



41J08SE0188 0015A1 MAY

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KERR-ADDISON GOLD MINES LIMITED

**REPORT
ON A
GEOLOGICAL, MAGNETOMETER AND ELECTROMAGNETIC SURVEY
ON THE
ALTIM EXPLORATIONS, SHEA AND PIERRE OPTIONS
IN
MAY TOWNSHIP, ONTARIO
SUDBURY MINING DIVISION
BY
C. K. WILTON**

JANUARY 29, 1962

TORONTO, ONTARIO



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SUMMARY AND RECOMMENDATIONS

Kerr-Addison Gold Mines Limited holds under option part of lots 7 to 12 inclusive in Concessions 5 and 6, in May Township, near Massey, Ontario, about 55 miles west of Sudbury.

The claims are underlain by a pre-Huronian series of steeply north dipping east northeasterly striking, volcanic and sedimentary rocks intruded by post-Huronian diorite sills and cut by the Murray strike fault and its branches.

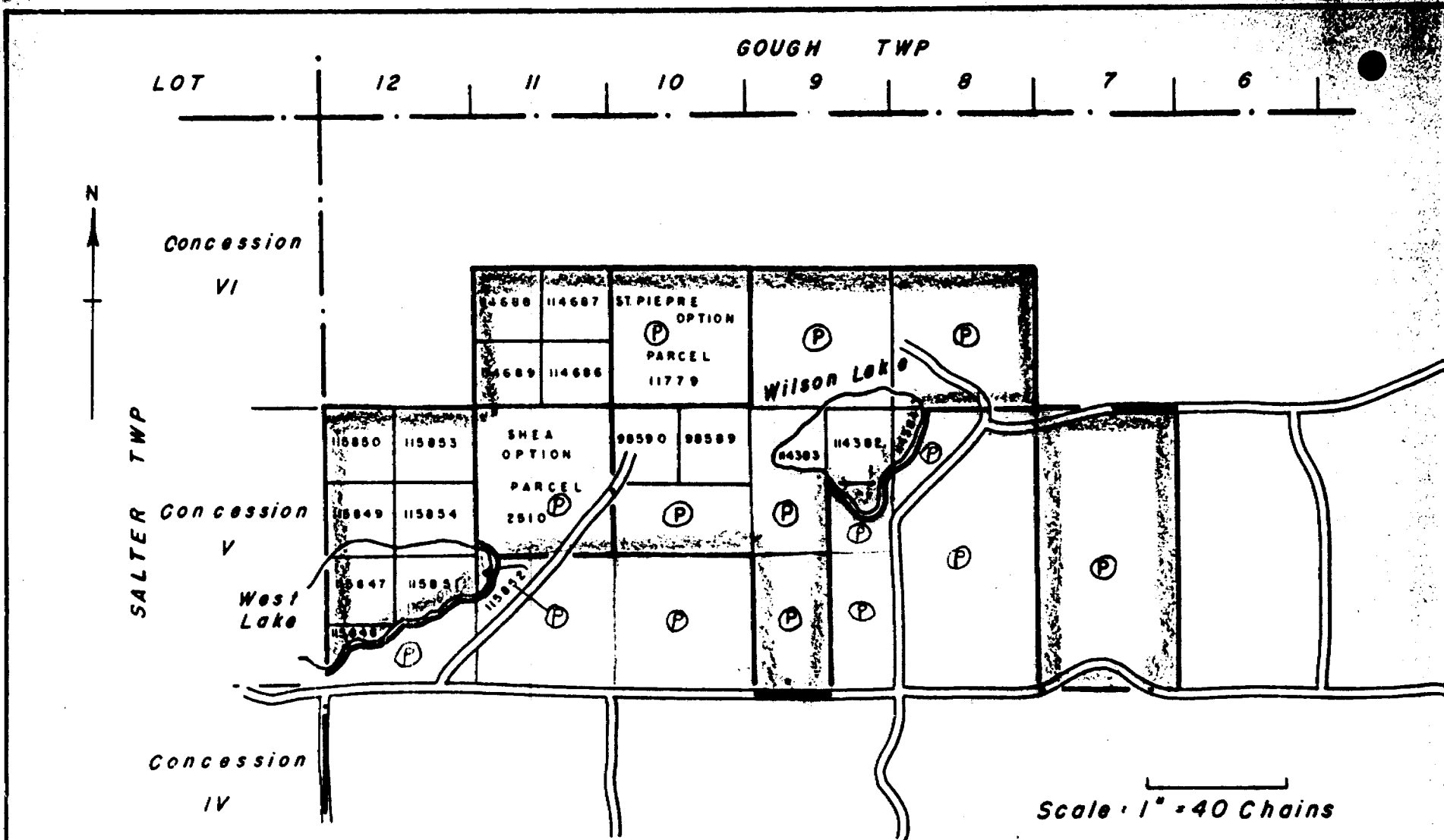
Numerous showings, mainly pyrite and pyrrhotite, with some chalcopyrite and nickel have been known for many decades along the Murray fault on these claims as well as east and west of them. The earliest work consisted of pits on the showings. In recent years aerial surveys by Newmont Corporation as well as detailed surface geological and geophysical surveys by Proscio Limited have been carried out on part of the claims. This work found some weak electromagnetic anomalies, in diorite near the Murray fault, not considered worth drilling. One hole was drilled by Proscio Limited on an old showing known as Vance south. After Proscio Limited dropped their option one of the owners, Mr. A. J. Alexander, did more work, including a pack-sack hole, on another old showing known as the Vance north.

Because the Vance north showing indicated near-ore grade values in copper over a width of about 8 feet and some indications of mineralization over a length of about 250 feet in an area not previously covered by geophysical surveys an option was obtained and geological, magnetometer and electromagnetic surveys carried out on lines at 400 foot intervals.

The magnetometer survey outlined some broad magnetic anomalies interpreted as being probably underlain mainly by diorite. A narrow weak extension of one of the magnetically anomalous areas across Whitson Lake in a southeasterly direction is probably a diorite dyke.

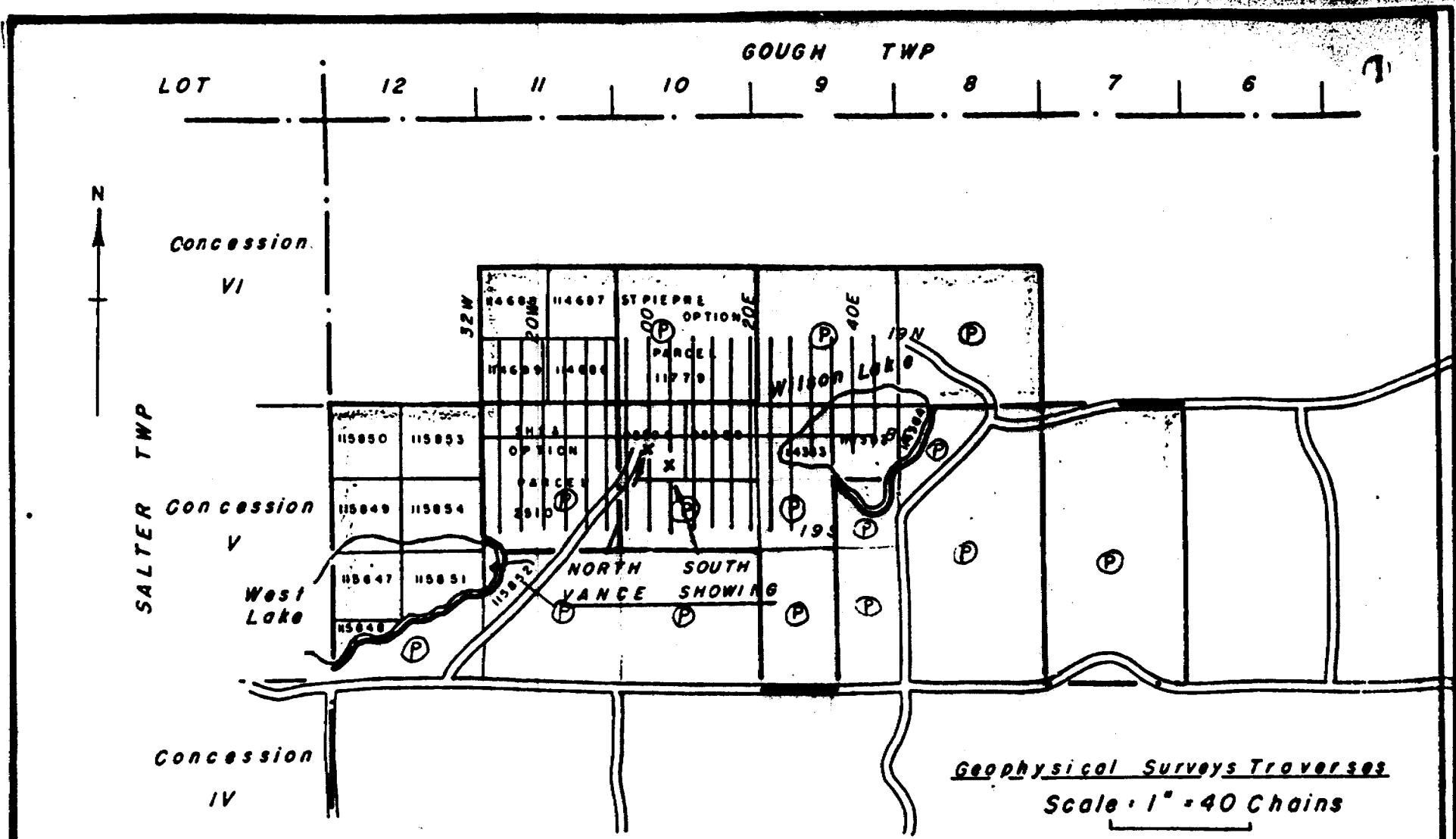
The electromagnetic survey showed one positive and one possible conductor but check work on lines 100 feet distant on strike failed to give any indications of extensions of these conductors.

The work found no anomalies on which more work is recommended.



KERR-ADDISON GOLD MINES LIMITED
 ALTIM OPTION
 MAY TOWNSHIP ONTARIO

DWG K1001



KERR-ADDISON GOLD MINES LIMITED
 ALTIM OPTION
 MAY TOWNSHIP ONTARIO

Work carried out by Mr. Alexander on the Vance north showing returned 1.62% copper across 7.7 feet in a surface chip sample and 1.03% copper across a core length of 18.0 feet in a packsack hole under the showing. Although it is not a generally attractive situation some consideration should be given to further drilling of this showing. Such drilling could show results similar to that at the Massey mine (Donalda), which is about $4\frac{1}{2}$ miles to the west in a similar geological environment, and is reported by J. E. Gill to have indicated four small copper ore shoots, each about 200 feet in length, in a total length of 2200 feet. The shoots have an average width of about 7 feet and an average grade of about 2.9% copper. Gill considered that the shoots were likely to be as short in vertical as in horizontal extent and that dilution during mining would decrease the grade. He considered that after dilution the tonnage per vertical foot would probably be about 300 with a grade of 2.4% copper and that about 6 times that much ore would be "needed to bring the occurrence into economic range" since a great deal of cost would be involved in tracing and opening such small shoots underground.

THE PROPERTY, LOCATION, ACCESS AND GENERAL GEOLOGY

The location of the Altm Explorations claims is shown on the accompanying drawing No. K1001. They total 862.25 acres of patented ground, 15 unpatented claims and mineral rights to 2 claims and are situated in the west half of May Township, in Concessions 5 and 6, about 55 miles west of Sudbury and 4 miles north of Massey, Ontario. The location of the adjacent Shea and St. Pierre options is also shown on the above map.

The property is accessible by road from Massey and Sudbury.

The claims are underlain by pre-Huronian volcanics and sediments, post-Huronian basic intrusives and granite. The volcanics contain some narrow interbedded quartzites which are the host rock of the Vance south and Vance north showings. (See Drawing No. G3001) The sediments consist of quartzite, conglomerate and sedimentary schist. The volcanics and sediments strike about N65-70E, dip steeply north, and are intruded by sills and dykes of diorite and gabbro. All these rocks have been sliced by the steeply dipping regional Murray strike fault and its branches as well as by at least one west northwesterly striking cross fault.

Showings of sulphides, mainly pyrite, some with pyrrhotite, occasionally with chalcopyrite and still less frequently with chalcopyrite and nickel are common on the claim and adjoining properties.

Altim Explorations is a partnership carrying on business in the district of Sudbury and owned by Alvin J. Alexander, Box 302, Massey, Ontario and L. W. Houle, Massey, Ontario.

PREVIOUS WORK

The first work on the property was probably done about 50 years ago and consisted of pits and shallow shafts put down on rusty showings.

Following the discovery of uranium in the Blind River area, about 40 miles to the west, and the development of aerial geophysical instruments in the early 1950's, the vicinity of the Murray fault between Blind River and Sudbury received further attention. It is reported that the property was part of an area covered by an aerial geophysical survey done by Newmont Mining Corporation in 1957. Also in that year the property was part of an area geologically mapped on a scale of 1 inch to $\frac{1}{4}$ mile by Proscio Limited who subsequently carried out magnetometer and electromagnetic surveys over an area along the Murray fault from lots 7 to 11 and about $\frac{1}{2}$ to 1 mile in width, but not including the Vance north and Vance south showings. Proscio Limited also drilled a 400 foot hole on the Vance south showing which returned 1.1% copper over 3 feet of core. Proscio's geophysical work discovered a number of weak anomalies in diorite near the Murray fault not considered worth drilling.

In 1958 an old showing known as Vance north was the object of more work by Mr. Alexander including a surface sample which assayed 1.62% copper across 7.7 feet and a packsack hole immediately below it which assayed 1.03% copper across 18.0 feet, the entire length of the hole. This zone is exposed intermittently for a strike length of 250 feet beyond which the strike extension in both directions is covered by overburden.

The Vance north showing is also exposed in another pit, 30 feet west of the main pit, in which assays average 0.95% copper across 5 feet.

The Vance south showing has 5 pits which average 1.33% copper across $1\frac{1}{2}$ feet. The best width is 6 feet and the best assay is 3.22% copper (across $1\frac{1}{2}$ feet).

PRESENT WORK

The Vance north showing being near ore grade and width the area in which it lies was considered to be worth some further work. In August, 1961 the claims were geologically surveyed by traversing by Mr. George Ross and a geological map on a scale of 1 inch to 200 feet was prepared. During the fall of 1961 options were obtained on the Shea and St. Pierre claims (see Drawing No. 01002). In December of 1961 and early January of 1962 line-cutting at 400 foot intervals, magnetometer and electromagnetic surveys were carried out over an area including part of the Altim claims and part of the Shea and St. Pierre claims.

The line-cutting totalled 81,250 feet. Of this total 54,850 feet is on the Altim Explorations claims.

Magnetometer readings were made at 712 stations.

Dip angle readings were made at 741 stations.

The work was carried out between December 10th, 1961 and January 10th, 1962.

GEOLOGICAL SURVEY

The geological survey was carried out by Mr. George Ross with Mr. A. J. Alexander as assistant and was done by traversing at 400 foot intervals. The geological data obtained were plotted on a map drawn on a scale of 1 inch to 400 feet (Drawing No. G4008). The rock type colored in light blue on Mr. Ross' map is named greywacke by Ross but previous mapping by Proscio over a much greater area than Ross' map designated these rocks as volcanics with some quartzite. The outcrops of this rock south of the Vance south showing and north of the showing in lot 7, Concession 5, were examined by the writer and are considered to be unbedded greywacke, poorly bedded volcanic tuff or a lava flow with no flow textures or all three types may be present. These outcrops show a slight lineation which Mr. Ross has mapped as bedding. The work shows that the area mapped is underlain mainly by the rocks referred to above, quartzite, conglomerate and sericite schist intruded by diorite sills and bordered on the northwest by an irregular contact with granite. The mapping did not help in defining their position but the Murray strike fault as well as some parallel to sub-parallel branch faults are known to cross the claims and their probable position is shown on the map.

The location of various showings are also indicated on the map. The showing which approaches most closely being of ore grade and width is known as Vance north. The best mineralized pit in this zone shows a width of about 8 feet of east north-easterly striking, steeply north dipping, sheeted quartzite which has apparently acted as a relatively more brittle layer during deformation and has been fractured and mineralized with chalcopyrite.

The Vance south showing is similar but narrower. The showing in lot 7, Concession 5, is also similar but narrower still. The showing on the granite contact in lot 11, Concession 6, was seen by the writer. It consists of erratic chalcopyrite mineralization associated with quartz in the contact area of the granite and is considered to be unlikely to persist along strike.

On the north shore of Whitson Lake the writer examined an unimportant copper showing consisting of splashes of chalcopyrite associated with a northwesterly striking, vertically dipping fracture in sediments.

MAGNETOMETER SURVEY

The magnetometer survey was done because pyrrhotite in sufficient quantity may be indicated by such work. Magnetometer surveys are also useful in outlining areas underlain by basic intrusives such as those shown on the geological map of the property.

The readings were made by Alex Mathias of Larder Lake, Ontario, under the supervision of J. S. Donaldson, using a GFZ Torsion wire Askania magnetometer, number 590-653, which may be read within about 1 gamma and has a scale constant of 1 degree equal to 242.0 gammas.

The Master Station was established on the base line at line 0. Temporary base stations were carried forward as required and tied in to the Master Station. Base station checks were made at two hour intervals for magnetic storms and any apparent erratic effects were reread when atmospheric conditions were normal. Readings were made mainly at 100 foot intervals and occasionally at 50 foot intervals in anomalous areas. All readings were corrected for diurnal and latitude variations and plotted in gammas on the accompanying drawing No. M4004 drawn on a scale of 1" to 200 feet.

The magnetic anomalies shown on the map are obviously mainly due to the basic intrusive rocks. The weak magnetic anomaly across Whitson Lake appears to join up to the west with a larger anomaly due to diorite and the Whitson Lake linear magnetic anomaly may therefore be caused by a basic dyke.

The magnetic anomaly in the vicinity of the Vance south showing is probably due to introduction of fine magnetite into the rocks. The log of the Prosko hole under the Vance south showing notes that much of the core in the first part of the hole is strongly magnetic although no magnetite was observed.

ELECTROMAGNETIC SURVEY

The electromagnetic survey was done using the high frequency (1800 cycles) Crone Wedge Type Junior Electromagnetic unit with 200 foot spacing between the two operators. The chief operator was John B. Kirk and the helper was Arthur Elliott.

In such a survey the operators each transmit and receive and read dip angles which are added algebraically and the sum plotted on the forward station, occupied by the chief operator, as on the accompanying drawing No. E4001. If no conductor is present the two dip angles read add up to zero or perhaps one or two degrees. If a conductor is present the dip angles add up to a negative sum of possibly four or more degrees as the chief operator approaches the conductor, change to a positive sum after the chief operator has crossed the conductor, change to a negative sum when both operators have crossed the conductor and then gradually approach zero as the operators move away from the conductor.

The survey indicated one conductor at 175 north on line 800 west but work on lines at 700 west and 900 west on strike with the conductor failed to show any conductive indications so that the conductor, if it is parallel to the general strike, must be quite short.

A possible conductor indicated at 1125 south on line 1200 west was also checked on lines 1300 west and 1100 west but no further indications of a conductor were obtained.

P. C. Masterman's report of October 5th, 1959 stated that reconnaissance electromagnetic work on the north Vance showing indicated a conductor over a length of 400 feet. Recent tests with an ohm meter of samples from the Vance north showing showed that the sulphides are conductive and quite continuous through the sample. However no indication of conductors other than those noted above were found. It is of course still possible that short conductive zones exist between the lines surveyed. No further work is recommended as a result of the survey.

ASSESSMENT WORK

For assessment work purposes the following list of names and work performed is given.

<u>Name & Address</u>	<u>Occupation</u>	<u>Days Worked</u>	<u>No. of days for assessment work purposes</u>
George Ross	Geologist	35 ✓	140
C. K. Wilton Willowdale, Ontario	Geologist	10 ✓	40
Ron Watson Agincourt, Ontario	Draughtsman	5 ✓	20 <i>200</i> <i>200</i>
J. S. Donaldson 484 Church St. Toronto, Ontario	Mining Engineer	25 ✓	100
J. B. Kirk Larder Lake, Ontario	Electromagnetic survey operator	21 ✓	84
A. Mathias Larder Lake, Ontario	Magnetometer Operator	21 ✓	84
A. Elliott Virginiatown, Ontario	Magnetometer Operator's helper	21 ✓	84 <i>352</i> <i>352</i>
A. J. Alexander Box 302 Massey, Ontario	Line-Cutter	37 ✓	148
L. V. Richer Massey, Ontario	Line-Cutter	12 ✓	48
M. Beaudry Massey, Ontario	Line-Cutter	4 ✓	16
TOTALS		191	764 ✓ <i>212</i> <i>212</i>

The number of assessment work days applicable to the Altin Explorations claims is 515.

MAPS

A list of maps accompanying this report follows:

	<u>Scale</u>	<u>Drawing No.</u>
Property Map	1" to 40 chains	K1001
Property Map Overlay showing lines cut	1" to 40 chains	01002
Geological Plan	1" to 400 feet	G4008
Geological plan and Assays Vance north and Vance south showings area	1" to 40 feet	G3001
Magnetometer survey plan	1" to 200 feet	M4004
Magnetometer survey profile plan	1" to 200 feet	M4002
Magnetometer survey contour plan	1" to 200 feet	M4003
Electromagnetic survey plan	1" to 200 feet	E4001

C. K. Wilton

CKW:ry
15/2/62

C. K. Wilton
Senior Geologist - Exploration



41J08SE0188 0015A1 MAY

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KERR-ADDISON GOLD MINES LIMITED

MAGNETOMETER AND ELECTROMAGNETIC SURVEY
ON CLAIMS 114687 AND 114688
ALTIM EXPLORATIONS OPTION
MAY TOWNSHIP ONTARIO

JULY 19, 1962

TORONTO, ONTARIO



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MAP	4

SUMMARY AND RECOMMENDATIONS

The work described in this report consists of a magnetometer and electromagnetic survey of claims 114687 and 114688 which cover the north half of the south half of lot 11, concession VI, May Township, about 55 miles west of Sudbury.

The claims are underlain by a series of Pre-Huronian sedimentary rocks composed of quartzite and greywacke, which strike about S 70°- 80° E and dip steeply north, intruded by Post-Huronian diorite and gabbro sills. Some granitic rocks underlie the north boundary of the claims.

The claims form part of a group held by Altim Explorations which is a partnership owned by A. J. Alexander and L. W. Houle of Massey, Ontario. The group of claims were formerly under option to Kerr-Addison Gold Mines Limited. The present work was carried out to complete assessment work due on the claims as provided under the terms of the option agreement.

The work showed no anomalies of interest and no further interest in the claims is warranted.

THE PROPERTY, LOCATION, ACCESS AND GENERAL GEOLOGY

The part of the Altim Explorations group of claims on which the present work was carried out consists of claims 114687 and 114688 in lot 11, concession VI, May Township. The claims are about five miles north of Massey, Ontario and 55 miles west of Sudbury, Ontario.

The claims are easy of access by road from Massey.

The claims are underlain by a Pre-Huronian series of quartzite and greywacke. The quartzite is a massive white to light pink colored highly siliceous rock and the greywacke is a massive, grey green, fine to medium-grained rock. These interbedded rocks strike S 70°- 80° E and dip very steeply north. At the north end of the claims on lines 32W, 28W, 24W and 20W from about 30N to 32N, outcrops are granitic in appearance and may be quartzite or granite, possibly a border phase of the granite reported to underlie the area north of the claims. In places, such as at 2350N on L 24W, 2065N on L 20W, 31N to 32N on L 16W, 23N to 24N on L 12W and 25N on L 8W there are outcrops of diorite and gabbro which are probably Post-Huronian sills and dykes.

PREVIOUS WORK

So far as is known to the writer no work other than geological mapping has previously been carried out on the claims.

PRESENT WORK

During the period July 11th to July 16th inclusive lines 8W to 32W, of the grid established on the property in December of 1961 and January 1962, were extended by cutting and picketing from 19N to 32N of the base line. A magnetometer and electromagnetic survey was then done using the picket lines for control.

The line-cutting totalled 9100 feet.

Magnetometer readings were made at 98 stations.

Dip angle readings were made at 98 stations.

MAGNETOMETER SURVEY

The magnetometer survey readings were made by C. K. Wilton using an Arvela Everyman magnetometer. This instrument has a light indicating magnet, suspended on a torsion wire, which turns frictionlessly. By means of a compensating magnet connected to the scale of the magnetometer the indicating magnet is returned to its horizontal position. Then the magnetic value can be read directly on the scale. The scale has 10 divisions and can be read to the nearest tenth of a division. The gamma value is then obtained by multiplying the reading by 1000, or by 5000 if the magnetic values are above 12000 gammas. This means that values below 12000 gammas are correct to within about 100 gammas and above 12000 gammas to within about 1000 gammas.

In order that the magnetic values read would be relative to those made on the remainder of the property 24000 gammas was added to all readings.

The magnetic values were plotted on the accompanying drawing EM3002, drawn on a scale of 1" to 200', which has been contoured.

The area underlain by the magnetic anomaly centred at 19N on line 12W is covered by overburden, but is probably underlain by diorite or gabbro.

The anomalous values at 21N on line 20W and 22N on line 24W are probably caused by the diorite and gabbro which outcrops nearby.

ELECTROMAGNETIC SURVEY

The survey was carried out using a high frequency (1800 cycles) Crone Wedge Type Junior Electromagnetic unit with 200 foot spacing between the two operators. The chief operator was K. L. Reading and the helper was C. K. Wilton.

In such a survey the operators each transmit and receive and read dip angles which are added algebraically and the sum plotted on the forward station, occupied by the chief operator, as on the accompanying drawing No. EM3002. If no conductor is present the two dip angles add up to zero or perhaps one or two degrees.

No conductors were indicated by the survey.

ASSESSMENT WORK

For assessment work purposes the following table is given:-

<u>Name and Address</u>	<u>Occupation</u>	<u>Days Worked</u>	<u>Days Worked</u>
C. K. Wilton Willowdale Ontario	Geologist	July 11-13 linecutting	3
		July 14 magnetometer survey	1
		July 15-16 electromagnetic survey	1½
		July 16-17 report preparation	1½
K. L. Reading Noranda Quebec	Geologist	July 11-14 linecutting	4
		July 15-16 electromagnetic survey	1½
R. Watson Agincourt Ontario	Draughtsman	July 17-18 draughting	2
R. A. Yerex	Stenographer	July 18 typing	1
			15½
			==

The work performed totals 7 days for linecutting and 15½ days altogether or a total of 62 days of assessment work credit.

MAP

Drawing No. EM3002 which accompanies this report and is drawn on a scale of 1" to 200 feet shows the results of the surveys.



C. K. Wilton
Senior Geologist - Exploration

CKW:ry

SEE ACCOMPANYING
MAP(S) IDENTIFIED AS

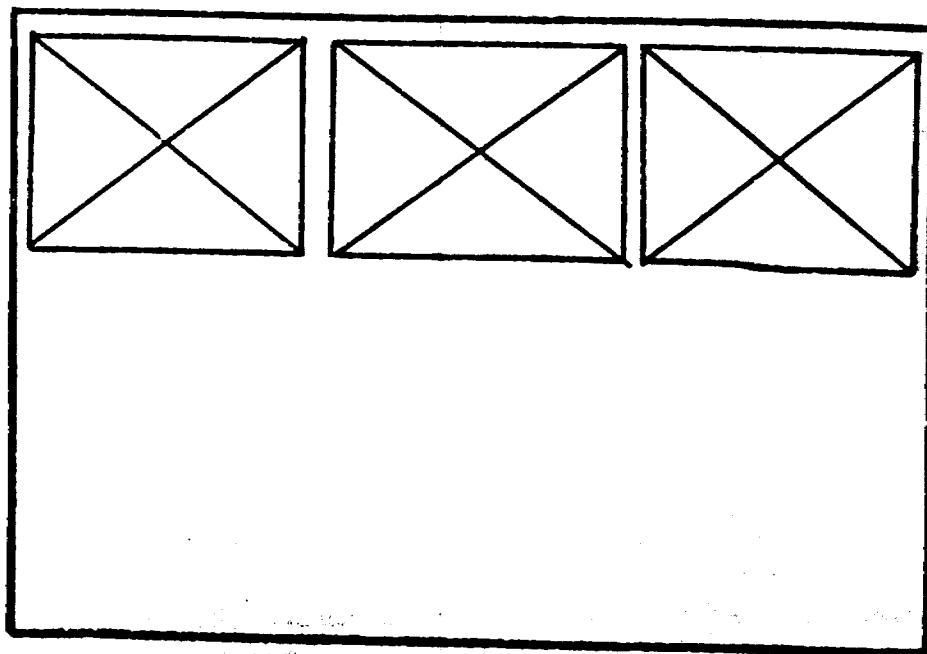
MAY-0015-A1, #1, #2, #3



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900

LOCATED IN THE MAP
CHANNEL IN THE FOLLOWING
SEQUENCE (X)

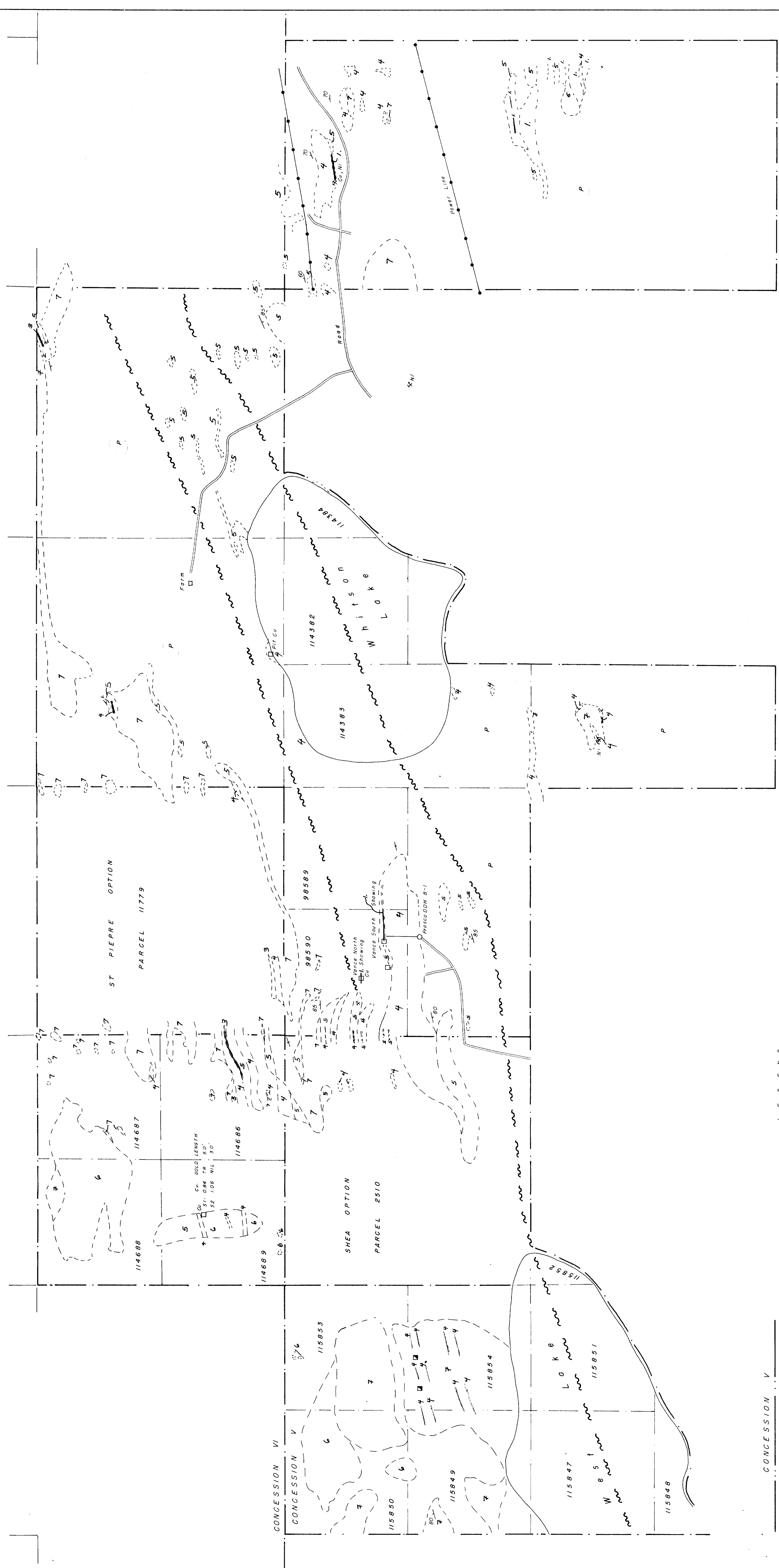


FOR ADDITIONAL
INFORMATION

SEE MAPS:

MAY-0015-A1 #4-7

LOT 12 LOT 11 LOT 10 LOT 9 LOT 8 LOT 7



CONCESSION V
CONCESSION IV

LEGEND

- POST-INTRUSIVE
- 7 Gabbro-Diorite (Basic Intrusive)
- PRE-INTRUSIVE
- 6 Granite
 - 5 Quartzite (Graywacke)
 - 4 Graywacke (Argillaceous, Arkosic, (Trilobites?))
 - 3 Conglomerate
 - 2 Sericite Schist
 - 1 Mineralized Zone

SEE LEGAL PLAN
KERR-ADDISON GOLD MINES LTD.
TORONTO, ONTARIO

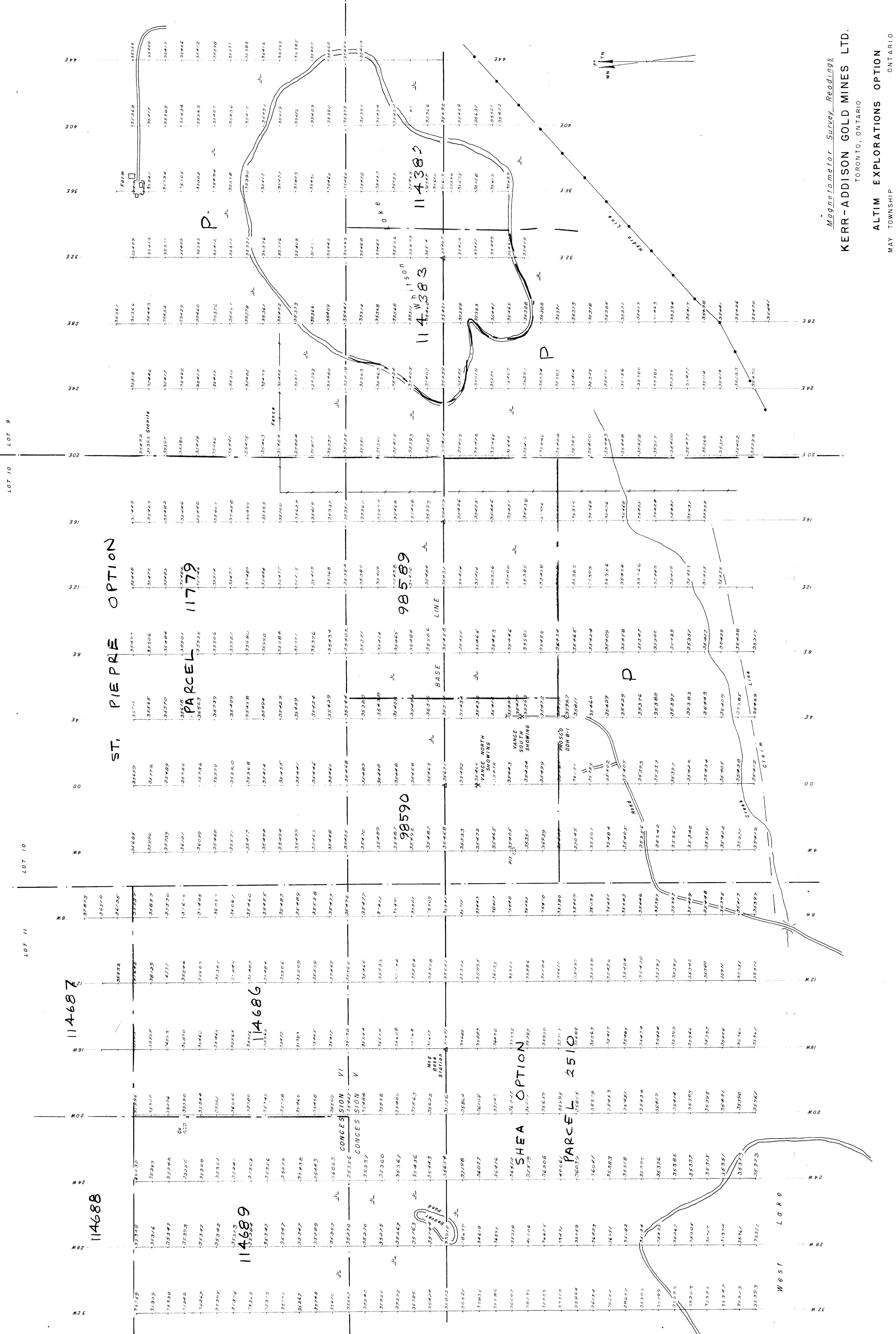
ALTIM EXPLORATIONS OPTION
MAY TOWNSHIP ONTARIO

Scale: 1" = 400'

Skilton
January 1962

MAY-0015-A1#1





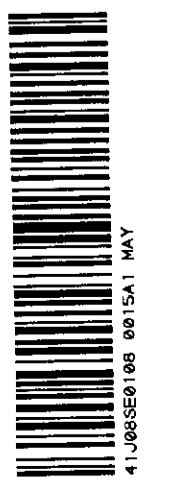
Magnetic Survey Readings
 KERR - ADDISON GOLD MINES LTD.
 TORONTO, ONTARIO
 ALTIM EXPLORATIONS OPTION
 MAY TOWNSHIP ONTARIO
 Scale: 1" = 200'
 E. Kilbuck
 January 1962
 DWG M 4004

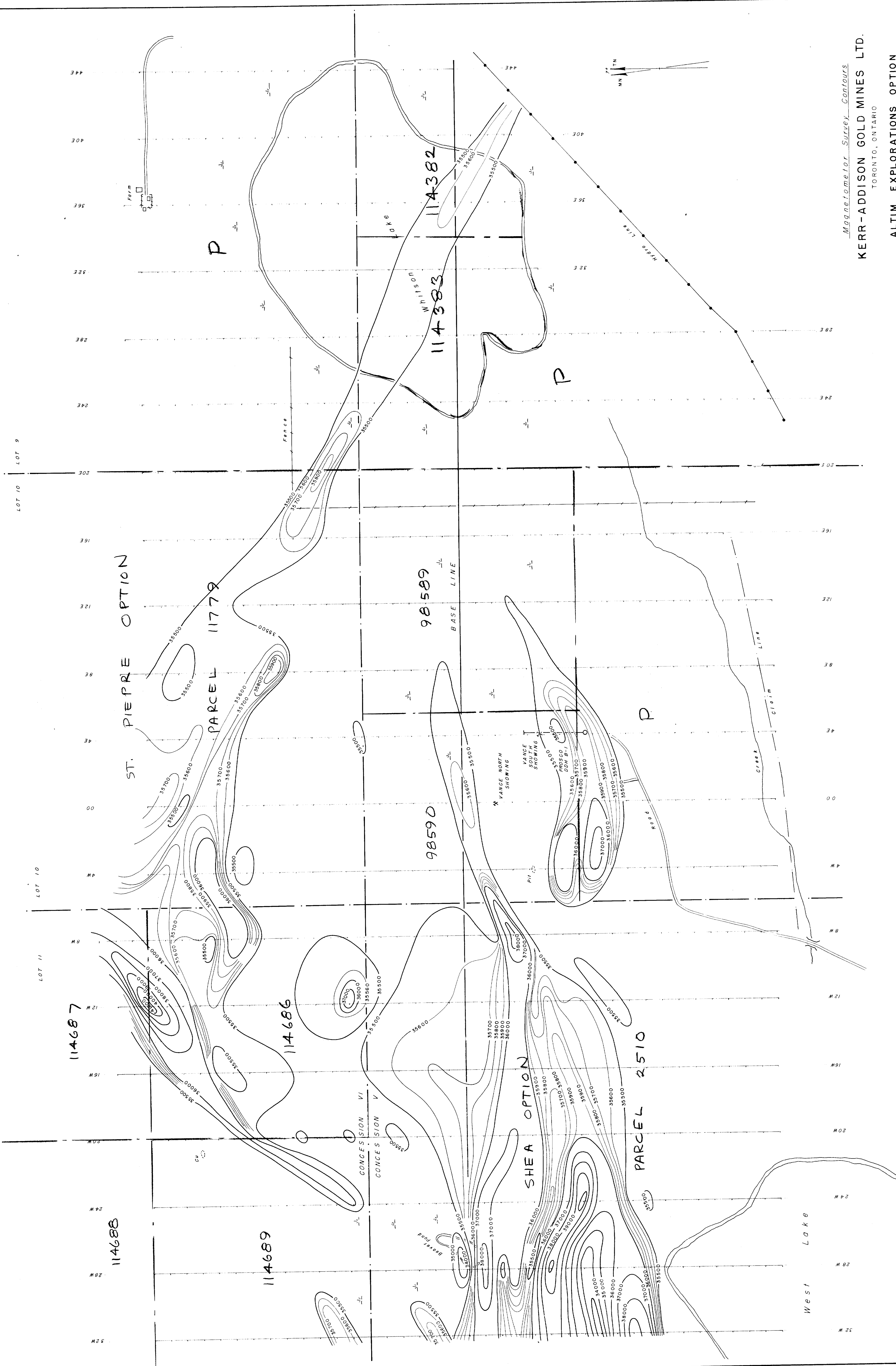




Magnetometer Survey Profiles
 KERR-ADDISON GOLD MINES LTD.
 TORONTO, ONTARIO
 ALTIM EXPLORATIONS OPTION
 MAY TOWNSHIP ONTARIO
 Scale: 1" = 200'

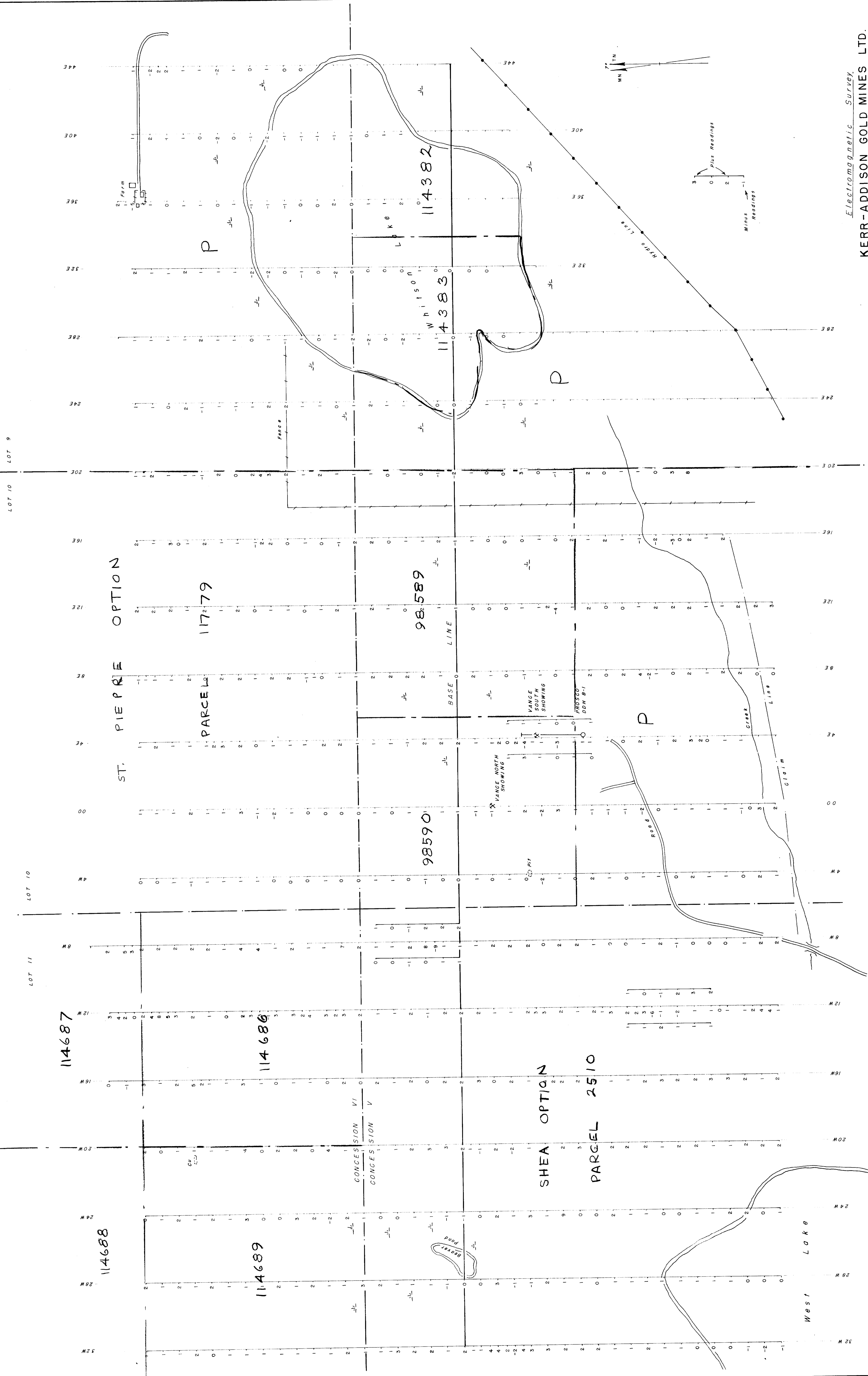
R. Wilton
 January 1962
 MAY-0015-A1 #3
 DWG M4002





Magnetometer Survey Contours
KERR-ADDISON GOLD MINES LTD.
 TORONTO, ONTARIO
ALTIM EXPLORATIONS OPTION
 MAY TOWNSHIP
 Scale: 1" = 200'
 January 1962
 DWG M4003



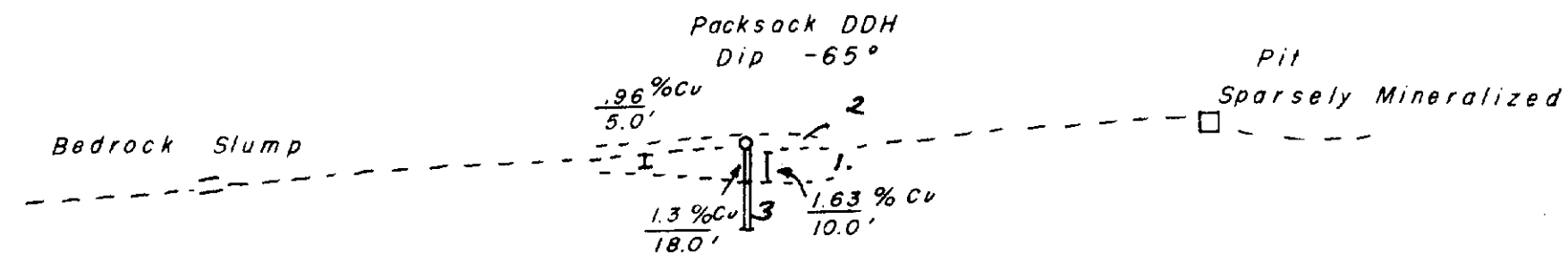


Electromagnetic Survey
KERR-ADDISON GOLD MINES LTD.
 TORONTO, ONTARIO
ALTIM EXPLORATIONS OPTION
 MAY TOWNSHIP ONTARIO

Scale: 1" = 200'
Altim
 January 1962
MAY-0015-A1 #5



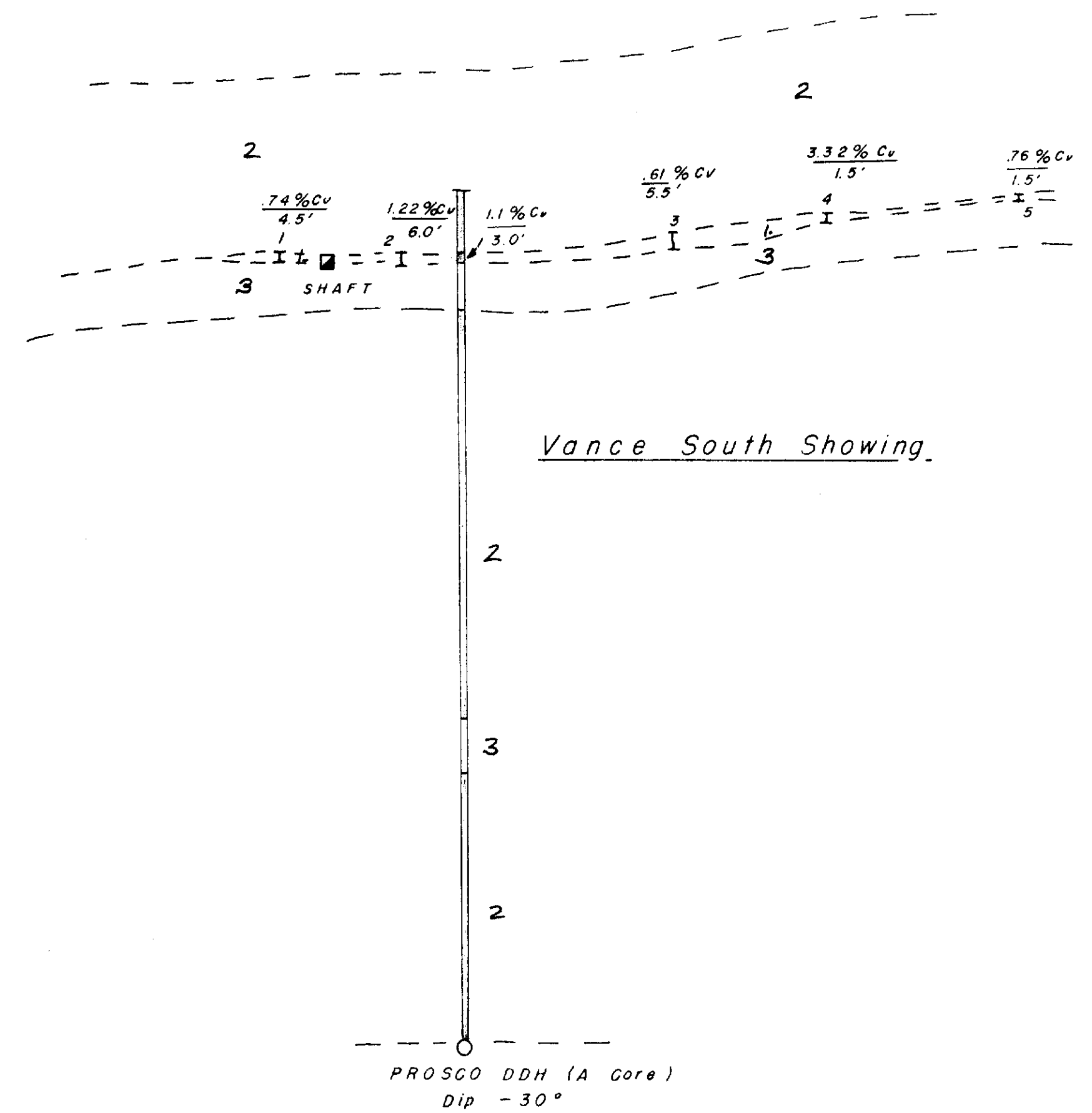
X Quartzite with Sulphide Rust



Vance North Showing

98590

Several Pits
Chalcopyrite



Vance South Showing

LEGEND

- 3 Quartzite
- 2 Graywacke (Volcanics)?
- 1 Mineralized Zone



Showing Assays of
North and South Vance Showings
KERR-ADDISON GOLD MINES LTD.
TORONTO, ONTARIO

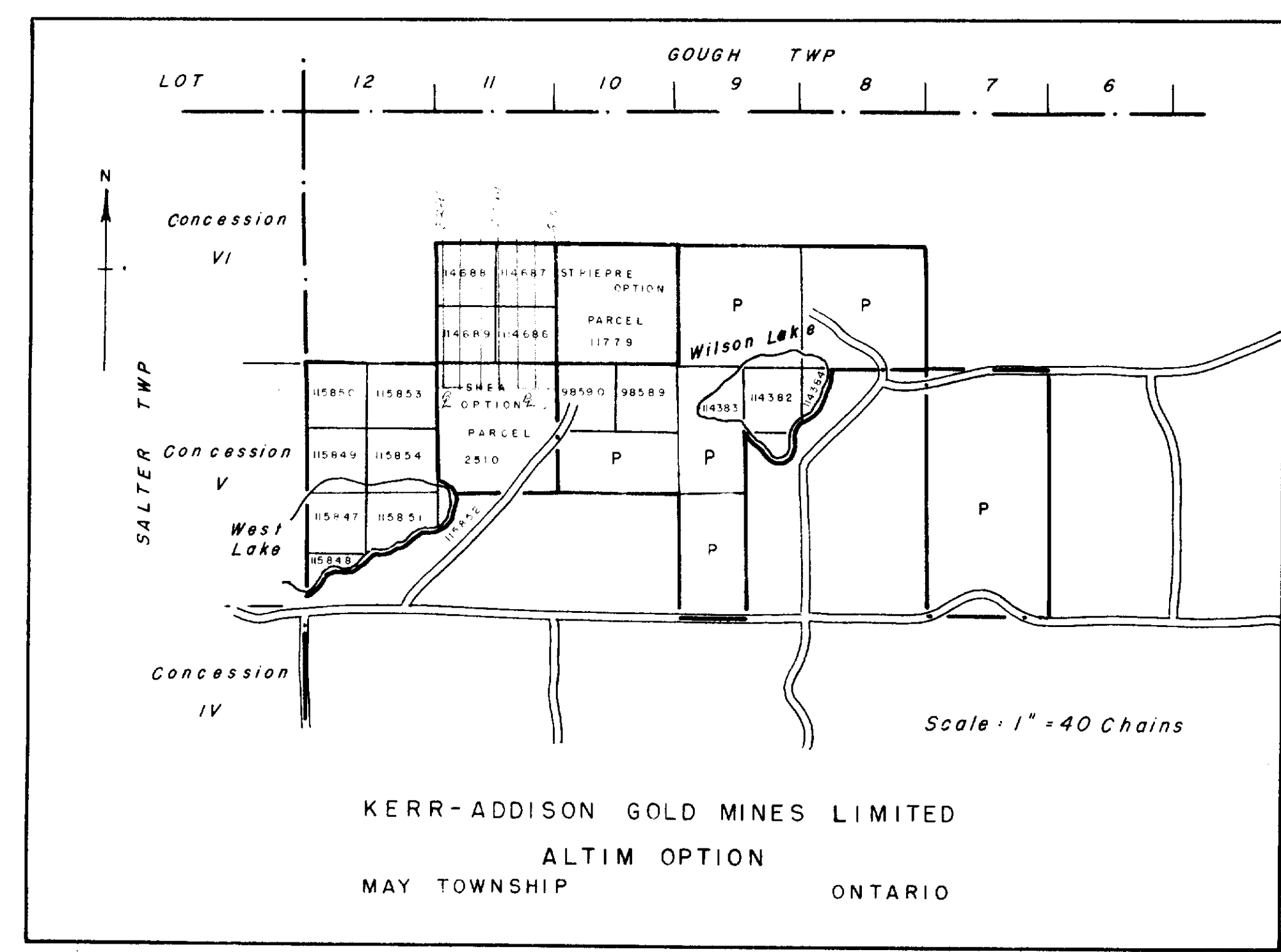
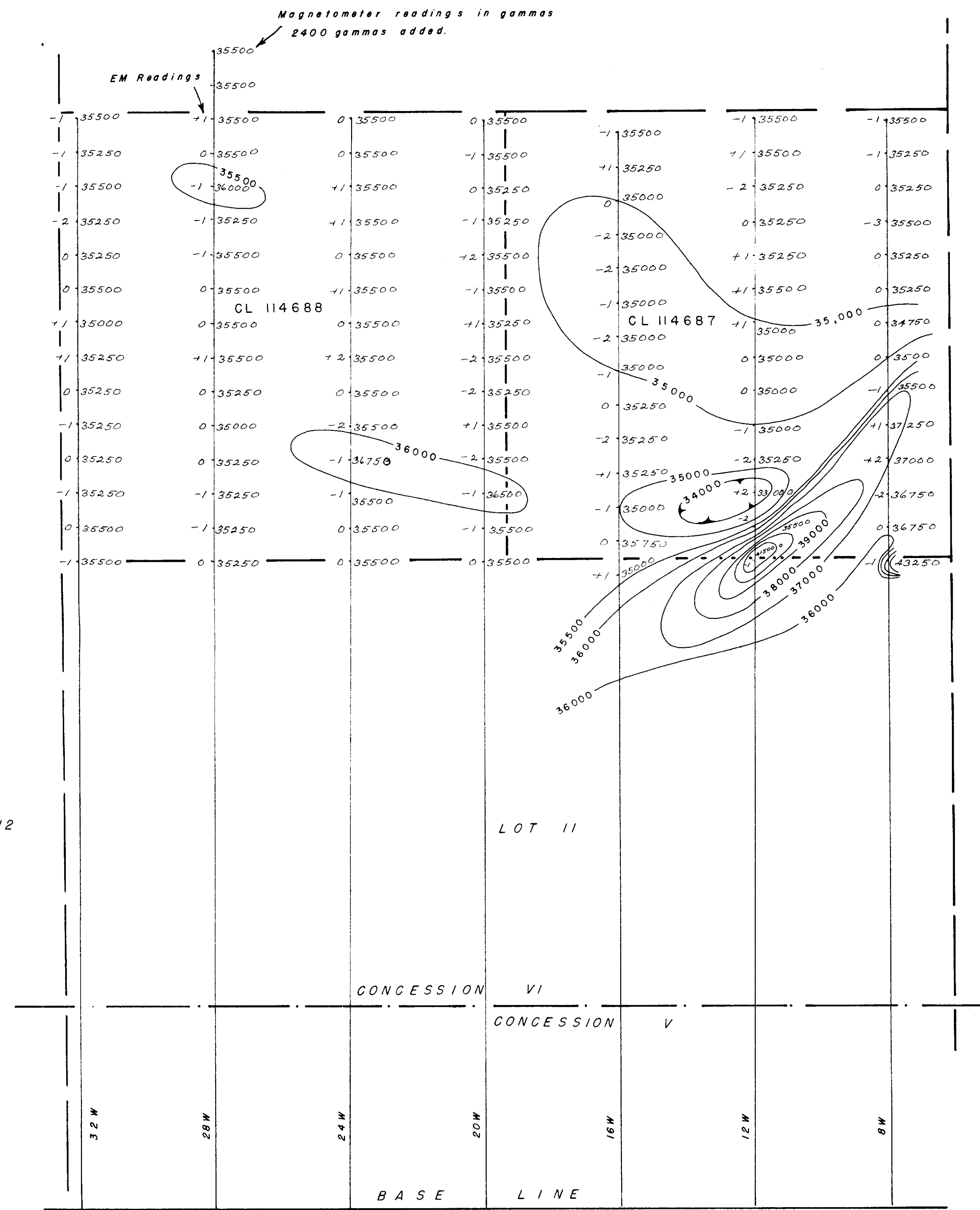
ALTIM EXPLORATIONS OPTION
MAY TOWNSHIP ONTARIO

Scale 1" = 40'

Cl Wilton

MAY-0015-A1, #6 January 1962





DWG K1001

LOT 12

LOT 11

LOT 10

CONCESSION VI

CONCESSION V

BASE LINE

32 W

28 W

24 W

20 W

16 W

12 W

8 W

INSTRUMENTS

- Arvela Everyman Magnetometer
- Crone JR. Wedge Type EM Unit

Electromagnetic Survey
and
Magnetometer Survey Contours

KERR-ADDISON GOLD MINES LTD.
TORONTO, ONTARIO
ALTIM EXPLORATIONS OPTION
MAY TOWNSHIP ONTARIO
Scale: 1" = 200'

E. Wilton
MAY-0015-A1-#7 July 1962

