

42A04NW0028 2.6342 REEVES

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REPORT ON AIRBORNE MAGNETIC AND
VLF-ELECTROMAGNETIC SURVEYS,
FOLEYET AREA, ONTARIO

for

H.W.S. SYNDICATE

RECEIVED

FEB 3 1984

MINING LANDS SECTION

Toronto, Ontario
January, 1984

W. E. Brereton, P.Eng.

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1.0 INTRODUCTION

A Dighem airborne geophysical survey totalling 997 line-km with a 200 m line spacing has recently been completed on behalf of the H.W.S. Syndicate of Vancouver. Survey specifications were designed and field work was supervised by MPH Consulting Limited of Toronto on behalf of the Syndicate.

The AS-350 turbine helicopter flew at an average airspeed of 110 km/h with an EM bird height of approximately 30 m. Ancillary equipment consisted of a Sonotek PMH 5010 magnetometer with its bird at an average height of 45 m, a Sperry radio altimeter, a Geocam sequence camera, an RMS GR-33 digital graphics recorder, a Sonotek SDS 1200 digital data acquisition system, a DigiData 1640 9-track 800-bpi magnetic tape recorder and a Totem 2A V.L.F. The analog equipment recorded four channels of EM data at approximately 900 Hz, two channels of EM data at approximately 7200 Hz, two ambient EM noise channels (for the coaxial and coplanar receivers), two channels of V.L.F. data and a channel of radio altitude. The digital equipment recorded the EM data with a sensitivity of 0.2 ppm and the magnetic field to one nT (i.e., one gamma).

Appendix 1 provides details on the data channels, their respective sensitivities, and the flight path recovery procedure. Noise levels of less than 2 ppm are generally maintained for wind speeds up to 35 km/h. Higher winds may cause the system to be grounded because excessive bird swinging produces difficulties in flying the helicopter. The swinging results from the 5 m² of area which is presented by the bird to broadside gusts. The DIGHEM system nevertheless can be flown under wind conditions that seriously degrade other AEM systems.

Only the VLF-EM and magnetic results are being considered for the purposes of this report. Appendix 2 presents Technical Data Statements in respect of assessment credits on claims covered by the surveying.

2.0 LOCATION AND ACCESS

The survey area is centred approximately 78 km southwest of the town of Timmins in northeastern Ontario (Figure 1).

Access is relatively good. Highway 101 West passes immediately to the north of the survey area.

New, good quality gravel roads lead from Highway 101 to the south through the general Kenogaming - Penhorwood area. Numerous subsidiary logging roads extend off these main access roads as indicated on the airborne survey maps.

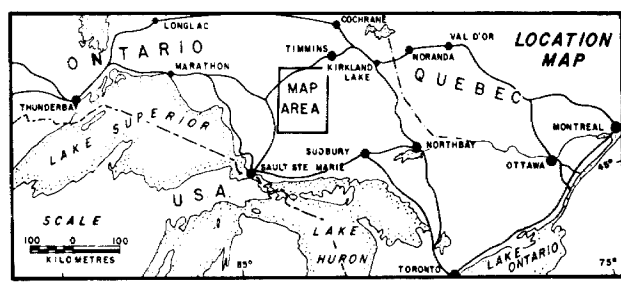
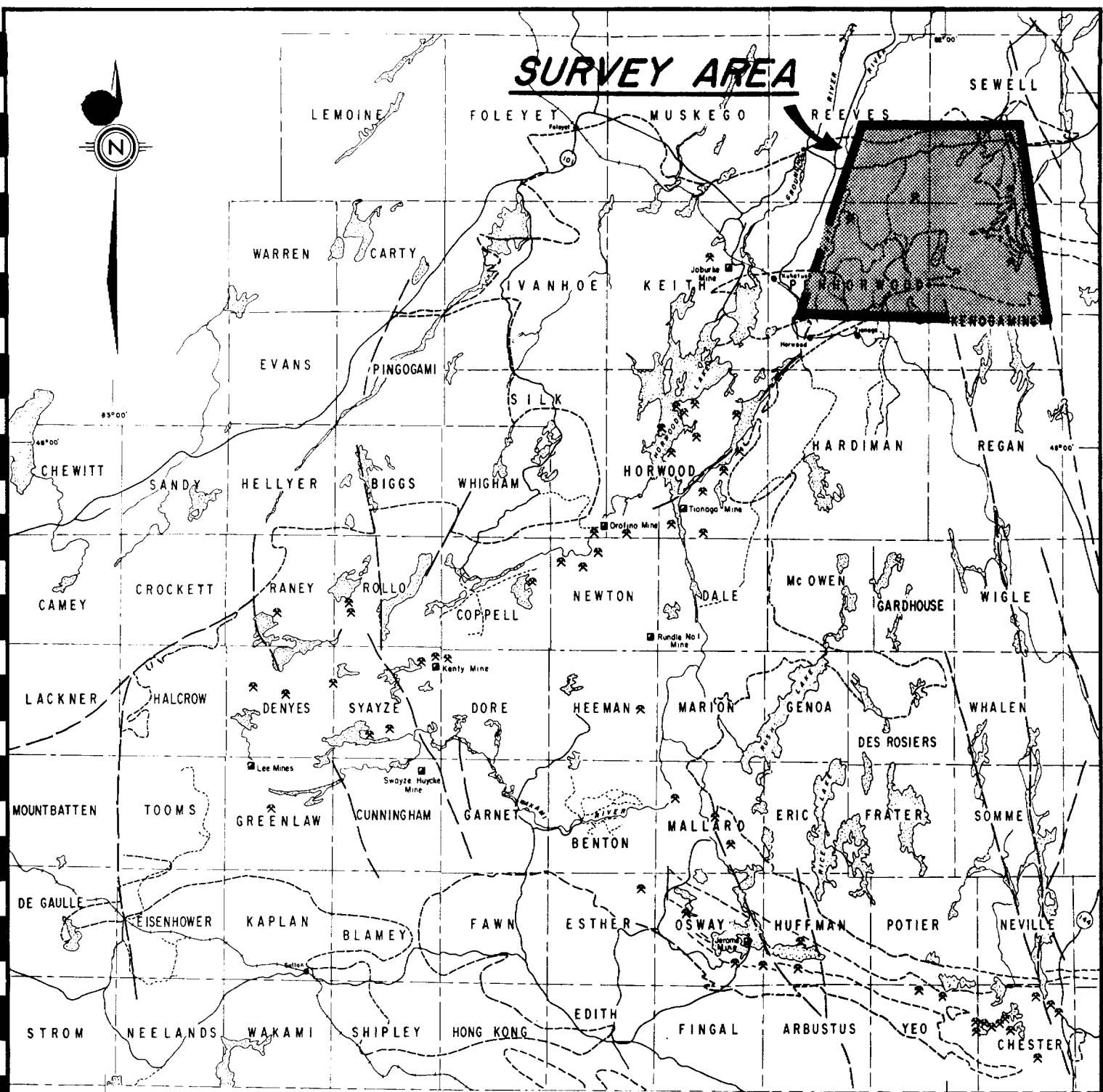
The general area is under active development by a local lumber company (Malette Lumber) which should ensure continued year round access.

The main line of the Canadian National Railway passes through the southwest portion of the project area.





The main centre of service and supply in the region is Timmins with a population of 45,000. All manner of mining equipment, contract services, exploration services, etc. are available here along with a skilled and stable mining work force. The smaller, nearby hamlet of Foleyet offers some food, accommodation and supply services.

Of interest, Orofino Resources Ltd. plan to construct a mill on their Silk township gold property which might be available to handle ore from other deposits in the immediate area. This is a very attractive consideration for further gold exploration in the north Swayze area. The presence of a nearby custom mill could

SURVEY AREA



LEGEND

-  Swayze metasedimentary - metavolcanic belt
-  Felsic intrusive rocks
-  Gold prospect or showing
-  Shaft on gold deposit

H.W.S SYNDICATE

SWAYZE GREENSTONE BELT GEOLOGY AND GOLD OCCURRENCES

Project No: C-586	By: W.E. Brereton
Scale:	Drawn: GCS Limited
Drawing No: Figure 1	Date: Jan. 1984

 MPH Consulting Limited

greatly increase the economic viability of a smaller, otherwise non-economic deposit. The closest custom mills at present are those of Pamour Porcupine Mines Ltd. at Schumacher and Pamour, approximately 85 miles by truck to the east.

3.0 GEOLOGY AND MINERAL DEPOSITS

3.1 General

The survey area is located in the northeastern extremity of the Swayze Gold Belt. The Swayze Gold Belt is located southwest of and in rocks grossly equivalent to the Timmins-Porcupine Gold Camp. The Porcupine Camp is located in the west portion of the Abitibi Greenstone Belt of the Canadian Shield. It is the largest gold-producing camp in Canada and one of the largest in the world. During the past seventy years, more than 56.3 million troy ounces of gold have been produced from 18 properties in the area.

The Swayze area contains four past-producing gold mines (Joburke, Tionaga, Halcrow-Swayze and Jerome). Other substantial gold prospects under active exploration/development in addition to Orofino include the Rundle Mine (Sulpetro-Hollinger) in Newton Township, the Kenty Mine in Swayze Township (Cumo Resources-Heron Resources) and the Jerome Mine in Osway Township (Osway Resources).

3.2 History of Exploration and Development

Initial interest in the general region was stimulated by the discovery of two major iron formation bands along the Groundhog River and Woman River in the early 1900's. Following a general waning of interest in iron deposits, gold became the principal metal sought.

Earliest gold discoveries date back to 1909 as prospectors worked westward from the Porcupine Camp which had been discovered that same year.

The first significant gold discovery in the area and subsequent staking rush was made in 1918 on the east shore of Horwood Lake. This became the property of Groundhog Gold Mines Limited in 1934.

Visible gold was discovered on what is now the property of Orofino Resources Limited in the early 1930's. This precipitated another small rush into the region.

Numerous other properties were being actively explored and developed in the Horwood Lake area at this time. The only production during this period was in 1938-39 from the Smith-Thorne (Tionaga) Mine.

Gold was then discovered in 1946 on the Joburke property in Keith Township immediately to the north of Orofino triggering another staking rush in the northern portion of the Swayze metasedimentary-metavolcanic belt.

3.3 Geology

The Swayze area has been the subject of numerous geological studies since the turn of the century. The most pertinent studies in the present area are those by Laird (1935), Harding (1937), Breaks (1978) and Milne (1972).

The Swayze area represents the western extremity of the Abitibi metasedimentary-metavolcanic ("greenstone") belt of

Archean age which extends for several hundred miles east - northeast to the Grenville Front east of Chibougamau.

Swayze greenstone rocks are truncated to the west against the "Kapusking High" structural-metamorphic zone.

Of interest, the Abitibi is probably the most prolific metal producer of any greenstone belt in the world.

The present area of interest, the Kenogaming-Penhorwood area, encompasses the northeasternmost extremity of the Swayze greenstone sub-belt.

The present survey area is centred on a discrete, lenticular pile of felsic metavolcanic rocks approximately 13 km long in an east-west direction by 6.5 km wide in the central portion of Kenogaming Township and east-central portion of Penhorwood Township (Ontario Department of Mines Map 2231). The main felsic pile is bounded to the east by the Tanton Lake Fault although a narrow wedge of felsic rocks does extend to the east into adjoining Pharand Township. Rock types include mainly felsic volcanoclastic rocks (tuffs, tuff-breccias) and some flows. The volcanics are extensively intruded by mafic to ultramafic rocks. A major oxide facies iron formation extends along the entire north boundary of the felsic pile and forms the contact with adjoining mafic metavolcanics. Granitic batholith complexes occur to the east and south.

Extensive areas of mafic-ultramafic intrusives crop out directly to the west of the survey area. One of these hosts the Reeves talc/asbestos Mine.

3.4 Mineral Deposits

Economic interest in the immediate survey area has focussed on gold, silver, asbestos, talc, copper-nickel, iron, copper-zinc and barite deposits. There has been economic production of the first four of the above mineral commodities. Gold and silver have been won primarily from structurally-controlled, quartz vein-type deposits, e.g. Joburke mine, Keith Township, which produced 66,500 ounces of gold from 1973 to 1979. Asbestos and, lately, talc are produced at the Reeves Mine of Canadian Johns-Manville in Reeves Township immediately northwest of the present property. The Orofino Mine to the southwest of the survey area is currently being actively explored with a view to a productive decision in early 1984. Drill indicated reserves are currently quoted in the range of 1,000,000 tons of 0.17 oz. Au/ton.

4.0 AIRBORNE SURVEYS

4.1 Magnetics

Total field magnetic data were digitally recorded in the aircraft to an accuracy of 1 nT (i.e. 1 gamma). The digital tape was then computer processed to yield total field magnetic contour maps. These results are presented on four sheets at a scale of 1:10,000 at rear.

Sheet 1

Magnetics here are relatively active. There are two distinct magnetic trends. The more prominent of these is east-west to northeast-southwest. This is interrupted, truncated and dislocated by numerous north-south trending features. A good example is in the central portion between flight lines 39 and 40. This north-south trend is interpreted to be reflective of various faults in this direction, some of which are filled by diabase dikes.

The build-up in magnetic intensities in the southwest corner of the sheet is reflective of the mafic/ultramafic intensive complex that hosts the Reeves Mine.

In all, the magnetic signature is consistent with the interpretation that this area is underlain by mafic volcanics with variable magnetite content and associated ultramafic intrusives.

Sheet 2

This very impressive magnetic picture can be directly correlated with known geological features. Prominent oval to elongate magnetic highs in the northwest quadrant of the sheet correlate directly with known mafic to ultramafic intrusive bodies.

The distinctive hook-like anomaly which extends from the northeast corner into the central portion the map area correlates directly with a mixed oxide - sulphide facies iron formation which has been defined by previous drilling and mapping.

A pronounced high in the east-central portion of the sheet at the south end of Hanrahan Lake relates directly to a known ultramafic intrusive.

Again a series of north-south faults, some filled with diabase, transect and offset magnetic trends. A prominent north-trending fault crosses the entire sheet in the vicinity of line 31 with another in the central portion of lines 17 and 18. A north-striking diabase intrusive is evident along the north end of line 901.

Sheet 3

The prominent linear magnetic high marking the iron formation on Sheet 2 continues across the south end of Sheet 3. The iron formation becomes much wider and more diffuse to the east.

The remainder of the Sheet is characterized by a relatively active pattern displaying numerous localized highs and lows. A generalized east-west trend can be discerned. This signature is reflective of underlying mafic volcanics.

Several major north-south faults/diabase dikes transect the sheet. A very obvious one of these is in the vicinity of lines 61-63.

Sheet 4

This is an area of intense magnetic activity excepting the southeast corner.

A very strong, generally linear east-west anomaly crosses the north part of the sheet. This coincides directly with iron formation as defined by previous drilling and which extends onto adjoining sheets. The iron formation is sharply truncated to the east by the north-trending Tanton Lake Fault.

Intense magnetic activity in the central and southwest portion of the sheet is reflective of numerous ultramafic bodies intrusive into felsic volcanics. Some of these intrusives have been investigated in the past for their nickel/asbestos potential.

The area of decreased magnetic activity and amplitudes in the southeast is reflective of felsic volcanic rocks, mainly tuffs and tuff-breccias.

North-south fault/diabase features are again prominent as along lines 71-72.

4.2 VLF-EM

VLF-EM anomalies are not EM anomalies in the conventional sense. EM anomalies primarily reflect eddy currents flowing in conductors which have been energized inductively by the primary field. In contrast, VLF-EM anomalies primarily reflect current gathering, which is a non-inductive phenomenon. The primary field sets up currents which flow weakly in rock and overburden, and these tend to collect in low resistivity zones. Such zones may be due to graphite and/or sulfides, shears, river valleys and even unconformities.

The Herz Industries Ltd. Totem VLF-electromagnetometer as used in the present survey measures the total field and vertical quadrature VLF components. Both these components are digitally recorded in the aircraft with a sensitivity of 0.1 percent. The total field yields peaks over VLF current concentrations whereas the quadrature component tends to yield crossovers. Both appear as traces on the profile records. The total field data also are filtered digitally and displayed on a contour map, to facilitate the recognition of trends in the rock strata and the interpretation of geologic structure.

The response of the VLF total field filter operator in the frequency domain is basically similar to that which can be used to produce enhanced magnetic maps. The two filters are identical along the abscissa but different along the

ordinant. The VLF-EM filter removes long wavelengths such as those which reflect regional and wave transmission variations. The filter sharpens short wavelength responses such as those which reflect local geological variations. The filtered total field VLF-EM contour map is produced with a contour interval of one percent.

Filtered VLF results for the 4 sheets are discussed following:

Sheet 1

A distinct east-west trend is apparent in virtually all of the VLF anomalous features in this area. There is one strong VLF trend which extends from just south of the Reeves Mine pit across the entire sheet. This anomaly may be of economic interest as there is a known gold showing associated with it on the easternmost of the two claims held by other interests southeast of the small lake (claim 724840).

The bulk of the VLF trends are interpreted to be reflective of zones of shearing in bedrock. Some of this is localized along graphitic (+ sulphidic) interflow sedimentary horizons as indicated by previous drilling.

As with the magnetics, the effects of north-south faulting are clearly evident in the form of offset and truncation of VLF trends. One such fault passes along the west side of claim 583226, Reeves Township.

Sheet 2

There is a large amount of primarily east-west VLF activity in this area.

The known sulphide-oxide iron formation in the northeast corner of the sheet is marked by a narrow, intense VLF anomaly. Other sections of the iron formation also have a VLF response as at the south end of Hanrahan Lake (claims 730371 to 730372).

The VLF trends represent east-west shearing and various graphitic sulphidic horizons. The strong VLF trend along the north portion of the sheet which extends east from claim 743064 (Penhorwood Township) coincides directly with a known, regional graphitic unit.

North-south faulting is again in evidence with a good example being the structure which extends directly north from Montgomery Lake.

Sheet 3

Some of the VLF trends defined on Sheet 1 continue across the present sheet. Anomalies in general in these mafic volcanics do not appear as intense as those to the south.

Anomalous trends are again interpreted to be related to zones of shearing and local to regional graphitic (+ sulphidic) interflow sedimentary members.

A somewhat "broken-up" aspect to the anomaly picture in the northeast corner of the Syndicate property is interpreted to be reflective of closely-spaced north to northeast faulting.

Sheet 4

A pronounced linear trend along the extreme north edge of the sheet coincides directly with known sulphide-oxide iron formation. The VLF anomalous trend in the south part of the sheet which passes through, for example, claim 742362 (Kenogaming Township) is interpreted to represent on a regional basis the stratigraphic equivalent of the above iron formation.

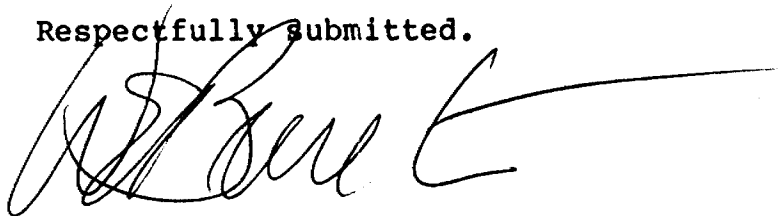
Remaining VLF trends are again ascribed to a combination of east-west and east-southeast shearing and, in some cases, graphitic-sulphidic units. The conclusion that much of the VLF is shear-related is based on limited field observations, as in the area at the south end of Akweskwa Lake where east-west VLF trends clearly crosscut felsic pyroclastic stratigraphy and are often directly coincident with topographic linears (eg. creeks, swampy depressions).

5.0 CONCLUSIONS AND RECOMMENDATIONS

Helicopter-borne total field magnetic and VLF-electromagnetic surveys recently completed on the H.W.S. Syndicate holdings in northeast Swayze Gold Belt have aided our geological interpretation of the project area and have presented some VLF (+ magnetic) targets that might be of economic significance. A high priority target for syngenetic gold-base metals deposits considering results to date is along the sulphide-oxide iron formation of the top of the felsic pile in Kenogaming-Penhorwood townships.

A complete compilation and evaluation of all previous mining work should be carried out. The results of this should then be integrated into our existing geophysical-geological data base such that targets for more detailed follow-up can be selected.

Respectfully Submitted.

A handwritten signature in black ink, appearing to read 'W.E. Brereton', with a long horizontal flourish extending to the right.

W.E. Brereton, P.Eng.

REFERENCES

Breaks, F.W.; 1978

Geology of the Horwood Lake Area, Ont. Geol. Surv. Report 169

Harding, W.D.; 1937

Geology of the Horwood Lake Area, Ont. Dept. Mines An. Report,
Vol. XLVI, P II, 1937

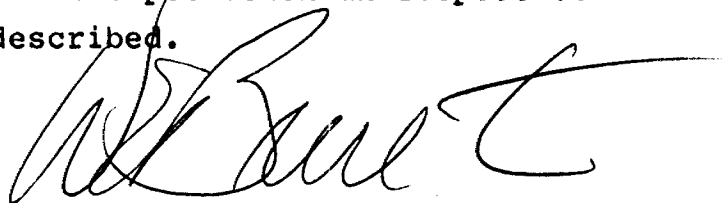
Laird, H.C.; 1935

Horwood Lake Area, Ont. Dept. Mines An. Report, Vol. XLIV,
P VII, 1935

CERTIFICATE OF QUALIFICATIONS

I, William E. Brereton, of Toronto, Ontario, do hereby certify that:

1. I am a consulting geologist with an office at 120 Adelaide Street West, Suite 2406, Toronto, Ontario, M5H 1T1, Canada.
2. I obtained an Honours B.Sc. degree in Geology and Physics from Queen's University in 1971 and an M.Sc.(A) in Mineral Exploration from McGill University in 1977.
3. I have practised my profession continuously since graduation and have been in private independent practice since 1977.
4. I am a member of the Association of Professional Engineers of the province of Ontario.
5. I personally provided overall supervision in respect of airborne surveys herein described.



William E. Brereton, P.Eng.,
Toronto, Ontario, Canada,
January, 1984.

APPENDIX 1

AIRBORNE EQUIPMENT SPECIFICATIONS

THE FLIGHT RECORD AND PATH RECOVERY

Both analog and digital flight records were produced. The analog profiles were recorded on chart paper in the aircraft during the survey. The digital profiles were generated later by computer and plotted on electrostatic chart paper at a scale of 1:10,000. The digital profiles are listed in Table A-1.

In Table A-1, the log resistivity scale of 0.03 decade/mm means that the resistivity changes by an order of magnitude in 33 mm. The resistivities at 0, 33, 67, 100 and 133 mm up from the bottom of the digital flight record are respectively 1, 10, 100, 1,000 and 10,000 ohm-m.

The fiducial marks on the flight records represent points on the ground which were recovered from camera film. Continuous photographic coverage allowed accurate photo-path recovery locations for the fiducials, which were then plotted on the geophysical maps to provide the track of the aircraft.

The fiducial locations on both the flight records and flight path maps were examined by a computer for unusual helicopter speed changes. Such speed changes may denote

an error in flight path recovery. The resulting flight path locations therefore reflect a more stringent checking than is provided by standard flight path recovery techniques.

Table A-1. The Digital Profiles

<u>Channel Name (Freq)</u>	<u>Observed parameters</u>	<u>Scale units/mm</u>
MAG	magnetics	10 nT
ALT	bird height	3 m
CXI (900 Hz)	vertical coaxial coil-pair inphase	1 ppm
CXQ (900 Hz)	vertical coaxial coil-pair quadrature	1 ppm
CXS (900 Hz)	ambient noise monitor (coaxial receiver)	1 ppm
CPI (900 Hz)	horizontal coplanar coil-pair inphase	1 ppm
CPQ (900 Hz)	horizontal coplanar coil-pair quadrature	1 ppm
CPS (900 Hz)	ambient noise monitor (coplanar receiver)	1 ppm
CPI (7200 Hz)	horizontal coplanar coil-pair inphase	1 ppm
CPQ (7200 Hz)	horizontal coplanar coil-pair quadrature	1 ppm
CPS (7200 Hz)	ambient noise monitor (coplanar receiver)	1 ppm
VLFT	VLF-EM total field	1 %
VLFQ	VLF-EM vertical quadrature	1 %
<u>Computed Parameters</u>		
DIFI (900 Hz)	difference function inphase from CXI and CPI	1 ppm
DIFQ (900 Hz)	difference function quadrature from CXQ and CPQ	1 ppm
REC1	first anomaly recognition function	1 ppm
REC2	second anomaly recognition function	1 ppm
REC3	third anomaly recognition function	1 ppm
REC4	fourth anomaly recognition function	1 ppm
CDT	conductance	1 grade
RES (900 Hz)	log resistivity	.03 decade
RES (7200 Hz)	log resistivity	.03 decade
DP (900 Hz)	apparent depth	3 m
DP (7200 Hz)	apparent depth	3 m
FEO% (900 Hz)	apparent weight percent magnetite	0.25%



Sonotek Limited
2410-5 Dunwin Drive, Mississauga
Ontario - Canada - L5L 1J9
telephone: (416) 828-6810
telex: 065-24733

Specification for the Proton Precession Magnetometer:

Sensitivity	± 0.1 gamma for sample times of 1 second or longer ± 1 gamma for sample times of less than 1 second
Range	20,000 to 100,000 gammas
Sampling Rate	Programmable in 0.1 sec steps from 0.3 to 2.0 sec (same as scan rate of data system)
Tuning	Automatic
Reference Frequency	Accuracy ± 1 ppm at 25°C Stability 5 ppm/year
Auxiliary Output	Analog signal monitoring output (BNC)
Indicator	Polarize current LED monitor
Power	28 \pm 4 VDC. For typical sensor: 7 A max current, 50% duty cycle, 100 W average power
Physical Data:	
Signal Package	Width 241 mm (9.5 in), half-rack width Height 133 mm (5.25 in) Depth 254 mm (10 in) Weight 5 kg (11 lb)
Toroid Sensor	Diameter 150 mm (5.9 in) Height 170 mm (6.7 in) Weight 5.5 kg (12 lb)
Airfoil plus Toroid Sensor	Diameter 170 mm (6.75 in) Length 660 mm (26 in) Weight 9 kg (20 lb)

Totem 2A

Multi channel

VLF Electromagnetic
airborne survey instrument

Specifications

Introduction.

The Totem-2A measures basically the same parameters and shares the same package configuration as the well established Totem-1A.

This new generation instrument, however, measures multiple parameters on two channels simultaneously, with less noise and greater accuracy. These advancements have been achieved while maintaining the simple installation and operating procedures of the 1A model.

The Totem-2A employs state of art digital and linear integrated circuits to implement the functions of crystal controlled phase locked loop frequency synthesizers, dual frequency heterodyne conversion and proprietary time domain sampling vector computation techniques.

Features.

The principal parameters measured are the change in total field and the vertical quadrature field. Parameters also available are the total field gradient (from sensors in two locations) and the horizontal quadrature field. The quadrature polarity is defined by the direction of flight relative to the field. The total and quadrature magnitudes are insensitive to sensor orientation in pitch, roll and yaw.

One obvious advantage of dual frequency operation is that primary sources can be selected to ensure good coupling with conductors of any orientation. Potential uses of the gradient mode are enhanced interline contouring and delineation of multiple conductors with horizontal and vertical gradient respectively.

Specifications subject to change.

Primary source: Magnetic field component radiated from VLF radio transmitters (one or two simultaneously).

Parameters measured: Total field, vertical quadrature, horizontal quadrature, gradient.

Frequency range: 15kHz to 25.0kHz front panel selectable for each channel in 100Hz steps.

Sensitivity range: 130uV/m to 100mV/m at 20kHz, 3dB down at 14kHz and 24kHz.

VLF signal bandpass: -3dB at ± 80 Hz, $\pm 4\%$ variation at ± 50 Hz.

Adjacent channel rejection: 300 to 800Hz = 20 to 32dB, 800 to 1500Hz = 32 to 40dB, > 1500 Hz > 40 dB (for $\pm 2\%$ noise envelope).

Out of band rejection: 10kHz to 2.5kHz = 5×10^{-4} A/m to 5×10^{-1} A/m ± 2.5 kHz rising at 12dB/octave
30kHz to 60kHz = 5×10^{-4} A/m to 8×10^{-3} A/m > 60 kHz rising at 6dB/octave (for no overload condition).

Output span: $\pm 100\% = \pm 1.0$ V

Output filter: Time constant 1sec for 0 to 50% or 10% to 90%, noise bandwidth 0.3Hz (second order LP).

Internal noise: 1.3uV/m rms (ambient noise will exceed this).

Sferics filter: Reduces noise contribution of impulse interference.

Electric field rejection: $\pm 0.5\%$ error for 20m tow cable.

Controls: Power switch, frequency selector switches (line & ortho) level controls (line & ortho), meter switch (total/quad) sferics filter switch.

Displays: Meters (line & ortho), sferics light, overload light

Inputs: Power, 23 to 32 Vdc fused 0.5Amp.
Signal, Sensor upper, Sensor lower.

Outputs: Total, quad, gradient, multiplexed (line & ortho) Audio monitor, stereo line & ortho

Dimensions & weight: Console 19" rack mounted, 4.5cm high x 34cm deep, 3.8kg. Sensor and pre-amplifier assembly 15cm dia. and 46cm long, 1.5kg.

APPENDIX 2

TECHNICAL DATA STATEMENTS



**GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT**

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.

Type of Survey(s) Airborne, VLF, EM, Magnetics
 Township or Area Kenogaming, Penhorwood, Reeves, Sewell
 Claim Holder(s) R. Sheppard, 21-2246
Folkstone Way, W. Vancouver, B.C.
 Survey Company MPH Consulting/Dighem Ltd.
 Author of Report W.E. Brereton
 Address of Author 2406-120 Adelaide St. W., Toronto
 Covering Dates of Survey Oct./83 - Jan./84
 (linecutting to office)
 Total Miles of Line Cut --

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

AS ATTACHED

**SPECIAL PROVISIONS
CREDITS REQUESTED**

DAYS
per claim

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

ENTER 20 days for each
additional survey using
same grid.

- Geophysical
 - Electromagnetic _____
 - Magnetometer _____
 - Radiometric _____
 - Other _____
- Geological _____
- Geochemical _____

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

Magnetometer 20 Electromagnetic 20 Radiometric _____
 (enter days per claim)

DATE: Jan. 31/84 SIGNATURE: [Signature]
 Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 614

If space insufficient, attach list

OFFICE USE ONLY

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____
(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) VLF, Magnetics, EM

Instrument(s) Totem 2A VLF, Sonotek PMH 5010 Mag, Dighem III EM system
(specify for each type of survey)

Accuracy EM - 0.2 ppm, Magnetics - 1 gamma
(specify for each type of survey)

Aircraft used AS-350 Helicopter

Sensor altitude 30 m

Navigation and flight path recovery method Visual Navigation

Aircraft altitude 45 m Line Spacing 200 m

Miles flown over total area 1,000 km (600 miles) Over claims only 650 miles 403.9 mi

P	725566	
	725567	
	725568	
	725569	
	725570	
	725571	
	725572	
	725573	
	725574	
	725575	
	725576	
	725577	
	725578	
	725579	
	725580	
	725581	
	725582	
	725583	
	725584	
	725585	
	725586	
	725587	
	725588	

P	725589	
	725590	
	725591	
	725592	
	725593	
	725594	
	725595	
	725596	
	725597	
	725598	
	725599	
	725600	
	725601	
	725602	
	725603	
	725604	
	725605	
	725606	
	725607	
	725608	

PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER
P	730226	P	730338	P	741106	P	741477
	730227		730339		741107		741478
	730228		730340		741108		741479
	730229		730341		741109		741480
	730230		730342		741110		741481
	730231		730343		741111		741482
	730232		730344		741112		741483
	730233		730345		741113		741484
	730234		730346		741114		741485
	730235		730347		741115		741486
	730236		730348		741116		741487
	730237		730349		741117		741488
	730238		730350		741118		741489
	730239		730351		741119		741490
	730240		730352		741120		741491
	730242		730353		741121		741492
	730243		730354		741122		741493
	730244		730355		741123		741495
	730245		730356		741124		741496
	730246		730357		741126		741497
	730247		730358		741127		741498
	730248		730359		741128		741499
	730249		730360		741129		741500
	730250		730361		741130		741501
	730251		730362		741131		741502
	730252		730363		741132		741503
	730253		730364		741133		741504
	730254		730365		741134		741506
	730255		730366		741135		741507
	730256		730367		741136		741508
	730257		730368		741137		741509
	730258		730369		741138		741510
	730259		730370		741139		741511
	730260		730371		741140		741515
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	730263		730374		741143		741518
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	730265		730376		741145		741528
	730266		730377		741146		741529
	730267		730378		741147		741530
	730268		730379		741148		741531
	730269		730380		741149		741532
	730270		730381		741150		741533
	730271		730382		741151		741534
	730272		730383		741152		741535
	730273		730384		741153		741536
	730274		730385		741154		741537
	730275		730386		741155		741538
	730276		730387		741156		741539
	730277		730388		741157		741540
	730278		741085		741433		741541
	730279		741086		741434		741542
	730280		741087				741543
	730281		741088		741436		741544
	730282		741089		741437		741545
	730283		741090		741438		741546
	730284		741091		741439		741547
	730285		741092		741440		741548
	730286		741093		741441		741549
	730287		741094		741442		741550
	730288		741095		741443		742331
	730328		741096		741444		742332
	730329		741097		741445		742333
	730330		741098		741469		742334
	730331		741099		741470		742335
	730332		741100		741471		742336
	730333		741101		741472		742337
	730334		741102		741473		742338
	730335		741103		741474		742339
	730336		741104		741475		742340
	730337		741105		741476		742341



Ministry of
Natural
Resources

Report of Work #29/84
(Geophysical, Geological,
Geochemical and Expenditures) #2



42A04NW0028 2.6342 REEVES

900

The Min.

Type of Survey(s) AIRBORNE, VLF, EM and MAGNETIC SURVEYS		Township or Area Kenogaming, Sewell, Penhorwood, Reeves Townships	
Claim Holder(s) ROBERT JAMES SHEPPARD		Prospector's Licence No. M-21444	
Address 1333 Kilmer Road, North Vancouver, B.C.			
Survey Company Dighem Surveying Co. (MPH Consulting Ltd.)		Date of Survey (from & to) 01 10 83 30 30 83 Day Mo. Yr. Day Mo. Yr.	
Total Miles of line Cut			
Name and Address of Author (of Geo-Technical report) W.E. Brereton, 120 Adelaide St. W., Suite 2406, Toronto, Ont. M5W 1W5			

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
For each additional survey: using the same grid: Enter 20 days (for each)	- Other	
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
Airborne Credits	Geophysical	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	- Electromagnetic	20
	- Magnetometer	20

RECORDED
FEB 1 1984
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MINING DIVISION
FEB 01 1984

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
P	725566		P	725589	
	725567			725590	
	725568			725591	
	725569			725592	
	725570			725593	
	725571			725594	
	725572			725595	
	725573			725596	
	725574			725597	
	725575			725598	
	725576			725599	
	725577			725600	
	725578			725601	
	725579			725602	
	725580			725603	
	725581			725604	
	725582			725605	
	725583			725606	
	725584			725607	
	725585			725608	
	725586				
	725587				
	725588				

continued on attached sheets

Expenditures (excludes power stripping)	
Type of Work Performed	Performed on Claim(s)
Calculation of Expenditure Days Credits	Total Days Credits
Total Expenditures	\$
÷ 15 =	
Instructions Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.	

Total number of mining claims covered by this report of work: 614

For Office Use Only		Mining Division Recorder	
Total Days Cr. Recorded	Date Recorded	Date Approved as Recorded	Branch Director
24560	Feb 1/84	8.7.6.17	

Date	Recorded Holder or Agent (Signature)
Jan 31/84	M. Hibbard (Agent)

Certification Verifying Report of Work
I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying	Date Certified	Certified by (Signature)
MAURICE HIBBARD		

CLAIM NUMBERS

PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER
P	742342	P	742358	P	743046	P	783011
	742343		742359		743047		783012
	742344		742360		743048		783013
	742345		742361		743049		783014
	742346		742362		743050		783015
	742347		742363		743051		783016
	742349		742391		743052		783017
	742350		742392		743053		783018
	742351		742393		743054		783019
	742352		742394		743055		783020
	742353		742395		743056		783021
	742354		742396		743057		783022
	742355		742397		743058		783023
	742356		742398		743059		783024
	742357		742399		743060		783025
			742400		743061		783026
			742401		743062		783027
			742402		743063		783028
			742403		743064		783029
			742524		749338		783030
			742525		749339		783031
			742526		749340		783032
			742527		749341		783033
			742528		749342		783034
			742529		749343		783035
			742530		749344		783036
			742531		749345		783037
			742532		749346		783038
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			742545		749359		783051
			742546		749360		783052
			742547		749361		783053
			742548		749362		783055
			742549		749363		783056
			742550		749364		783057
			742551		749365		783058
			742552		749366		783059
			742553		749367		783060
			742554		749368		783061
			742555		749369		783062
			742556		749370		783063
			742557		749371		783064
			742558		749376		783065
			742559		749377		783066
			742560		749378		783067
			742561		749379		783068
			742562		749380		783069
			742563		749381		783070
			742564		758357		783071
			742565		758359		783072
			742566		779564		783073
			742567		779565		783074
			742568		779566		783075
			742569		779567		783076
			742570		779568		783077
			742571		779569		783078
			743040		779570		783079
			743041		779571		783080
			743042		779572		783081
			743043		779573		783082
			743044		783009		783083
			743045		783010		783084

FRODOFINE MINING DIVISION
RECEIVED
 FEB 01 1984
 A.M. P.M.
 7 8 9 10 11 12 1 2 3 4 5 6

Centennial *M. Howard*

CLAIM NUMBERS

PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER
P	730226 ✓	P	730338	P	741106	P	741477
	730227		730339		741107		741478
	730228		730340		741108		741479
	730229		730341		741109		741480
	730230		730342		741110		741481
	730231		730343		741111		741482
	730232		730344		741112		741483
	730233		730345		741113		741484
	730234		730346		741114		741485
	730235		730347		741115		741486
	730236		730348		741116		741487
	730237		730349		741117		741488
	730238		730350		741118		741489
	730239		730351		741119		741490
	730240 ✓		730352 ✓		741120		741491
	730242		730353 ✓		741121		741492
	730243		730354		741122		741493
	730244		730355		741123		741495
	730245		730356		741124		741496
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	730247		730358		741127		741498
	730248		730359		741128		741499
	730249		730360		741129		741500
	730250		730361		741130		741501
	730251		730362		741131		741502
	730252		730363		741132		741503
	730253		730364		741133		741504 ✓
	730254		730365		741134		741506
	730255		730366		741135		741507
	730256		730367		741136		741508
	730257		730368		741137		741509
	730258		730369		741138		741510
	730259		730370		741139		741511 ✓
	730260		730371		741140		741515
	730261		730372		741141		741516
	730262		730373		741142		741517
	730263		730374		741143		741518 ✓
	730264		730375		741144		741527
	730265		730376		741145		741528
	730266		730377		741146		741529
	730267		730378		741147		741530
	730268		730379		741148		741531
	730269		730380		741149		741532
	730270		730381		741150		741533
	730271		730382		741151		741534
	730272		730383		741152		741535
	730273		730384		741153		741536
	730274		730385		741154		741537
	730275		730386		741155		741538
	730276		730387 ✓		741156		741539
	730277		730388 ✓		741157 ✓		741540
	730278		741085		741433		741541
	730279		741086		741434		741542
	730280		741087				741543
	730281		741088		741436		741544
	730282		741089		741437		741545
	730283		741090		741438		741546
	730284		741091		741439		741547
	730285		741092		741440		741548
	730286		741093		741441		741549
	730287 ✓		741094		741442		741550 ✓
	730288 ✓		741095		741443		742331
	730328		741096		741444		742332
	730329		741097		741445		742333
	730330		741098		741469		742334
	730331		741099		741470		742335
	730332		741100		741471		742336
	730333		741101		741472		742337
	730334		741102		741473		742338
	730335		741103		741474		742339
	730336		741104		741475		742340
	730337		741105		741476		742341 ✓

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 JUN 01 1984
 P.M.
 730251-730337

Handwritten signature



2.6342

May 29, 1984

Mr. S.E. Yundt
Ministry of Natural Resources
Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

Dear Mr. Yundt:

Re: File 2.6342

Enclosed please find claim maps showing the exact claims on which airborne survey credits are being requested.

The 650 mile figure for airborne coverage on the claims is incorrect as you point out and should in fact have read 650 km.

Yours very truly

MPH CONSULTING LIMITED

W.E. Brereton
Vice President

WEB/sw

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JUN 04 1984

MINING LANDS SECTION

P.

April 19, 1984

Our File: 2.6342

Robert James Sheppard
1333 Kilmer Road
North Vancouver, B.C.
V7K 1R3

Dear Sir:

RE: Airborne Geophysical (Magnetometer & Electromagnetic)
Survey on Mining Claims P 725566 et al in the Townships
of Sewell, Penhorwood & Reeves and the Area of Kenogaming

Returned herein are the maps for the above-described survey.
On each plan please show the numbers of the perimeter claims.

Also, there seems to be a discrepancy on the Technical Data
Statement concerning the flight miles. You state that the
miles flown over the total area was 600 miles (1,000 km)
and that the miles flown over the claims only was 550 miles.
Please check your records and advise this office of the correct
figure.

When submitting this material, please quote file 2.6342.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416) 965-6918

S. Hurst:mc

cc: Mining Recorder
Timmins, Ontario

Encl.



Mining Lands Comments

- may need to ask for claim numbers on corner claims.

To: Geophysics Mr. R. Barlow.

Comments

Approved Wish to see again with corrections

Date: March 19/84 Signature: RRLW

To: Geology - Expenditures

Comments

Approved Wish to see again with corrections

Date: Signature:

To: Geochemistry

Comments

Approved Wish to see again with corrections

Date: Signature:

To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

MEA 84 03 05

Assessor

Approved Reports of Work
sent out

Notice of Intent filed

Approval after Notice of Intent
sent out

Duplicate sent to Resident
Geologist

Duplicate sent to A.F.R.O.

1984 02 13

Your File: 2.6342

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for an Airborne Geophysical (Electromagnetic and Magnetometer) Survey submitted on Mining Claims P 725566 et al (614 claims) in the Townships of Kenogaming, Penhorwood, Reeves and Sewell.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:sc
cc:
B. Sheppard
21 - 2246 Folkstone Way
W. Vancouver, B.C.
V7S 2X7

cc:
W.E. Brereton
2406 - 120 Adelaide St.W
Toronto, Ontario
M5H 1T1



Ministry of Natural Resources

Report of Work (Geophysical, Geological, Geochemical and Expenditures)

#29/84

your file # 2.6342
Apr 1st
Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

The Mining Act

Type of Survey(s) AIRBORNE, VLF, EM and MAGNETIC SURVEYS
Township or Area Kenogaming, Sewell, Penhorwood, Reeves Townships
Claim Holder(s) ROBERT JAMES SHEPPARD
Prospector's Licence No. M-21444
Address 1333 Kilmer Road, North Vancouver, B.C.
Survey Company Dighem Surveying Co. (MPH Consulting Ltd.)
Date of Survey (from & to) 01 10 83 30 30 83
Day | Mo. | Yr. | Day | Mo. | Yr. | Total Miles of line Cut
Name and Address of Author (of Geo-Technical report) W.E. Brereton, 120 Adelaide St. W., Suite 2406, Toronto, Ont. M5W 1W5

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
For each additional survey: using the same grid: Enter 20 days (for each)	- Other	
	Geological	
	Geochemical	

Man Days

Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	

RECORDED
FEB 1 1984
Note: Special provisions credits do not apply to Airborne Surveys.

Airborne Credits

Days per Claim
20
20

Expenditures (excludes power stripping)
Type of Work Performed
Performed on Claim(s)
A.M. 10 11 12 1 2 3 4 5 6

Calculation of Expenditure Days Credits

Total Expenditures \$ + 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date Jan 31/84
Recorded Holder or Agent (Signature) M. Hibbard (Agent)

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
P	725566		P	725589	
	725567			725590	
	725568			725591	
	725569			725592	
	725570			725593	
	725571			725594	
	725572			725595	
	725573			725596	
	725574			725597	
	725575			725598	
	725576			725599	
	725577			725600	
	725578			725601	
	725579			725602	
	725580			725603	
	725581			725604	
	725582			725605	
	725583			725606	
	725584			725607	
	725585			725608	
	725586				
	725587				
	725588				

continued on attached sheets

Total number of mining claims covered by this report of work 614

For Office Use Only

Total Days Cr. Recorded 24560
Date Recorded Feb 1/84
Date Approved as Recorded
Mining Recorder
Branch Director

Certification Verifying Report of Work
I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying MAURICE HIBBARD
Date Certified
Certified by

CLAIM NUMBERS

PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER
P	730226 ✓	P	730358	P	741106	P	741477
	730227		730359		741107		741478
	730228		730340		741108		741479
	730229		730341		741109		741480
	730230		730342		741110		741481
	730231		730343		741111		741482
	730232		730344		741112		741483
	730233		730345		741113		741484
	730234		730346		741114		741485
	730235		730347		741115		741486
	730236		730348		741116		741487
	730237		730349		741117		741488
	730238		730350		741118		741489
	730239		730351		741119		741490
	730240 ✓		730352		741120		741491
	730242		730353 ✓		741121		741492
	730243		730354		741122		741493
	730244		730355		741123		741495
	730245		730356		741124		741496
	730246		730357		741126		741497
	730247		730358		741127		741498
	730248		730359		741128		741499
	730249		730360		741129		741500
	730250		730361		741130		741501
	730251		730362		741131		741502
	730252		730363		741132		741503
	730253		730364		741133		741504 ✓
	730254		730365		741134		741506
	730255		730366		741135		741507
	730256		730367		741136		741508
	730257		730368		741137		741509
	730258		730369		741138		741510
	730259		730370		741139		741511 ✓
	730260		730371		741140		741512
	730261		730372		741141		741516
	730262		730373		741142		741517
	730263		730374		741143		741518 ✓
	730264		730375		741144		741527
	730265		730376		741145		741528
	730266		730377		741146		741529
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	730268		730379		741148		741531
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	730270		730381		741150		741533
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	730272		730383		741152		741535
	730273		730384		741153		741536
	730274		730385		741154		741537
	730275		730386		741155		741538
	730276		730387		741156		741539
	730277		730388 ✓		741157 ✓		741540
	730278		741085		741433		741541
	730279		741086		741434		741542
	730280		741087				741543
	730281		741088		741436		741544
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	730283		741090		741438		741546
	730284		741091		741439		741547
	730285		741092		741440		741548
	730286		741093		741441		741549
	730287 ✓		741094		741442		741550 ✓
	730288 ✓		741095		741443		742331
	730328		741096		741444		742332
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	730332		741100		741471		742336
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	730336		741104		741475		742340
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01 1984
 1281456

M. J. ...

CLAIM NUMBERS

PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER	PREFIX	NUMBER
P	742342	P	743046	P	783011	P	783085
	742343		743047		783012		783086
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	742353		743056		783021		783095
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			779573		783082		
			783009		783083		
			783010		783084		

FEDERAL BUREAU OF INVESTIGATION
RECEIVED
 FEB 01 1984
 A.M. P.M.
 FBI - MEMPHIS

Benjamin L. ...

KENO GAMING

297 860

DISTRICT OF SUDBURY

PORCUPINE MINING DIVISION

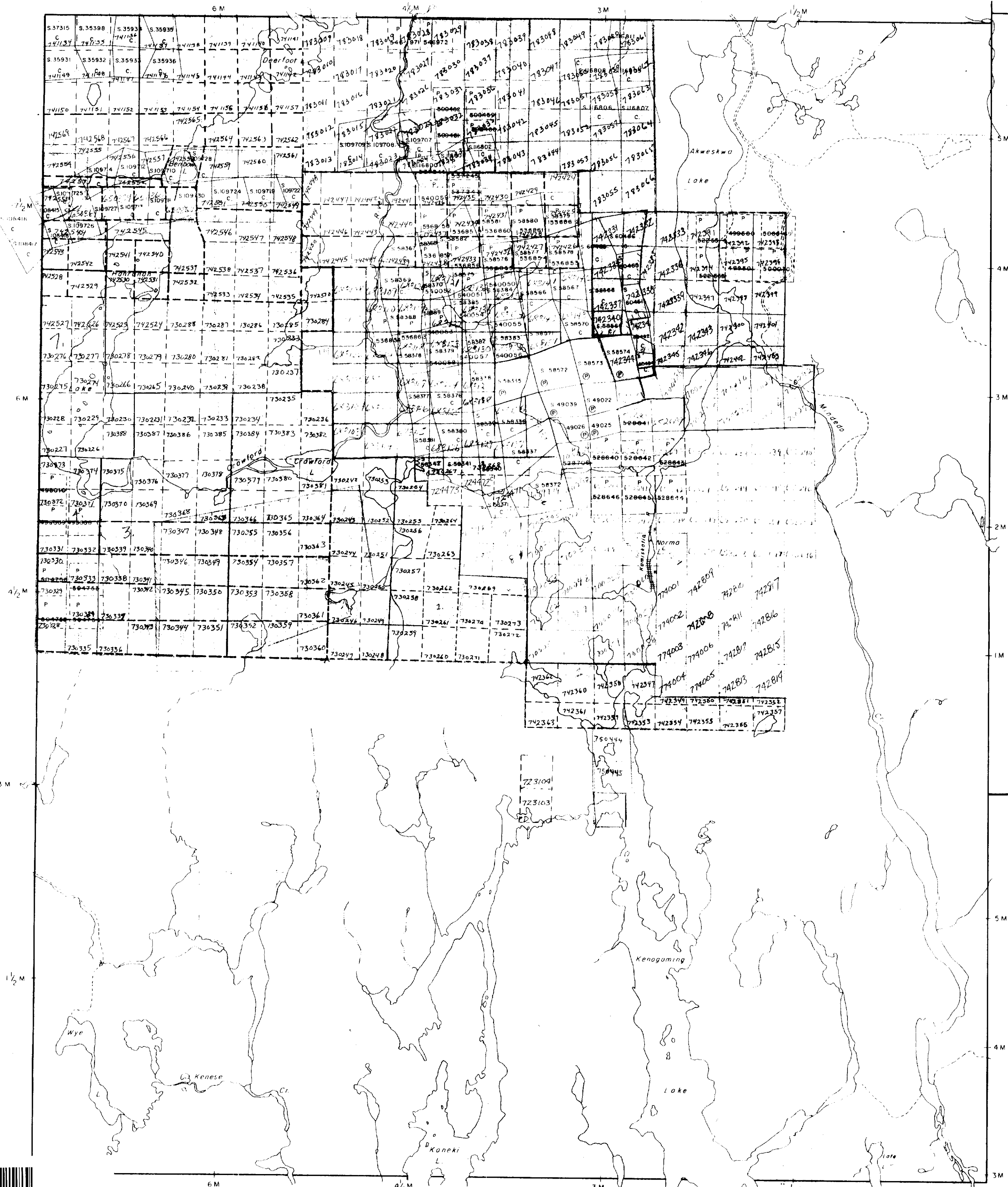
SCALE: 1-INCH 40 CHAINS

LEGEND

- PATENTED LAND ● or ⊙
- CROWN LAND SALE C.S.
- LEASES ⊕
- 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 —
- CANCELLED —
- PATENTED S.R.O. —

NOTES

400' Surface Rights reservation along the shores of all lakes and rivers.



Penhorwood Twp. M. 1055

Pharand Twp. M. 306

Crothers Twp. M. 742



APPROVED FOR
 THE MINISTER OF NATURAL RESOURCES
 ON JULY 19 1984
 [Signature]

Reeves Twp. (M.1074)

THE TOWNSHIP OF

PENHORWOOD

DISTRICT OF SUDBURY

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND Ⓟ
- CROWN LAND SALE C.S.
- LEASES Ⓛ
- 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 *
- CANCELLED C.
- PATENTED FOR S.R.O. Ⓟ

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers
 Flooding Rights on Horwood Lake Reserved To Contour 117' L.O. 7746.

SAND and GRAVEL

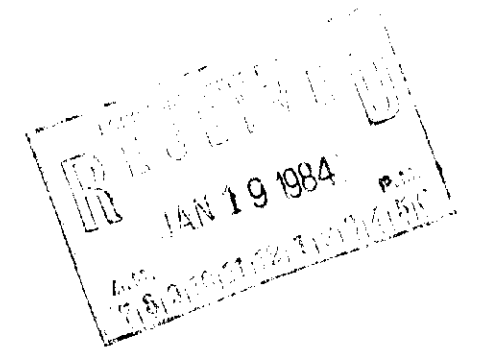
- Ⓞ Gravel File 38729
- Ⓢ Gravel Pit 13555 v 6
- Ⓟ Gravel File 106274

RESERVES

- Ⓢ 400 Reserve File 135537
- Ⓢ withdrawn from Staking File 135537

Areas withdrawn from staking under Section 43 of the Mining Act (1950-1970).

Order No.	File	Date	Disposition
W 91 72	620062	27/10/72	S.R.O.

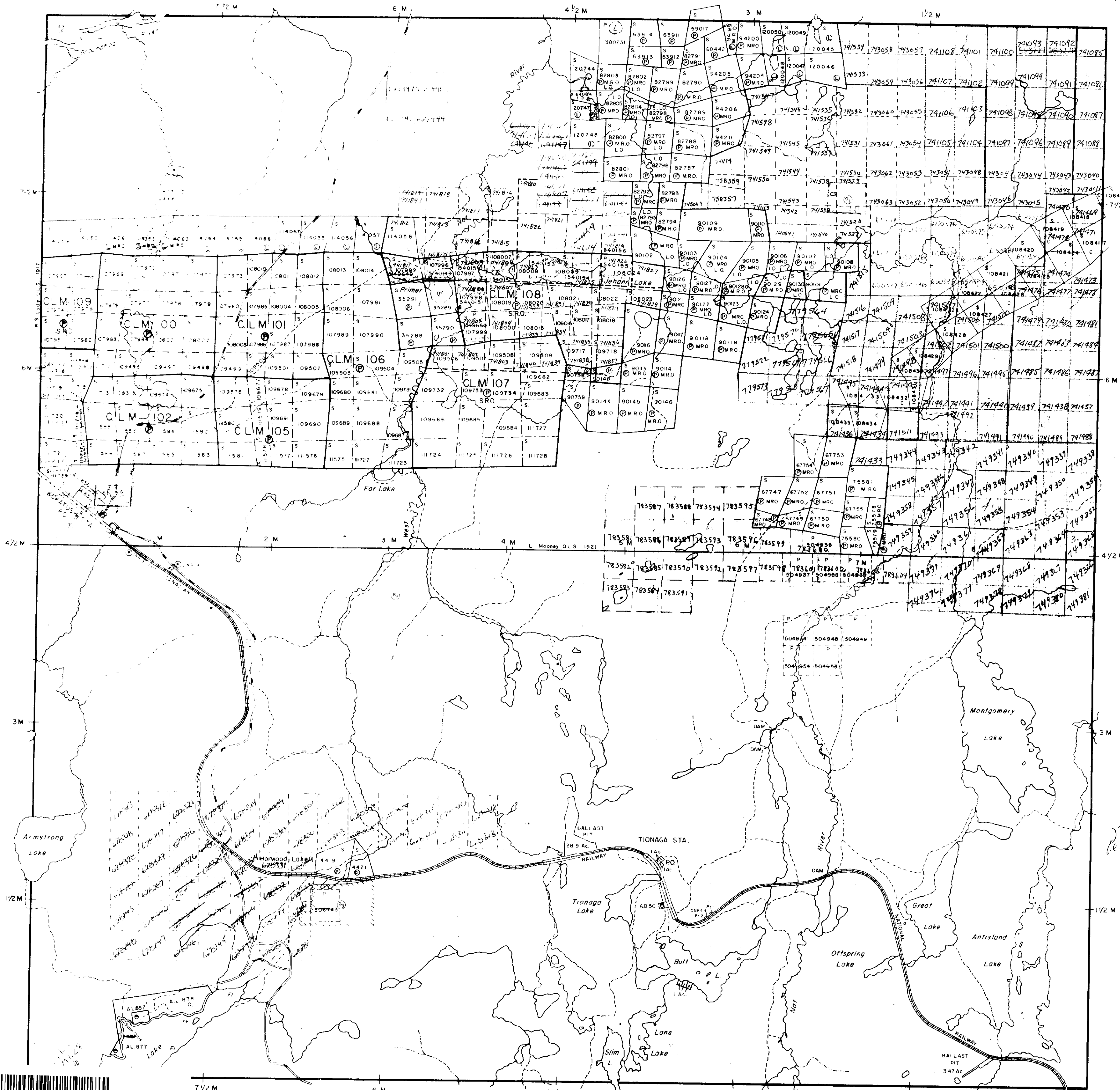


PLAN NO. **M.1055**

ONTARIO
 MINISTRY OF NATURAL RESOURCES
 SURVEYS AND MAPPING BRANCH

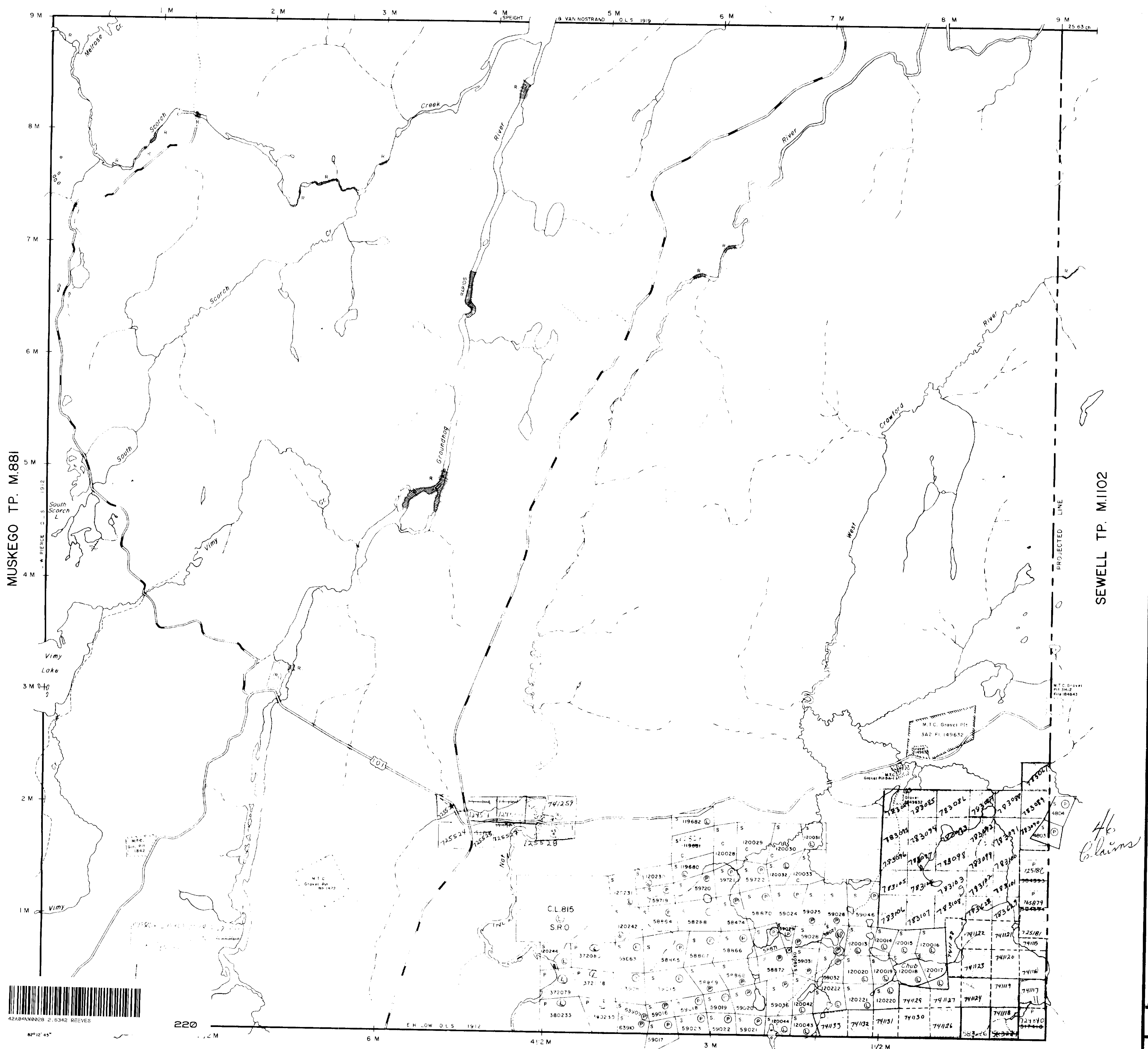
Keith Twp. (M.962)

Kenogaming Twp. (M.967)



Hardiman Twp. (M.916)

MELROSE TP. M.861



THE TOWNSHIP OF
OF
REEVES

DISTRICT OF
SUDBURY

PORCUPINE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

- PATENTED LAND ● or ⊕
- CROWN LAND SALE C.S.
- LEASES ⊙
- 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 ———
- CANCELLED ———
- PATENTED S.R.O. ———

NOTES

400' surface rights reservation along the shores of all lakes and rivers

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. 1970)

Order No	File	Date	Disposition
43	163002	27 7 72	SR & MR

S.R.O. withdrawn from staking under Sec 34(1) of the Mining Act (R.S.O. 1960) File 163006

SEWELL TP. M.1102

MUSKEGO TP. M.881



220

PLAN NO. M.1074

ONTARIO

MELROSE TWP
M-861

FREY TWP M-819

THE TOWNSHIP
OF

SEWELL

DISTRICT OF
SUDBURY

PORCUPINE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	● or ⊕
CROWN LAND SALE	C.S.
LEASES	⊙
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	⊗
CANCELLED	⊘
PATENTED S.R.O.	⊙
REGISTERED PLAN OF SUBDIVISION	—

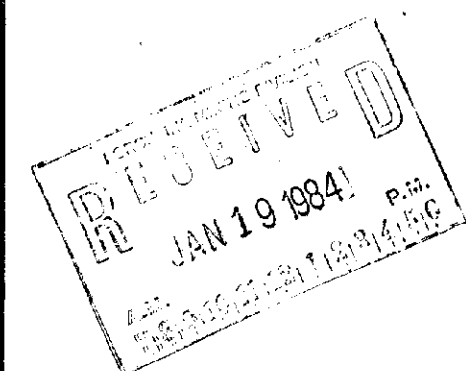
NOTES

400' surface rights reservation along the shores of all lakes and rivers.

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. 1970)

Order No.	File	Date	Disposition
164584		7/6/72	S.R.O.
W 30/77	155748	11/3/77	S.R.O.
W 19/78	188543	10/4/78	S.R.O.
HR W 10/78	135746	14/11/78	S.R.O.

- L site preparation M.R. May 2, 1983
- (R₆) Dump Attenuation Zone
- (R₇) withdrawn from staking w. 46/83 83/8/14 surface mining rights



PLAN NO. M-1102

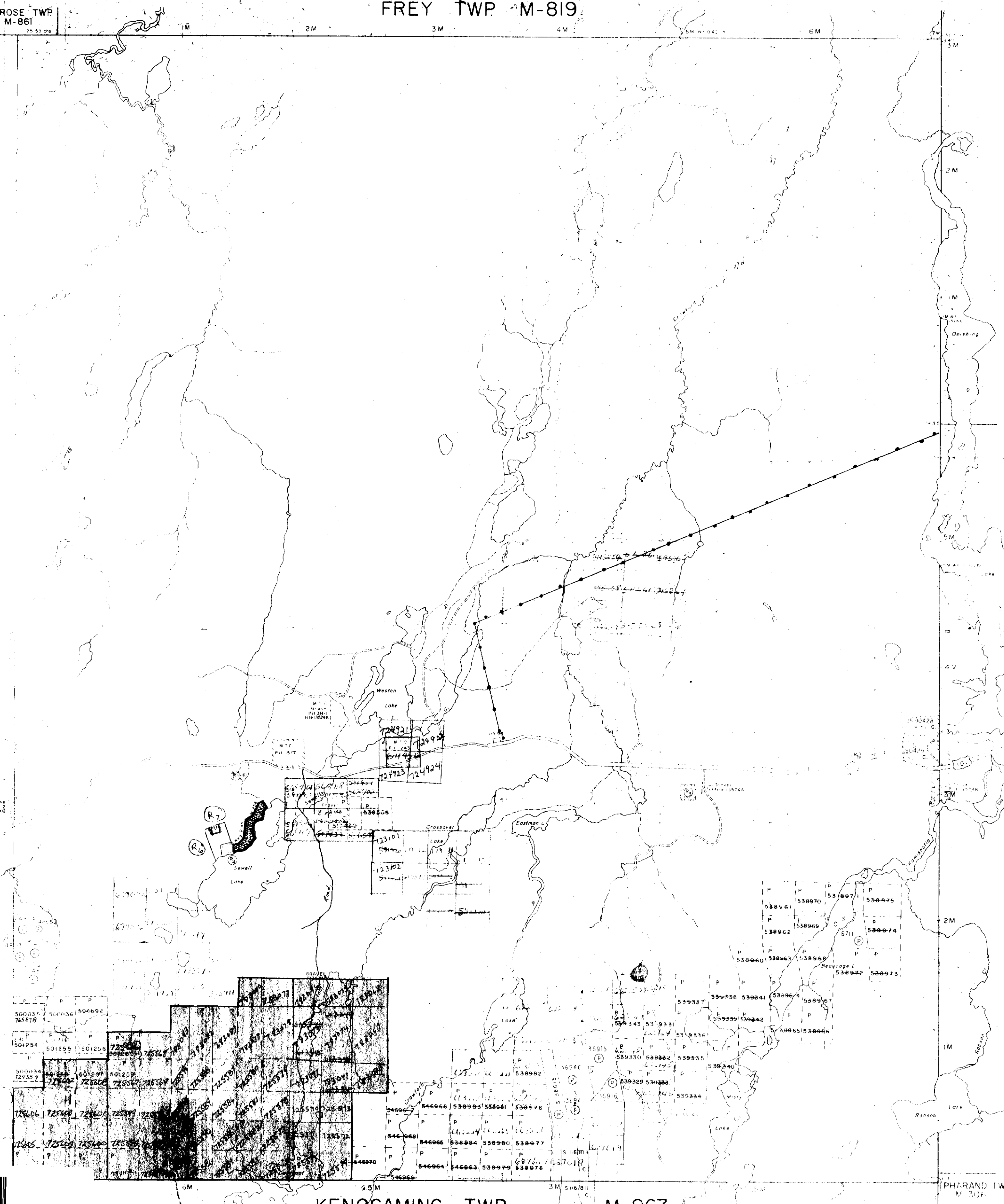
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

REEVES TWP M-1074

KEEFER TWP M-290

HILLARY TWP M-286

63 Sewell



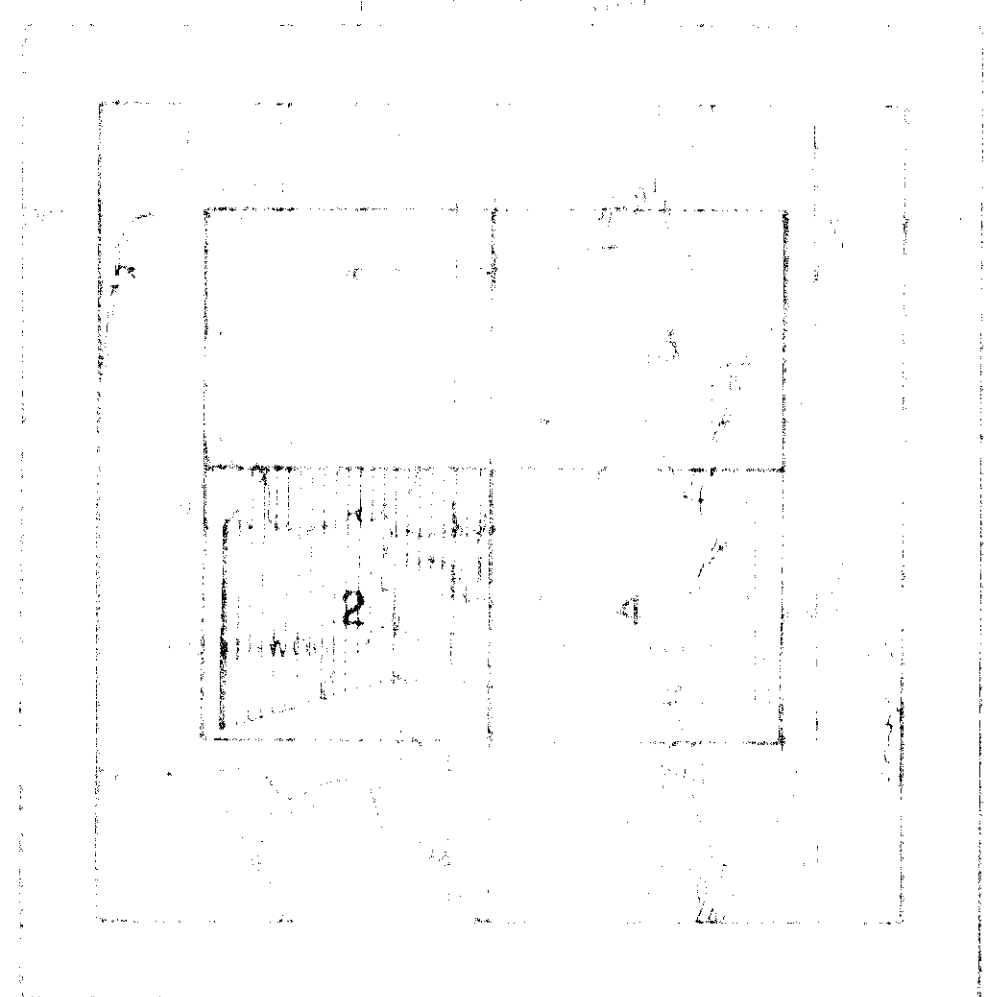
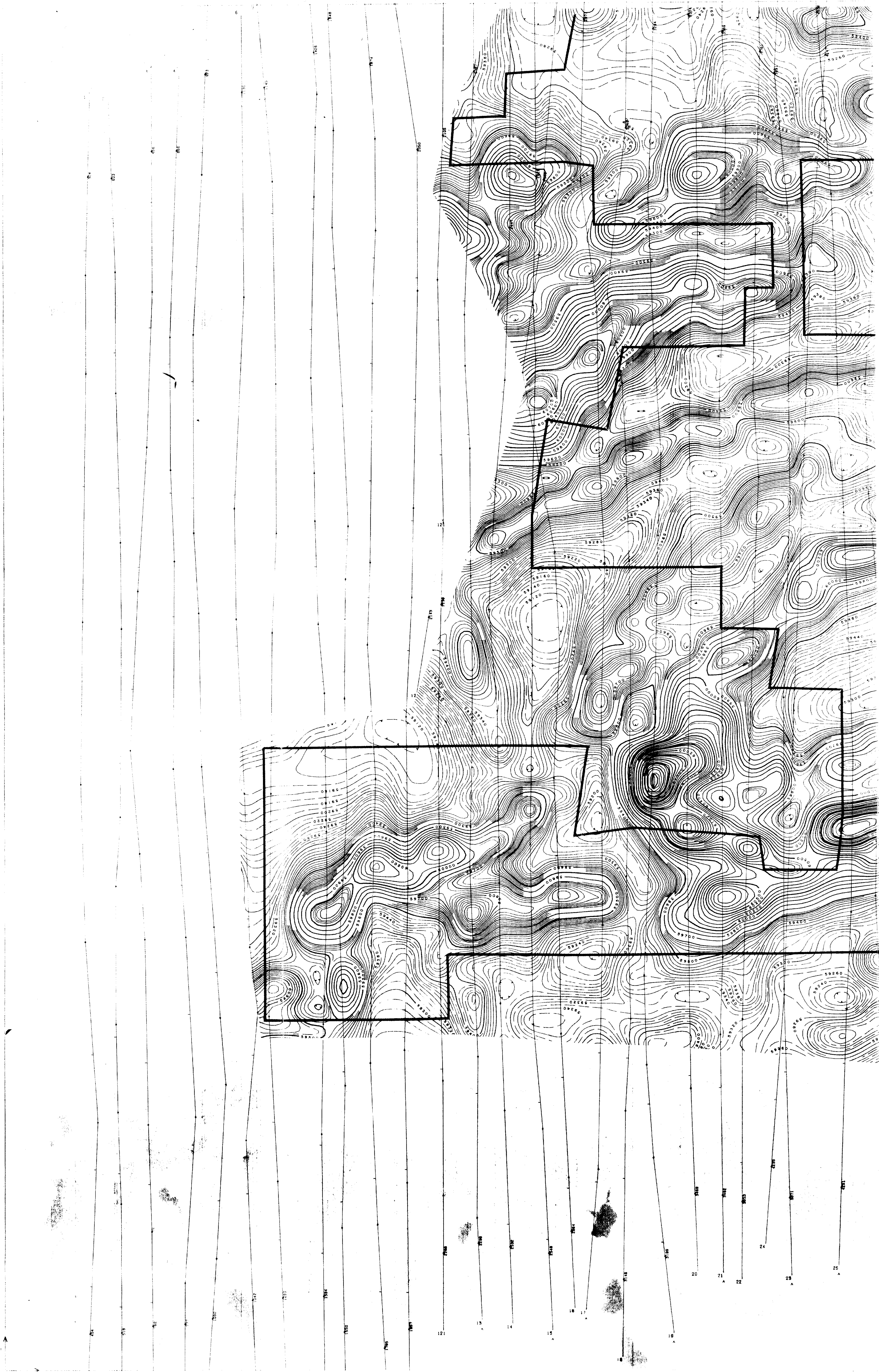


DIGHEM SURVEY

FOLEY AREA, ONTARIO
TOTAL FIELD MAGNETICS

HWS SYNDICATE

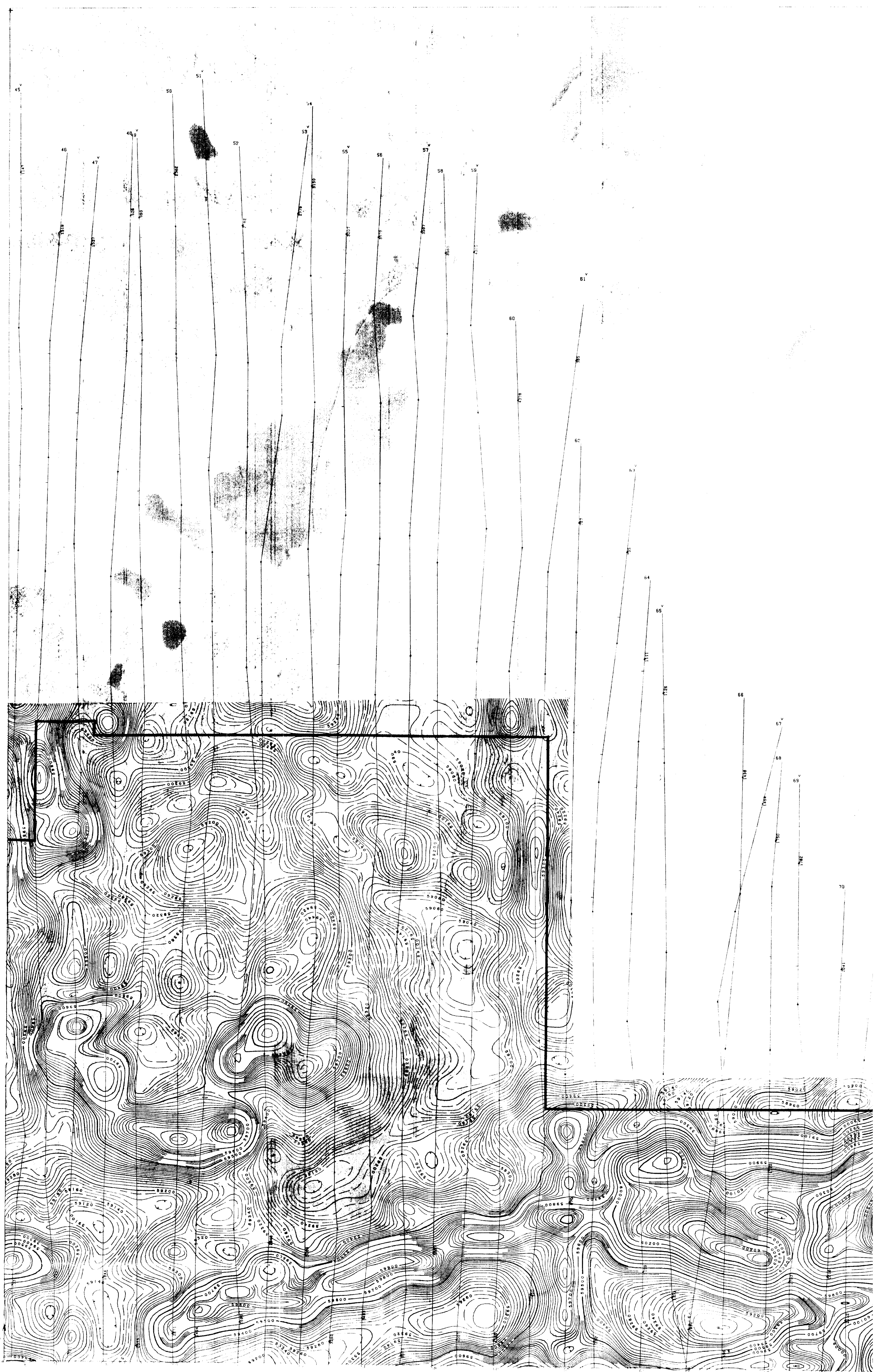




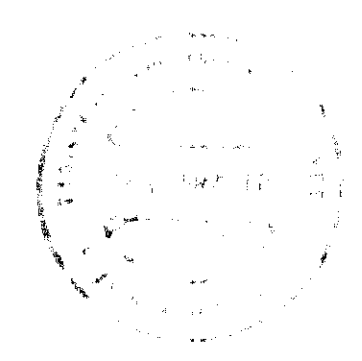
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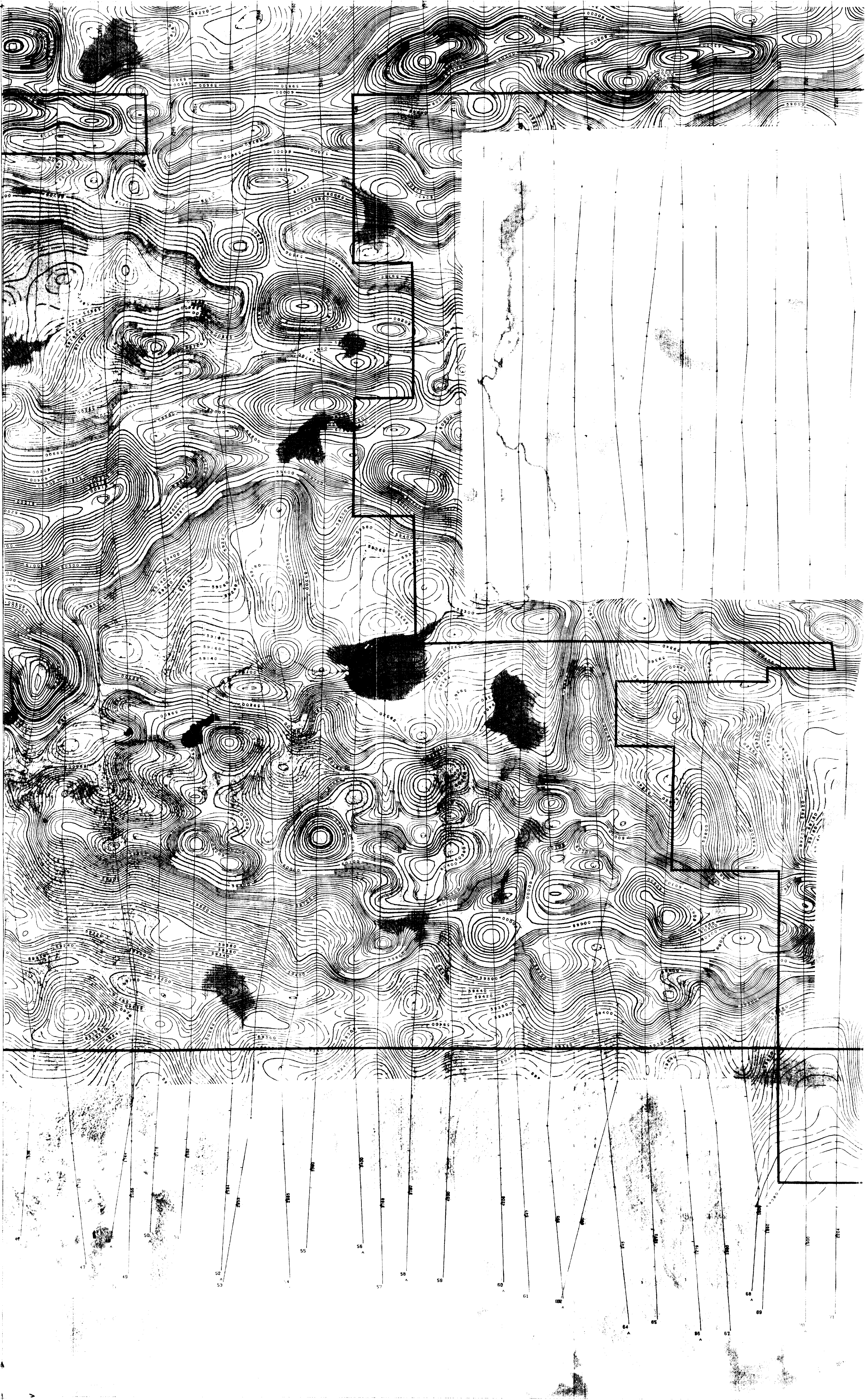
FOLEYET AREA ONTARIO
 TOTAL FIELD MAGNETICS
 FOR
 HWS SYNDICATE





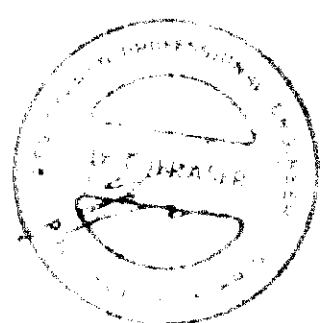
DIGHEM SULLEY
FOLLEYET AREA OF
TOTAL FIELD MAGNETIC
FOR
HWS SYNDICATE

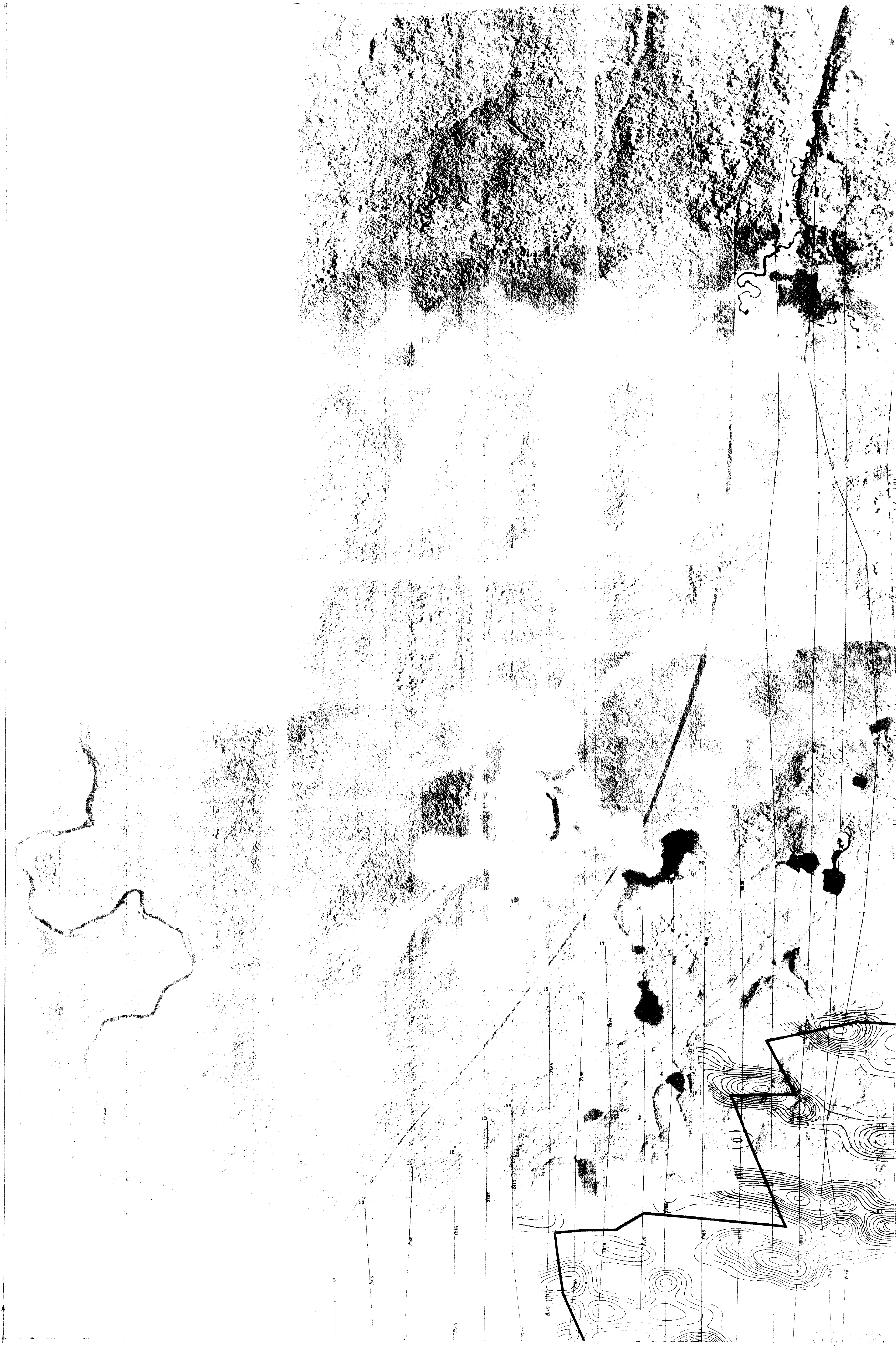




DIGHEM SURVEY

FOLEYET AREA, ONTARIO
 TOTAL FIELD MAGNETIC
 FOR
 HWS SYNDICATE



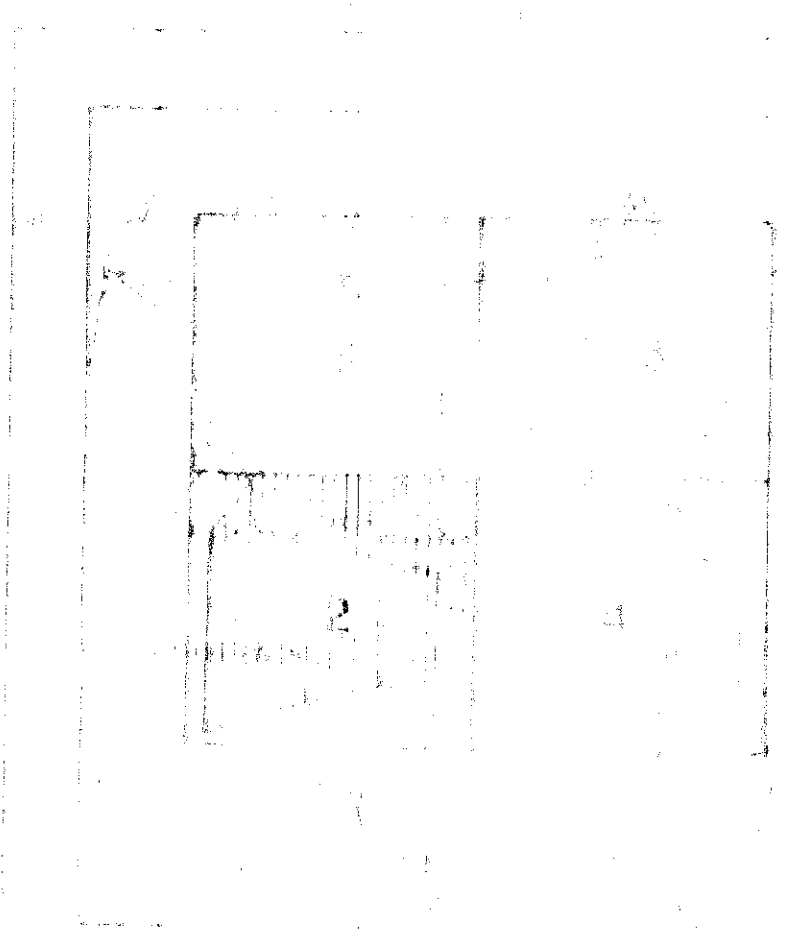
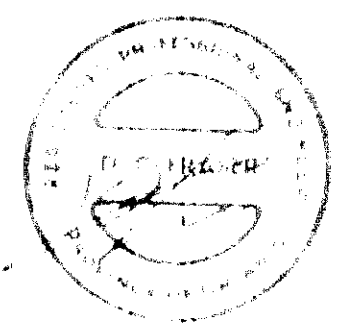


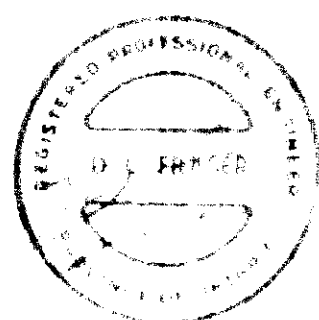
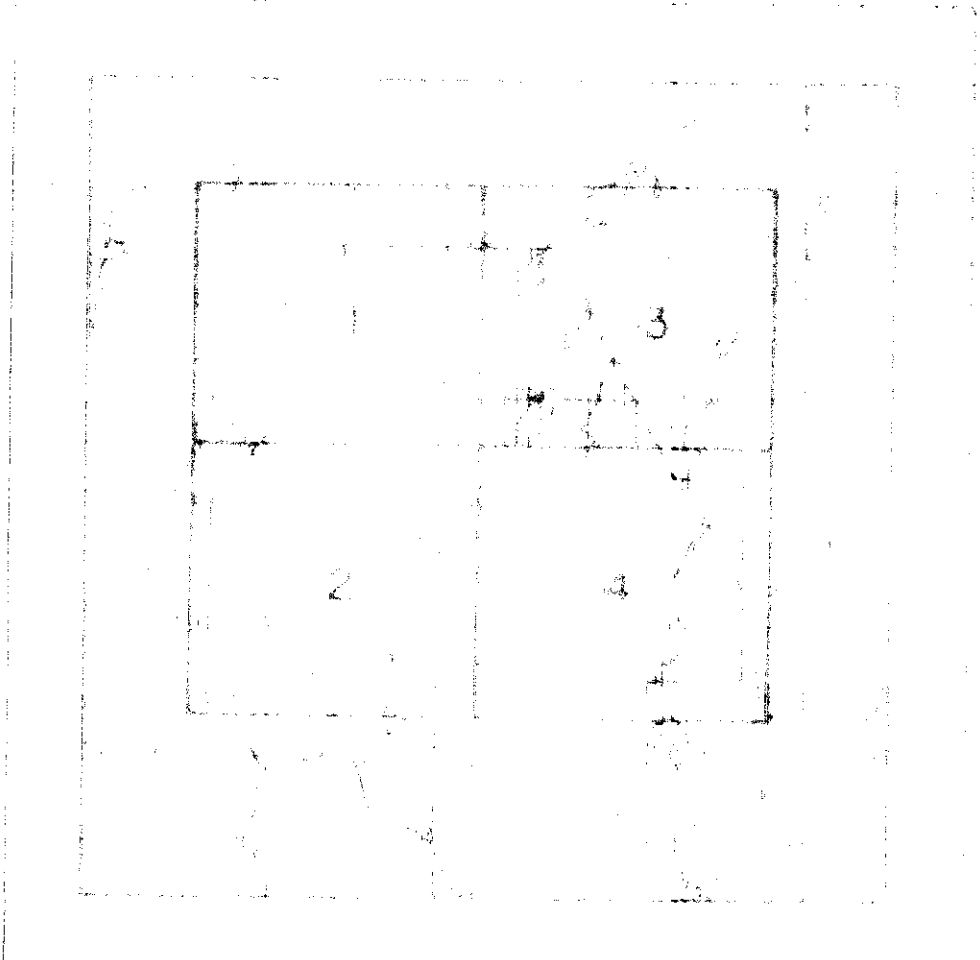
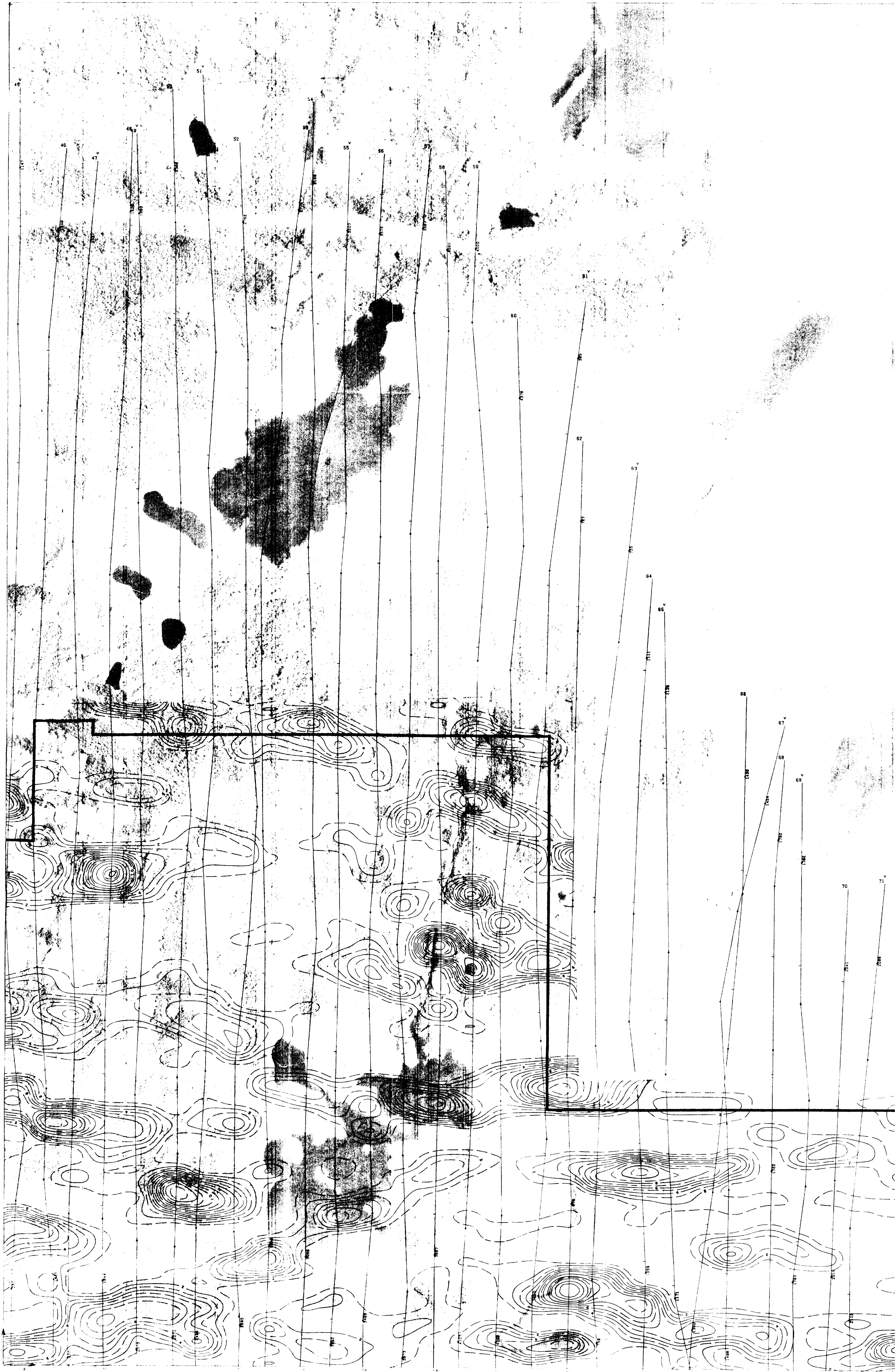
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FOLEYET AREA ONTARIO
FILTERED TOTAL VLF EM FIELD
FOR
HWS SYNDICATE





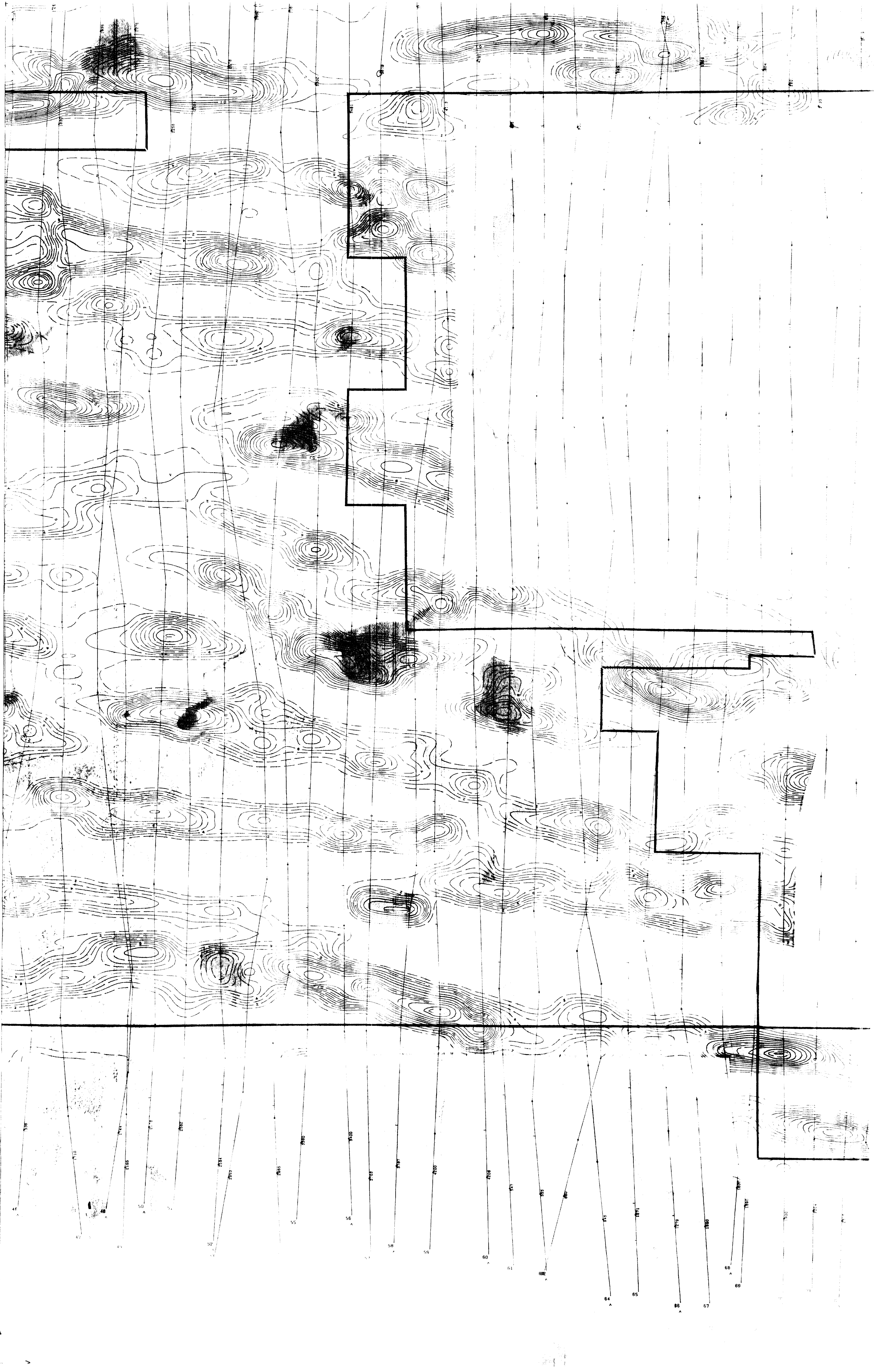
DIGHEM SURVEY
 FOLEYET AREA ONTARIO
 FILTERED TOTAL VLF EM FIEL
 FOR
 HWS SYNDICATE



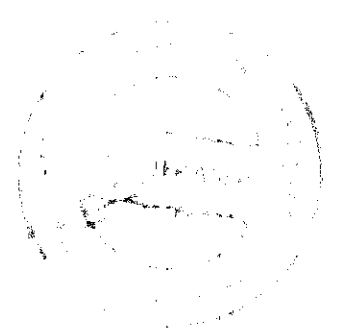


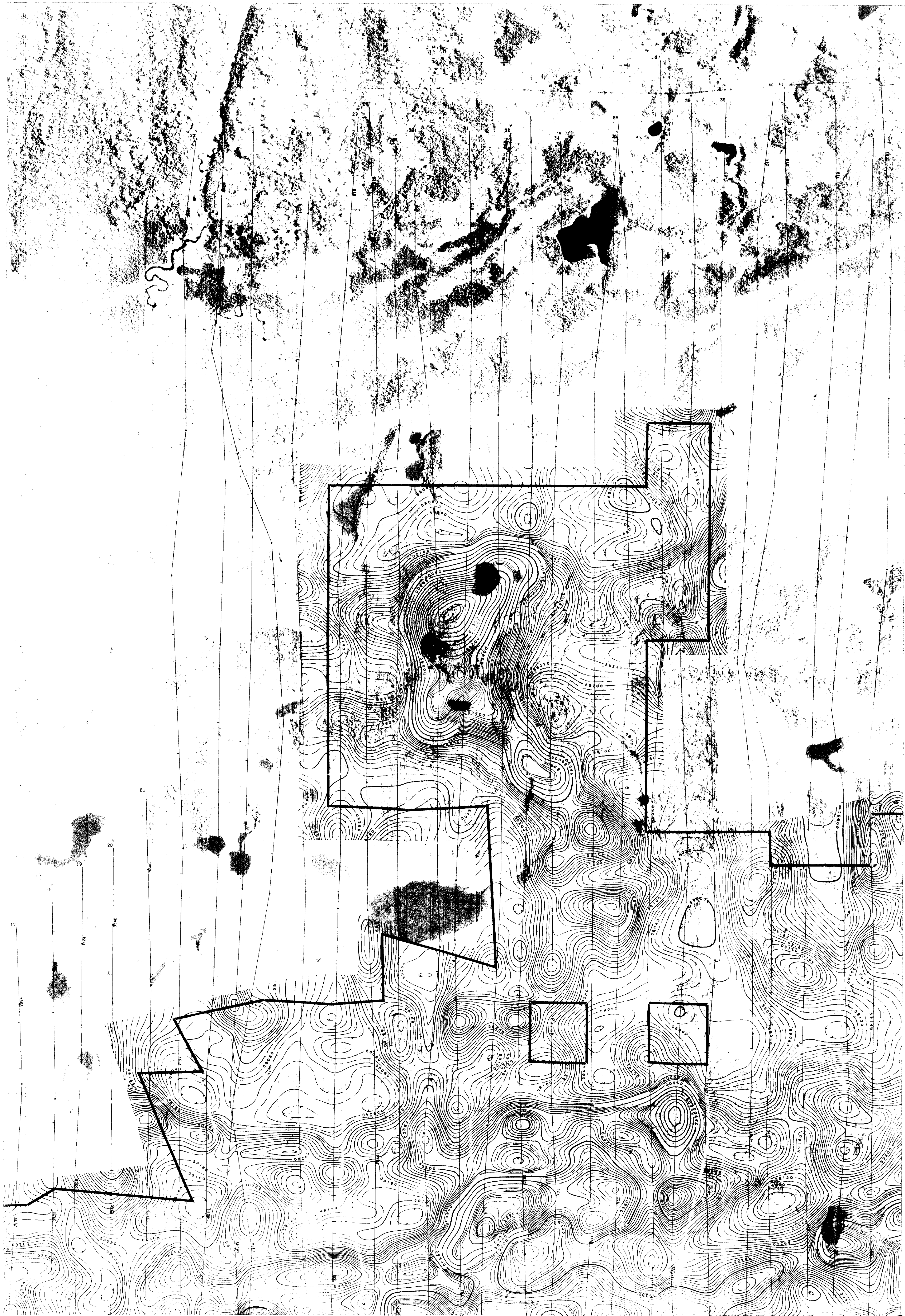
DIGHEM SUR
 FOLEYET AREA ONT
 FILTERED TOTAL VLF E
 FOR
 HWS. SYNDICATE





DIGHEM SURVEY
FOLEY AREA ONTARIO
FILTERED TOTAL VLF EM FIE
FOR
HWS SYNDICATE

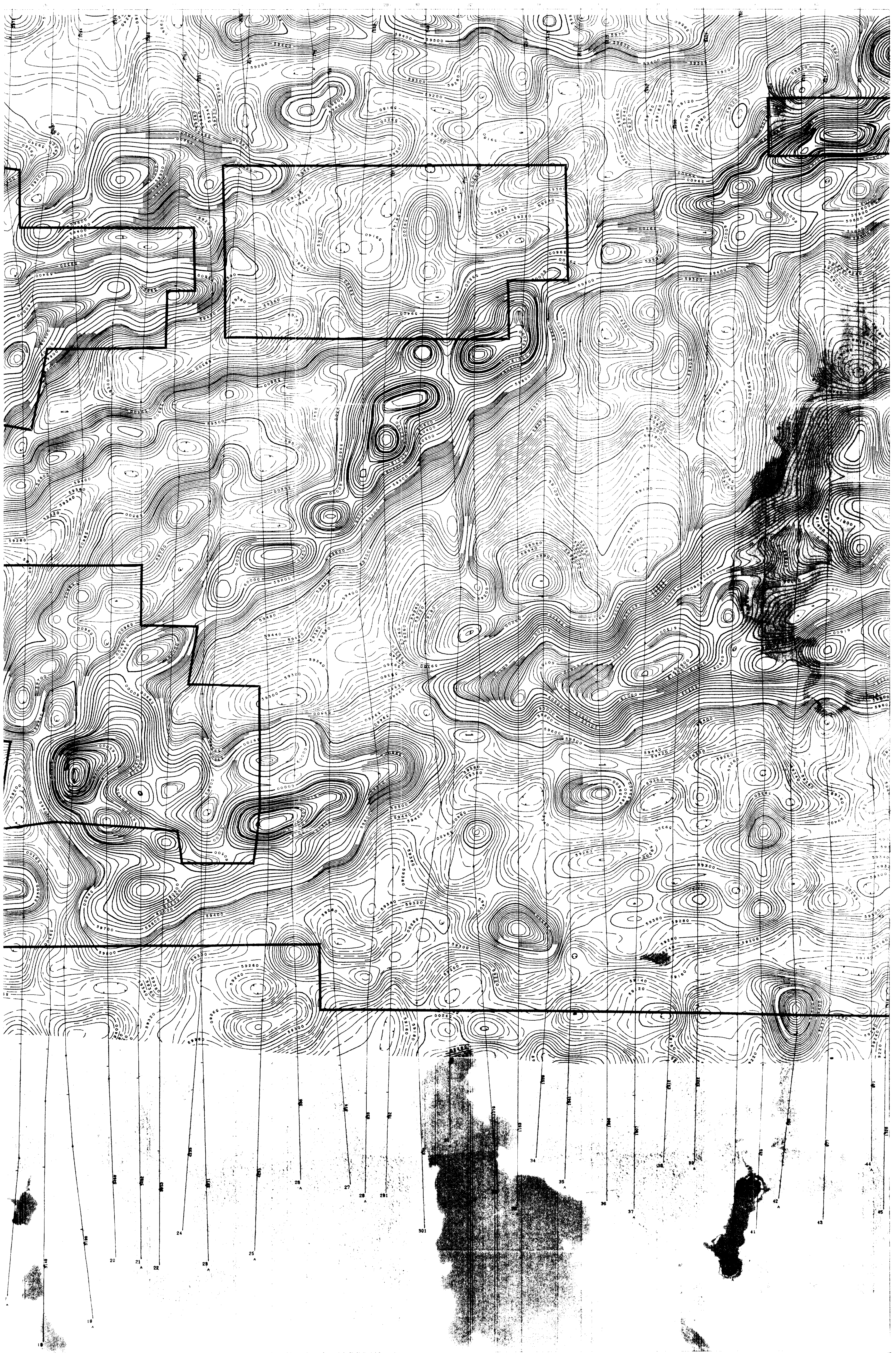




DIGHEM SURVEY

FOLEYET AREA ONTARIO
TOTAL FIELD MAGNETICS
FOR

HWS SYNDICATE



DIGHEM SURVEY

FOLEYET AREA ONTARIO

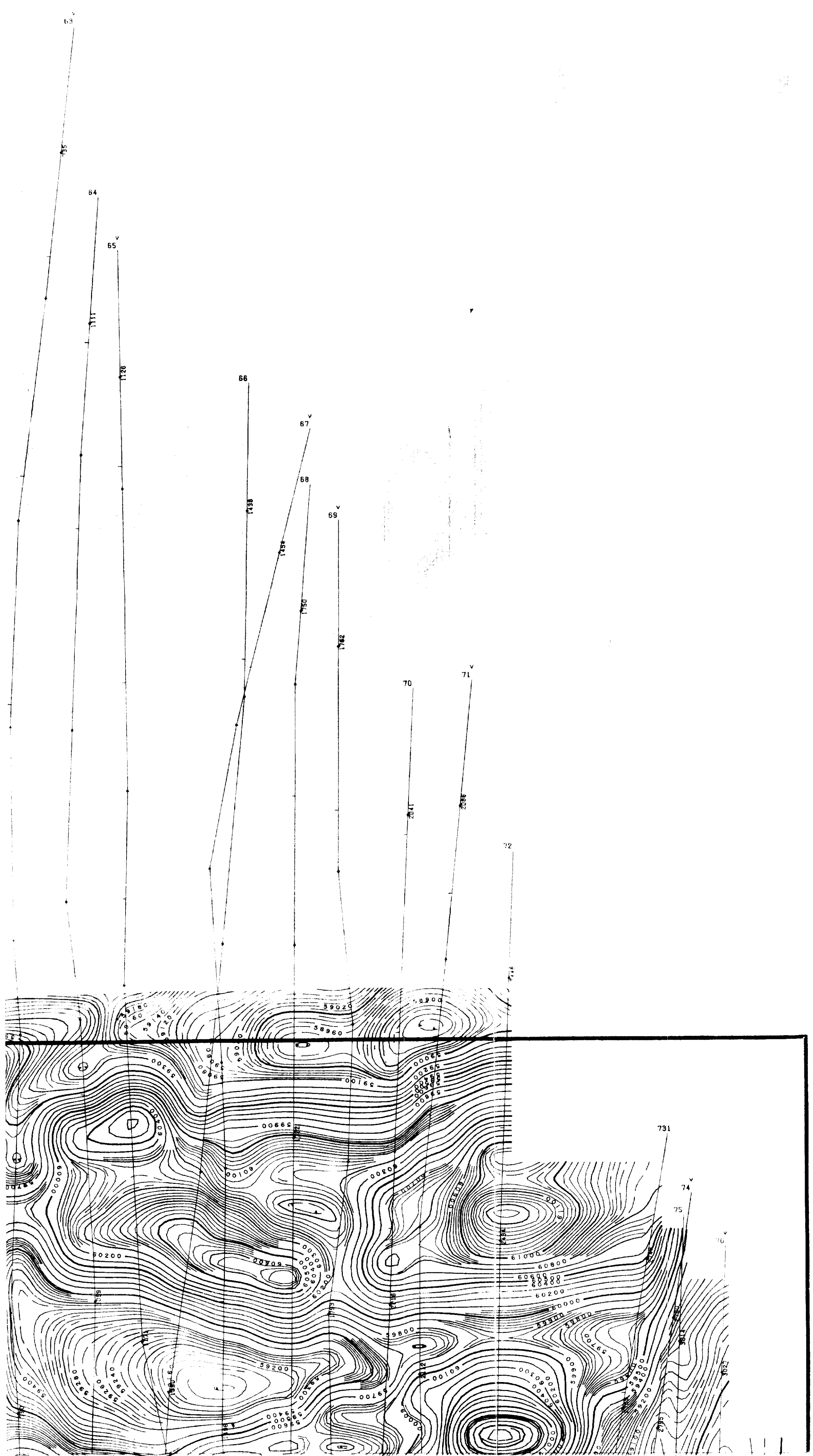
TOTAL FIELD MAGNETICS

FOR

HWS SYNDICATE

MAGNETIC LINE
1:50,000

Scale 1:50,000



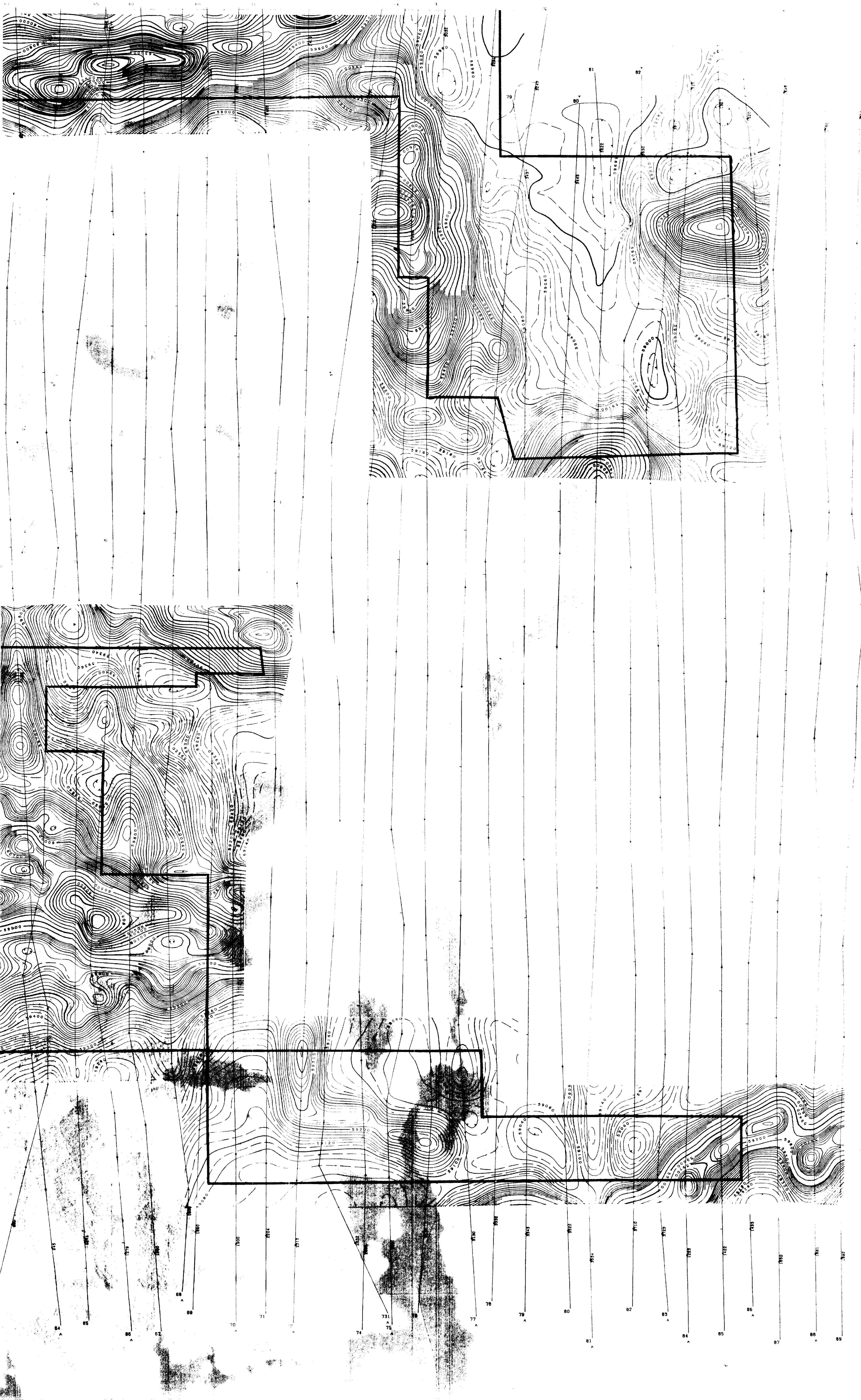
DIGHEM^{III} SURVEY

FOLEYET AREA, ONTARIO
 TOTAL FIELD MAGNETICS
 FOR
 HWS SYNDICATE

EXPLANATION OF LINES
 (LEGEND)

THIS SURVEY WAS CONDUCTED BY
 THE DIGHEM COMPANY
 IN THE MONTHS OF
 JULY AND AUGUST 1954
 UNDER THE SUPERVISION OF
 MR. J. H. DIGHEM
 AND THE ASSISTANCE OF
 MR. R. W. BROWN

SCALE 1:50,000
 SHEET 1 OF 1



DIGHEMTM SURVEY
 FOLEYET AREA, ONTARIO
 TOTAL FIELD MAGNETICS
 FOR
 H.W.S. SYNDICATE

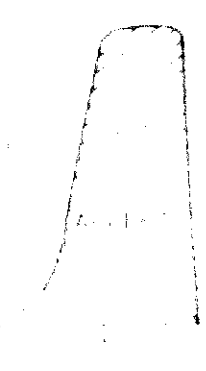
PERMANENTLY FIXED
 SHEET NUMBER

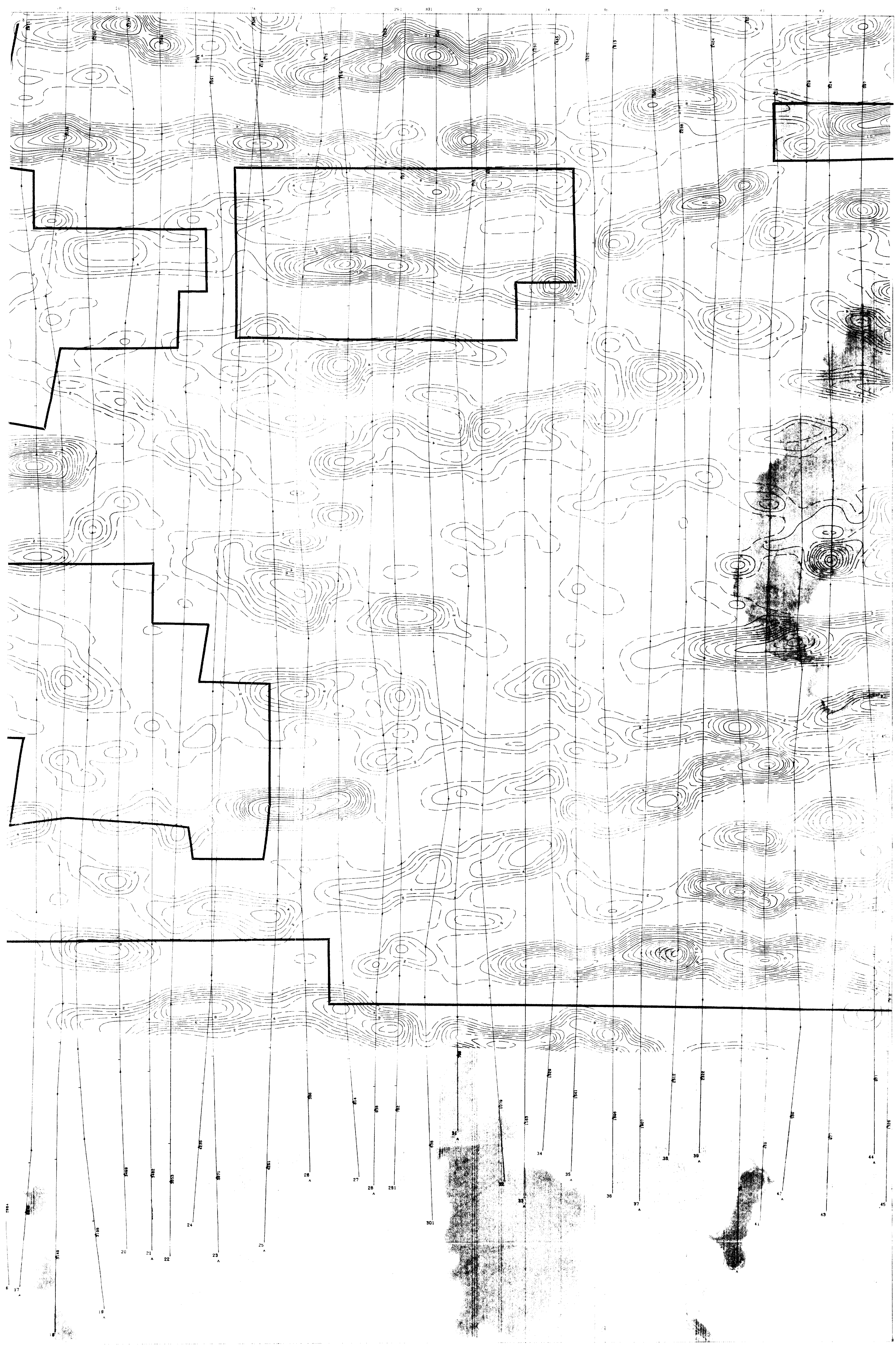


DIGHEM SURVEY

FOLEYET AREA ONTARIO
FILTERED TOTAL VLF EM FIELD
FOR

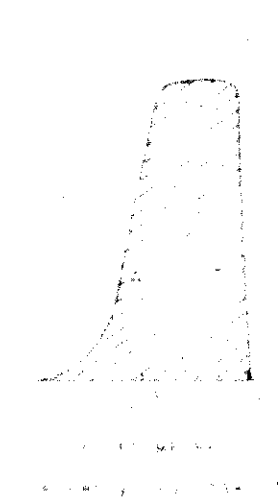
HWS SYNDICATE

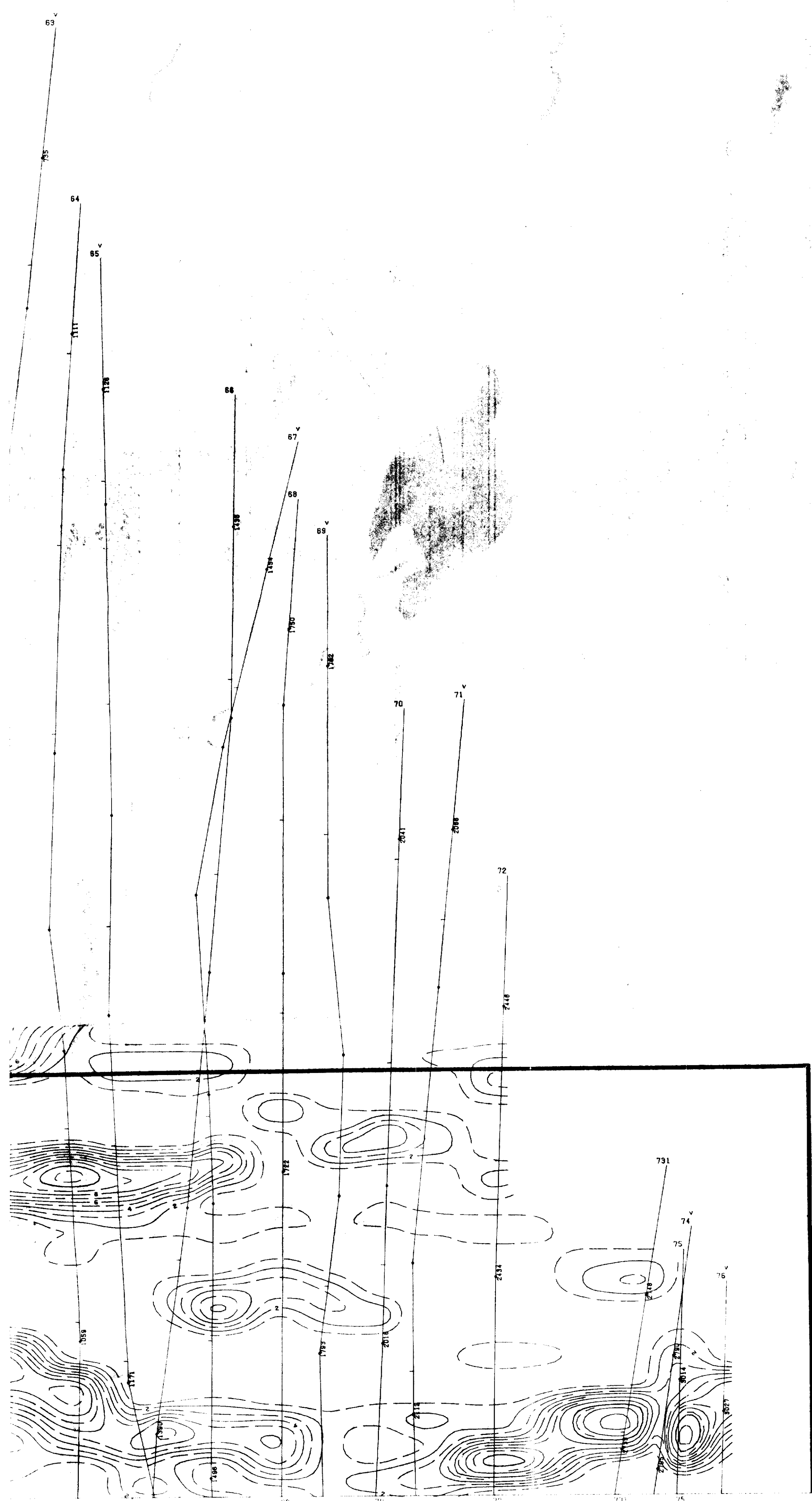




DIGHEM SURVEY

FOLEYET AREA ONTARIO
FILTERED TOTAL VLF EM FIELD
FOR
HWS SYNDICATE





DIGHEM SURVEY
 FOLEYET AREA, ONTARIO
 FILTERED TOTAL VLF EM FIELD
 FOR
 H.W.S. SYNDICATE

EXPLANATION

- 1. Contour interval 100 mV/m
- 2. Contour interval 200 mV/m
- 3. Contour interval 300 mV/m
- 4. Contour interval 400 mV/m
- 5. Contour interval 500 mV/m
- 6. Contour interval 600 mV/m
- 7. Contour interval 700 mV/m
- 8. Contour interval 800 mV/m
- 9. Contour interval 900 mV/m
- 10. Contour interval 1000 mV/m

