



Introduction

This report has been prepared at the request of Mr. Fred W. Matthews, Supervisor, Projects Section, Mining Lands Branch, Ontario Department of Mines and Northern Affairs.

The property consists of the following nine (9) contiguous unpatented mining claims in Zavitz township, Larder Lake Mining Division, Ontario:

292702	292704	292706	292708	292710
292703	292705	292707	292709	

Location and Access

The claim group covers and surrounds the southeast arm of Kitchiming Lake, near the center of the east boundary of Zavitz township, being located roughly 30 miles south of Timmins and roughly 25 miles west of Matachewan, and accessible from either of these communities by automotive vehicles via good gravel roads.

History of Exploration

There is no record in the assessment work files in the office of the Resident Geologist, Ontario Department of Mines and Northern Affairs, Kirkland Lake, of any previous exploration work having been done on this ground. No evidence of past work such as picket lines, strippings, pits, trenches, drilling set-ups, etc. were seen by the writer during his sojourn on the property. During the summer of 1970, the Rochon brothers and William Dallaire of Timmins, Ontario, discovered widespread copper mineralization on what is now claim 292706 by grub-hoe prospecting. These men staked the subject claim group in August, 1970, and optioned the same to the writer and his associates in September, 1970.

Topography

In general the terrain of Zavitz township is rather flat or very gently rolling with local relief seldom exceeding 100 feet. The southeast arm of Kitchiming Lake appears to be quite shallow. Bedrock outcrops are not uncommon in the east-central part of the township, but in most localities are somewhat obscured by coverings of moss and humus. Overburden cover consists mainly of a thin layer of outwash sands and gravel, probably only rarely exceeding 50 feet in thickness. Forest cover consists of a mixed growth of spruce, pine, balsam, cedar, birch and poplar, with some trees exceeding 24 inches through the butt.

### Regional Geology and Geophysics

The most recent geological survey of Zavitz township is shown on Ontario Department of Mines Preliminary Geological Map No. P.455. Regional aeromagnetic survey coverage is shown on Geological Survey of Canada Aeromagnetic Series Map No. 291G. These publications indicate that the eastern part of Zavitz township is underlain mainly by mafic to intermediate volcanic rocks with subordinate amounts of interstratified sialic volcanic rocks. These formations have been closely folded along east-west trending axial planes, and subsequently intruded by mafic to sialic plutonic rocks in the form of dikes, sills and small stocks and bosses.

### Geology of the Property

The subject claim group is underlain by mafic volcanic flow rocks, including massive, pillowed, amygdaloidal and spherulitic andesites and basalts, which have been folded into a tight synclinal structure plunging steeply to the west; the nose of this fold occupies the east-central part of the claim group and the axial plane strikes east-west across the south row of three claims. Intensive prospecting of the ground has so far been confined to claim 292706, the center claim of the group. Sulphide minerals, including chalcopyrite, pyrrhotite, pyrite and bornite, as well as traces of native copper, were found by grub-hoe prospecting at eighteen rather widely scattered localities on this claim, as amygdaloidal fillings, massive stringers, coarse disseminated grains and small, irregular masses in the volcanic rocks. Minor silicification and epidotization are evident locally, and there are a few minor shear zones, but otherwise the mafic flows are fresh, massive, dense, tough and hard to break. Numerous, and, in places closely spaced, joint planes are much in evidence, though their development appears to post-date the emplacement of the sulphide minerals.

### Development Work To Date

Two strips, each 1000 feet long and roughly 50 feet wide, were cleared of forest cover and overburden by bulldozer on claim 292706; one trends at azimuth 293°, the other at azimuth 217°. Within these strips more than 1500 lineal feet of rock trenches, roughly 4 feet wide and 1 foot deep, were blasted into the bedrock. Muck samples, each weighing from 10 to 20 lbs., were taken over 10 foot intervals from the rock broken in the trenches. The locations of the strips, trenches, pits, etc., and the assay results from the sampling are shown on the accompanying sketch map of the workings. To-date the cost of property acquisition, prospecting, stripping, trenching, sampling, assaying, supervision, etc., exceeds \$25,000.

Analysis of Results

The results of this work indicate the presence of a zone of disseminated copper mineralization, at least 800 feet long and 400 feet wide, trending a little west of north, which is still open for extension to the north, the south and the east. The western boundary of the zone has been at least roughly delineated. Based on the assay results of the trench sampling, the grade of the copper content of this zone would appear to be at least 4 lbs. to the short ton (0.20%), and there are additional minor values in gold and silver.

The deposit therefore offers intriguing possibilities for the development of a large tonnage, low-grade, open-pit, "porphyry copper" type of operation. Outlined below is a proposed exploration program designed to determine as efficiently as possible whether or not the deposit has the potentiality to be developed into such an operation.

Projected Exploration Program

Contingent upon the availability of suitable financial arrangements, it is proposed to further explore and develop the property in the following program:

- (1) to strip and clean by means of earth-moving equipment, high-pressure water pumps, etc., the bedrock surface over an area of at least one million square feet north and south of the present strips and eastward from them to the shore of Kitchiming Lake:
- (2) to map the exposed bedrock surface in detail for all geological features, mineralization, etc., and to conduct careful geophysical tests using the induced potential method to obtain optimum results over the mineralized zones:
- (3) to carry out 6000 lineal feet of rock trenching over the mineralized areas in order to obtain systematic bulk samples for assay purposes.

The estimated cost of this program is as follows:

Stripping and cleaning	.....	\$20,000
Mapping and geophysics	.....	5,000
Trenching and sampling	.....	35,000
Assaying	.....	6,000
Supervision	.....	7,000
Contingencies	.....	<u>7,000</u>
Total		<u>\$80,000</u>

Timmins, Ontario,  
January 26, 1971.

*H.D. Carlson*  
H. D. Carlson, Ph.D., P. Eng.,  
Consulting Geologist.

Swastika, Ont., ~~Nov. 30, 1970~~ 19.....

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 41846

We have assayed two samples of composite pulps

Received Nov. 26, 1970 and submitted by Dr. H. D. Carlson

with the following results:

Sample No.	Molybdenum %	Nickel %
Comp. 201 -- 205		None
Comp. 334 -- 340	0.01	Trace

SWASTIKA LABORATORIES LIMITED,

per: *W. C. Lawson*

Swastika, Ont., Oct. 15, 1970 19

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 41736

We have assayed twenty samples of ore

Received Oct. 14, 1970 and submitted by Dr. H. D. Carlson,

with the following results:

Sample No.	Copper %	Gold per ton Ozs. Value @ \$35.00	Silver Ozs.
301	0.16		
302	0.04		
303	0.10		
304	0.08		
305	0.07		
306	0.14		
307	0.05		
308	0.01		
309	0.01		
310	0.02		
311	0.02		
312	0.09		
313	0.11		
314	0.12		
315	0.02		
316	0.42		
317	0.50		
318	0.56		
319	0.69	0.03	0.24
320	0.31		

SWASTIKA LABORATORIES LIMITED,

per: J. C. Lawson

Swastika, Ont. Oct. 20, 1970 1970

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 1748

We have assayed fifteen samples of ore

Received Oct. 19, 1970 and submitted by Dr. H. D. Carlson

with the following results:

Sample No.	Copper %
322	0.03
323	0.12
324	0.21
325	0.11
326	0.04
327	0.18
328	0.16
329	0.15
330	0.06
331	0.13
332	0.13
333	0.03
334	0.16
335	0.12
336	0.18

SWASTIKA LABORATORIES LIMITED,

per: *H. D. Carlson*

Swastika, Ont., ~~Oct. 23, 1970~~ 19.....

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 4,1761

We have assayed eight samples of ore

Received Oct. 22, 1970 and submitted by Dr. H. D. Carlson

with the following results:

Sample Copper  
No. %

337	0.35
338	0.16
339	0.18
340	0.15
341	0.11
342	0.09
344	0.10
345	0.15

SWASTIKA LABORATORIES LIMITED,

per: *H. D. Carlson*

Swastika, Ont., Oct. 26, 1970 19.....

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 41765.....

We have assayed seven samples of composite pulps

Received Oct. 23, 1970 and submitted by Dr. H. D. Carlson

.....with the following results:

Sample No.	Gold per ton		Silver Ozs.
	Ozs.	Value @ \$35.00	
301-307	0.005	\$0.17	0.02
308-311	Nil	-	Nil
312-315	Nil	-	Nil
316-320	0.01	\$0.35	0.17
322-326	Nil	-	0.02
327-331	0.02	\$0.70	0.07
332-336	0.005	\$0.17	0.02

SWASTIKA LABORATORIES LIMITED,

per: *B. C. Kerr-Lawson*



Swastika, Ont., Oct. 28, 1970 19

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 41773

We have assayed twenty-one samples of ore

Received Oct. 27, 1970 and submitted by Dr. H. D. Carlson

with the following results:

Sample No.	Copper %
346	0.07
347	0.03
348	0.06
349	0.06
350	0.01
351	0.04
352	0.02
353	0.02
354	0.01
355	0.02
356	0.06
357	0.02
358	0.03
359	0.07
362	0.03
363	0.04
364	0.03
365	0.03
366	0.03
367	0.03
368	0.03

SWASTIKA LABORATORIES LIMITED,

per: *H. D. Carlson*

Swastika, Ont., Oct. 29, 1970 19

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 41777

We have assayed thirty-four samples of ore

Received Oct. 28, 1970 and submitted by Dr. H. D. Carlson

with the following results:

Sample No.	Copper %
201	0.02
202	0.08
203	0.02
204	0.03
205	0.02
206	0.11
207	0.19
208	0.45
209	0.43
210	0.32
211	0.28
212	0.28
213	0.20
214	0.22
215	0.06
216	0.07
217	0.26
218	0.18
219	0.14
220	0.07
221	0.47
222	0.03
225	0.01
226	0.07
228	0.01
229	None
230	None
369	0.04
370	0.04
371	0.05
372	0.13
373	0.18
374	0.02
375	0.01

SWASTIKA LABORATORIES LIMITED,

per: *J.C. Kerr-Lawson*

Swastika, Ont., ~~Nov. 3, 1970~~ 19

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. ~~41785~~

We have assayed twenty-six samples of ore

Received Oct. 30, 1970 and submitted by Dr. H. D. Carlson

with the following results:

Sample No.	Copper %
231	0.01
232	0.01
233	0.01
234	0.01
235	0.01
236	0.02
237	0.01
238	0.02
243	0.02
244	0.06
245	0.02
246	None
248	0.18
249	0.04
250	0.26
251	0.21
252	0.23
253	0.04
254	0.05
255	0.04
256	0.05
257	0.02
258	None
263	0.01
264	0.01
265	0.01

SWASTIKA LABORATORIES LIMITED

Swastika, Ont., Nov. 6, 1970 19

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 41805

We have assayed fourteen samples of ore

Received Nov. 5, 1970 and submitted by Dr. H. D. Carlson

with the following results:

Sample No.	Copper %	Gold per ton Ozs. Value @ \$35.00	Silver Ozs.
282	0.01		
284	0.82	0.025 \$0.87	0.30
376	0.01		
377	0.01		
382	0.01		
390	None		
391	0.05		
392	0.02		
393	0.08		
396	0.10		
397	0.07		
398	0.28		
399	0.05		
400	0.24		

SWASTIKA LABORATORIES LIMITED,

per: *H. D. Carlson*

Swastika, Ont., Nov. 10, 1970 19

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 41808

We have assayed two samples of composite pulps

Received Nov. 5, 1970 and submitted by Dr. H. D. Carlson

with the following results:

Sample No.	Gold per ton		Silver Ozs.
	Ozs.	Value @ \$35.00	
206-221	0.005	\$0.17	0.04
337-345	0.005	\$0.17	0.05

SWASTIKA LABORATORIES LIMITED,

per: *J. C. [Signature]*

Swastika, Ont., ~~Nov. 11, 1970~~ 19

# SWASTIKA LABORATORIES LIMITED

## Certificate of Analysis

No. 41810

We have assayed nine samples of ore

Received Nov. 6, 1970 and submitted by Dr. H. D. Carlson

with the following results:

Sample No.	Copper %	Gold per ton Ozs. Value @ \$35.00	Silver Ozs.	Zinc %	Nickel %
378	0.02				
379	0.03				
383	0.01				
384	0.01				
385	0.01				
389	0.01				
394	0.01				
395	0.01				
Grab	None	Nil	Nil	0.02	0.01

SWASTIKA LABORATORIES LIMITED,

per: *H. D. Carlson*

Geikie Twp.(M.320)










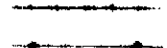

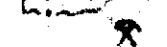



THE TOWNSHIP  
OF  
**"Claim Map"**  
**ZAVITZ**

DISTRICT OF  
SUDBURY

LARDER LAKE  
MINING DIVISION

SCALE: 1:INCH 40 CHAINS

LEGEND

- PATENTED LAND 
- CROWN LAND SALE 
- LEASES 
- LOCATED LAND 
- LICENSE OF OCCUPATION 
- MINING RIGHTS ONLY 
- SURFACE RIGHTS ONLY 
- ROADS 
- IMPROVED ROADS 
- KING'S HIGHWAYS 
- RAILWAYS 
- POWER LINES 
- MARSH OR MUSKEG 
- MINES 
- CANCELLED 

NOTES

400' SURFACE RIGHTS RESERVATION AROUND  
ALL LAKES AND RIVERS.

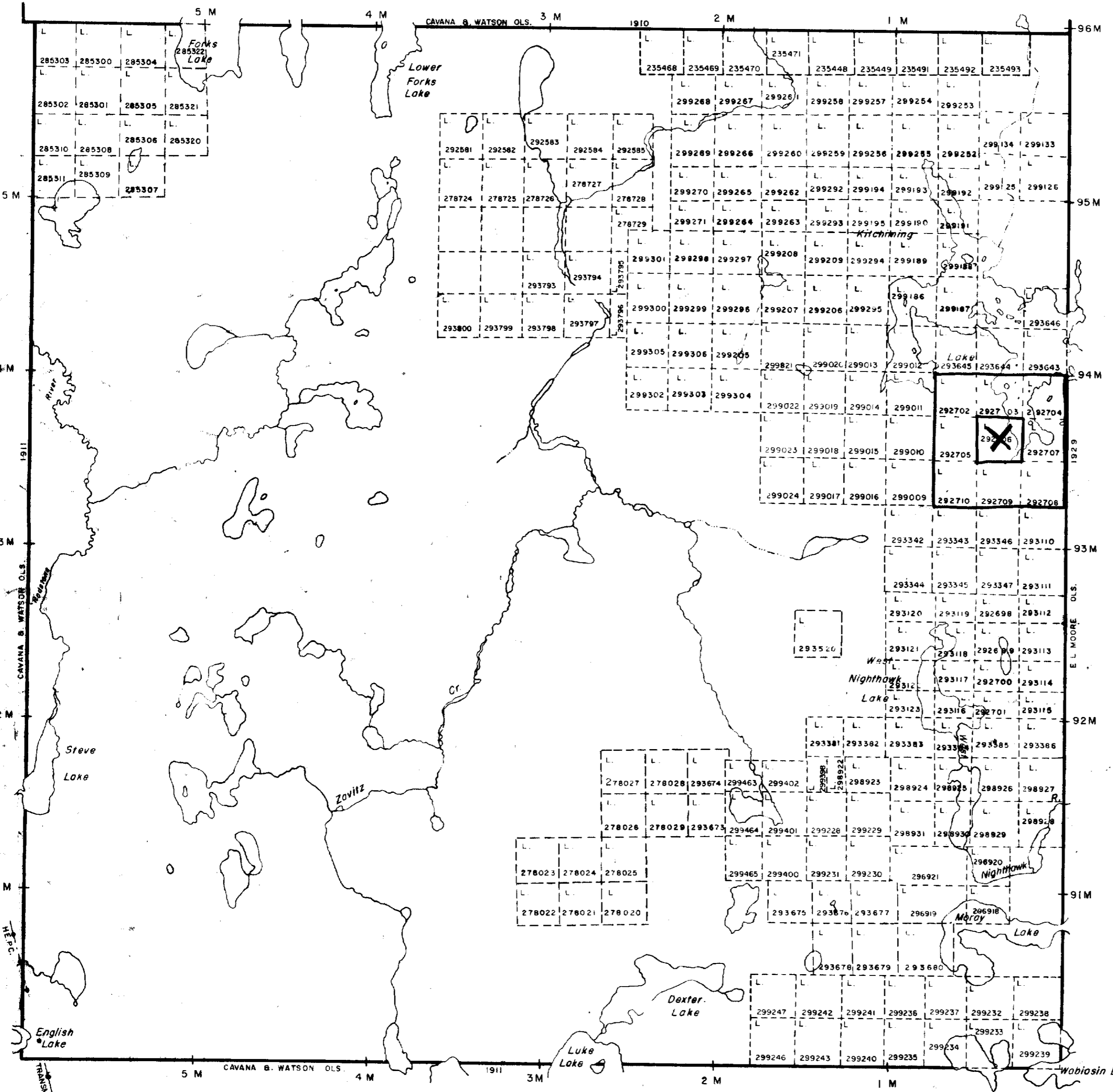
DATE OF ISSUE  
**FEB 8 1971**  
ONT. DEPT. OF MINES  
AND NORTHERN AFFAIRS

PLAN NO. **M. 1189**

ONTARIO  
DEPARTMENT OF MINES  
AND NORTHERN AFFAIRS

English Twp.(M.787)

Hincks Twp.(M.223)



Hutt Twp.(M.943)



42A035E0185 2.306 ZAVITZ

#2 #3  
#1 #4

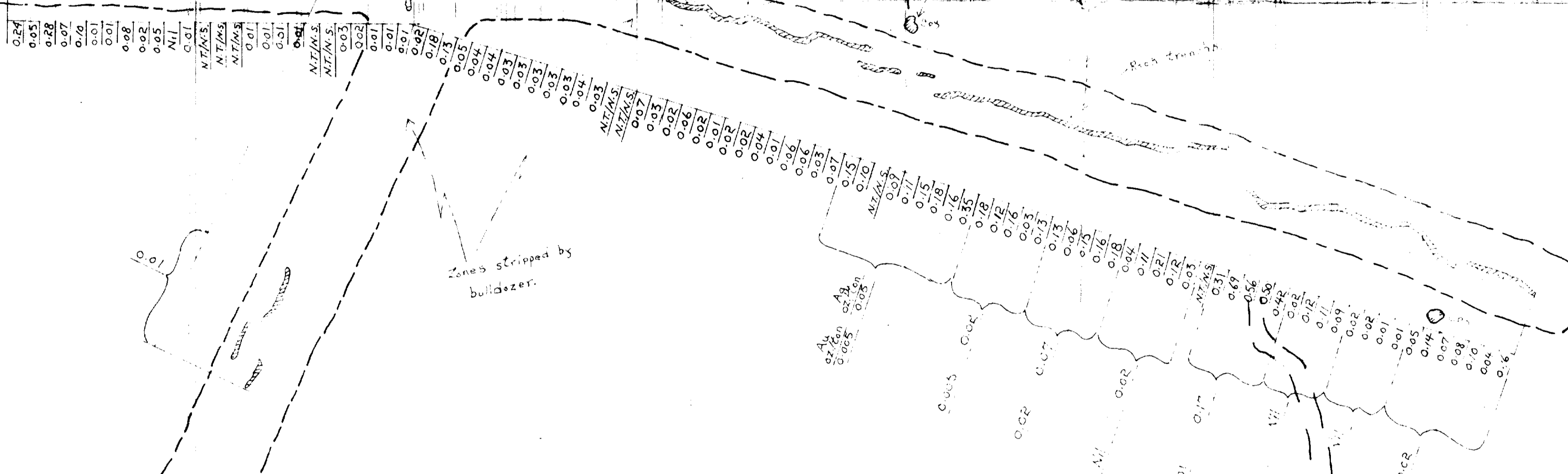
W.P.



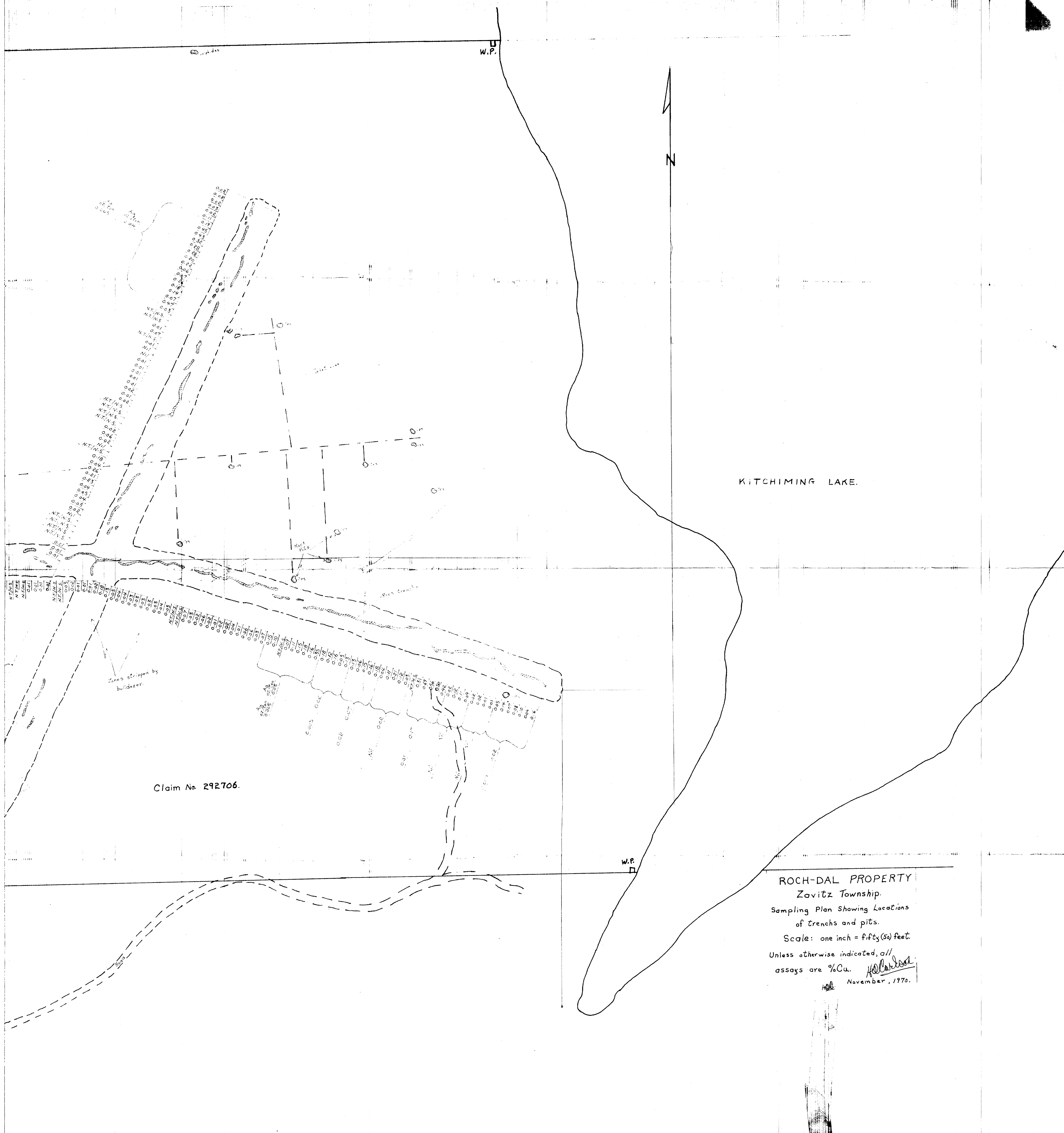
#2 #3  
#1 #4

W.P.

Claim No. 292706.







W.P.



KITCHIMING LAKE.

Claim No. 292706.

W.P.

ROCH-DAL PROPERTY  
Zavitz Township.  
Sampling Plan Showing Locations  
of trenches and pits.  
Scale: one inch = fifty (50) feet.  
Unless otherwise indicated, all  
assays are %Cu. *H. Carlson*  
November, 1970.