOGICAL EXPLORATION PROGRAMME

ZAP, SIN, 15, TER & CONE CLAIMS

ASSESSMENT REPORT

OVERBURDEN DRILL HOLE LOCATIONS

DATE: MARCH 1981	JOB NO: 81-09	FIG NO: 3
DRAWN BY: C.L.		
REVISED BY:	SCALE: 1:5,000	METRES

BEMA INDUSTRIES LTD.