



42A10NE0027 2.2460 WILKIE

010

RECEIVED
JUL 27 1977
MINING LANDS SECTION

Report
on a
GEOPHYSICAL SURVEY

WILKIE #1 GROUP
(Chevalier Option)

Hollinger Mines Limited
Wilkie Township, Ontario

Timmins, Ontario
July 6, 1977

H.Z. Tittley, P.Eng.



WALKER TWP.

WILKIE TWP.

CON. V
CON. IV

CON. IV
CON. III

CON. III
CON. II

CON. II
CON. I

WILKIE TWP.

CARR II TWP.

12

10

9

8

7

River

Shallow

WILKIE GROUP No. 1

(P)

(P)

(P)

(P)

476565	476566	476567	476568	476569	476570
475721	475722	476574	476573	476572	476571
475725	475719	475720	475723	475727	475729
475726	475718	475717	475724	452762	476564
				476564	476563
				476563	476562

SCALE: 1" = 2640'

INTRODUCTION

A horizontal loop electromagnetic survey over a group of 28 claims in the southwest quarter of Wilkie Township was conducted in the search for economic concentrations of base metals.

Many conductive features were mapped but the anomaly with the highest probability of originating from a bedrock source was found to contain an abandoned diamond drill site over its axis.

PROPERTY, LOCATION and ACCESS

The property, designated as Wilkie No. 1 Group, was optioned from J. Chevalier and R. Bellemare by Hollinger Mines Limited in August of 1976.

These 28 claims occupy lots 8, 9 and 10 and the south half of lot 11, all in the second concession of Wilkie Township, Larder Lake Mining Division. They are numbered L-452762, L-475717 to L-475728 inclusively, and L-476560 to L-476574 inclusively.

Wilkie Township is situated 6 miles north of Matheson and 40 miles north of east from Timmins, Ontario.

The western part of the property is accessible by boat via the Black and Shallow rivers from a landing 3 miles east of Val Gagne on highway 11. Further east, a winter bush road provides good access by snowmobile from an abandoned farm road 6 miles north of Matheson.

HISTORY and GEOLOGY

History:

The presence of mineralized boulders along the Shallow river, in the second concession of Wilkie Township, has attracted prospectors to the area over a long period of time. Early (1939) assessment records show that pyrite, pyrrhotite, chalcopyrite, galena, silver and gold were found or detected in shallow pits in the rock exposures near the river.

During 1962, Noranda Mines Limited held 59 claims that encompassed the entire Hollinger Group. Magnetic and E.M. shoot-back electromagnetic surveys were performed but no significant conductors were located on the present group. Two diamond drill holes were sunk, however, on a mineral showing near line 4E at the 20S B.L., one of which intersected 1.44% copper over a core length of 15 feet.

Noranda Mines continued their programme between 1971 and 1973 when they held 10 claims immediately bordering the river in concession 2. A less detailed magnetic survey and a single frequency electromagnetic survey were performed but the stronger anomalies were not tested by drilling. Instead, one hole was drilled under the previously mentioned mineralized intersection and another probably based on geological interpretation was put down near the 00 B.L. at line 8E.

In the meantime, during 1965, Continental Copper drilled one hole on a north bearing for over 1100 feet. The purpose for this hole at the time is not known to the author but the collar near line 28E at 16S is near small outcrops.

Hecla Mines reported a diamond drill hole near line 8E at 12S in 1970 but, again, the reasons are not given.

During the linecutting stages of the present survey, a diamond drill site was reported at 10N on line 28E. There is

no public record of the results of this work, but it does appear to have been intended to test one of the stronger V.E.M. anomalies previously detected by Noranda.

Geology:

Wilkie Township lies immediately north of the sedimentary basin associated with the Destor-Porcupine Fault zone. Along the north boundary of the basin and one half mile south of the property, the Pipestone Fault zone separates the sediments from a wide belt of predominantly basic pillowed lavas. Further north, and north of the 00 B.L., porphyritic rocks are believed to be mainly felsic lavas that extend easterly across the township.

SURVEY METHODS

Linecutting:

From a survey monument on concessions one and two at the boundary between lots 10 and 11, line 00 was extended north for 3400 feet. From this point the 00 Base line was extended west for 2600 feet and to the east for 8000 feet. Lines 400 feet apart were then cut and measured south to the concession line and north to the claim boundaries. Stations were marked at 100 ft. intervals along the survey lines.

H.E.M. Survey:

On the above-mentioned grid of lines, the H.E.M. survey was conducted with an EM-17 electromagnetic unit manufactured by Geonics Limited of Toronto, Canada. Readings

were taken at intervals of 100 feet or less with the coils 300 feet apart and in the horizontal co-planar mode. Only line 00, north of the base line was read with the coils 400 feet apart.

RESULTS

The results of the survey are plotted on the accompanying map entitled H.E.M. Survey at a scale of 1 inch to 400 feet.

Although many conductive zones have been interpreted, most display too much out-of-phase characteristics or too small amplitudes to be attributable to bedrock features.

The four anomalies labelled A to D are believed to have the highest probability of originating from a source within the bedrock. Anomaly A, which appears to have a strike length of 3300 feet, is a definite anomaly on line 28E where a drill site exists that probably dates to 1975. Whether the cause of the anomaly was encountered by this drilling is open for speculation at this time.

Anomaly B is probably on the same horizon as anomaly A.

Anomalies C and D are near the east end of the property where there is considerably deeper overburden as expressed by the higher positive in-phase readings in the north and extreme east part of the property.


RECOMMENDATIONS and CONCLUSIONS

Anomaly A should have its axis compared with the drill collar by using detail V.E.M. Anomalies B, C and D should also

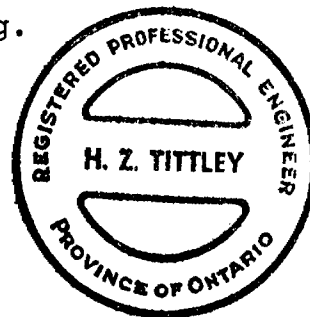
be confirmed using V.E.M. first.

The survey successfully detected four conductive zones that may lead to the discovery of economic sulfide mineralization upon further examination. Anomaly C may lie close to a rhyolite-andesite contact that is generally considered a favourable host for this type of deposit.

Respectfully submitted,



H. Z. Tittley, P.Eng.





GEOPH



42A10NE0027 2.2460 WILKIE

2,2460
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900
JUL 27 1977

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

MINING LANDS SECTION

Type of Survey(s) Geophysical (Electromagnetic)
 Township or Area Wilkie Township
 Claim Holder(s) Hollinger Mines Limited
Box 320, Timmins, Ont. P4N 7E2
 Survey Company Hollinger Mines Limited
 Author of Report H. Z. Tittley, P.Eng.
 Address of Author 147 Hemlock Street, Timmins, Ont.
 Covering Dates of Survey Oct. 1976 to July 1977
 (linecutting to office)
 Total Miles of Line Cut 33.75

MINING CLAIMS TRAVERSED	
List numerically	
L-452762	
(prefix) L-475717 (number)	
L-475718	
L-475719	
L-475720	
L-475721	
L-475722	
L-475723	
L-475724	
L-475725	
L-475726	
L-475727	
L-475728	
L-476560	
L-476561	
L-476562	
L-476563	
L-476564	
L-476565	
L-476566	
L-476567	
L-476568	
L-476569	
L-476570	
L-476571	
L-476572	
L-476573	
L-476574	
TOTAL CLAIMS	<u>28</u>

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

Geophysical 40 DAYS per claim

-Electromagnetic

-Magnetometer

-Radiometric

-Other

Geological

Geochemical

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
 (enter days per claim)

DATE: July 6/77 SIGNATURE: H. Z. Tittley P. Eng.
 Author of Report or Agent

Res. Geol. L.D. Qualifications 63.2513

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations 1740 Number of Readings 1624
Station interval 100 ft. or less Line spacing 400 ft.
Profile scale _____
Contour interval _____

MAGNETIC

Instrument _____
Accuracy - Scale constant _____
Diurnal correction method _____
Base Station check-in interval (hours) _____
Base Station location and value _____

ELECTROMAGNETIC

Instrument Geonics EM-17 Ser. No. 0442
Coil configuration Horizontal Co-planar
Coil separation 300 ft.
Accuracy In phase 1% Out-of-phase 2%
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 1600 Hertz
(specify V.L.F. station)
Parameters measured In-phase (Real) and Out-of-phase (Imaginary)

GRAVITY

Instrument _____
Scale constant _____
Corrections made _____
Base station value and location _____
Elevation accuracy _____

INDUCED POLARIZATION
RESISTIVITY

Instrument _____
Method Time Domain Frequency Domain
Parameters - On time _____ Frequency _____
- Off time _____ Range _____
- Delay time _____
- Integration time _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____

ASSESSMENT WORK DETAILS

JUN - 2 1977

2-2460

Type of Survey Geophysical **MINING LANDS SECTION**

A separate form is required for each type of survey

Township or ~~Area~~ Wilkie

Chief Line Cutter J. Chevalier
or Contractor Name

General Delivery, South Porcupine
Address

Party Chief H. Z. Tittley
Name

Box 320, Timmins, Ontario
Address

Consultant _____
Name

Address

Geological field mapping by _____
Name

Address

COVERING DATES

Line Cutting October 1 - December 20, 1976

Field December 3, 1976 - May 31, 1977
Instrument work, geological mapping, sampling etc.

Office _____

INSTRUMENT DATA

Make, Model and Type Geonics EM 17

Scale Constant or Sensitivity 1600 Hz
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count _____

Number of Stations Within Claim Group 1755

Number of Readings Within Claim Group 1569

Number of Miles of Line cut Within Claim Group 32.66

Number of Samples Collected Within Claim Group _____

CREDITS REQUESTED

20 DAYS
per claim

40 DAYS
per claim

----- Includes
(Line cutting)

- Geological Survey
- Geophysical Survey Show Check ✓
- Geochemical Survey

DATE June 1/77 SIGNED [Signature]

SPECIAL PROVISION CREDITS
for
PERFORMANCE & COVERAGE

MINING CLAIMS TRAVERSED
List numerically

L-452762 L-476567

L-475717 L-476568

L-475718 L-476569

L-475719 L-476570

L-475720 L-476571

L-475721 L-476572

L-475722 L-476573

L-475723 L-476574

L-475724

L-475725

L-475726

L-475727

L-475728

L-476560

L-476561

L-476562 JUN 6 1977

L-476563 PROJECTS UNIT

L-476564

L-476565

L-476566

TOTAL CLAIMS 28

Send in Duplicate to:

FRED W. MATTHEWS
SUPERVISOR-PROJECTS SECTION
DEPARTMENT OF MINES &
NORTHERN AFFAIRS
WHITNEY BLOCK
QUEEN'S PARK
TORONTO, ONTARIO

If space insufficient, attach list

SUBMISSION OF GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS
AS ASSESSMENT WORK

In order to simplify the filing of geological, geochemical and ground geophysical surveys for assessment work, the Minister has approved the following procedure under Section 84 (8a) of the Ontario Mining Act. This special provision does not apply to airborne geophysical surveys.

If, in the opinion of the Minister, a ground geophysical survey meets the requirements prescribed for such a survey, including:

- (a) substantial and systematic coverage of each claim
- (b) line spacing not exceeding 400 foot intervals
- (c) stations not exceeding 100 foot intervals or
- (d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit.

Each additional ground geophysical survey using the same grid system and otherwise meeting these requirements will qualify for an assessment work credit of 20 days.

A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

Similarly, a geochemical survey using the same grid system with the average number of collected samples per claim being not less than 40 samples, and meeting the requirements for the submission of geochemical surveys for maximum credits, will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geochemical survey a credit of 40 days per claim will be allowed for the survey.

Credits for partial coverage or for surveys not meeting requirements for full credit will be granted on a pro-rata basis.

If the credits are reduced for any reason, a fifteen day Notice of Intent will be issued. During this period, the applicant may apply to the Mining Commissioner for relief if his claims are jeopardized for lack of work or, if he wishes, may file with the Department, normal assessment work breakdowns listing the names of the employees and the dates of work. The survey would then be re-assessed to determine if higher credits may be allowed under the provisions of subsections 8 and 9 of section 84 of the Mining Act.

If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.

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 or Contractor General Delivery, South Porcupine
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Address

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Name

Address

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Number of Stations Within Claim Group 1755

Number of Readings Within Claim Group 1569

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Number of Samples Collected Within Claim Group _____

CREDITS REQUESTED

	<u>20 DAYS</u> per claim	<u>40 DAYS</u> per claim	----- Includes (Line cutting)
Geological Survey	<input type="checkbox"/>	<input type="checkbox"/>	
Geophysical Survey	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Show Check ✓
Geochemical Survey	<input type="checkbox"/>	<input type="checkbox"/>	

DATE June 1/77 SIGNED [Signature]

SPECIAL PROVISION CREDITS
 for
 PERFORMANCE & COVERAGE

MINING CLAIMS TRAVERSED
 List numerically

- L-452762 L-476567
- L-475717 L-476568
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- L-475726
- L-475727
- L-475728
- L-476560
- L-476561
- L-476562
- L-476563
- L-476564
- L-476565
- L-476566

TOTAL CLAIMS 28

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If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.

Rickard Twp.

THE TOWNSHIP
OF 2.2460

WILKIE

DISTRICT OF
COCHRANE

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (C.S.)
- LEASES (L)
- LOCATED LAND (Loc.)
- LICENSE OF OCCUPATION (L.O.)
- MINING RIGHTS ONLY (M.R.O.)
- SURFACE RIGHTS ONLY (S.R.O.)
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES

NOTES

400' Surface rights reservation around all lakes and rivers.

DATE OF ISSUE

JUL 27 1977

SURVEYS AND MAPPING
BRANCH

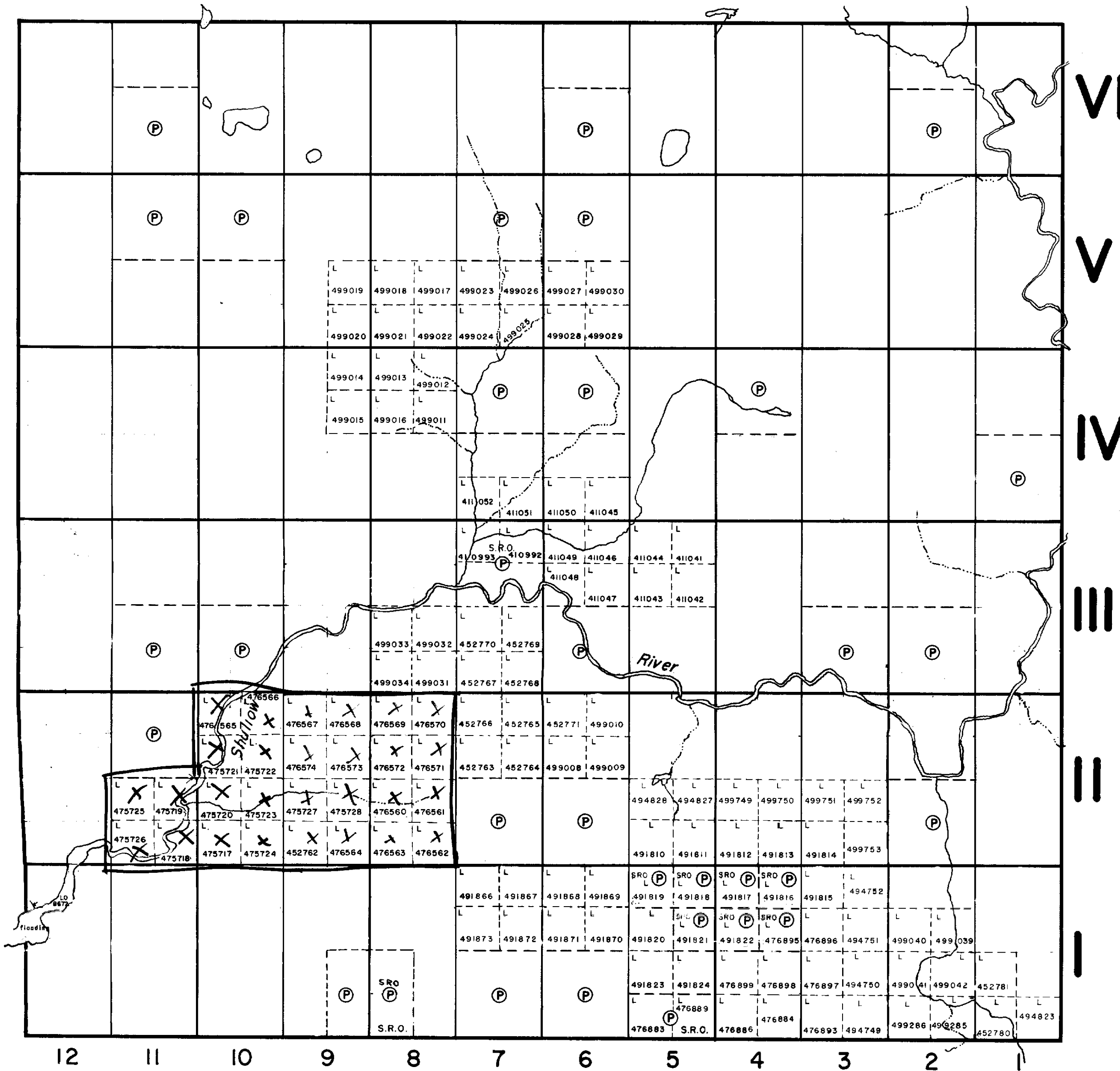
PLAN NO.- M.398

ONTARIO
MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

Walker Twp.

Coulson Twp.



42A10NE0027 2.2460 WILKIE

200

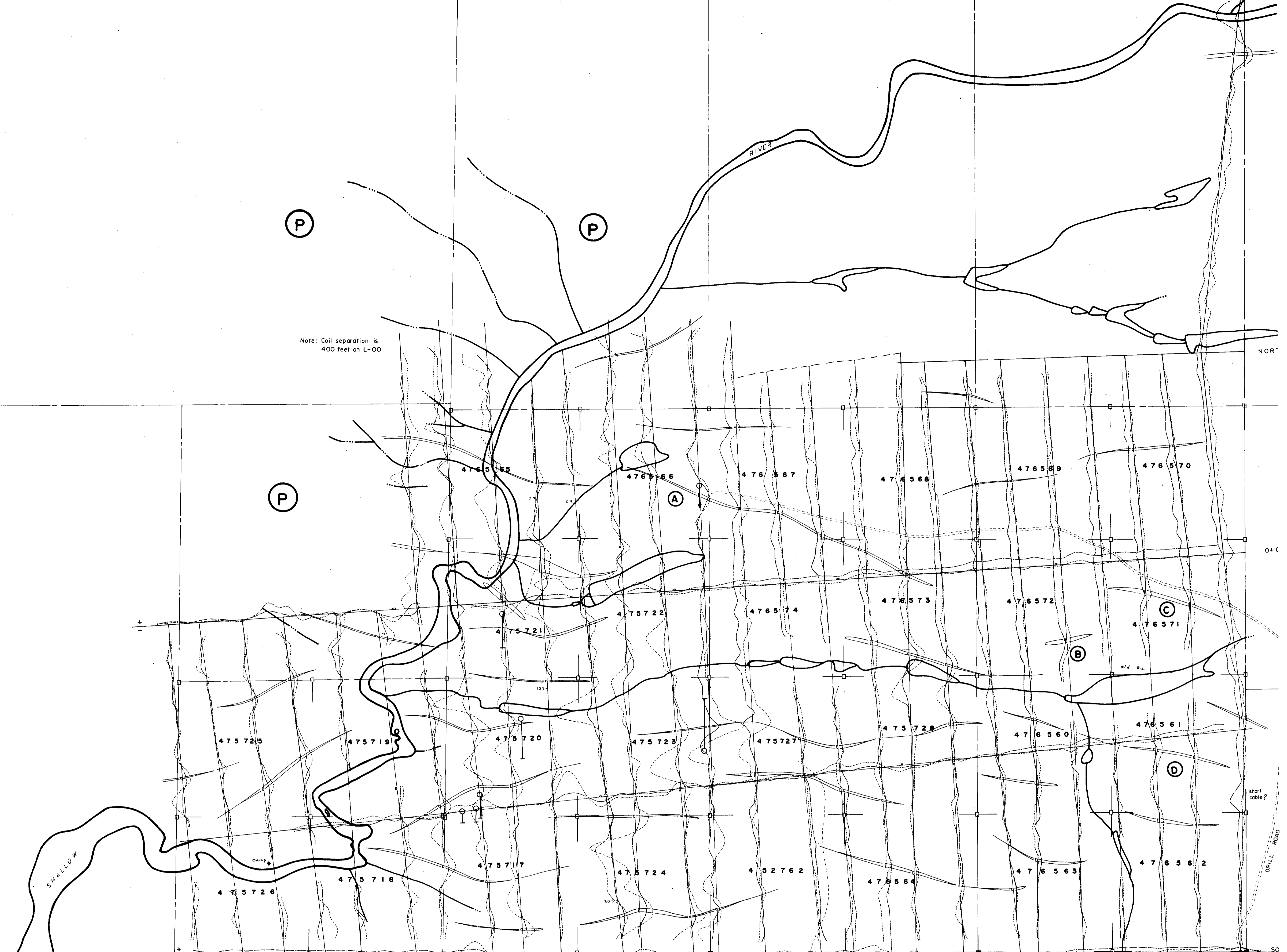
Carr Twp.

Note: Coil separation is 400 feet on L-00

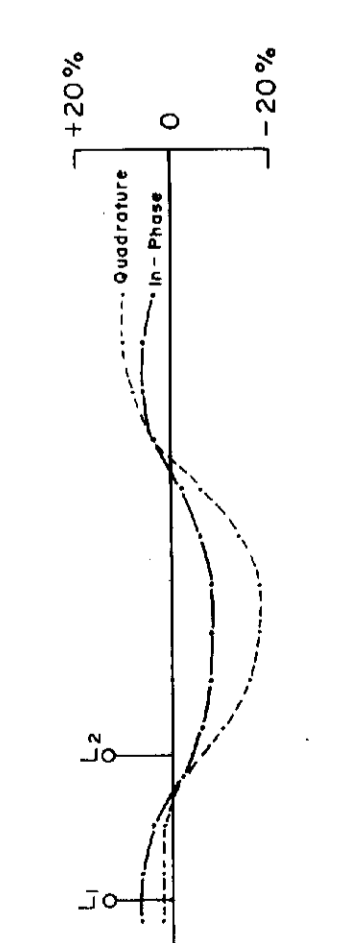
CON. III
CON. II

CON. II
CON. I

L-24 W L-20 W L-16 W L-12 W L-8 W L-4 W L-00 L-4 E L-8 E L-12 E L-16 E L-20 E L-24 E L-28 E L-32 E L-36 E L-40 E L-44 E L-48 E L-52 E L-56 E L-60 E L-64 E L-68 E L-72 E L-76 E L-80 E



LEGEND



poor
medium
good
Anomaly Rating

Diamond Drill Hole

survey monument

WALKER TWP.
WILKIE TWP.

210

LOT 12

LOT 11

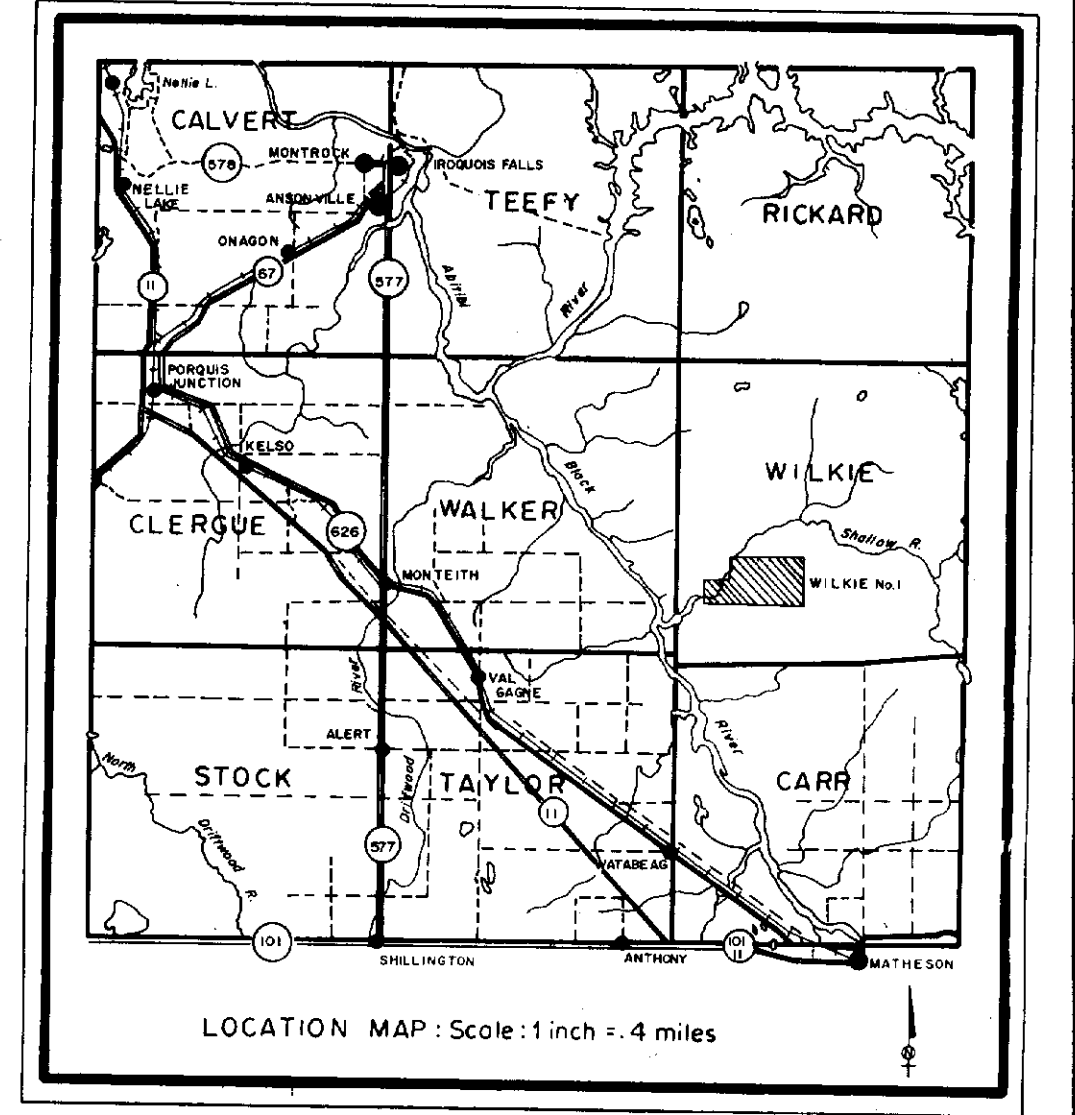
LOT 10

LOT 9

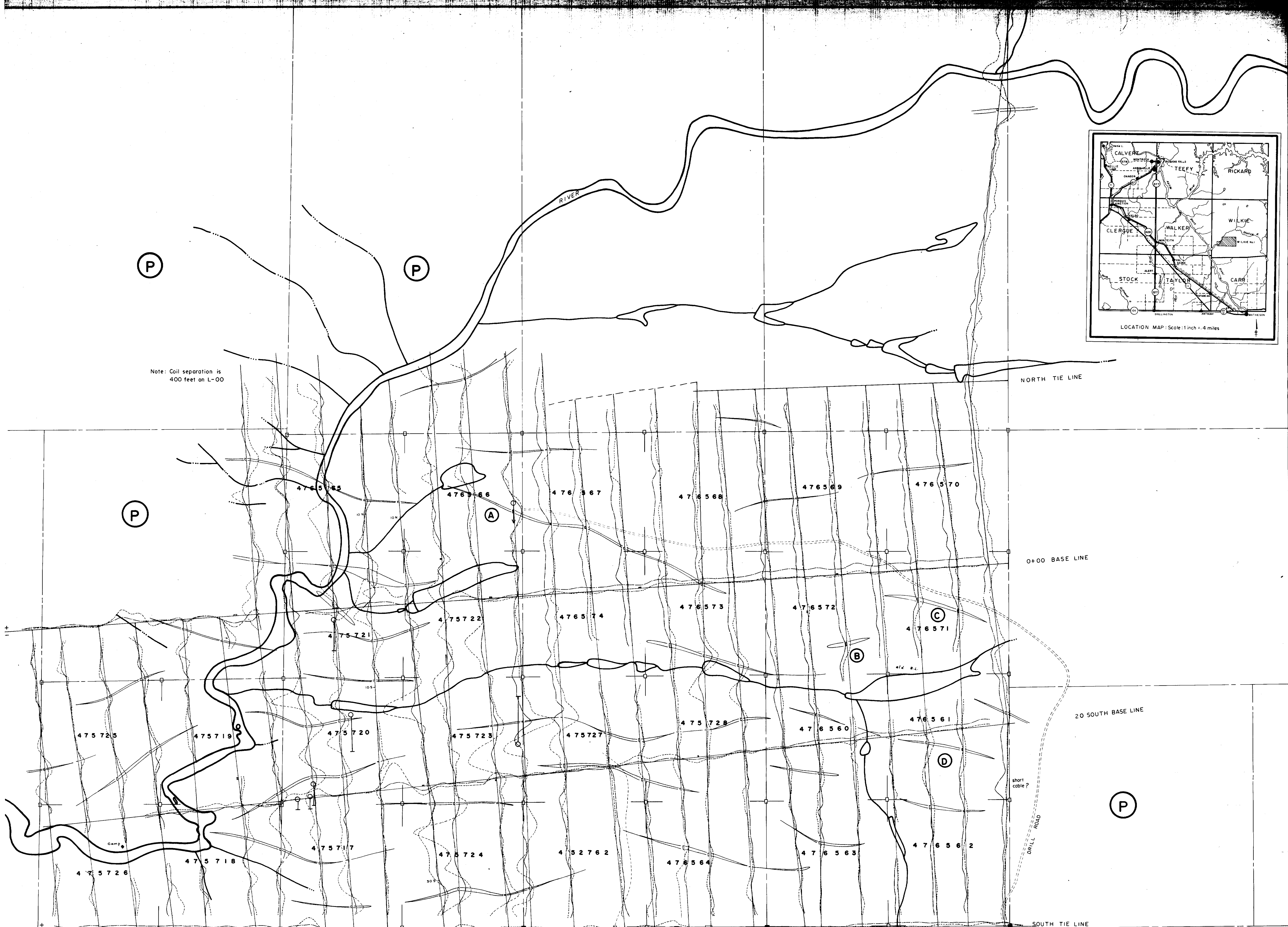
WILKIE TWP.
CARR TWP.

LOT 8





Note: Coil separation is 400 feet on L-00



L-24 W L-20 W L-16 W L-12 W L-8 W L-4 W L-00 L-4 E L-8 E L-12 E L-16 E L-20 E L-24 E L-28 E L-32 E L-36 E L-40 E L-44 E L-48 E L-52 E L-56 E L-60 E L-64 E L-68 E L-72 E L-76 E L-80 E

LOT 11

LOT 10

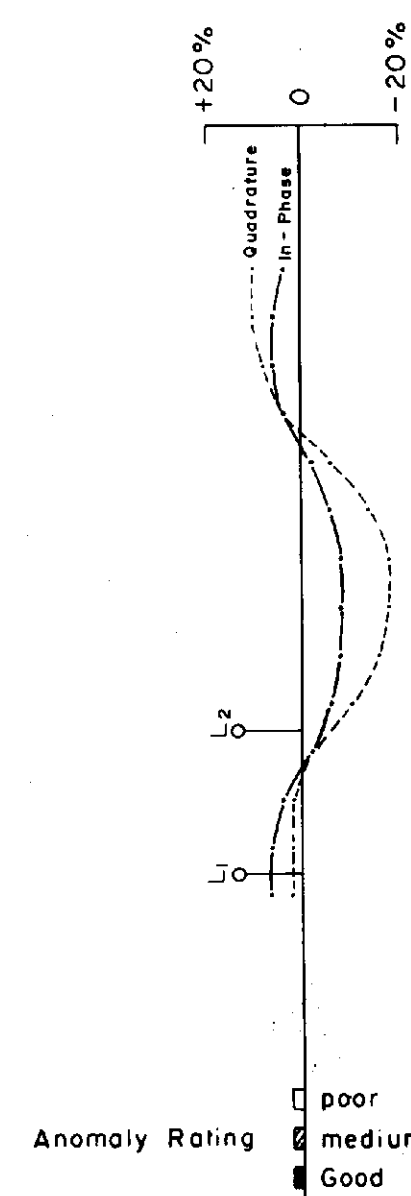
LOT 9

WILKIE TWP.
CARR TWP.

LOT 8

LOT 7

LEGEND



Diamond Drill Hole

survey monument



HOLLINGER MINES LTD.
WILKIE NO. 1
(CHEVALIER OPT.)
H.E.M. SURVEY
(1600 Hz.)
WILKIE TWP. ONT.
SCALE: 1" = 400'

H. Z. Taylor P. Eng.

