

827551
Lara
92B/13

Field Report For : Minnova Limited

Covering : Surface Borehole FEM Surveys

Survey Area : Chemainus, B.C.

Survey Dates : July 6 to 8, 13, 19, 1990

Survey By : Scott Geophysics Limited

Field Report By : Neil Hughes

Introduction :

Surface Borehole PEM surveys were conducted by Scott Geophysics Limited, 4013 West 14th Avenue, Vancouver, on behalf of Minnova Limited, 311 Water Street, Vancouver on their Lara Property near Chemainus B.C.

Equipment :

A Standard 2000 Watt Crone Transmitter and Crone Digital Receiver were used for all surveys.

Survey Comments :

Apart from the "anomaly" generated by loop C4 in Hole 276 no other EM targets were detected. The 276 anomaly was not evident from a north loop, suggesting the effect is due to overloading.

Several days, July 9 to 12, had no production due to a failed slipping.

All holes can be accessed by road. Accomodation for the survey was at the Fuller Lake Motel.

Survey Parameters

Hole 262

Date : July 6, 1990

Loop : C1 - 200m X 200m, 88W to 90W, 106+00N to 108+00N
#12 AWG wire

Transmitter/Receiver Settings

Ramp : 1.5 ms
Time Base : 16.66 ms
ZTS : 1507.5
Sync. : Cable
Current : 10 Amp
Stacking : 1024/2048

Logging Depth : 40m to 200m

Comments :

Very "noisy" data, possibly on account of the known disseminated mineralization in the hole. No apparent EM targets detected.

Hole 272

Date : July 7, 1990

Loop : C1

Transmitter/Receiver Settings

Ramp : 1.0 ms
Time Base : 8.33 ms
ZTS : 999.0
Sync. : Cable
Current : 7 Amps
Stacking : 2048

Logging Depth : 40m to 160m

Comments :

A shorter ramp time was used than hole 262 to enhance higher frequency responses (poorer conductors). The time base was shortened because 16 channels adequately described the response. The current was cut so as not to overload the signal at the top of the hole.

Hole 286

Date : July 7, 1990

Loop : C2 - 200m X 250m, 74W to 76W, 106+50N to 109+00N
#12 AWG wire

Transmitter/Receiver Settings

Ramp : 1.0ms
Time Base : 8.33ms
ZTS : 1012.5
Sync. : Cable
Current : 6 Amps
Stacking : 1024

Logging Depth : 30m to 170m

Comments :

No apparent EM targets detected.

Hole 288

Date : July 7, 1990

Loop : C2

Transmitter/Receiver Settings

Ramp : 1.0ms
Time Base : 8.33ms
ZTS : 1012.5
Sync. : Cable
Current : 6 Amps

Logging Depth : 30m to 180m

Comments :

No apparent EM targets detected.

Hole 290

Date : July 8, 1990

Loop : N3 - 200m X 200m, 34W to 36W, 7+00N to 9+00N
#12AWG wire

True North-South lines used.

Transmitter/Receiver Settings

Ramp : 1.0ms
Time Base : 8.33ms
ZTS : 1012.5
Sync. : Cable
Current : 6 Amps
Stacking : 1024

Logging Depth : 20m to 130m
(Drilled depth 179m).

Comments :

No apparent EM targets detected. The north loop was designed to preferentially energise the target while minimizing the response from the envelope mineralization.

Hole 274

Date : July 8, 1990

Loop : C4 - 175m X 275m, 40W to 38+25W, 5+25N to 8+00N
#12 AWG wire
True North-South lines

Transmitter\Receiver Settings

Ramp : 1.0ms
Time Base : 8.33ms
ZTS : 1021.5
Sync. : Cable
Current : 6 Amps
Stacking : 2048

Logging Depth : 25m to 120m
(Drilled depth 425m)

Comments :

No apparent EM targets detected.

Hole 276

Date : July 13, 1990

Loop : C4

Transmitter\Receiver Settings

Ramp : 1.0ms

Time Base : 8.33ms
ZTS : 1021.5
Sync. : Cable
Current : 6 Amps
Stacking : 2048

Logging Depth : 10m to 190m

Date : July 19, 1990

Loop : N5 - 100m X 100m, 81+50W to 80+50W,
109+25N to 110+25N
#16 AWG

Transmitter\Receiver Settings

Ramp : 1.0ms
Time Base : 8.33ms
ZTS : 1017.0
Sync. : Cable
Current : 4 Amps
Stacking : 1024/2048

Logging Depth : 10m to 190m

Comments :

An off hole type anomaly detected with loop C4 indicated a south dipping plate. A subsequent north loop N5 did not give the expected response from a south dipping plate.

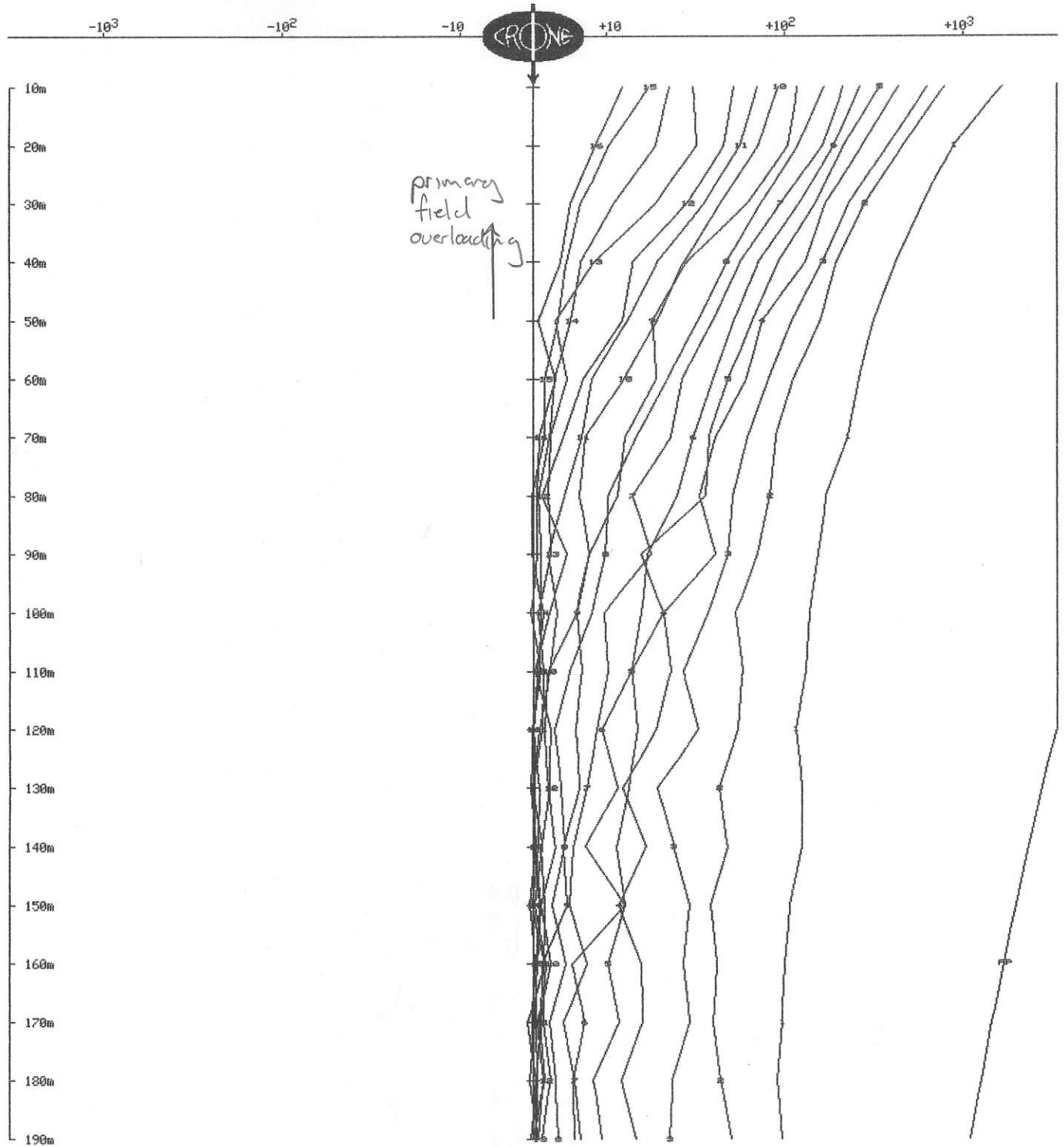
The explanation for the anomaly generated by loop C4 may be attributed to signal overloading, a similar effect only very positive is noted for the top half of the hole from loop N5.

CRONE GEOPHYSICS & EXPLORATION LTD BOREHOLE PEM

Client : MINNOVA
Grid : LARA
Time Base : 8.33 ms
Ramp Time : 1.00 ms
Scale : 1:1000

Hole : 276
Tx Loop : N
Date : Jul 19, 1990
File : H276N5.PEM

AXIAL COMPONENT dBa/dt nanoTesla/sec - 16 channels and PP



**CRONE GEOPHYSICS & EXPLORATION LTD
BOREHOLE PEM**

Client : MINNOVA
 Grid : LARA
 Time Base : 8.33 ms
 Ramp Time : 1.00 ms

Hole : 276
 Tx Loop : N
 Date : Jul 19, 1990
 File : H276N5.PEM

Station	Cap	Gains	ZTS	Delay	Stack	Ovld	Rdg#	PP	1	2	3	4	5	6	7	8	9	10	11	12
10m	Z	3 A7	1017.0	90	1024	Ch.1	525	31250	1673	790	631	440	344	266	215	168	118	93	71	52
20m	Z	2 A7	1017.0	90	1024	PP	526	56770	895	468	388	278	219	191	166	121	106	73	57	46
30m	Z	2 A7	1017.0	90	1024	PP	527	36640	600	286	232	171	150	122	95	75	62	44	36	29
40m	Z	3 A7	1017.0	90	1024	PP	528	25370	428	198	165	133	93	73	57	48	28	27	19	14
50m	Z	3 A7	1017.0	90	1024	PP	529	18430	317	160	112	76	67	52	40	33	18	19	13	12
60m	Z	4 A7	1017.0	90	1024	PP	530	13720	265	113	82	61	48	40	27	22	19	13	8	7
70m	Z	4 A7	1017.0	90	2048	PP	531	10380	229	90	63	41	38	31	23	15	13	7	7	4
80m	Z	4 A7	1017.0	90	2048	PP	532	8011	172	84	52	33	36	25	14	10	12	6	4	1
90m	Z	4 A7	1017.0	90	2048	PP	533	6323	155	71	49	41	16	17	18	1	8	8	2	5
100m	Z	5 A7	1017.0	90	2048	PP	534	5067	138	53	37	21	21	16	1	8	6	6	3	2
110m	Z	5 A7	1017.0	90	2048	PP	535	4093	133	58	27	23	14	14	10	5	7	2	2	0
120m	Z	5 A7	1017.0	90	4096	PP	536	3379	117	55	33	19	15	9	9	3	6	2	1	2
130m	Z	5 A7	1017.0	90	2048	PP	537	2805	126	43	20	12	13	12	7	4	6	2	-0	2
140m	Z	5 A7	1017.0	90	2048	PP	538	2350	126	48	24	17	11	7	5	4	4	3	1	1
150m	Z	6 A7	1017.0	90	2048	PP	539	1991	108	39	29	12	13	13	5	3	5	1	0	2
160m	Z	6 A7	1017.0	90	2048	PP	540	1712	101	42	27	16	10	5	7	5	1	2	2	1
170m	Z	6 A7	1017.0	90	2048	PP	541	1467	97	40	29	16	12	7	4	2	1	1	1	1
180m	Z	6 A7	1017.0	90	2048	PP	542	1278	92	44	24	12	8	5	6	3	2	1	0	2
190m	Z	6 A7	1017.0	90	2048	PP	543	1115	98	51	23	15	9	6	7	3	1	1	-0	0

Station	Cap	13	14	15	16
10m	Z	31	23	17	12
20m	Z	32	19	10	9
30m	Z	19	11	7	5
40m	Z	8	7	5	4
50m	Z	3	5	3	1
60m	Z	5	3	2	3
70m	Z	2	2	2	1
80m	Z	2	1	-0	1
90m	Z	2	1	-0	1
100m	Z	1	1	1	-0
110m	Z	1	1	1	1
120m	Z	1	0	0	-0
130m	Z	-0	1	0	-0
140m	Z	0	1	0	0
150m	Z	1	-0	1	-0
160m	Z	1	2	0	0
170m	Z	0	-1	-0	0
180m	Z	-0	0	0	1
190m	Z	1	0	1	0