Kian A. Jensen
Exploration and Consulting Services

010

MAGNETIC AND ELECTROMAGNETIC SURVEYS

for

FRANK ZOEBELEIN

on the

KEEFER TOWNSHIP PROJECT

in

KEEFER TOWNSHIPS
PORCUPINE MINING DIVISION
DISTRICT OF COCHRANE
ONTARIO

by

Kian A. Jensen
Consulting Geologist/Geophysicist

February, 1987

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INTRODUCTION

During, November, 1986 to January, 1987, linecutting, a total field magnetic survey and a VLF-EM Survey were completed on the 14 contiguous unpatented mining claims of Mr. Frank Zoebelein known as the Keefer Township Property.

A total of 13.74 miles of linecutting was completed to establish a total of 725 magnetic readings and 573 VLF-EM readings. The above mention work was completed from November 19, 1986 to January 10, 1987, by personnel of Kian A. Jensen Exploration and Consulting Services under the supervision of the author. The interpretation and report was completed by the author from January 22 to February 6, 1987.

The project area is located approximately 12.5 miles (20 km) west of the junction of Highways 101 and 144. The claims cover the area west of Mosher Lake which is located in the southeastern portion of the southeast quadrant of Keefer Township, Porcupine Mining Division, District of Cochrane, Ontario.

The purpose of the geophysical surveys were to identify the lithological units, location of the major structural features, and to identify favourable areas for gold bearing mineralization. In this area, gold and silver mineralization are associated with narrow quartz veining in metavolcanic rocks, sulphide mineralization associated with the carbonate

zone within the Destor Porcupine Fault, and fractures or shear zones. Possible other sources of gold mineralization are quartz and/or feldspar porphyries and sulphide bearing iron formations near lithological contacts and structural features.

LOCATION and ACCESS

The 14 unpatented mining claims cover the area west of Mosher Lake which is located in the southeastern portion of the southeast quadrant of Keefer Township, Porcupine Mining Division, District of Cochrane, Ontario, as shown in Figure 1.

The project area is located approximately 12.5 miles (20 km) west of the junction of Highways 101 and 144. On the east side of Warren Lake, a logging road leads southwards to the claim group. Four wheel drive vehicles are required to travel the logging roads which access both the western and eastern portions of the claim group.

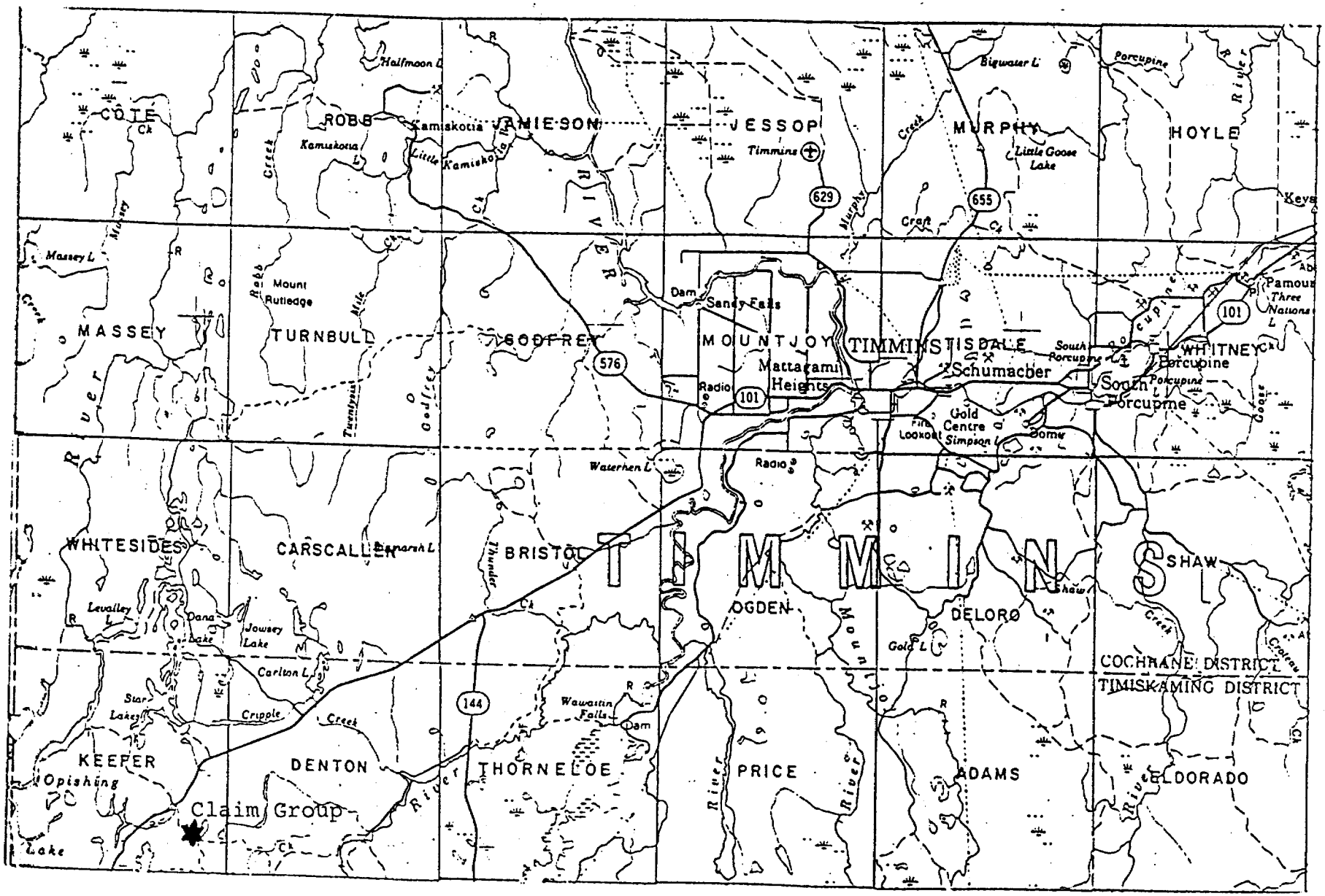


Figure 1: Location Map of F. Zoebelein Property, Keefer Township, Porcupine Mining Division, District of Cochrane, Ontario. Scale: 1 inch = 4 miles.

PROPERTY

The portion of F. Zoebelein Keefer Township property covered by this report is shown in the claim map, Figure 2, and consists of the following mining claims and recording dates:

P-833191	October 15, 1984
P-833192	October 15, 1984
P-833193	October 15, 1984
P-833194	October 15, 1984
P-833195	October 15, 1984
P-817604	July 10, 1984
P-817605	July 10, 1984
P-817607	July 10, 1984
P-817608	July 10, 1984
P-817603	July 16, 1984
P-817606	July 16, 1984
P-949074	October 14, 1986
P-947881	September 11, 1986
P-947882	September 11, 1986

F. Isalata

Frank Zoebelein

The east and a part of the south boundaries of the patent mining claim, 10928, which is adjacent to the northwest corner of the claim group, was located. The boundary of the patent claim P.22841 on the east side of Mosher Lake was not located. However, the eastern shoreline and the located claim posts were used as the property boundary.

Many different ages of claim posts were located. However, due to recent logging operations, several of the current claim posts for the porperty could not be located.

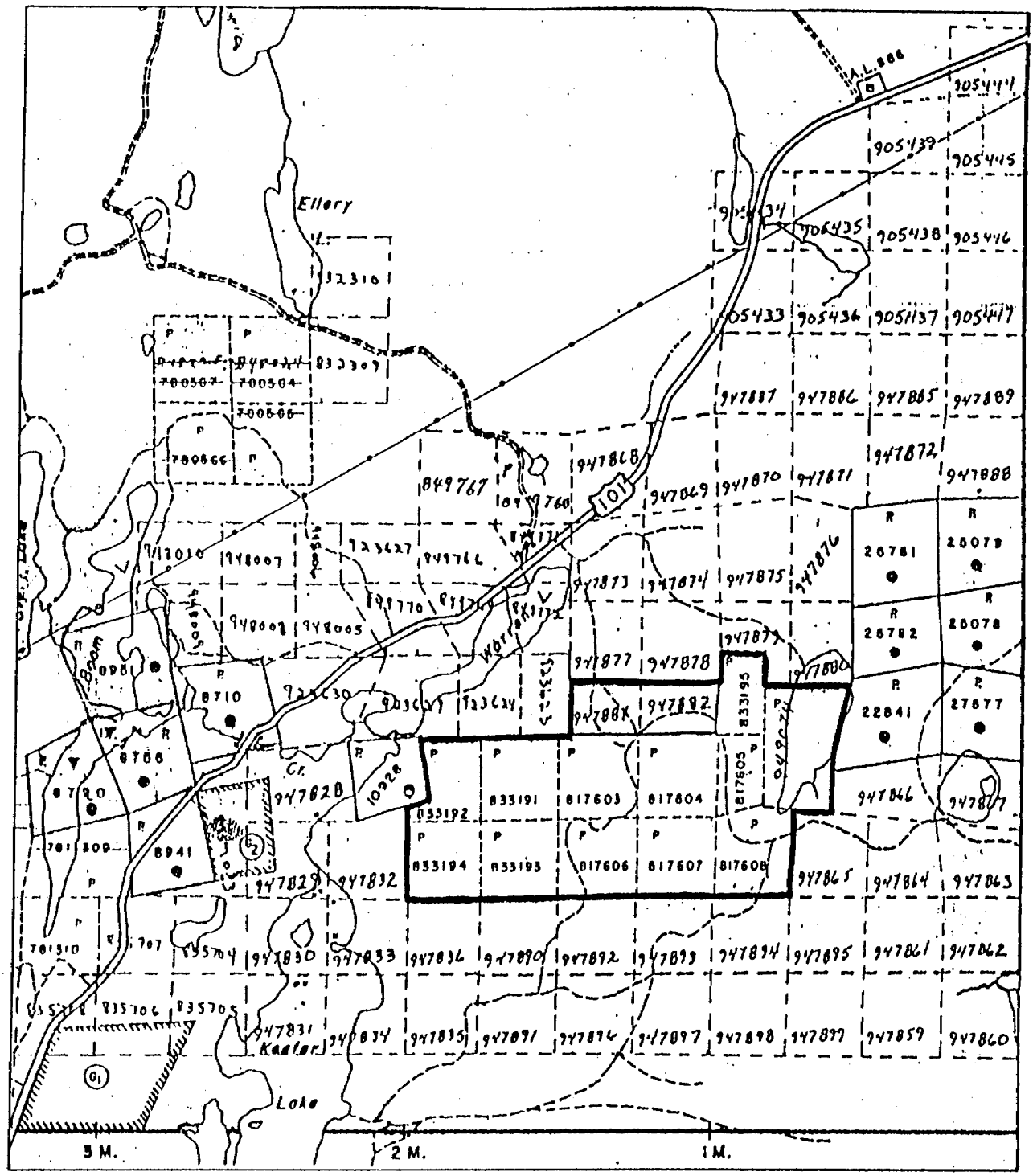


Figure 2: Claim Map and Property Location Map of F. Zoebelein Property, Keefer Township, Porcupine Mining Division, District of Cochrane, Ontario. Scale: 1 inch = ½ mile.

TOPOGRAPHY and VEGETATION

The topography of the area consists generally of low lying spruce and cedar swamps with mixed tag alders. The lowest area is occupied by a shallow lake known as Mosher Lake which is located on the eastern portion of the claim group. The drainage of the lake is to the south to southeast. A wide area around the lake is occupied by rushes and swamp grasses.

In areas of higher ground, mature spruce and poplar are the dominant vegetation. Approximately 40% to 50% of the present claim group has been logged in recent years, with minimum regeneration of local vegetation.

From information gathered from the survey and literature pretaining to the area and Keefer Township, it appears that bedrock exposure occupies less than 5% of the claim group.

GENERAL GEOLOGY

The bedrock of the area consists of Early Precambrian metavolcanic and metasedimentary rocks.

The oldest rocks consist of mafic to light green, massive to pillow flows of intermediate composition. These are succeeded by intermediate to felsic metavolcanics which include andesite, dacite and rhyolites interlayered with tuff, lappilli-tuff and tuff breccia.

The clastic metasedimentary rocks consist dominantly of greywacke, siltstone and lesser amounts of pebble conglomerates. A zone of chemical metasediments consisting of chert and magnetite and/or pyrite occurs within a siliceous metasediments. This iron formation outcrops along Highway 101 in the western portion of the township and continues eastwards to the southern portion of Mosher Lake in the eastern part of the township.

The above rocks have been intruded by later felsic intrusives which occupy approximately 80% of the township in the northern and southern parts.

Intruding all the rock units are diabase dikes of possible Middle Precambrian age.

PREVIOUS EXPLORATION ACTIVITIES

A detail description of the exploration activities and the various properties up to 1938 is given in the O.D.M. Report Volume 47, Part 4, titled "Geology of the Keefer-Eldorado Area" by W.D. Harding and L.G. Berry.

In the early 1930's, three properties existed all within the southern portion of the township, fromwest to east, namely; the Moore claims containing gold bearing quartz veins, the Sam Reid property, and the Simpson-Marcot property.

During the early 1960's, Hollinger Consolidated Gold Mines Limited explored the Moore property with negative results.

The same company conducted geophysical surveys in 1964 and 1965 near Star Lake for the source of copper-nickel float.

The Galata brothers held several properties from 1964 to 1972 in the southeast quarter of the township. In 1964, PCE Exploration Limited diamond drilled the iron formation south of Mosher Lake.

The southcentral Galata property was explored by Jessie James Mines Limited, however the recommended diamond drilling was not conducted.

During 1971, Texas Gulf Sulphur Company Incorporated and Conwest Exploration Company Limited were joint venture partners on the Galata properties. They conducted an airborne survey which indicated a weak anomaly on the northwestern side of Mosher Lake. No further work was done.

During the years and in more recent times, F. Galata has preformed several stripping and trenching operations in several areas of the present claim group.

GEOPHYSICAL SURVEY

INTRODUCTION:

The linecutting was conducted by Kian A. Jensen Exploration and Consulting Services of Timmins, Ontario, from November 19 to December 1, 1986. The lake portion was done on December 14 and 15, 1987. The east-west baseline extends from 39+00 West to 36+00 East. Line 0 was established approximately 100 feet east and 650 feet south of post 1 of P-947881. The south tie line was established at 20+00 South on the west side of Line 0 and at 19+00 South on the east side of Line 0. The offset was due to the irregular angle of the southern claim boundary. A total of 13.74 line miles of grid was established with line separations every 400 feet and picketed at 100 foot intervals.

On completion of the linecutting, J. Penttinen conducted a total field magnetic survey utilizing a Geometrics G-816 proton procession magnetometer. The survey was done from December 6 to 16, 1986. Data reduction and drafting was completed by the author and M. Guindon by January 17, 1987.

In conjunction with the above survey, Mark Guindon conducted a VLF-EM survey utilizing Phoenix VLF-2 unit. The transmitter station used throughout the survey was Cutler, Maine. The data was collected from December 6, 1986 to January 10, 1987.

The data reductions, Fraser Filtering and the drafting was completed by Mark Guindon and the author from January 12 to 20, 1987.

The data from the magnetic and VLF-EM surveys are presented on base maps with a scale of 1:2400 or 1 inch to 200 feet.

The interpretation and the report were done by the author from January 22 to February 6, 1987.

MAGNETIC SURVEY:

The magnetic base station was established on the base line at 12+00 West with an averaged value of 58,955 gammas. The base line and tie lines were surveyed at intervals of 100 feet in a looping fashion to establish accurate control stations for each grid line at the base line and the intersections with the tie lines. Upon completion of this phase of the survey, the grid lines were surveyed at 100 foot intervals. A total of 725 magnetic readings were established.

The data was corrected for the daily drift and the tie-ins with the control stations. A base level of 58,000 gammas has been removed from all the obsevered readings.

The data was contoured wherever possible, at 100 gamma intervals as shown in Figure 3.

VLF-EM SURVEY:

The transmitter station used throughout the survey was Cutler, Maine, with a transmitting power of 24.0 kHz. A total of 573 readings were established on the north-south lines.

The base station and calibration station for the survey was located on the base line at 12+00 West with a Horizontal Field Strength (HFS) value for Cutler, Maine of 190%. The base lines and tie lines were surveyed in a looping fashion. This data was corrected for the drift of the HFS to provide accurate tie in points for the survey of the grid lines. The data collected was corrected for daily fluctuations and half transmitting power of the HFS.

The VLF-EM unit was rotated in the direction of the transmitting station to obtain the maximum reading on the HFS which was recorded. Upon completion, the unit was rotated counter clockwise to face in an easterly direction until a null in the HFS is located. The unit was then lifted vertically and tilted to obtain the maximum dip value which was recorded. The Crone convension was utilized in the recording of the dip values.

The VLF-EM data is presented in profile form for the dip values on the base map as shown in Figure 4. The dip and the HFS values are plotted on the left and right side of the grid

lines, respectively. The left side of the grid line is positive and the right side is negative for the plotting of the dip profile lines. The values of the HFS have been corrected for the both tie-ins. The plotting scale is 1 inch to 20 degrees.

To assist in the interpretation of the VLF-EM data, a low pass filter was used on the dip values, known as Fraser Filtering. The filtering rotates the positive peak to be positioned over the conductor. Also, it will attenuate the near surface conductors resulting in higher positive values while deeper conductors will appear as low positive values. The results are contoured at an interval of +10 units wherever possible as shown in Figure 5.

INTERPRETATION:

The main high magnetic units within the claim group are associated with two segments of an iron formation located in the southern portion of the property. The magnetic range for the iron formation is from 60,000 to 64,000+ gammas. This unit trends near eastwards east of Line 4+00 West and between North 75 to 80 degrees West west of Line 4+00 West.

Due to the high magnetic response and poor to none existing EM response, the iron formation is probably composed of magnetite with minimum amounts of sulphides and graphite.

This unit is suspected to be displaced by at least three faults and by at least three diabase dikes. The faults are located at 19+00 South on Line 40+00 West, between 1+00 and 2+00 East on the Baseline, and between Lines 20+00 and 24+00 East; trending northeast, north-northeast and north respectfully.

The next high magnetic anomalies are probably related to the more magnetic rich diabase dikes and the quartz diabase dikes. The relationship between these two types of diabase dikes are uncertain. However, both types cut all the lithological units and generally trend in a northerly to north-northwesterly direction. The magnetic signature of the dikes are represented by small, isolated, moderate to high magnetic "bulls eye" anomalies.

The diabase dikes are located as follows:

1) Line 32+00 West at 20+00 South to Line 36+00 West from 1+00 to 5+00 South,
2) Tie Line 20+00 South at 17+00 East to the Baseline at 12+00 East,
3) and parallel to Line 0.

The third magnetic anomaly is located in the northwestern corner of the property and is suspected to be related to a late stage gabbroic intrusive.

Several short strike length magnetic anomalies were detected thoughout the claim group and may represent either narrow diabase dikelets from the main dikes or a fold axis of a more magnetic mafic metavolcanic sequence.

The contact between the granitic body to the south and the metasediments and felsic metavolcanics to the north, appears to be near the southern boundary of the property. However, additional survey information is required to establish this contact.

There appears to be little to no magnetic difference between the different units of the felsic to intermediate metavolcanics and the clastic metasediments.

The VLF-EM survey located 14 anomalies within the claim group. The anomalies are described as follows:

1) Line 4+00 East to Line 24+00 East at 6+00 North - this anomaly appears to be related to a magnetic low east-west trending anomaly. The amplitude and strength indicates a near surface, weak conductor probably related to a lithological contact. This anomaly is probably similar to the airborne conductor previously indicated.

2) Line 12+00 West to Line 28+00 East at 13+00 South - this moderate to strong, near surface anomaly is probably related to sulphide mineralization in either the chemical metasediments or the felsic metavolcanics. This conductor

is approximately 300 to 500 feet north of the strong magnetic anomaly attributed to the magnetic rich iron formation.

3) Line 8+00 West to Line 20+00 West at 18 South to 23 South - this moderate anomaly is probably related to a more conductive section of an east-northeast trending shear zone or contact.

4) Line 32+00 West to Line 40+00 West at 9 South to 14 South - this moderate anomaly is probably related to a east-north east trending shear or fault zone cutting the iron formation and the suspected north-northwest trending diabase dike.

5) Line 28+00 West to Line 36+00 West at the Baseline - this anomaly may be related to the north contact of the suspected gabbro intrusive and the diabase dike.

The remainder of the 14 anomalies are very short in strike length and generally weak. These are suspected to be related to either topographic conditions, the overburden, or concentrations of sulphides at or near lithological contacts.

CONCLUSIONS

The results of the geophysical surveys on the Keefer Township property provided information of the lithological units, structural features and EM anomalies which require additional investigation.

The magnetic differences between the metasedimentary and metavolcanic units appear to be very small which may indicate a similar origin, and the metasediments are probably water lain volcanic tuffs and pyroclastics of felsic to intermediate composition.

The iron formation in the southern portion of the property appears to be relatively continuous with the exceptions of the spaces occupied by the northerly trending diabase dikes. The composition of this chemical metasediment is chert and magnetic with little sulphide mineralization due to the lack of a defined EM anomaly.

The location and characteristics of the diabase dikes traversing the property was difficult due to the orientation of the grid survey lines with respect to the trend of the dikes.

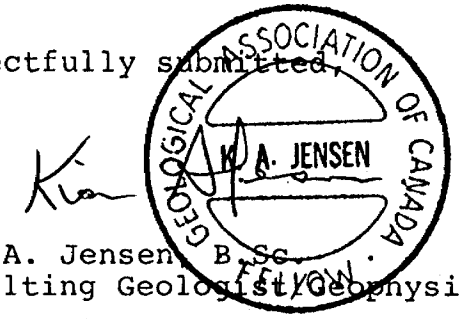
A narrow wedge of mafic metavolcanic is suspected to exist near the eastern shore of Mosher Lake approximately 800 feet north of the magnetic iron formation.

Several north-northwest to northeast trending fault zones traverse the property. The displacement of the faults are relatively small with the larges displacement in the order of approximately 200 feet. Any faulting or shearing parallel to the strike of the lithological units is difficult to detect.

The two major VLF-EM anomalies located at the north and south ends of the western side of Mosher Lake appear to be the most promising geophysical targets within the claim group and requires additional follow-up work.

The magnetic lows which are not associated with areas of high magnetic activity may represent zones of either carbonatization or silicification and warrants further investigation.

Respectfully submitted,



Kian A. Jensen, B.Sc.
Consulting Geologist/Geophysicist

RECOMMENDATIONS

Based upon the information available to the author and the results of the geophysical surveys covered by this report it is recommended that the following work be conducted:

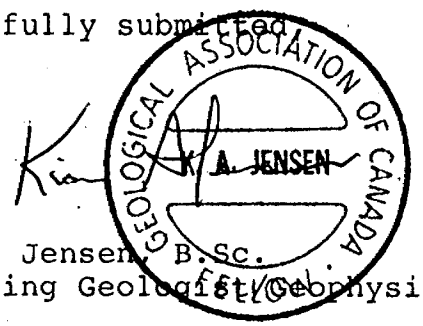
1) Geologically map the property with emphasis in the vicinty of all VLF-EM anomalies; a) noting the persentage of sulphide mineralization and magnetic content, b) indications of folding and shearing or faulting, c) the degree of alteration and the types,

2) Local trenching and/or stripping may be warranted near the anomalies which have thin overburden cover,

3) Identify the distribution and type of Pleistocene deposits for a possible overburden reverse circulation drilling program,

4) A limited diamond drilling program on the more favourable areas as defined by the correlation of the present geophysical surveys and the results of the above recommendations.

Respectfully submitted,



Kian A. Jensen, B.Sc.
Consulting Geologist/Geophysicist

February 6, 1987
Timmins, Ontario

Kian A. Jensen
Exploration and Consulting Services

CERTIFICATE

With reference to my report on the Magnetic and Electromagnetic Surveys Report for Frank Zoebelein Dated February 6, 1987 .....

I, Kian A. Jensen, of the City of Timmins, Ontario, do hereby certify the following to be true and accurate to the best of my knowledge:

1) That I received an Honour B.Sc. degree in Earth Science, Geology Major from the University of Waterloo in 1975,

2) That I have been employed as a geologist and/or geophysicist by various exploration companies and consulting companies since 1978,

3) That I have been and still am a member in good standing in the following associations:

a) Society of Exploration Geophysicist - Associate, 1981
b) Geological Association of Canada - Fellow, 1983

4) That I am the author of the corresponding report, and have been actively exploring and prospecting in the Timmins area since 1981,

5) That I have no interest direct or indirect in the mining claims comprising the property described in this report or in the shares of any company or companies in this joint venture on this property or the surrrounding properties, nor do I expect to receive any directly or indirectly.

Dated this 6th day of February, 1987
Timmins, Ontario.

GEOLOGICAL ASSOCIATION OF CANADA
K.A. JENSEN
FELLOW

Kian A. Jensen, B.Sc.
Consulting Geologist/Geophysicist

1.0 GENERAL INFORMATION

1.1 INTRODUCTION

The Model G-826 Portable Proton Mangetometer is a complete system designed for man-carry field applications requiring simple operation and stable measurements of the total intensity of the earth's magnetic field. The G-826 is accurate and has a sensitivity of ±1 gamma over a range from 20,000 to 90,000 gammas. Since the instrument measures total field intensity, the accuracy of each measurement is not affected by sensor orientation. The inherent simplicity of the G-826 proton magnetometer allows rapid, accurate measurements to be obtained from a rugged, compact field instrument. This is a precision instrument and reasonable attention must be given to handling, battery condition, and magnetic environment.

1.2 MAGNETIC ENVIRONMENT

It is important that the earth's magnetic field is not perturbed by allowing unwanted magnetic objects to come close to the sensor. Such objects include rings, keys, watches, belt buckles, pocket knives, metal pencils, zippers, etc. When the sensor is used on the staff, one gamma surveys are easily performed provided the sensor is kept at a distance of three feet from the operator. When the sensor is used in the backpack, certain articles of clothing and some types of batteries within the console will cause a five to ten gamma heading error in the readings. The G-826, however, still provides one gamma sensitivity and repeatability despite the presence of such a base line shift. The backpack feature is recommended for use in difficult terrain where "hands free" operation is required.

Prior to survey use, objects that are suspected to be magnetic may be checked in the following manner:

1. Attach sensor to staff and connect coiled signal cable to console. Sensor should not be moved or turned during the test, and the suspected article should be far away initially.

2. Cycle the magnetometer a few times by depressing the READ button--releasing--and waiting for a reading each cycle.

3. Observe measurement readings. Each reading should repeat to ±1 gamma. (A slow shift may occur over several minutes due to a diurnal change in the earth's field.)

4. Place the suspected article at the distance from the sensor expected during actual survey operation.

5. Cycle magnetometer several times and note the readings.

6. Remove the article and repeat steps 2 and 3 to check for diurnal shifts in the earth's field. If a diurnal shift is present, repeat entire test.

7. If the readings obtained in step 5 differ by more than ±1 gamma (± one count) from those obtained in steps 3 and 6, then the article is magnetic.

IF THE ARTICLE IS HIGHLY MAGNETIC, OR IF THE SENSOR IS INSIDE OR NEAR A BUILDING OR VEHICLE, THE PROTON PRECESSION SIGNAL WILL BE LOST, GIVING COMPLETELY ERRATIC READINGS AND LOSS OF ± 1 COUNT REPEATABILITY.

The magnetometer should not be operated in areas that are known sources of radio frequency energy, power line noise (transformers), in buildings or near highly magnetic objects. The sensor should always be placed on the staff above the ground, or in the "backpack." The sensor will NOT operate properly when placed directly on the ground.

1.3 SPECIFICATIONS

Sensitivity:	±1 gamma throughout range
Range:	20,000 to 90,000 gammas (worldwide)
Tuning:	Multi-position switch with signal amplitude indicator light on display
Gradient Tolerance:	Exceeds 800 gammas/feet

Sampling Rate:	Manual push button, one reading each six seconds.
Output:	Five digit numeric display with readout directly in gammas.
Power Requirements:	Twelve 1.5 volt "D" cell universally available flashlight-type batteries. Charge state or replacement signified by flashing indicator light on display.
Temperature Range:	Console and sensor: -40° to +85° C.
	Battery pack: 0° to +50° C (limited use to -15° C; lower temperature battery belt operation — optional).
Accuracy (Total Field):	±1 gamma through 0° to +50° C temperature range.
Sensor:	High signal, noise cancelling, mounted on staff or attached to backpack.
Size:	Console: 3.5 x 7 x 11 inches (9 x 18 x 28 cm) Sensor: 3.5 x 5 inches (9 x 13 cm) Staff: 1 inch diameter x 8 ft. length (3 cm x 2.5m)

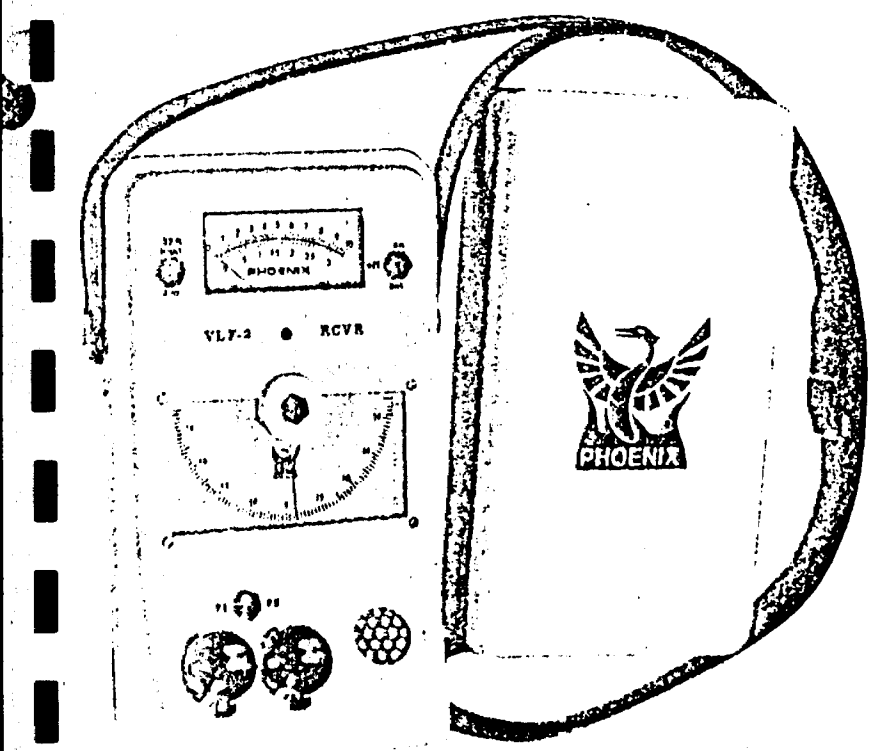
Weight:

	Lbs.	Kgs.
Console (w/batteries):	5.5	2.5
Sensor and signal cable:	4	1.8
Aluminum staff:	2	.9
	11.5	5.2

VLF-2

Electromagnetic Unit

- Lightweight, low battery drain, rugged, simple to operate
- Two independent channels
- Each channel may select any station between 14.0 and 29.9 kHz
- Single crystal used for all frequencies
- Locking clinometer provides tilt-angle memory
- Superheterodyne detection and digital filtering provide extremely high selectivity and noise rejection



Military and time standard VLF transmitters are distributed over the world. These stations are used for geophysical EM surveying thus eliminating the need for a local transmitter and permitting one-man operation.

To ensure that a station excites the prospective conductor, two stations at approximately right angles are used during a survey (see data on back).

The choice of 160 frequencies in the range 14.0 to 29.9 kHz permits the use of a local EM transmitter when no suitable regular VLF station is available.

PHOENIX GEOPHYSICS LIMITED

Geophysical Consulting and Contracting, Instrument Manufacture, Sale and Lease.

Head Office: 200 Yorkland Blvd. Willowdale, Ont., Canada M2J 1R5. Tel: (416) 493-6350
310 - 885 Dunsmuir St. Vancouver, B.C., Canada V6C 1N5. Tel: (604) 684-2285
4690 Ironton St. Denver, Colorado, U.S.A. 80239. Tel: (303) 373-0332

Specifications

Parameters Measured	:	Orientation and magnitude of the major and minor axes of the ellipse of polarization.
Frequency Selection, Front Panel	:	Dual channel, front panel selectable (F1 or F2) each with independent precision 10-turn dial gain control.
Frequency Selection, Internal	:	F1 and F2 can be selected by internal switches within the range 14.0 to 29.9 kHz in 100 Hz increments.
Detection And Filtering	:	Superheterodyne detection and digital filtering provide a much narrower bandwidth and thus greater rejection of interfering stations and 60 cycle noise than conventional receivers.
Meter Display	:	2 ranges: 0 to 300 or 0 to 1000. Background is typically set at 100. Meter is also used as dip angle null indicator and battery test.
Audio	:	Crystal speaker. 2500 Hz used as null indicator.
Clinometer	:	±90°, +0.5° resolution. Normal locking, push button release.
Battery	:	One standard 9v transistor radio battery. Average life expectancy - 1 to 3 months (battery drain is 3 mA)
Temperature Range	:	-40° to + 60° C.
Dimensions	:	8 x 22 x 14 cm (3 x 9 x 6 inches).
Weight	:	850 grams (1.9 pounds).

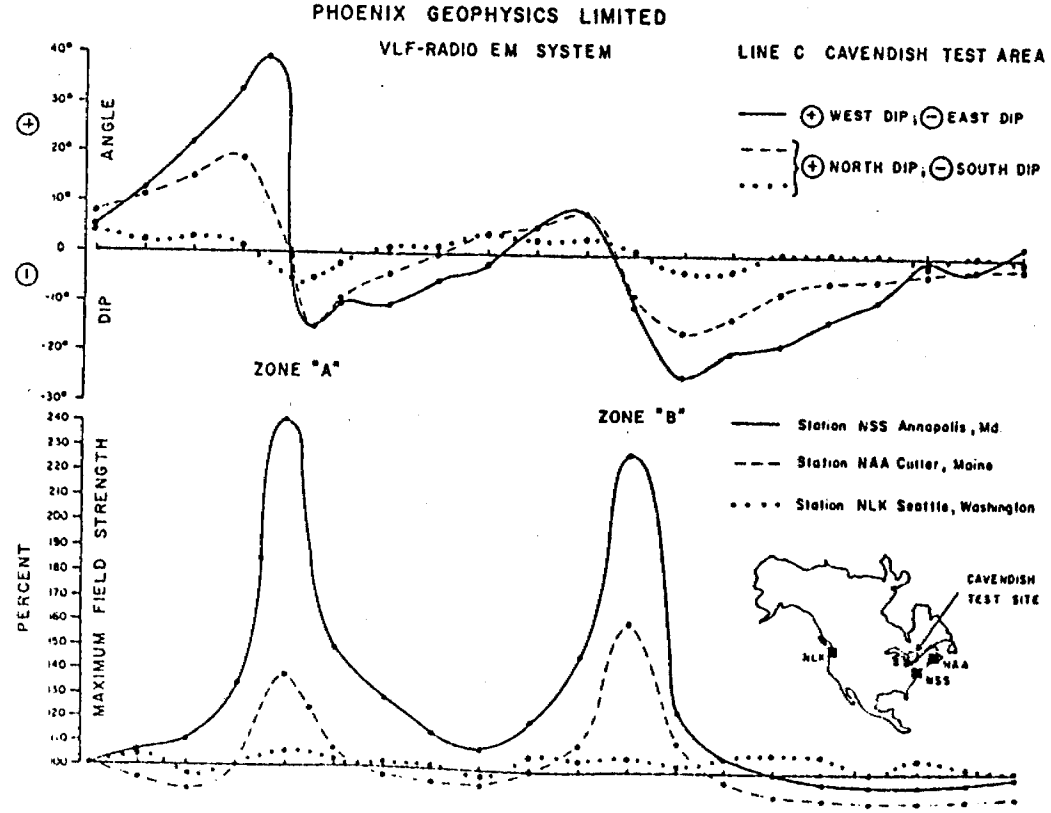
All of the established stations may be selected, or alternatively, a local VLF transmitter may be used which transmits at any frequency in the range 14.0 to 29.9 kHz.

VLF Station	Frequency (kHz)
Bordeaux, France	15.1
Odesso (Black Sea)	15.6
Rugby, U.K.	16.0
Moscow, U.S.S.R.	17.1
Yosamai, Japan	17.4
Hegaland, Norway	17.6
Cutler, Maine	17.8
Seattle, Washington	18.6
Malabar, Java	19.0
Oxford, U.K.	19.6
Paris, France	20.7
Annapolis, Maryland	21.4
Northwest Cape, Australia	22.3
Laulualei, Hawaii	23.4
Buenos Aires, Argentina	23.6
Rome, Italy	27.2

Field Data

The results below illustrate the need for using two orthogonal stations when the strike of the prospective conductor is not well-known. The dip angle and amplitude data measured using station NLK in Seattle, Washington, show only a very weak anomaly associated with the two conductive sulphide zones at Cavendish, Ontario.

The results obtained using Cutler, Maine reveal a more prominent anomaly, but the best response was obtained using Annapolis, Maryland since the station lies almost due south and the transmitted electromagnetic field is thus maximum-coupled with the North-South trending conductors.



Ontario

900

Ministry of
Northern Development
and Mines

August 5, 1987

Your File: 77/87
Our File: 2.9953

Mining Recorder
Ministry of Northern Development and Mines
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

RE: Notice of Intent dated July 21, 1987
Geophysical (Electromagnetic & Magnetometer)
Surveys on Mining Claims P 817607, et al,
in Keefer Township

The assessment work credits, as listed with the above-mentioned Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

R.M. Charnesky (Mrs.)
Acting Manager
Mining Lands Section
Mineral Development and Lands Branch
Mines and Minerals Division

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

DK/mc

cc: Mr. Frank Galata
Mr. Frank Zoebelein
P.O. Box 72
160 Kingcross Drive
King City, Ontario
LOG 1KO

Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

Resident Geologist
Timmins, Ontario

Encl.

Ontario Ministry of Northern Development Mines

Technical Assessment Work Credits

File 2.9953

Date July 21, 1987

Mining Recorder's Report of Work No. 77-87

Recorded Holder
FRANK GALATA & FRANK ZOEBELEIN

Township or Area
KEEFER

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	P 833191 to 95 incl 817603 to 06 incl 817608 949074 947881-82
Electromagnetic 31 days	
Magnetometer 16 days	
Radiometric ____ days	
Induced polarization ____ days	
Other ____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological ____ days	
Geochemical ____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☒ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☒ not sufficiently covered by the survey ☐ insufficient technical data filed

P 817607

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+S. – MINING AND SURFACE RIGHTS

	Description	Order No.	Date	Disposition	File
(W1)	SEC 43/70	W26/77	11/5/77	S.R.O.	160543
(W2)	SEC 42/60			M.+S.	141506
(W3)	SEC 42/60		7/10/66	M.+S.	160115
(P4)	DANA AND JOWSEY LAKES PARK RESERVE SEC 36/60 W64/65			S.R.O. M.R.O.	

L.U.P. LAND USE PERMIT

(R5) DUMPING STATION

SAND AND GRAVEL

(G1) M.T.C. PIT 1593

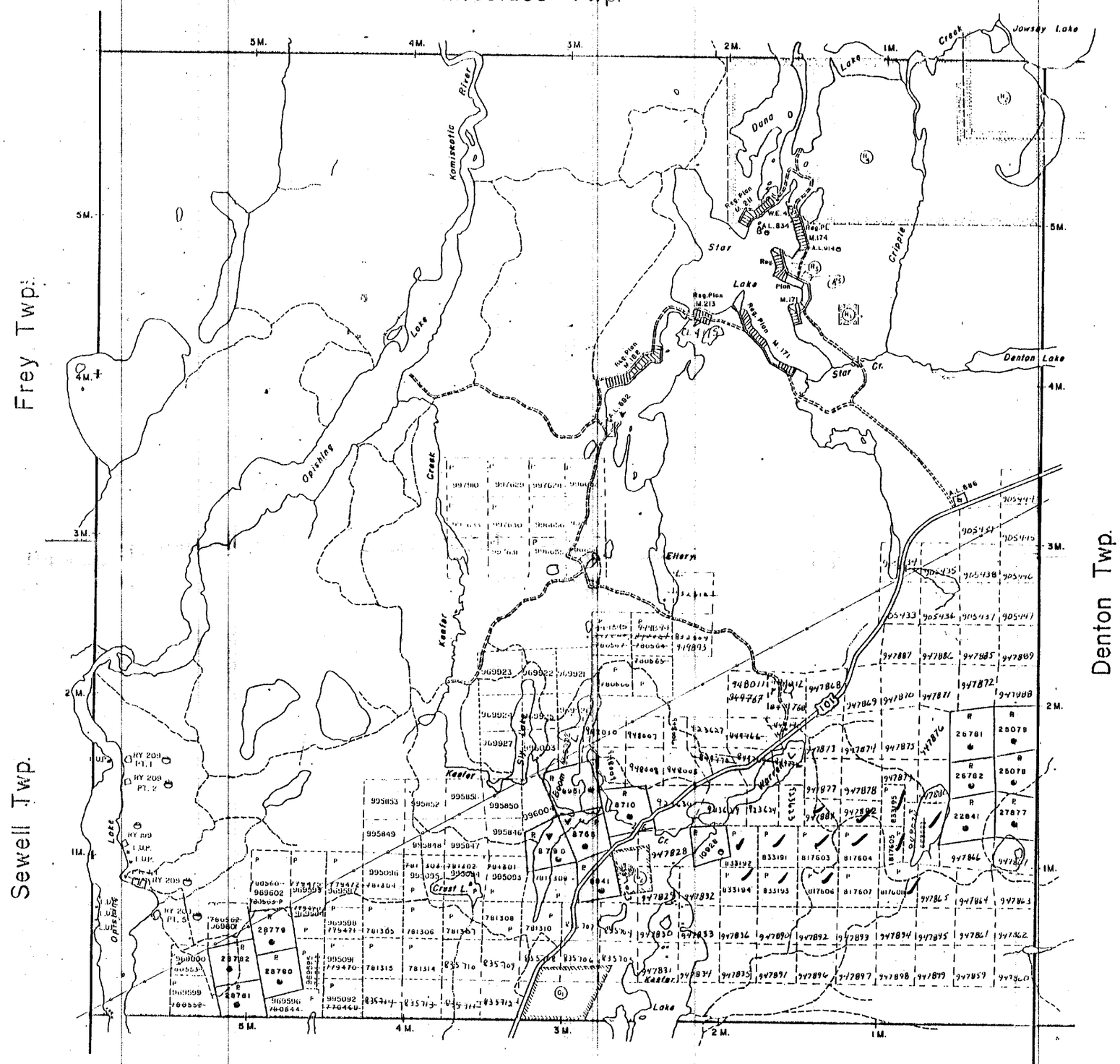
(G2) GRAVEL FILE 44986

IMPORTANT NOTICE

This township forms part of the WAFERBOARD FOREST MANAGEMENT AGREEMENT — The 1985/86 Annual Plan, on file in The Mining Recorders Office shows the area to be affected in the next year

— If this plan affects you, further information may be obtained from:

Mr. Malcom Kilgour - Unit Forester
Ministry of Natural Resources
896 Riverside Drive, Timmins Ont.
Telephone: 267-7951
and/or
Mr. Pierre Corbeil
Waferboard Group
Telephone: 268-1462



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
" , SURFACE RIGHTS ONLY	
" , MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
" , SURFACE RIGHTS ONLY	
" , MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	OC
RESERVATION	(R)
CANCELLED	
SAND & GRAVEL	(S)
L.U.P. LAND USE PERMIT	L.U.P.

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

KEEFER

M.N.R. ADMINISTRATIVE DISTRICT

TIMMINS

MINING DIVISION

PORCUPINE

LAND TITLES / REGISTRY DIVISION

COCHRANE

Ontario Ministry of Natural Resources — Land Management Branch

Date MARCH, 1985

Number

Recd Specifics

L-40 W | L-36 W | L-32 W | L-28 W | L-24 W | L-20 W | L-16 W | L-12 W | L-8 W | L-4 W | L-0 | L-4 E | L-8 E | L-12E | L-16 E | L-20 E | L-24 E | L-28 E | L-32 E | L-35 E | L-38 E

15 N | 10 N | 5 N | BL-0 | 5 S | 10 S | 15 S | TL-20 S | 20 S | 25 S | 30 S

N

10928

To HWY 101 West

3-923624 | 2-923623

2-947877 3-947878 1-947881 4-947882 | 4-947881 | 2-947878 | 1-947882

WP 2-947879 | WP 3-947880

1-833196 4-949074

2-833195 | 3-833195 | 2-947882 | WP 2-949074

3-947881 1-833192 4-833191 | 1-833191 4-817603 | 2-947881 3-947882 1-817603 4-817604 | 1-817604 4-817605

Beaver Dam

1-947832 | 2-833192 3-833191 1-833194 4-833192 | 2-833191 3-817603 1-833193 4-817606

2-817605 1-817606 3-947865

2-817604 3-817605 1-817607 4-817608

1-947892 | 4-947893

2-833193 4-947892 1-947890 | 2-817603 3-817604 1-817606 4-817607

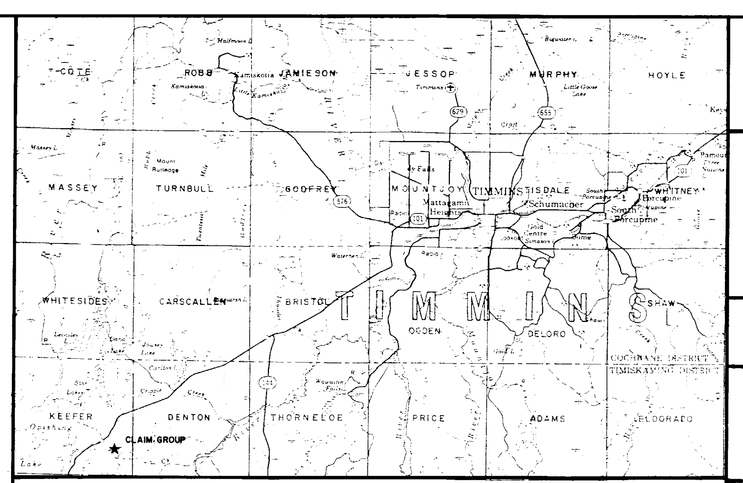
2-833194 3-833193 1-947836 4-947890

1-947833 4-947836 | 2-947832 3-833194

3-947865 1-947894 4-947895

LEGEND

- OUTLINE OF CUTOVER
- ROAD
- CREEK
- CLAIM POST, LOCATED
- PATENT CLAIM BOUNDARY
- GRASSY SWAMP
- RIDGE



LOCATION MAP SCALE: 1 inch = 4 miles

F. ZOEBELEIN PROPERTY

KEEFER TOWNSHIP

2.9953

SCALE: 1 inch = 200 feet

200 0 200 400 600 800 1000 FEET

Drafted by:	M. Guindon	Date:	Jan, 1987
Revision by:		Date:	
Survey by:	M. Guindon, J. Penttinen	Date:	Dec 6/86, Jan. 10/87
Approved by:		Date:	
Revision by:		Date:	

PROJECT: 86-021
FILE NO:

Kian A. Jensen
Exploration and Consulting Services

PROFESSIONAL ENGINEERS ASSOCIATION OF CANADA — K. A. JENSEN — FELLOW

42A05SE0211 2.9953 KEEFER

210

L-40 W | L-36 W | L-32 W | L-28 W | L-24 W | L-20 W | L-16 W | L-12 W | L-8 W | L-4 W | L-0 | 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-35 E | L-38 E

15 N | 10 N | 5 N | BL-0 | 5 S | 10 S | 15 S | TL-20 S | 20 S | 25 S | 30 S

N

To HWY 101 West

Beaver Dam

10928

GEOMETRICS G-816
BASE LEVEL 58,000 gammas
BASE STATION B.L. 8+00W

500 gammas
100 gammas
Magnetic Low

LEGEND

OUTLINE OF CUTOVER
ROAD
CREEK
CLAIM POST, LOCATED
PATENT CLAIM BOUNDARY
GRASSY SWAMP
RIDGE

LOCATION MAP SCALE: 1 inch = 4 miles

COTE | ROBB | JAMIESON | VESSOP | MURPHY | HOYLE | MASSEY | TURNBULL | GODFREY | MOUNT JOY | TIMMINS | TIDEWATER | WHITESIDES | CARSCALLEN | BRISTOL | OGDEN | DELORO | SHAW | KEEFER | DENTON | THORNELOE | PRICE | ADAMS | ELDORADO | CLAIM GROUP

F. ZOEBELEIN PROPERTY

KEEFER TOWNSHIP

29953

MAGNETIC SURVEY

SCALE 1 inch = 200 feet

200 0 200 400 600 800 1000 FEET

Drafted by: M. Guindon, K.A. Jensen — Date: Jan, 1987
Revision by: — Date:
Survey by: M. Guindon, J. Penttinen — Date: Dec 6/86, Jan. 10/87
Approved by: — Date:
Revision by: — Date:

PROJECT: 86-021
FILE NO:

K.A. Jensen
Exploration and Consulting Services

CANADIAN GEOPHYSICAL ASSOCIATION OF CANADA — K.A. JENSEN — FELLOW

L-40 W | L-36 W | L-32 W | L-28 W | L-24 W | L-20 W | L-16 W | L-12 W | L-8 W | L-4 W | L-0 | 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-35 E | L-38 E

15 N | 10 N | 5 N | BL-0 | 5 S | 10 S | 15 S | TL-20 S | 20 S | 25 S | 30 S

N

10928

To HWY 101 West

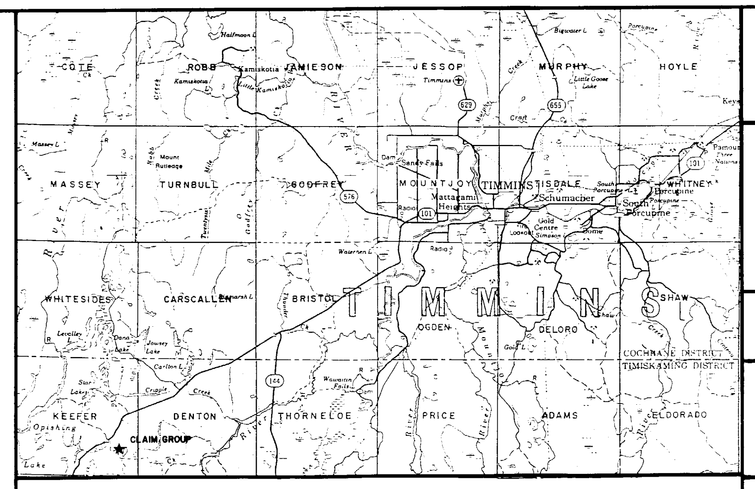
Beaver Dam

PHOENIX VLF-2
BASE STATION BL. 6+00W
DIP: scale: 1 inch = 20°
: left side
H.F.S.: right side

Anomaly Axis

LEGEND

- OUTLINE OF CUTOVER
- ROAD
- CREEK
- CLAIM POST, LOCATED
- PATENT CLAIM BOUNDARY
- GRASSY SWAMP
- RIDGE



LOCATION MAP SCALE: 1 inch = 4 miles

F. ZOEBELEIN PROPERTY

KEEFER TOWNSHIP

VLF-EM SURVEY

CUTLER, MAINE

2.9953

SCALE 1 inch : 200 feet

200 0 200 400 600 800 1000 FEET

Drafted by:	M. Guindon	Date:	Jan, 1987
Revision by:		Date:	
Survey by:	M. Guindon, J. Penttinen	Date:	Dec. 6/86 Jan. 10/87
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PROJECT: 86-021
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Kian A. Jensen
Exploration and Consulting Services

GEOLOGICAL ASSOCIATION OF CANADA — K. A. JENSEN — FELLOW

L-40 W | L-36 W | L-32 W | L-28 W | L-24 W | L-20 W | L-16 W | L-12 W | L-8 W | L-4 W | L-0 | 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-35 E | L-38 E

15 N | 10 N | 5 N | BL-0 | 5 S | 10 S | 15 S | TL-20 S | 20 S | 25 S | 30 S

N

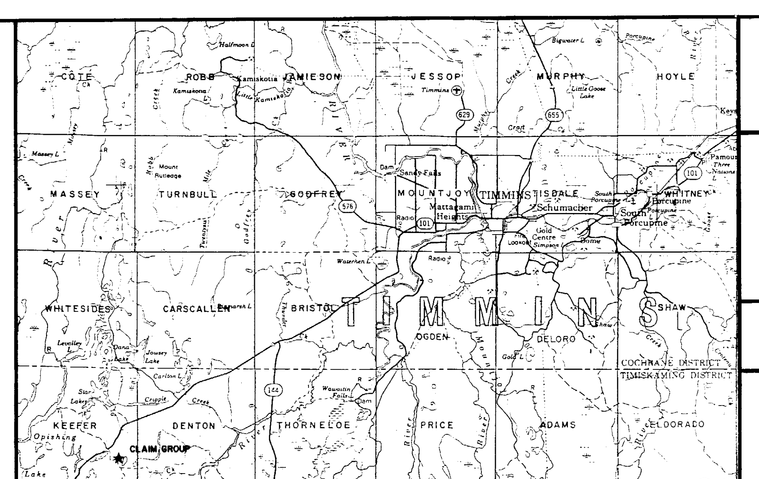
To HWY 101 West

10928

Beaver Dam

LEGEND

- OUTLINE OF CUTOVER
- ROAD
- CREEK
- CLAIM POST, LOCATED
- PATENT CLAIM BOUNDARY
- GRASSY SWAMP
- RIDGE



LOCATION MAP SCALE: 1 inch = 4 miles

F. ZOEBELEIN PROPERTY

KEEFER TOWNSHIP

FRASER FILTER

CUTLER, MAINE

29953

SCALE 1 inch = 200 feet

200 0 200 400 600 800 1000 FEET

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