

2202

REPORT ON
ELECTROMAGNETIC SURVEY
LA ROSE PROPERTY

CLAIMS SURVEYED

La Rose #2	4249
Britania	4245
Britania #1	4246
Britania #3	4247
Speculator #3	33510
B. A. #1	729368
B. A. #2	729369

which are located in the Skeena Mining Division, Province of British Columbia; Longitude 129°32' W, Latitude 55°34'N.

The survey was conducted during the months of July and August of 1969.

The report is written by R. G. Agarwal, Ph.D., and G. A. Jameson, A.C.S.M.

VELOCITY SURVEYS LIMITED

October 2, 1969.

2202

REPORT
ON
ELECTROMAGNETIC SURVEY
ON
LA ROSE PROPERTY
ALICE ARM
BRITISH COLUMBIA
FOR
MR. E. A. TRETHERWEY

VELOCITY SURVEYS LIMITED
R. G. Agarwal, Ph.D.
G. A. Jameson, A.C.S.M.

ILLUSTRATIONS

- | | |
|-------|---|
| #1. | Location map (<i>Rear</i>) |
| #2 2. | <i>Claim Map (Rear)</i> |
| #3 2. | Electromagnetic Survey
Map (in pocket) |

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2202 MAP.....

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REPORT
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INTRODUCTION

An examination of the property on July 22nd to 25th, 1969 was followed by an electromagnetic survey conducted from August 2nd to August 12th, 1969. This report is based on our findings during the course of this work.

PROPERTY

The property consists of seven claims and are identified as follows:

<u>Claims</u>	<u>Record Nos.</u>
La Rose #2	4249
Britania	4245
Britania #1	4246
Britania #3	4247
Speculator #3	33510
B. A. #1	729368
B. A. #2	729369

LOCATION AND ACCESS

The claims are located at 129° 32' W and 55° 34' N. The property is at about 2000 ft. altitude above sea level and lies on the east slope of Tsimstol Mountain between La Rose and Klayduc Creeks. It is six air miles from Alice Arm.

An all-weather logging road from Alice Arm is about two miles from the property. Final access is by an old pack horse trail which climbs 1000 feet in two miles. There is also a good helicopter landing spot midway between the La Rose workings and the old Speculator shaft.

GEOLOGY

The country rocks consist of argillite and an interbedded, highly altered rock that may be a sill of fine-grained andesite. The rocks are heavily fractured with local tension cracks and crushings, and some calcite in the slips.

The mineral showings occur in a vein occupying a shear zone which strikes in a north-south direction and dips at 45° eastward.

MINERALIZATION

A wide shear zone which may be a fault with a considerable offset is exposed in a cross-cut adit about twenty feet east of the vein. The vein varies from a few inches to three feet in width and contains argentite, galena, and sphalerite as principal minerals. The silver/lead mineralization occurs in a quartz vein, i.e. silicified shear zone, which has been explored and

which?
omit
the ?
both.

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mineralization exposed in three places (the La Rose adit, the surface winze, and the Speculator shaft), over a strike length of about 1500 feet. The surface winze is possibly worked out and the mineralization in the adit is weak.

HISTORY

A small shipment of ore was made in 1918 and 1919 from this area. In 1920 the Alice Arm La Rose Mining Company Limited was formed to operate the mine and commenced active development in 1925. Ore was shipped in 1926-27, but since then the property has been idle. More work is certainly warranted to determine the extension of the vein.

GEOPHYSICAL SURVEY

The geophysical survey was conducted on this property with grid consisting of 200 foot line spacing at 100 foot station intervals.

Equipment and The Basic Principle

The geophysical equipment used for the survey was a vertical loop electromagnetic system (squire). It consists of setting up a large vertical transmitting coil and applying audio-frequency electromagnetic energy, i.e. 1100 cycles per second, to the coil. When an alternating electromagnetic field produced by the coil propagates through the ground, it induces electric currents in any conductor in its path. These secondary currents flow in such a way that their electromagnetic field opposes the inducing field. When the secondary field spreads out in space, the total field at any point differs from the primary field, i.e.

from the field arriving at a point directly from the source. The strength of the induced currents depends, among other factors, upon the resistivity of the conductor concerned and the frequency with which the primary field is alternating. Generally, the currents are stronger the smaller the resistivity and the higher the frequency.

Survey Technique

The area to be surveyed is divided into blocks of convenient size and the transmitter stationed at the centre of each block in turn. From any one transmitter location, lines on either side of the transmitter are surveyed. The message-to-noise ratio at the receiver, as dictated by the transmitted field, the gain of the receiver, the level of natural magnetic noise and the interval noise of the receiver, determines the maximum usable distance the receiver can be separated from the transmitter.

In surveying any given line, the transmitting coil is oriented so that the point of observation is contained within the plane of the coil. As the receiver is moved from point to point, the transmitting coil must be rotated about a vertical axis to follow it. The purpose in orienting the transmitter for each receiver station is twofold, elevation differences between transmitter and receiver produce errors in dip angles unless the orientation is perfect, and the currents induced in a uniform overburden are symmetrical about the plane of the transmitter and produce zero dip angles at a receiver situated in the plane of the transmitter.

Measurements Taken in The Field

The dip angles are measured with a search coil whose axis is rotated in that vertical plane which is perpendicular to

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the plane of the transmitter. At some particular rotation angle, the voltage induced in the receiving coil, by the transmitted or primary field, will be a minimum. The axis of the search coil is vertical unless a secondary field, due to induced sub-surface currents, is present. Departure from the vertical for a minimum voltage or "null", are recorded as tilt angles, indicating the dip of the resulting field vector from the horizontal. The operator also records the broadness or sharpness of this null since this could give some idea about the relative conductivity. Conductor indications are denoted by "cross-overs", in other words the tilt of the receiving coil changes in sense as the conductor is crossed. The significance of the "cross-over" is that when the transmitting coil has been positioned over or near a conductor the "cross-over" will occur over the surface projection of the conductor axis.

The results obtained by using the vertical loop electromagnetic method are displayed in the accompanying map.

DISCUSSION OF RESULTS

The electromagnetic survey has indicated a 1200 foot long conductor on this property trending in an east-west direction. The electromagnetic response due to this conductor is quite strong. The conductor indicated by electromagnetic survey apparently falls at right angles to the direction of the known mineralized trends in the area.

To find the cause of electromagnetic anomalies, the conductor was tested with portable x-ray drilling equipment. Five

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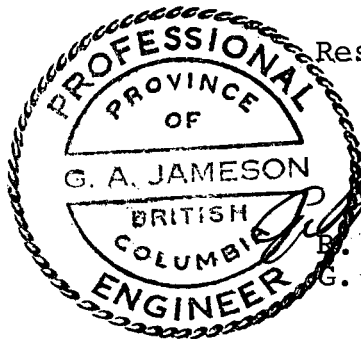
locations along the axis of the conductor were tested, and each one was drilled to an approximate depth of 60 to 70 feet. The examination of drill cores indicated the presence of graphite stringers and the assay results show traces of gold and 0.2 to 0.3 ounces of silver per ton.

It seems that the electromagnetic conductor is caused by the presence of graphite stringers in the area. On the other hand, this electromagnetic system does not seem to indicate or respond to known mineralization zones in the area.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the occurrence of graphite stringers has a dominant effect and over-rides any response due to economic minerals in the area.

In view of this, it is suggested that the experimental work using other geophysical methods may be carried out over the electromagnetic conductor and the known mineralization in the area. The experimental work may provide some relation of physical measurements with the known mineralized zones in the area.



Respectfully submitted,

AGarwal

G. A. Jameson
B. G. Agarwal, Ph.D.
G. A. Jameson, A.C.S.M. P.Eng.

VELOCITY SURVEYS LIMITED
September 25, 1969.

The following personnel were involved during the tenure of this programme:

<u>Name</u>	<u>Date on the property</u>	<u>Rate of Payment</u>	<u>Position</u>
G. A. Jameson	July 22-25, 1969	\$1200/mo.	Mining Engineer
K. Schulte	August 2 - 12, 1969	\$ 800/mo.	Geophysical Technician
L. Perreault	August 2 - 12, 1969	\$ 500/mo.	Geophysical Technician

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *3*
day of *October* *1969*, A.D.

W. H. G. ...

John Furman
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

SUB - MINING RECORDER

CERTIFICATION

I, Ram Gopal Agarwal, of the City of Calgary, Province of Alberta, hereby certify that:

1. I am a geophysicist with Velocity Surveys Ltd., at 1323 48th Avenue N.E., Calgary, Alberta.
2. I am a graduate of the University of Toronto, M.A. (Geophysics) 1956, and Alberta, Ph.D., (Geophysics) 1968.
3. I have been actively and continuously engaged in mineral exploration for the past 12 years.
4. I am a member of the Associations of Professional Engineers of Saskatchewan and Alberta.
5. I have no interest directly or indirectly nor do I expect to receive any interest in the property of Mr. E. A. Trethewey, nor in the securities of Mr. E. A. Trethewey.
6. This report is based on data derived from work carried out under my supervision in the property, from personal experience in the area, and from government publications relevant to the area.

Dated this 25th day of September, 1969 in the City of Vancouver, Province of British Columbia.

R. G. Agarwal

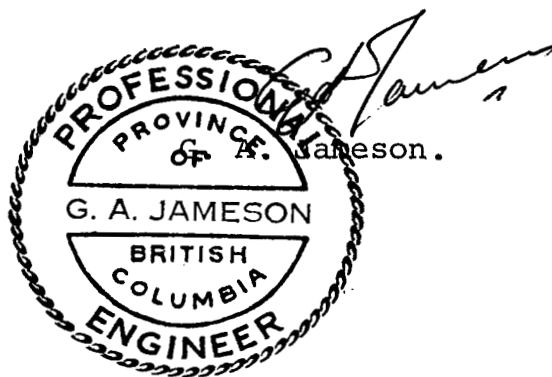
R. G. Agarwal.

CERTIFICATION

I, George Archibald Jameson, of the City of Vancouver, British Columbia, hereby certify that:

1. I am a mining engineer with offices at 824 - 602 W. Hastings Street, Vancouver, British Columbia.
2. I am a graduate of the Camborne School of Mines, England, A.C.S.M. (1947).
3. I have been actively engaged in mining engineering for the past 15 years.
4. I am a member of the Associations of Professional Engineers in Ontario and British Columbia.
5. I have no interest, directly or indirectly, nor in the securities of, nor do I expect to receive any such interest in the property of Mr. E. A. Trethewey.
6. That this report is based on data derived from work carried out by Velocity Surveys Limited, from personal experience in the area, and from government publications relevant to the area.

Dated this 25th day of September, 1969 in the City of Vancouver, British Columbia.





LEGEND

TRUNK ROUTES
 Divided Highway with Interchange
 Paved
 Gravel (Improved)

OTHER ROADS
 Paved
 Gravel
 Dirt
 Trail
 Under Construction
 Proposed
 Restricted Road

MILEAGES
 Mileage between towns and junctions
 Mileage between red symbols

MAP SYMBOLS
 Provincial
 Federal
 Campgrounds
 Marine Parks
 S&I Areas
 Points of Interest
 Scheduled Airline Stops
 Other Airports
 Open 24 hours
 Inquire locally
 Ports of Entry
 Fish Hatcheries
 Time Zone Boundaries

ROUTE MARKERS
 Trans-Canada
 Interstate
 Provincial and State
 United States

POPULATION SYMBOLS

● Prov. and State Capitals	⊙ 2,500 to 3,000	⊙ 25,000 to 50,000
○ Under 250	⊙ 3,000 to 10,000	⊙ 50,000 to 100,000
⊙ 250 to 1,000	⊙ 10,000 to 25,000	⊙ 100,000 and over
⊙ 1,000 to 2,500		

SCALE OF MILES
 0 5 10 20 30 40 50 60

ONE INCH EQUALS APPROXIMATELY 24 MILES

NOTE - Distorted scale in northern area of the Province. Use mileages shown between towns.

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NO. **2202** MAP **#1**

Klayduc Cr.

TSIMSTOL MTN.

M-92

L.4245-7
L.4249

L.4248

SPEC #3

L.886
C.G.

33510

L.927
C.G.

L.5806
C.G.

L.929
C.G.

L.928
C.G.

L.5887
C.G.

L.5809
C.G.

L.5808
C.G.

L.939
C.G.

La Rose Cr.

L.5515

L.5516

M.197

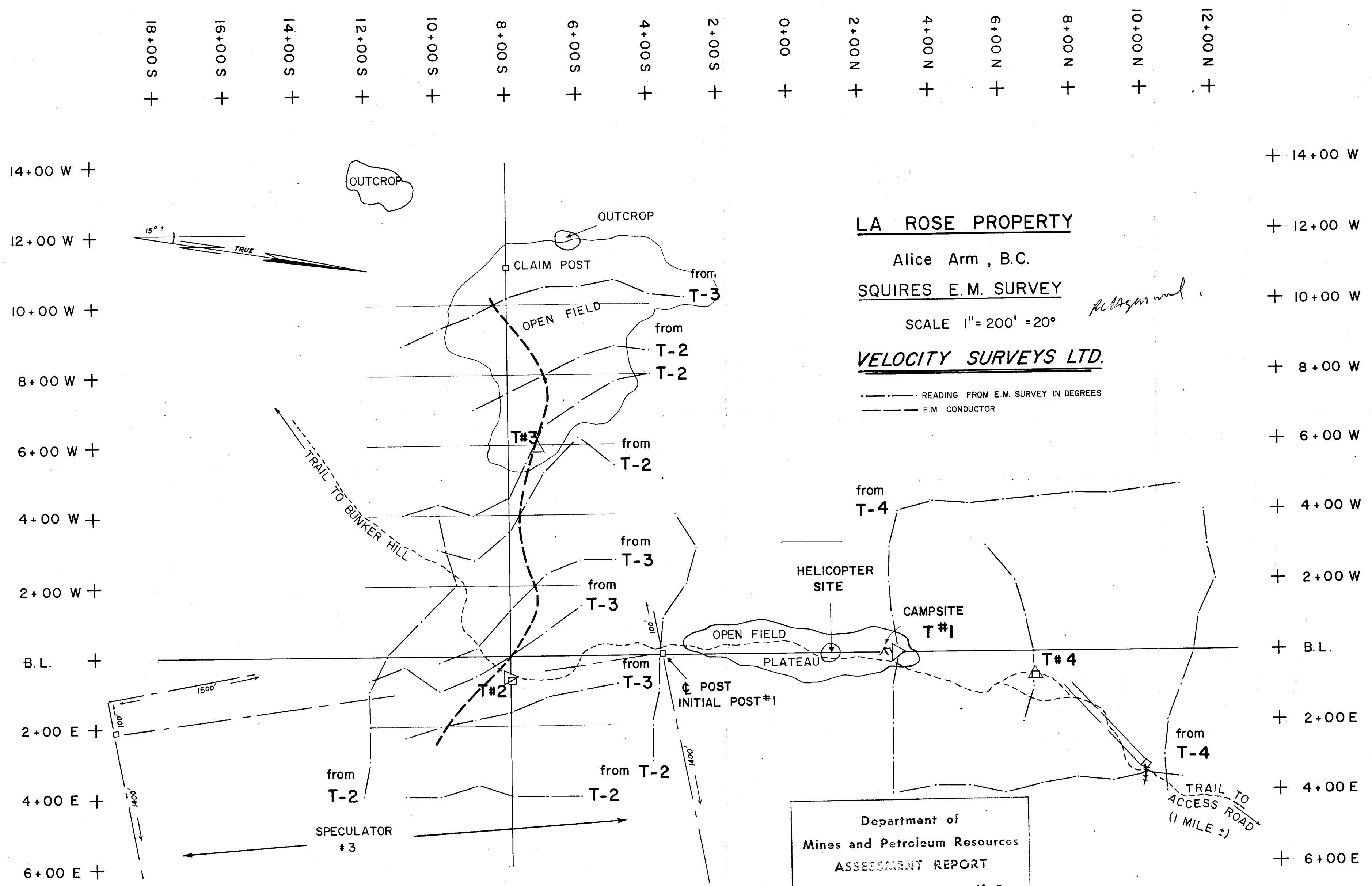
L.5517

L.5518

GWUNYA CR.

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NO. 2202 MAP #2



LA ROSE PROPERTY

Alice Arm, B.C.

SQUIRES E.M. SURVEY

SCALE 1" = 200' = 20°

VELOCITY SURVEYS LTD.

--- READING FROM E.M. SURVEY IN DEGREES
 - - - E.M. CONDUCTOR

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 NO. **2202** MAP **#3**

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