



52L07NW0008 63.921 WERNER LAKE

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INTRODUCTION

The claim group consists of 12 claims numbered K28452 to K28454 and K28198 to K28206 inclusive. Located in the Werner Lake area, in the district of Kenora. The property lies approximately 50 miles north of the town of Kenora and is accessible by aircraft to Upper Fortune Lake which lies on the east boundary of the claim block. A road is presently being built to Gordon Lake to service the copper nickel deposit held by Eastern Mining & Smelting, about six miles west of Upper Fortune Lake.

Topography: The area is more rugged than is usual in the Pre-Cambrian Shield with elevation differences of up to 150 feet. There are two marked east-west and two north-south depressions crossing the property.

The ground is well drained and swamps are rare. On the majority of the ground the rocks are practically free of any overburden. Glacial action in the area appears to have had limited effect on the topography. The lineaments do not conform to the regional glacial direction. Glacial drift deposits are scant over the majority of ground and in the depressions it reaches a maximum depth of only 20 feet.

The ground is sparsely timbered with spruce and pine and occasional birch.

Work Done: A baseline was established across the south of the property on a true bearing of 90° and then lines were cut at 400 foot intervals. A tie line was run from the west end of the baseline north and then another baseline was cut E-W across the north of the property. These two baselines were tied in by transit survey. Geochemical sampling and geology were tied into these picket lines.

GEOLOGY

General:

The area was first mapped in 1929 by D.R. Derry for the Ontario Department of Mines. The mapping was of a reconnaissance type following the main waterways and with only limited traversing through the bush.

The consolidated rocks of the area are all Pre-Cambrian in age. The main rock types consist of a sedimentary series with occasional associated volcanics which have all been highly metamorphosed, and an intrusive series ranging from diorite to granite with much associated pegmatite. The intrusive bodies are of great extent. Locally around Werner and Rex Lakes small lenses of peridotite occur often with sulphide mineralisation.

TABLE OF FORMATIONS. (after D.R.Derry).

<u>Quaternary:</u>	Recent.	Peat, lake deposits of clay and sand.
	Pleistocene.	Glacial boulder clay.
<u>Pre-Cambrian:</u>	Algoman.	Pegmatite and Aplite. White Binary granite. Porphyritic biotite granite. Grey granodiorite and Oligoclase granite. Diorite.
	Keewatin.	Peridotite ? Sedimentary Gneiss, Quartz Biotite schists. Garnet Hornblende Schists. Basic Schists.

DESCRIPTION OF FORMATIONS.

ALGOMAN. On the claim group the Algoman is represented by a pink granite and also a white granite very low in dark minerals almost reaching an Alaskite in composition. The granites are usually equigranular and consist of quartz, orthoclase hornblende and minor biotite. Biotite or Hornblende clots occur frequently and are partly assimilated xenoliths of the sediments.

DESCRIPTION OF FORMATIONS. (Con't.)

Near the contacts the gneissic inclusions became more abundant and the contact zone is not sharp but transitional. The contact is taken as being where original gneissic structures are visible and can be traced along the strike.

One broad band of granite, about 1000 feet wide strikes east-west across the property, crossing Upper Fortune Lake at its eastern end and continuing on to Lower Fortune Lake. To the south granite occurs in many narrow bands up to 300 feet wide. The northern mass is the Alaskitic type.

KEEWATIN. Pendotites. These rocks have been grouped in the Keewatin although insufficient is known about them to assign them to any specific period. In form the bodies are lenticular in ^{shape} with lengths up to several hundred feet and widths of up to 100 feet. They appear as very altered fine grained rocks with the degree of alteration varying with grain size. Generally the finer the texture, the higher the metamorphism. Thin section studies have shown some specimens to have a high hypersthene content. There are no occurrences of peridotite on the Sobiski group.

Sedimentary Gneisses. The sedimentary rocks were placed by Derry in the Keewatin as they comprise the oldest rocks in the area and are also lithologically similar to those of the series occurring at the town of Keewatin, 50 miles to the south.

Three main types of gneisses are present; namely a biotite hornblende gneiss, which is dark and fine to medium grained, a garnet hornblende gneiss which is medium to coarse grained, and a siliceous garnet gneiss. Considerable lit par lit injection has occurred in these rocks and also they are frequently riddled by irregular dykes of granitic and pegmatitic material. In some parts the injected material may constitute more than 50% of the rock, but where the original gneissic or sedimentary features are still recognisable, the rocks are still classed as paragneiss.

Sedimentary Gneisses. (Con't).

On the north boundary, the paragneiss is highly siliceous. South of the lake, biotite, hornblende and garnet are more developed.

STRUCTURE

The regional and local strike of the metasediments is east-west. Dips are vertical or slightly to the north. Folding is present only on a small scale and can be regarded as local contortion rather than as a structural feature.

No faults or breaks are exposed on the ground although suspected loci of such breaks are the easterly depressions striking through the lake and through the swamp area near the south boundary.

MINERALISATION

General: The claims are located in the same belt of paragneisses that are hosts to the small but high grade copper nickel deposits of Norpax Mines and Oils, and of Eastern Mining and Smelting, and also of the Cobalt property worked by the Venture group in the last war. At the two first named deposits, mineralisation occurs in two forms, namely as replacements of a narrow pegmatite zone by nickeliferous pyrrhotite and chalcopyrite, or as replacements of peridotites by the same minerals. A common "break" is said to link all three deposits and it is considered likely that this same break continues eastwards to Upper Fortune Lake.

There are numerous occurrences of chalcopyrite on the property. A zone striking at 100° from L18E on the south shore of the Lake has intermittent chalcopyrite occurring either in narrow massive bands up to 3 inches wide or as a dissemination in garnet-hornblende gneiss zones for a distance of 5000 feet. Drilling of geochemical and self potential anomaly along this zone failed to encounter ore grade mineralisation over minable widths.

Other similar but restricted occurrences of copper are at 600 feet north of the baseline between line 4E and 8E and 250 feet north of the baseline between L8E and L 12E.

GEOCHEMICAL SURVEY

Geochemical sampling was done over the entire group along picket lines at 100' intervals, with sampling at 50' intervals in the main depressions. All samples were taken at bedrock depth as far as could be determined. The deepest samples were from the swamp to the south where the depth of sample was 20 feet. Samples were analysed in the field with check samples being sent to McGill University for comparison with the field results. Results of the comparison were encouraging. The field analytical method was a colorimetric test for heavy metals by placing the sample in a test tube and adding 5 ccs. of a buffer solution. To this was added a dilute solution of Dithizone in Xylene which remained green in the absence of heavy metals but turns pink in the presence of traces of copper or zinc.

Numerous anomalies were located and check samples were taken in close proximity to confirm the anomaly. The majority of the anomalous readings came from between L 36E and L 40E. Drilling proved the presence of copper but in non-economic quantities.

Submitted by,



M. E. Penstone.



52L07NW0008 63.921 WERNER LAKE

INTRODUCTION

The claim group consists of 12 claims numbered as follows;

- | | |
|---------|---------|
| K 28452 | K 28201 |
| K 28453 | K 28202 |
| K 28454 | K 28203 |
| K 28198 | K 28204 |
| K 28199 | K 28205 |
| K 28200 | K 28206 |

The above claims are all located in the Werner Lake area in the mining district of Kenora.

LOCATION AND ACCESS. The property lies approximately 50 miles north of the town of Kenora and is accessible by aircraft to Upper Fortune Lake, which is in the centre of the claim block. A road is presently being built to Gordon Lake about six miles to the west, to service the copper-nickel deposit held by Eastern Mining and Smelting.

TOPOGRAPHY. The area is more rugged than is usual in the Pre-Cambrian Shield with elevation differences of up to 150 feet. Two east-west depressions transect the property which includes much swamp. There are also two marked north-south depressions. Overburden is thin throughout the group except for the swampy areas.

REASON FOR ELECTROMAGNETIC SURVEY. Mineralisation in the Werner Lake nickel belt occurs in two forms; as narrow but continuous replacement bodies of nickeliferous pyrrhotite, and as 20% concentrations of sulphides in peridotites. Both of these type deposits should be detectable by E.M. surveys.

The survey was done to try and locate similar deposits either in the areas of overburden or occurring at shallow depth within the gneisses.

RESULTS OF SURVEY. Results of the survey on the claim block were negative with no strong conductors being indicated.

ELECTRO-MAGNETIC SURVEY.

The instrument used in the survey was the Electro-magnetic unit made by Sharpes Instruments, Toronto. It is a low frequency unit operating at 1200 cycles per second. A current of 14 amperes is passed from the generator to the transmitter coil. A secondary induced current is then received by the receiver coil which would be zero when the receiver coil is normal to the plane of the transmitting coil. The presence of a conducting body will cause the secondary field to be distorted so that the null point on the receiving coil will be 'dip angle' is measured in the survey.

Readings were taken up to a distance of 1200 feet from the transmitter to the receiving coil. Readings were taken at 100 feet intervals along picket lines spaced 400 feet apart. There was insufficient encouragement for taking any detail readings at closer intervals. The picket lines were out on a bearing of true North.

A total distance of 14.4 miles of line were surveyed and a total of 612 readings were taken. 19 separate transmitter set-ups were used.

The results of the E-M Survey were remarkably flat. Dip angles varied only from 2.5 N. to 1.0 S. One small crossover was located at 28+00 N on Line 12 E. The crossover was from 0.5 N to 0.5 S. This anomaly was not repeated on the adjacent lines. A marked depression runs N and S between lines 12 E and 8 E. It is possible that the crossover may be due to a conducting body striking parallel to the picket lines.

The remainder of the small dip angles may be due to minor errors in orientation of the transmitter coil or slight variations from the vertical plane of the coil.

No diamond drilling or further work on the claims can be recommended as a result of the E.M. Survey.

Submitted by,


E.M. Middleton.



52L07NW0008 63.921 WERNER LAKE

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O G E M I N E S D E V E L O P M E N T C O M P A N Y L T D .

REPORT ON THE
MAGNETOMETER SURVEY OF THE SOBISKI GROUP CLAIMS.

WERNER LAKE AREA
OCTOBER 5th, 1957.

DISTRICT OF KENORA
M. E. PENSTONE.

INTRODUCTION

The claim group consist of 12 claims numbered K28452 to K28454 and K28198 to K28206 inclusive, located in the Werner Lake area in the District of Kenora. The property lies approximately 50 miles north of the town of Kenora and is accessible by aircraft to Upper Fortune Lake which lies in the centre of the claim block. A road is presently being built to Gordon Lake about six miles to the west to service the copper-nickel deposit held by Eastern Mining and Smelting.

REASON FOR MAGNETOMETER SURVEY.

A magnetometer survey was done on the property to try and locate either concentrations of pyrrhotite or bodies of peridotite similar to those at Gordon Lake.

The instrument used was a Sharpe D2 vertical variometer having a scale factor of 20.2 gammas per scale division.

A baseline was established across the south of the property on a true bearing of 90° and then lines were out at 400' intervals. A tie line was run from the west end of the baseline northwards and then another baseline was out E-W across the north of the property from which lines were also turned off at 400' intervals. The two baselines were tied in by transit survey. On the westerly three claims, the lines from the Shearn group at 300' intervals were extended northwards. All lines were picketed at 100 foot intervals. The total mileage of line out was 14.4 miles.

Base stations for the magnetometer were established along the baselines and these were tied into another station by the camp site at Fortune Lake. A total of 730 readings were taken excluding the regular check readings taken at the base stations. Readings were normally taken at intervals of 100 feet except where anomalous values were found where detailed readings were taken at 50 feet intervals.

TOPOGRAPHY.

The area is more rugged than is usual in the Pre-Cambrian shield with elevation differences on the property of up to 150 feet. Marked east-west depressions transect the property with frequent development of cliff faces up to 30 feet high. The ground is well drained and very few swamps occur. Overburden is thin throughout the group and over the high ground the rocks are almost totally exposed.

GEOLOGY

The consolidated rocks of the area are all Pre-Cambrian in age. The main rock types consist of a sedimentary series with occasional associated volcanics, all highly metamorphosed, and an intrusive series ranging from granite to diorite with much associated pegmatite. Much assimilation of the paragneisses by the granite has occurred and contacts in the area are largely transitional. Locally around Werner and Rex lakes small bodies of peridotite are found which are lenticular in shape with lengths of a few hundred feet and widths of up to 100 feet.

The strike of the sediments in the region is east-west and this is also the strike direction of the main breaks in the area. Topographic lineaments show to the North with north-south and north-easterly directions.

MAGNETOMETER SURVEY

Variations in magnetic intensity on the property varied from a peak high of 4656 gammas and to a low of -873 gammas. Both these values are exceptional and are isolated peaks. The majority of readings range from a low value of 245 gammas to a high of 1400 gammas.

An area about 700 feet wide running along the north boundary of the claim group appears to have a lower magnetic intensity and to have less local variation than the area to the south. This coincides with an area of siliceous paragneisses.

South of this values are higher and with rapid and erratic variations in intensity. Contouring shows a general east-west trend to be present.

INTERPRETATION.

The east-west trend of the magnetus corresponds with the strike of the paragneisses and of the granite. The magnetically low area to the north is probably an area in which sediments with a very low iron content were deposited and all the iron has been taken up during metamorphism to form the mafic minerals.

To the south of the paragneisses may have had a slight excess of iron which in metamorphism recrystallised as magnetite. Occasional pockets of magnetite were seen in the granite during geological mapping. In the gneisses, some bands show a reddish hematitic form of stain and on crushing this rock appreciable magnetite can be extracted by a pocket magnet. These bands of gneiss pinch out rapidly along strike.

Results of magnetometer surveys on other properties in the area have also shown similar erratic results. It is thought that the random distribution of magnetite in the granite and the narrow bands of gneiss account for the variations in magnetic values on the property, and that none of the anomalous values can be attributed to either appreciable concentrations of pyrrhotite or to bodies of peridotite occuring just below the surface.

Submitted by,



M. E. Penstone.

For Sogemines Development Co. Ltd.



52L07NW0008 63.921 WERNER LAKE

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S O G E M I N E S D E V E L O P M E N T C O M P A N Y

REPORT ON THE
SELF POTENTIAL SURVEY
ON THE
SOBISKI CLAIM GROUP
UPPER FORTUNE LAKE

Werner Lake Area.

M. E. Penstone.

District of Kenora.

November 6th, 1957.

INTRODUCTION.

The claim group consists of 12 claims numbered K28452 to K28454 and K28198 to K28206 inclusive, located in the Werner Lake area in the district of Kenora. The property lies approximately 50 miles north of the town of Kenora and is accessible by aircraft to Upper Fortune Lake which lies in the centre of the claim block. A road is presently being built to Gordon Lake about six miles to the west to service the copper-nickel deposit held by Eastern Mining & Smelting.

TOPOGRAPHY: The area is more rugged than is usual in the Pre-Cambrian Shield with elevation differences of up to 150 feet. Two east-west depressions transect the property which include much swamp. There are also two marked north-south depressions. Overburden is thin throughout the group except for the swampy areas.

REASON FOR SELF POTENTIAL SURVEY: Concentrations of sulphide minerals, magnetite and graphite when in an oxidising environment, give rise to small earth currents which at the surface show as centres of negative potential. This survey was done to try and locate and trace any such centres that might be on the property.

RESULTS OF SURVEY: An anomalous zone of high negative potential was located on the south side of the lake with a length of 2500 feet and a strike of 100° . A possible faulted continuation of this zone was located on the north side of the lake with a length of 1400 feet. Subsequent drilling failed to intersect any ore grade material over minable widths.

SELF POTENTIAL SURVEY:

The instrument used was the self potential unit of Geophysical Engineering and Surveys of North Bay. The instrument is basically a potentiometer which will read potential differences of from 1 millivolt to 1400 millivolts. Contacts were made with the ground by using two non polarising electrodes, consisting of two porous pots containing saturated copper sulphate solution.

The survey was confined mainly to the claims south of the lake where overburden obscures much of the ground.

A total of 5.6 miles of line were surveyed and 309 readings were taken. The readings were taken at 100 foot intervals except near the anomalous area where readings were taken at 50 and 25 foot intervals.

Readings were tied into an arbitrary zero point located at L 16E, 00N.

Values obtained in the survey ranged from a low of zero to a high of -433 mv. The general background value appeared to be about 50 mv.

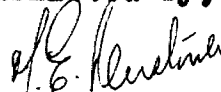
The peak value occurred on L 36E at 750 N. and is part of an anomalous zone from the east boundary of the property to L 20E. The anomaly is very narrow, is broken at L 32E. The peak value may have been missed on this line due to the narrowness of the anomaly.

North of the lake, anomalies were found on lines 0, 4E, 8E and 12 E. A marked depression runs parallel between lines 8E and 12E and may be a fault zone. If so the possibility exists that this northern anomaly may be a faulted extension of the southern.

Drilling and geological mapping shows that this anomaly is due to the presence of chalcopyrite either disseminated in certain bands of gneisses or occurring massive on narrow bands up to 3 inches wide.

RECOMMENDATION: No further work is recommended on the results of this survey.

Submitted by,



M.E. Penstone.



52L07NW0008 63.921 WERNER LAKE

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Sogemines Development Co. Ltd.,
206 Park Street,
Port Arthur,
Ontario.
November 13th, 1957.

Minister of Mines,
Parliament Buildings,
Toronto, Ontario.

Dear Sir:

Attached is a report on a magnetometer survey with maps, in duplicate, over claims K28452 to K28454 and K28198 to K28206 inclusive in the Werner Lake area, District of Kenora.

Credit for 116 days work is applied for as assessment work. The break down of the work is shown below:

Linecutting Norwescon Development Company, Red Lake, Ontario.

Foreman.	Ab Sobiski	Kenora	August 12th - 18th.
	D. Berg	Kenora	August 12th - 18th.
	R. Laforme	Kenora	August 12th - 18th.

21 mandays X factor 4 - max. allowed + Total 60 days. X

Magnetometer Survey-

Operator -	J. Merrill	Swastika	August 19th - 23rd
Assistant -	L. Jackman	Richmond Hill	August 19th - 23rd
Consulting-	B. Middleton	Port William	September 2nd & 3rd

Draughting & Reports:

M.E. Penstone Port Arthur October 4th & 5th.

14 Mandays X 4 _____ 56 Days. ✓
Total - 116 Mandays.

Tech - 56
Line - 56

112 ÷ 12 = 9 days per d.

Submitted by,
M.E. Penstone
M.E. Penstone,
For Sogemines Development Co.

Sogemines Development Company,
206 Park Street,
Port Arthur,
Ontario.
November 22nd, 1957.

Minister of Mines,
Parliament Buildings,
Toronto, Ontario.

Dear Sir:

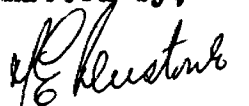
Attached is a report on a Self Potential Survey with maps, in duplicate, over claims K28452 to K28454 and K28198 to K28206 inclusive in the Werner Lake area in the District of Kenora.

Credit for 42 mandays is applied for as assessment work. The breakdown of the work is shown below:

Operator,	B. Pryzbilla	October 26th-30th,	Port Arthur.
Assistant,	R. Pettit	October 26th-30th,	Fort William.
Draughting & Reports,	M. Penstone	November 4th-6th ,	Port Arthur.

13 mandays X factor 4 = Total 42 mandays.

Submitted by,



M.E. Penstone,
For Sogemines Development Company.



52L07NW0008 63.921 WERNER LAKE

030

O G E M I N E S D E V E L O P M E N T C O M P A N Y L T D .

REPORT ON THE
MAGNETOMETER SURVEY OF THE SOBISKI GROUP CLAIMS.

WERNER LAKE AREA
OCTOBER 5th, 1957.

DISTRICT OF KENORA
M. E. PENSTONE.

INTRODUCTION

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REASON FOR MAGNETOMETER SURVEY.

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The instrument used was a Sharpe D2 vertical variometer having a scale factor of 20.2 gammas per scale division.

A baseline was established across the south of the property on a true bearing of 90° and then lines were cut at 400' intervals. A tie line was run from the west end of the baseline northwards and then another baseline was out E-W across the north of the property from which lines were also turned off at 400' intervals. The two baselines were tied in by transit survey. On the westerly three claims, the lines from the Shearn group at 300' intervals were extended northwards. All lines were picketed at 100 feet intervals. The total mileage of line out was 14.4 miles.

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INTERPRETATION.

The east-west trend of the magnetus corresponds with the strike of the paragneisses and of the granite. The magnetically low area to the north is probably an area in which sediments with a very low iron content were deposited and all the iron has been taken up during metamorphism to form the mafic minerals.

To the south of the paragneisses may have had a slight excess of iron which in metamorphism recrystallised as magnetite. Occasional pockets of magnetite were seen in the granite during geological mapping. In the gneisses, some bands show a reddish hematitic form of stain and on crushing this rock appreciable magnetite can be extracted by a pocket magnet. These bands of gneiss pinch out rapidly along strike.

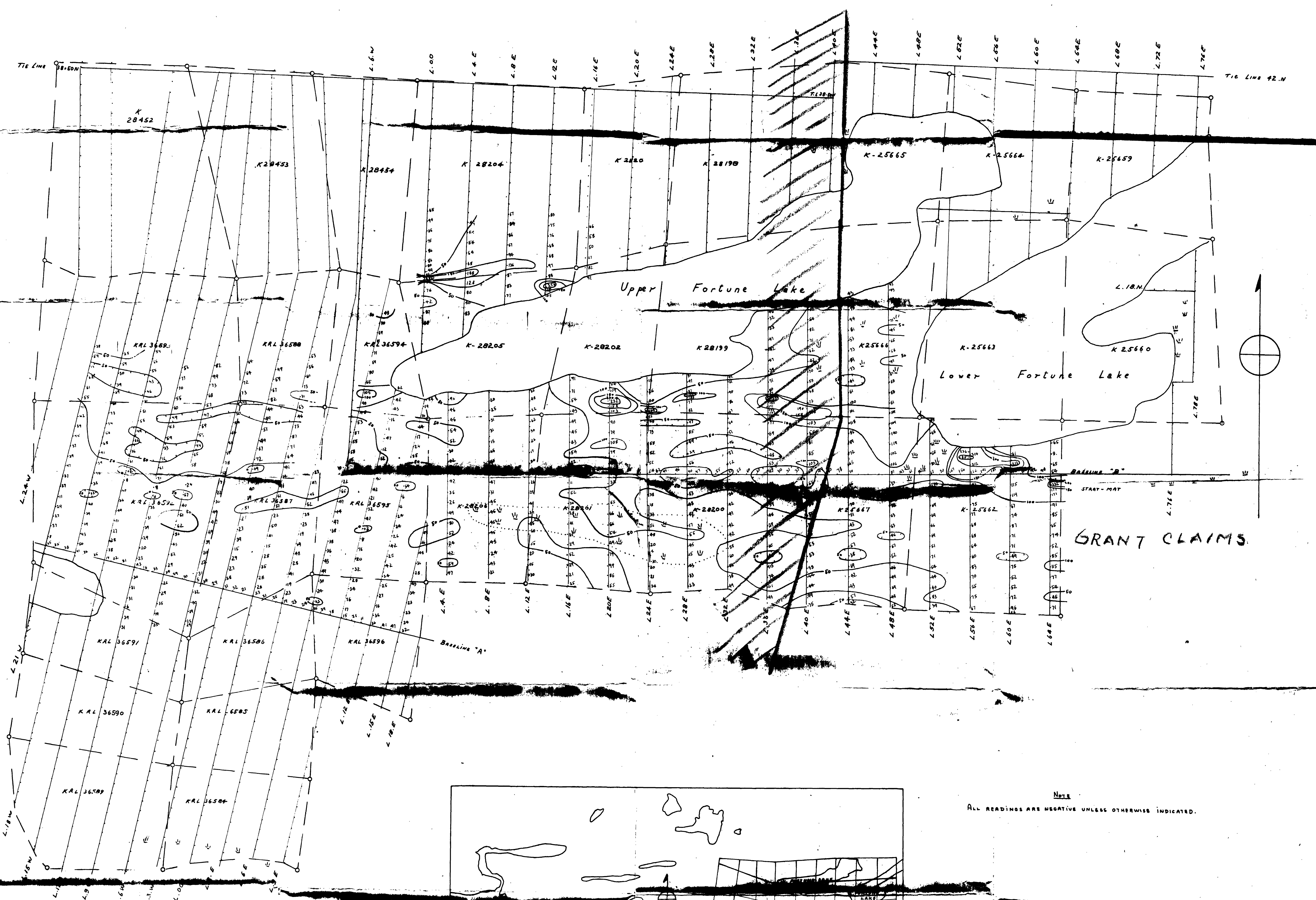
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Submitted by,



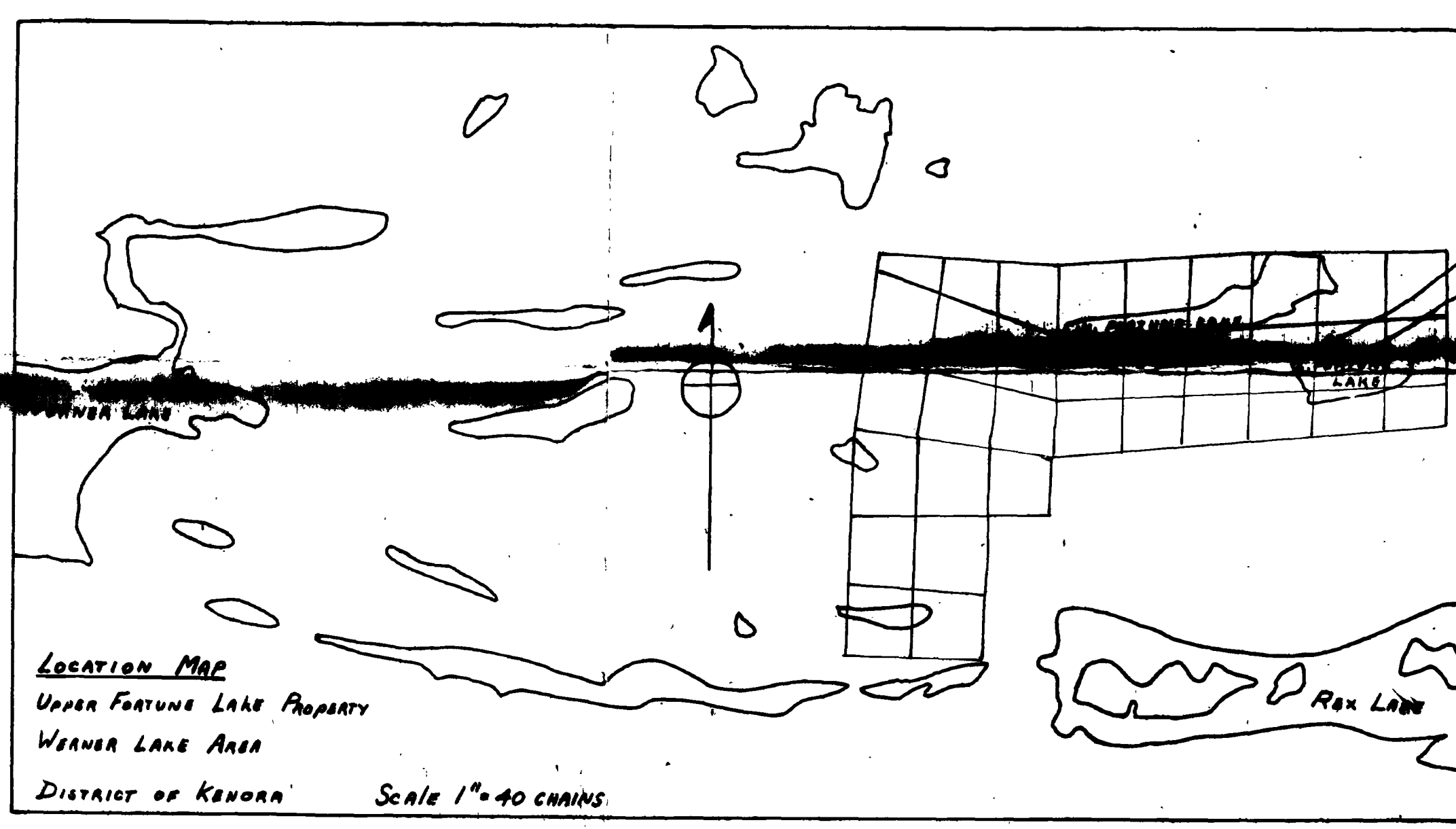
M. E. Penstone.

For Sogemines Development Co. Ltd.



GRANT CLAIMS

Note
ALL READINGS ARE NEGATIVE UNLESS OTHERWISE INDICATED.



SOGEMINES DEVELOPMENT CO. LTD.	
FORTUNE LAKE PROPERTY	S. POTENTIAL SURVEY
SCALE: 400' = 1 INCH	DATE: OCT. 28, 1957
DRAWN BY: M. PENSTONE	CONTOUR INTERVAL { 50' H.V. UP TO 200' H.V. 200' H.V. OVER 200' H.V.