



42A01SE0103 63.5897 OTTO

010

OPAP TECHNICAL REPORT

SUBMISSION

GRAVEL PIT PROPERTY

OTTO TOWNSHIP

LARDER LAKE MINING DIVISION ONTARIO

JANUARY 4, 1991

L.M.DYMENT

OP90-352

TECK TP. - M.392

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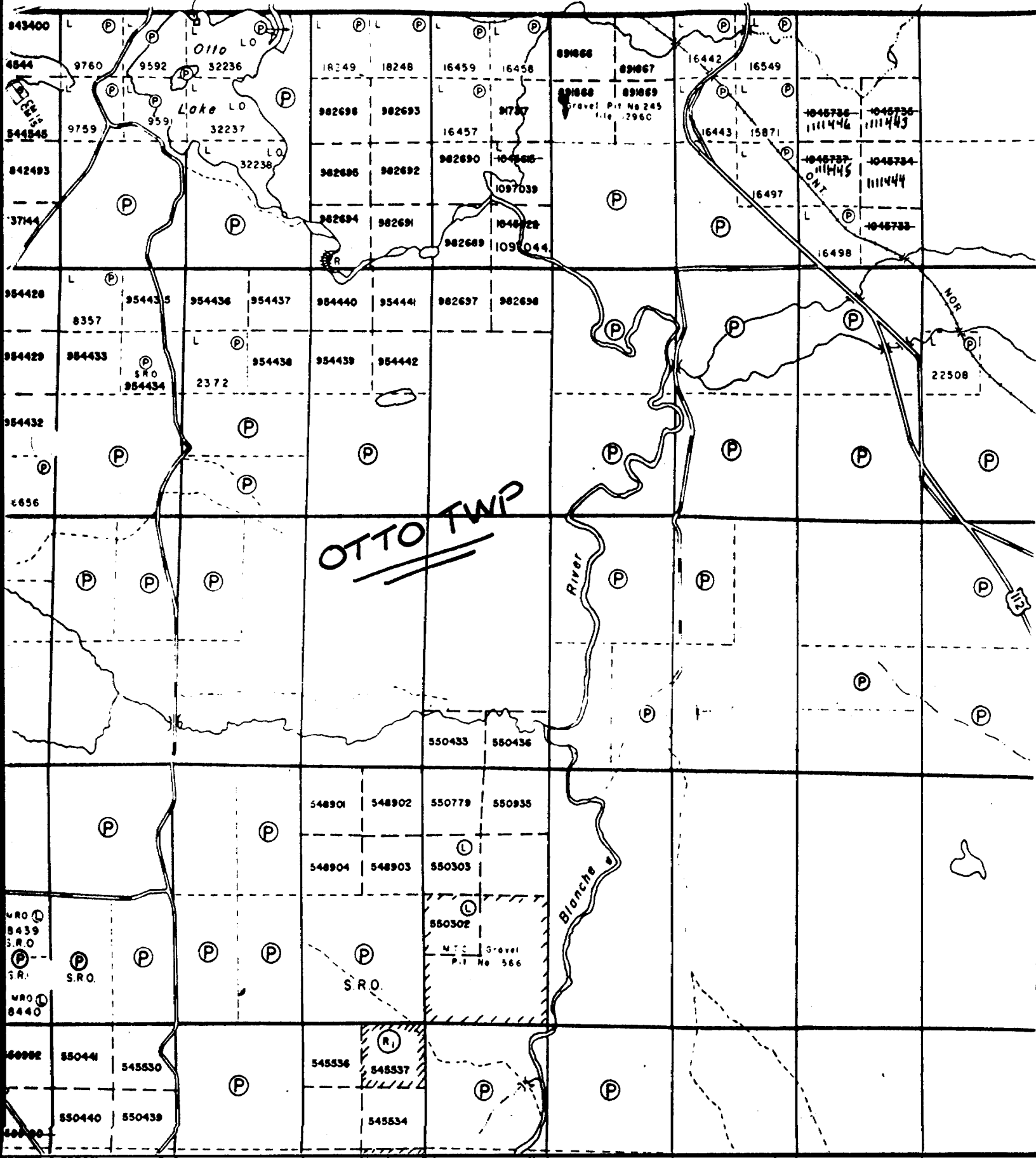
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CL 4614



LOCATION AND ACCESS

The property is located in Otto Twp., Larder lake Mining Division, approximately 3 miles Southwest of the town of Kirkland Lake, on Highway 112.

Access is by a timber road off highway 112 that leads to the center of the property.

CHANGES TO ORIGINAL PROPOSAL

No changes were made to the original proposal but there was an addition made when a major mining company, Battle Mountain Canada (Inc.), asked for and were granted permission to pressure hose, diamond saw, geologically map and sample stripped area #1, thus allowing the prospector to expand the emphasis and expenditure to other areas of the property. This additional exploration was a direct result of the mechanical stripping undertaken as proposed under the original OPAP submission, which stripping uncovered an interesting geological situation. As will be found further in this report, the sampling produced negative results, but the entire exercise shows how effective OPAP can be in encouraging further investment in exploration.

GEOLOGICAL SURVEY

A geological map at a scale of 1 " = 300 ' was drawn up using an existing grid on the property. The only other mapping on this property was done by Noranda in 1976, though not handed in for assessment credits. This map was later donated by Noranda to the Kirkland Lake assessment office. In 1985, the property was completely timbered and the access and outcrop exposure was greatly improved and a much more complex geological picture emerged.

The Southern half of the property contains highly foliated basalt which are probably of magnesium tholiitic origin. Within this horizon are numerous oxide iron formation bands, crenelated quartz, apilitic inclusions and lamprophyr dikes, possibly influenced by the Otto stock to the South,

To the North of the foliated basalt and in contact with it is a meta-sedimentary horizon showing lithic wacke, tuffs, mudstones, chert, conglomerate, fragmentals, and graphitic areas. Cu and Zn showings can also be found within this horizon.

A series of tholiitic flows, un-differentiated basalt, and inter-flow sediments, mainly graphite, were mapped North of the meta-sedimentary horizon where there is sparse outcropping.

SAMPLING AND STRIPPING PROGRAM

As shown by the accompanying stripping and sampling maps, certain areas were selected after a review of previous geological and geo-physical maps.

Areas where bedrock could not be reached were filled back in.

A detailed geological map was drawn of stripped areas and sample locations were noted. The areas were stripped by Martin Lautaoja Construction Ltd. using a Case excavator.

GEOCHEMICAL SURVEY

A geochemical survey was conducted using an existing grid (1989) with the results shown on separate maps within this report at a scale of 1 " = 300 '.

The "B" horizon was sampled by shovel and the samples were assayed for Cu, Zn, and Ag. 189 samples were taken with areas #1 to #4 showing interesting correlations in the minerals sampled.

RESULTS AND RECOMMENDATIONS

A better understanding of the property potential has resulted from the OPAP program. The geology and geochemistry surveys have given the prospector new areas of focus in the future.

Sufficient data has been obtained to make this an excellent starting point for a major mining company with money to spend in this area.



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Page 1 of 5

0W-1679-SG1

Geochemical Analysis Certificate

Company: **L.M.DYMENT**

Project:

Attn:

Date: **NOV-07-90**

Copy 1. P.O.BOX 66, SWASTIKA, ONT. POK 1T0

We hereby certify the following Geochemical Analysis of 148 SOIL samples submitted OCT-29-90 by .

Sample Number	Ag ppm	Cu ppm	Zn ppm
MD#1	0.1	15	51
MD#2	0.1	27	35
MD#3	0.2	43	169
MD#4	0.1	15	64
MD#5	0.2	28	72
MD#6	0.2	16	56
MD#7	0.1	26	78
MD#8	0.1	9	30
MD#9	0.5	19	254
MD#10	0.3	48	126
MD#11	0.5	49	421
MD#12	1.1	181	506
MD#13	0.1	46	71
MD#14	0.1	16	93
MD#15	0.1	4	11
MD#16	0.2	81	61
MD#17	0.2	34	105
MD#18	0.1	6	21
MD#19	0.1	5	20
MD#20	0.2	24	52
MD#21	0.1	13	38
MD#22	0.1	8	28
MD#23	0.3	32	79
MD#24	0.2	20	69
MD#25	0.1	21	52
MD#26	0.1	14	55
MD#27	0.1	24	41
MD#28	0.1	38	65
MD#29	0.1	18	21
MD#30	0.1	11	17

Certified by Donna Gardner

P.O. Box 10, Swastika, Ontario POK 1T0

Telephone (705) 642-3244

FAX (705) 642-3300



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Geochemical Analysis Certificate

0W-1679-SG1

Company: **L.M.DYMENT**

Date: NOV-07-90

Project:

Copy 1. P.O.BOX 66, SWASTIKA, ONT. P0K 1T0

Attn:

We hereby certify the following Geochemical Analysis of 148 SOIL samples submitted OCT-29-90 by .

Sample Number	Ag ppm	Cu ppm	Zn ppm
MD#31	0.1	18	32
MD#32	0.1	16	55
MD#33	0.1	7	29
MD#34	0.1	7	26
MD#35	0.2	16	42
MD#36	0.1	14	34
MD#37	0.1	16	83
MD#38	0.2	41	93
MD#39	0.1	10	66
MD#40	0.1	8	18
MD#41	0.1	12	45
MD#42	0.1	9	26
MD#43	0.1	10	32
MD#44	0.3	59	364
MD#45	0.1	4	25
MD#46	0.1	13	48
MD#47	0.1	33	74
MD#48	0.1	37	70
MD#49	0.1	13	19
MD#50	0.1	18	136
MD#51	0.2	25	54
MD#52	0.2	19	432
MD#53	0.3	39	261
MD#54	0.2	24	110
MD#55	0.3	70	258
MD#56	0.3	21	137
MD#57	0.1	19	40
MD#58	0.1	6	15
MD#59	0.1	10	41
MD#60	0.2	34	192

Certified by Lonna Gardner

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244

FAX (705) 642-3300



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Geochemical Analysis Certificate

0W-1679-SG1

Company: **L.M.DYMENT**

Date: **NOV-07-90**

Project:

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Attn:

We hereby certify the following Geochemical Analysis of 148 SOIL samples submitted OCT-29-90 by .

Sample Number	Ag ppm	Cu ppm	Zn ppm
MD#61	0.2	36	208
MD#62	0.1	23	155
MD#63	0.1	15	59
MD#64	0.2	19	37
MD#65	0.1	7	56
MD#66	0.1	12	73
MD#67	0.2	26	126
MD#68	0.2	13	54
MD#69	0.1	11	43
MD#70	0.1	15	27
MD#71	0.1	8	18
MD#72 not rec'd			
MD#73	0.1	4	17
MD#74	0.1	26	44
MD#75	0.1	10	35
MD#76	0.1	8	33
MD#77	0.1	8	34
MD#78	0.2	51	130
MD#79	0.1	11	75
MD#80	0.2	22	155
MD#81	0.2	20	177
MD#82	0.3	168	91
MD#83	0.2	41	175
MD#84	0.1	11	50
MD#85	0.1	9	46
MD#86	0.3	27	61
MD#87	0.1	8	24
MD#88	0.2	9	19
MD#89	0.1	17	44
MD#90	0.1	10	30

Certified by Donna Gardner

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244.

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Company: L.M.DYMENT

Date: NOV-07-90

Project:

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Attn:

We hereby certify the following Geochemical Analysis of 148 SOIL samples submitted OCT-29-90 by .

Sample Number	Ag ppm	Cu ppm	Zn ppm
MD#91	0.1	15	50
MD#92	0.1	15	87
MD#93	0.1	12	51
MD#94	0.1	9	38
MD#95	0.1	6	39
MD#96	0.2	9	43
MD#97	0.3	30	65
MD#98	0.1	11	76
MD#99	0.1	14	51
MD#100	0.2	16	76
MD#101	0.1	17	78
MD#102	0.1	20	41
MD#103	0.2	10	75
MD#104	not rec'd		
MD#105	0.1	24	51
MD#106	0.1	18	69
MD#107	0.5	41	68
MD#108	0.1	10	292
MD#109	0.1	16	50
MD#110	0.1	10	28
MD#111	0.1	14	44
MD#112	0.2	36	37
MD#113	0.5	41	113
MD#114	0.2	15	66
MD#115	0.3	16	57
MD#116	0.2	9	71
MD#117	0.3	9	62
MD#118	0.3	35	165
MD#119	0.1	7	18
MD#120	0.2	30	56

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P.O. Box 10, Swastika, Ontario POK 1T0

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FAX (705) 642-3300



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Geochemical Analysis Certificate

Company: L.M.DYMENT

Date: NOV-07-90

Project:

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Attn:

We hereby certify the following Geochemical Analysis of 148 SOIL samples submitted OCT-29-90 by .

Sample Number	Ag ppm	Cu ppm	Zn ppm
MD#121	0.4	16	29
MD#122	0.2	18	57
MD#123	0.2	10	60
MD#124	0.3	26	69
MD#125	0.2	15	33
MD#126	0.2	23	56
MD#127	0.1	40	32
MD#128	0.1	20	46
MD#129	0.2	26	106
MD#130	0.2	15	55
MD#131	0.3	15	94
MD#132	0.1	30	223
MD#133	0.1	37	224
MD#134	0.1	30	220
MD#135	0.1	43	216
MD#136	0.2	38	97
MD#137	0.1	17	28
MD#138	0.2	44	76
MD#139	0.1	28	74
MD#140	0.1	42	94
MD#141	0.3	55	80
MD#142	0.3	67	91
MD#143	0.1	18	69
MD#144	0.1	10	50
MD#145	0.1	51	95
MD#146	0.4	130	118
MD#147	0.8	403	245
MD#148	0.4	123	128
MD#149	0.1	26	52
MD#150	0.1	9	21

Certified by Donna Gardner

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244

FAX (705) 642-3300



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Geochemical Analysis Certificate

0W-1680-SG1

Company: **L.M.DYMENT**

Date: NOV-08-90

Project:

Copy 1. P.O.BOX 66, SWASTIKA, ONT. P0K 1T0

Attn:

We hereby certify the following Geochemical Analysis of 41 SOIL samples submitted OCT-29-90 by .

Sample Number	Ag ppm	Cu ppm	Zn ppm
MD#151	0.1	17	30
MD#152	0.2	48	60
MD#153	0.1	34	28
MD#154	0.3	122	144
MD#155	0.1	36	109
MD#156	0.5	43	177
MD#157	0.2	58	165
MD#158	0.3	55	122
MD#159	0.2	67	112
MD#160	0.1	24	58
MD#161	0.1	19	60
MD#162	0.1	37	43
MD#163	0.1	41	50
MD#164	0.1	40	48
MD#165	0.1	92	65
MD#166	0.1	20	57
MD#167	0.1	11	42
MD#168	0.1	26	53
MD#169	0.1	39	41
MD#170	0.1	394	437
MD#171	0.2	40	66
MD#172	0.1	42	344
MD#173	0.1	12	68
MD#174	0.1	10	52
MD#175	0.1	43	20
MD#176	0.1	5	12
MD#177	0.1	11	18
MD#178	0.1	2	17
MD#179	0.1	3	18
MD#180	0.1	5	19

Certified by Donna Anderson

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244

FAX (705) 642-3300



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0W-1680-SG1

Geochemical Analysis Certificate

Company: **L.M.DYMENT**

Project:

Attn:

Date: **NOV-08-90**

Copy 1. P.O.BOX 66, SWASTIKA, ONT. P0K 1T0

We hereby certify the following Geochemical Analysis of 41 SOIL samples submitted OCT-29-90 by .

Sample Number	Ag ppm	Cu ppm	Zn ppm
MD#181	0.2	67	150
MD#182	0.1	11	40
MD#183	0.1	21	22
MD#184	0.1	11	32
MD#185	0.1	7	32
MD#186	0.1	4	26
MD#187	0.1	19	85
MD#188	0.1	15	54
MD#189	0.1	29	112
MD#190	0.1	17	64
MD#191	0.1	19	67

Certified by

Lonna Jordan

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244

FAX (705) 642-3300



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Geochemical Analysis Certificate

0W-1511-RG1

Company: L.M. DYMENT

Date: OCT-10-90

Project:

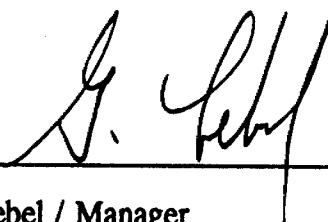
Copy 1. P.O.BOX 66, SWASTIKA, ONT. P0K 1T0

Attn:

We hereby certify the following Geochemical Analysis of 11 ROCK samples submitted OCT-05-90 by L.M. DYMENT.

Sample Number	Au ppb
MD-#1	Ni 1
MD-#2	Ni 1
MD-#3	Ni 1
MD-#4	10/Ni 1
MD-#5	Ni 1
MD-#6	Ni 1
MD-#7	Ni 1
MD-#8	Ni 1
MD-#10	21/27
MD-#11	Ni 1
MD-#12	29

Certified by



G. Lebel / Manager



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Geochemical Analysis Certificate

0W-1574-RG1

Company: **L. M. DYMENT**

Date: **OCT-18-90**

Project:

Copy 1. BOX 66 SWASTIKA ONT. POK 1T0

Attn:

We hereby certify the following Geochemical Analysis of 7 ROCK samples submitted OCT-16-90 by .

Sample Number	Au ppb	Ag ppm	Cu ppm	Zn ppm
MD# 12	Nil			
MD# 13	Nil	0.4		341
MD# 14	Nil			49
MD# 15		0.6	208	184
MD# 16		1.2	258	442
MD# 17		0.6		175
MD# 18	Nil			123

Certified by

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244

FAX (705) 642-3300



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Geochemical Analysis Certificate

0W-1681-RG1

Company: **L.M.DYMENT**

Project:

Attn:

Date: **NOV-01-90**

Copy 1. P.O.BOX 66, SWASTIKA, ONT. P0K 1T0

We hereby certify the following Geochemical Analysis of 2 ROCK samples submitted OCT-29-90 by .

Sample Number	Au ppb	Ag ppm	Cu ppm	Zn ppm
MD#19	34/38	0.1	353	
MD#20	31	0.2		59

Certified by *Donna Gordon*



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Page 1 of 2

0W-1183-RG1

Geochemical Analysis Certificate

Company: **BATTLE MOUNTAIN CANADA INC.**
Project: 75-JV-28
Attn: WAYNE BENHAM

Date: AUG-21-90

Copy 1. HOLD COPY 567-4840

We hereby certify the following Geochemical Analysis of 33 ROCK samples submitted AUG-16-90 by WAYNE BENHAM.

Sample Number	Au ppb
11465	7
11466	14/7
11467	10
11468	Nil
11469	Nil
11470	10
11471	Nil
11472	Nil
11473	Nil
11474	Nil
11475	Nil
11476	Nil
11477	3
11478	Nil
11479	Nil
11480	Nil
11481	10/17
11482	Nil
11483	Nil
11484	Nil
11485	3
11486	10/3
11487	3
11488	Nil
11489	Nil
11490	Nil
11491	3
11492	Nil
11493	Nil
11494	Nil

Certified by

G. Lebel / Manager



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Page 2 of 2

0W-1183-RG1

Geochemical Analysis Certificate

Company: **BATTLE MOUNTAIN CANADA INC.**
Project: **75-JV-28**
Attn: **WAYNE BENHAM**

Date: **AUG-21-90**
Copy 1. HOLD COPY 567-4840

We hereby certify the following Geochemical Analysis of 33 ROCK samples submitted AUG-16-90 by WAYNE BENHAM.

Sample Number	Au ppb
11495	3
11496	10
11497	7

Certified by

G. Lebel / Manager



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Established 1928

Geochemical Analysis Certificate

0W-1190-RG1

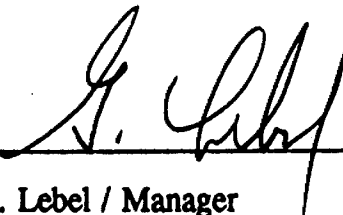
Company: **BATTLE MOUNTAIN CANADA INC**
Project: **75-JV-28**
Attn: **W. BENHAM**

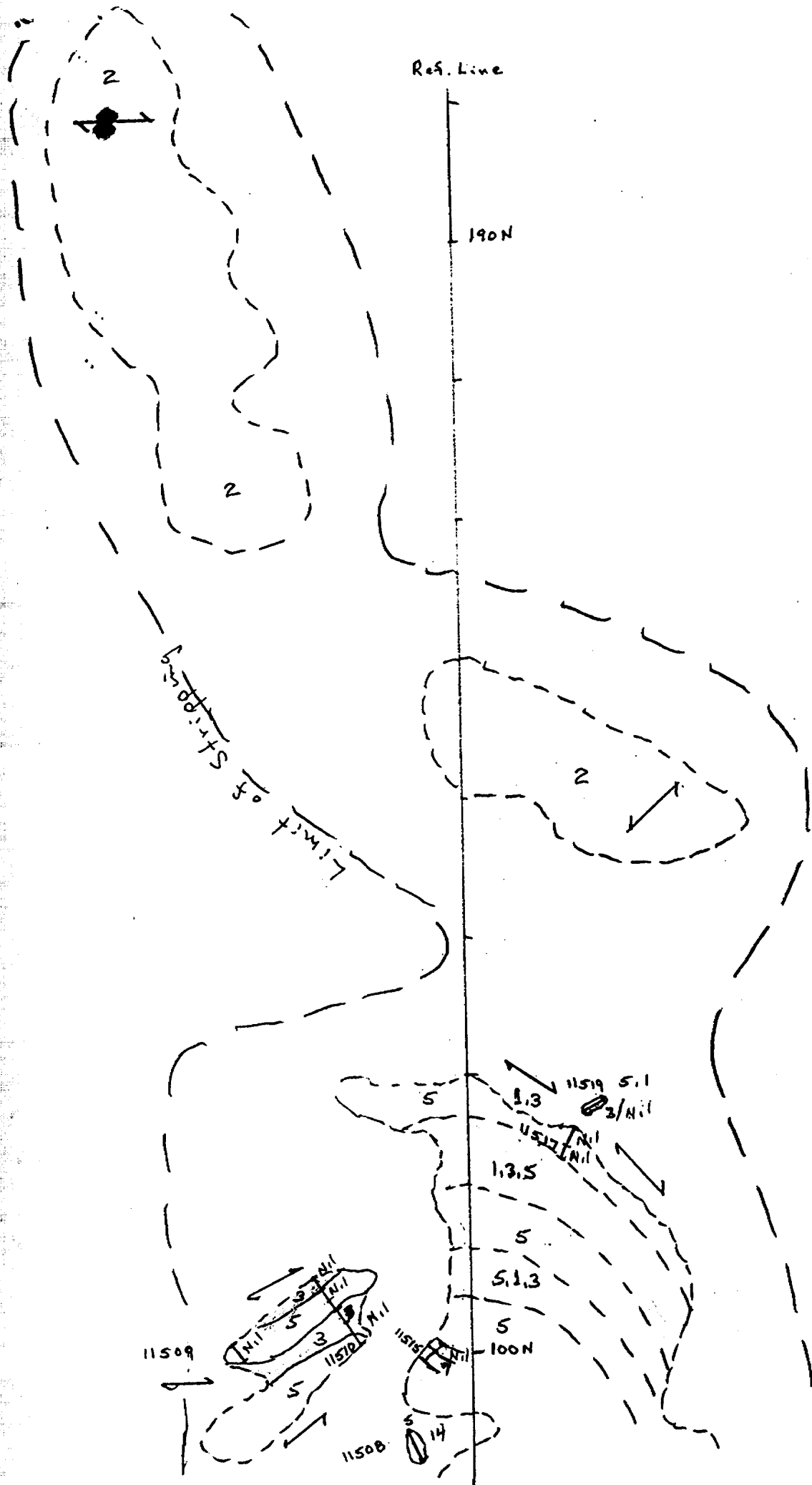
Date: **AUG-22-90**

Copy 1. PHONE 567-4840

We hereby certify the following Geochemical Analysis of 26 ROCK samples submitted AUG-17-90 by R. PEEVER.

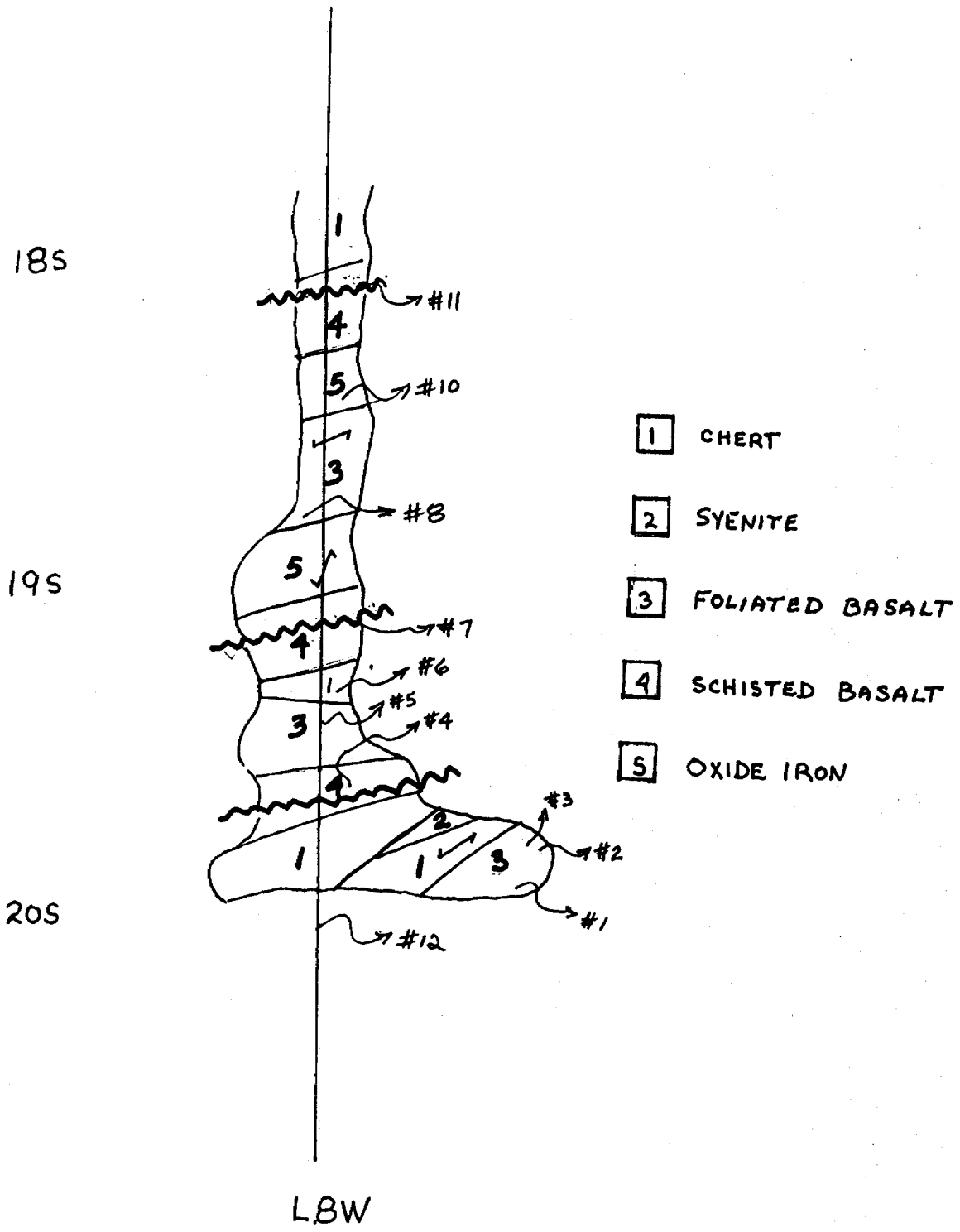
Sample Number	Au ppb	
11498	3	
11499	Nil/Nil	
11500	Nil	
11501	Nil	
11502	7	
11503	Nil	
11504	Nil	
11505	Nil	
11506	3	
11507	Nil	
11508	14	
11509	Nil	
11510	Nil	
11511	3	
11512	Nil	
11513	Nil	
11514	Nil/Nil	
11515	7	
11516	Nil	
11517	Nil	
11518	Nil	
11519	3/Nil	
11520	14	grouped with 11519 & 11521
11521	7	grouped with 11519 & 11520
11522	Nil	IFM 1-2% py
11523	Nil	syenite. 2% py 8/19/90

Certified by 
G. Lebel / Manager



Dyment-Kidston Claims
 Otto Twp
 475W-170N Showing.
 1" = 10'
 16/8/90: W. Benham S 1/2

STRIPPED AREA #2
OTTO TWP



DYMENT KIDSTON CLAIMS
OTTO TWP
L 8 W 19 S Showing
1" = 30 FT

GEOLOGICAL MAP

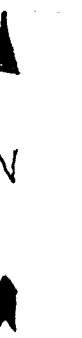
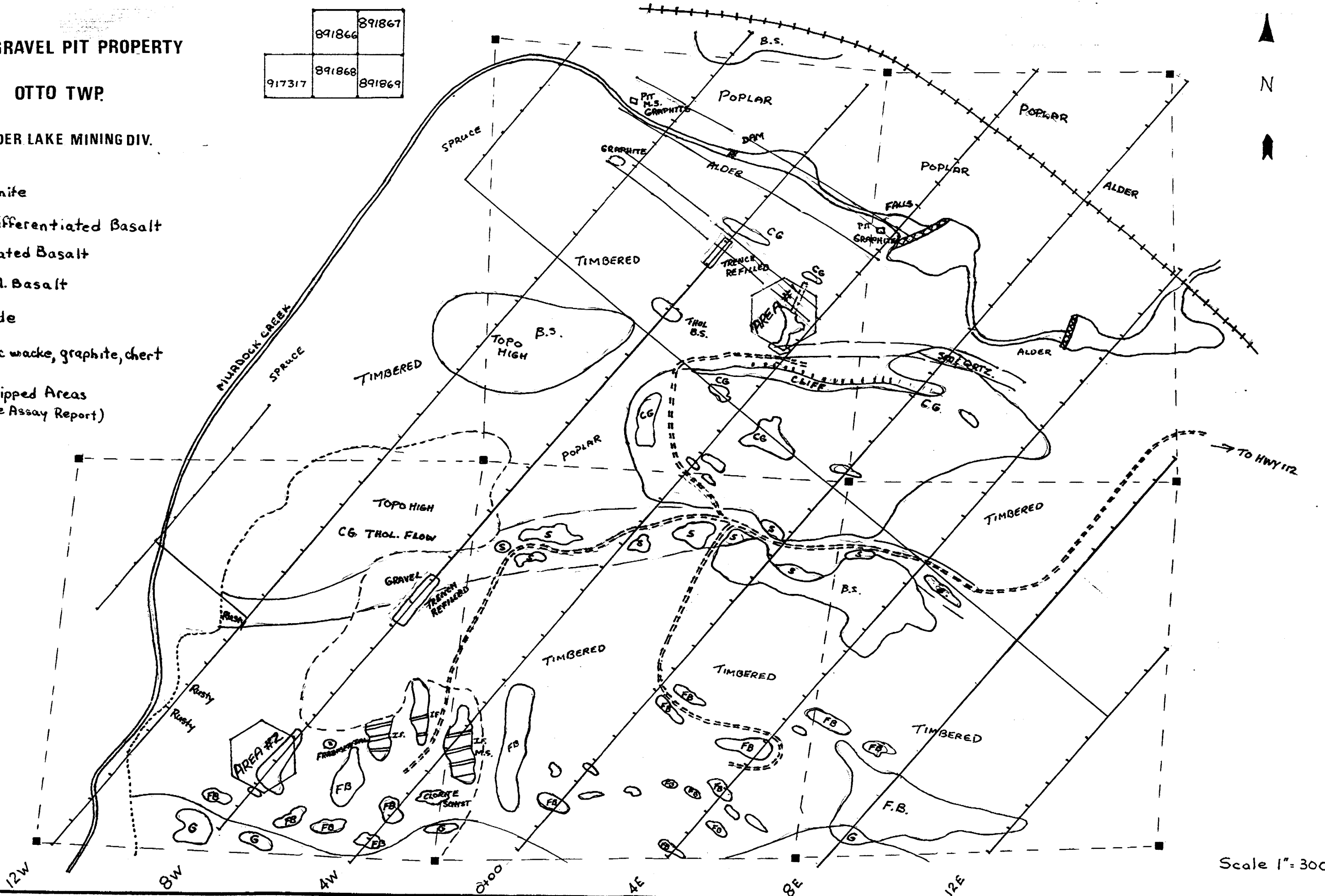
OTTO GRAVEL PIT PROPERTY

OTTO TWP.

LARDER LAKE MINING DIV.

	891866	891867
917317	891868	891869

- G Granite
- BS Undifferentiated Basalt
- FB Foliated Basalt
- CG Thol. Basalt
- IF Oxide
- S Lithic wacke, graphite, chert
- ◻ Stripped Areas
(See Assay Report)



Scale 1" = 300'

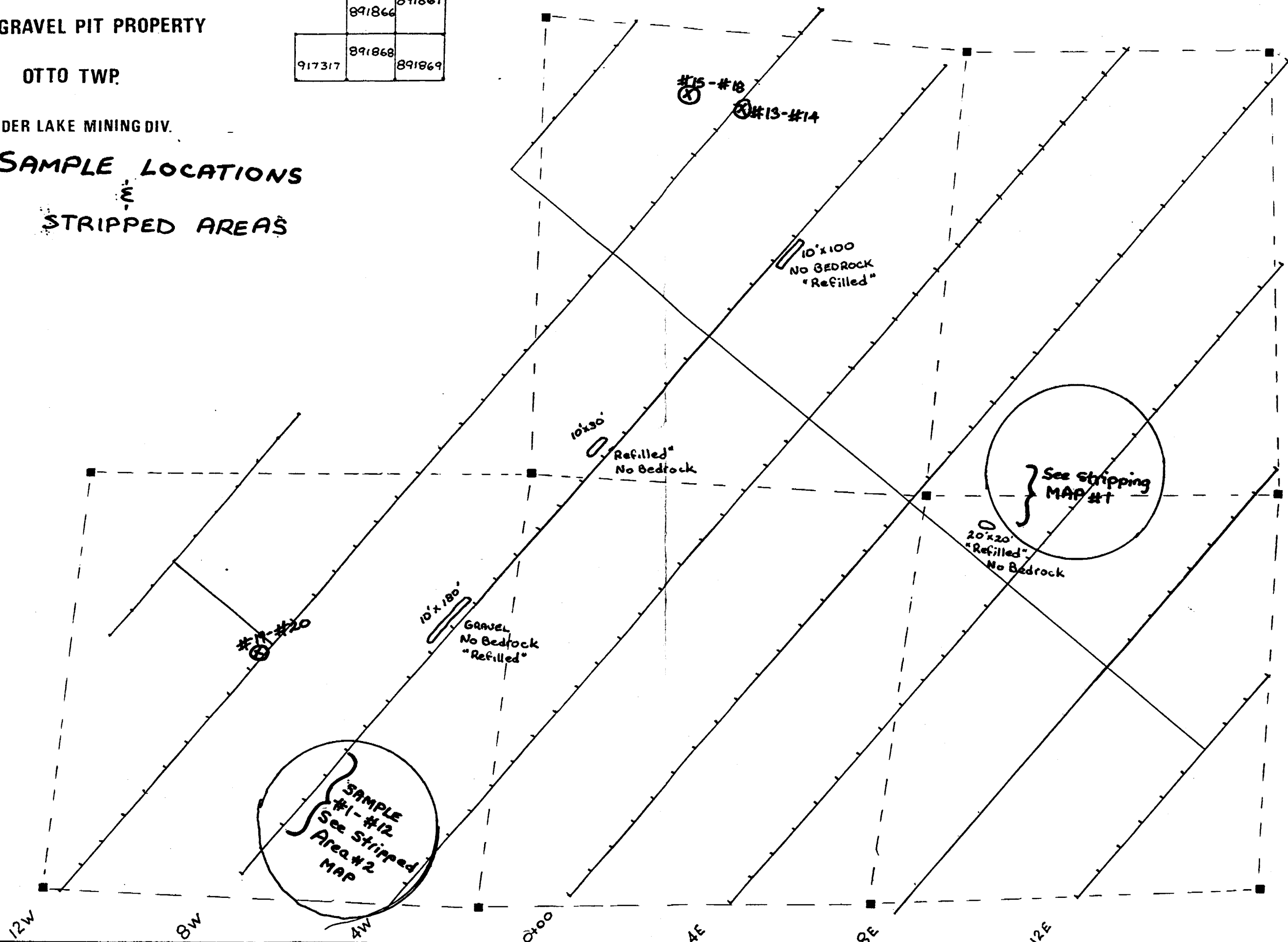
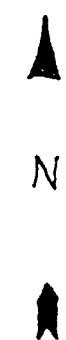
OTTO GRAVEL PIT PROPERTY

OTTO TWP.

LARDER LAKE MINING DIV.

SAMPLE LOCATIONS & STRIPPED AREAS

	891866	891867
917317	891868	891869



Scale 1" = 300'

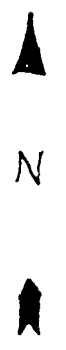
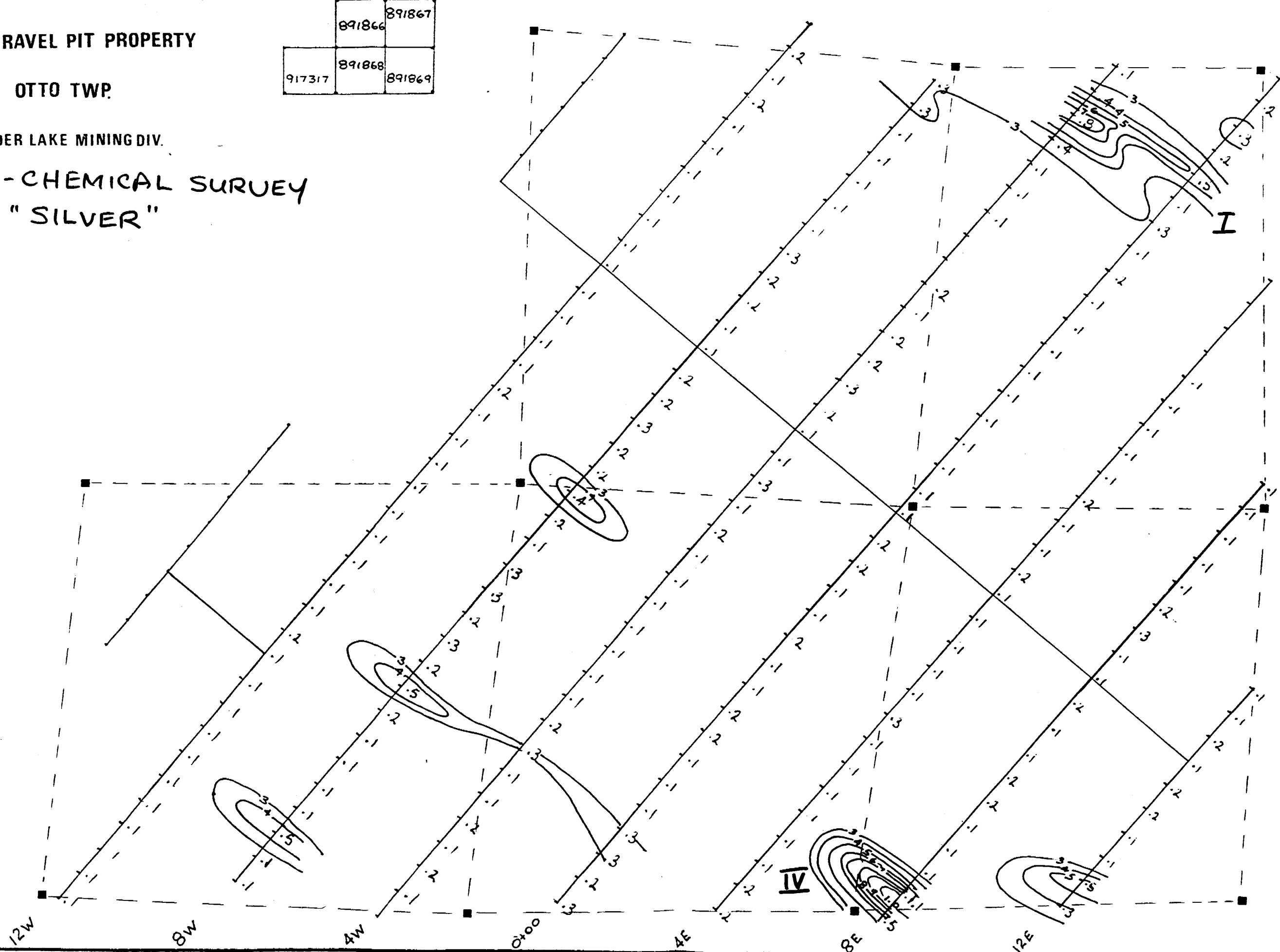
OTTO GRAVEL PIT PROPERTY

OTTO TWP.

LARDER LAKE MINING DIV.

GEO-CHEMICAL SURVEY
"SILVER"

	891866	891867
917317	891868	891869



Scale 1" = 300'

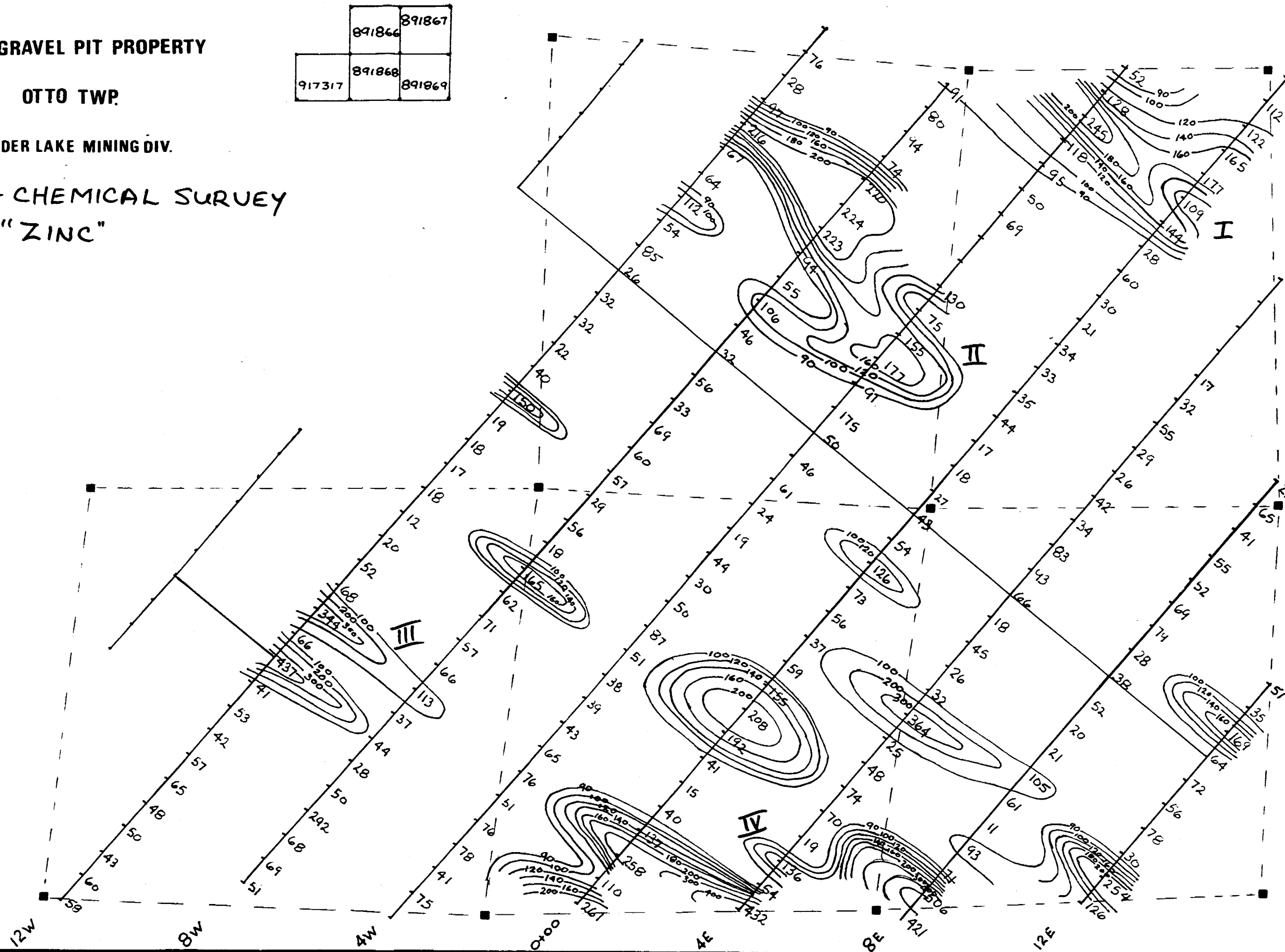
OTTO GRAVEL PIT PROPERTY

OTTO TWP.

LARDER LAKE MINING DIV.

GEO-CHEMICAL SURVEY
"ZINC"

	891866	891867
917317	891868	891869



Scale 1" = 300'

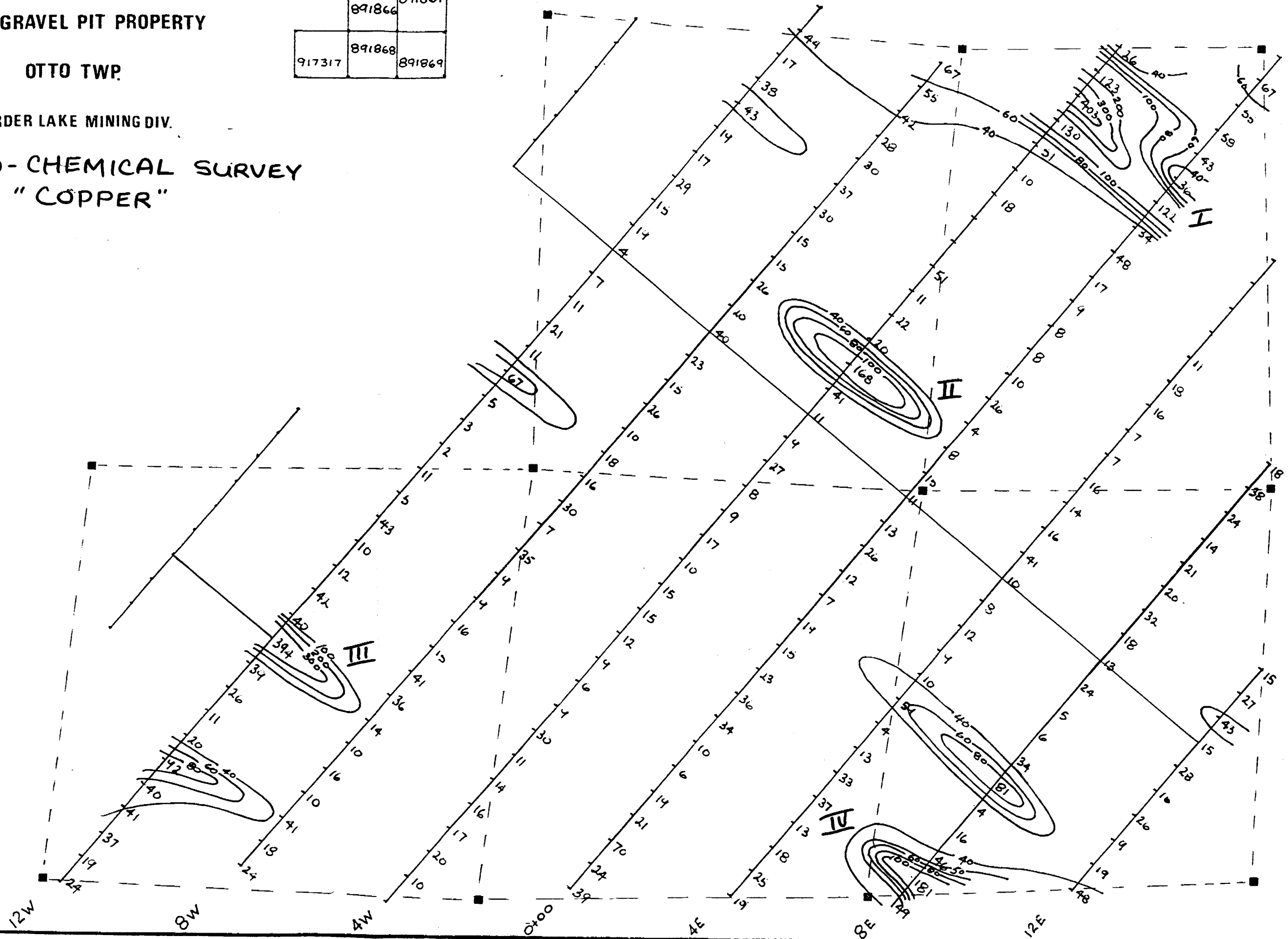
OTTO GRAVEL PIT PROPERTY

OTTO TWP.

LARDER LAKE MINING DIV.

GEO-CHEMICAL SURVEY
"COPPER"

	891866	891867
917317	891868	891869



Scale 1" = 300'