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Report on the B. W. Lang Claims Located in Northwest Fully Township Trains Area, Ontario

## LOCATION:

The property consists of 7 contiguous claims P-91529, P-91530, P-91533, P-91534, P-91535, P-91537 and P-91538 located in Concession IV and $V$, Lots 8 and 9, July Township. Access 18 via lumber roads as marked in dashed lines on the survey map.

GEOLOGY:
The andeaite-rhyolite contact that contains the Texas Gulf Sulphur orebody in Kidd Township is projected towards the northeast as passing through July Township. Due to the interbedding of numerous rhyolite-andesite flows and the lack of outcrop areas more accurate location of this favourable horizon cannot presently be determined.

Work to date in July Township has encountered similar rock types to those obtained at the Texas Gulf Sulphur orebody. Volcanic flows predominate with minor sedimentary horizons and a considerable number of peridotite Intrusions.

There is a noticeable change in strike within this group of claims. At the western portion of the group the strike is southeast, towards the middle of the claim group this changes to east-west. This is probably due to folding which in turn may be responsible for the large number of conductors within the immediate area.

## PREVIOUS WORK IN THE AREA:

A drill hole is recorded adjacent to the southwest portion of the B. W. Lang group. This hole probably intersected the southeastern end of airborne anomaly \#6 and obtained interbedded volcanics with the conductor being caused by a graphitic-pyrite horizon. The hole was drilled at $-55^{\circ}$ with bedrock being reached at $219^{\prime \prime}$ along the hole.

Another drill hole further to the north tested the northern portion of anomaly $\# 4$ and obtained rhyolite, dacite and gabbro, with the conductor being due to barren sulphides. Bedrock was obtained at $224^{\prime}$ along the hole drilled at $-55^{\circ}$.

Daering Explorers drilled 5 holes to test airborne anomalies \#8 and \#9 on their ground. I had a discussion with M. Zurosky, Consulting Geologist on the project. He reported that the holes intersected rhyolite, dacite and peridotite with considerable alteration, the conductors were caused by sulphides with some minor copper and zinc values. This property has subsequentiy been brought to lease status by Daering Explorers.

Further to the east 3 conductors located on the ground by United Comstock were tested by 3 drill holes. These conductors were not picked up by the airborne survey. The conductors were caused by graphite and pyrite.

## GROUND E.M. SURVEY EQUITMENT AND METHOD:

The E.M. survey was run using the vertical loop "broadside" method. This is a standard E.M. method where the transmitter
loop is placed opposite the receiver one or two lines over. The coil is held vertical and the plane of the coil directed towards the receiver. The dip angle is read and then both operators move to the next station. In this survey with a line interval of $300^{\prime}$ the operators were spaced $600^{\prime}$ apart. A Crone Dual Frequency E.M. unit was used as described in the enclosed specification brochure. Readings were taken at the 1,800 cps. frequency and two lines were read at both the 1,800 and 480 frequencies. Serial number of the units is JEM \#36-92. A total of 306 readings were taken within the claim group. The E.M. crew chief was A. F. Bessette of 42 Second Averue, Schumacher, Ontario. The E.M. work was carried out during the period March 4th to 10 th , 1968.

## LINECITTING:

A 300' line interval grid was cut by Denis Maillet, Contractor, from Val D'Or, Quebec. Cutting took place from February 4th to 20th, 1968. In all 7.2 miles of line were cut.

## RESULTS OF SURVEY:

Numerous conductors were detected by this survey. The northern conductors appear to be more consistent and have been lettered "A" to "F". Towards the southeast seven one or two line conductors exist and have been marked.

Dual Frequency readings on line $0+00$ and $6+00 \mathrm{~W}$ have a low/high frequency ratio of . 6 or greater indicating positive bedrock conductors of good to excellent conductivity.

Overburden in the area is expected to be in excess of 75 feet and probably is within the range of 75 to 150 feet.

Respectfully submitted,

Toronto, Ontario, October 4th, 1968.


During January and February 1968 two vertical loop electromagnetic surveys were carried out on four claims in Tully Township.

The claims 88213 , 88214,88217 and 88218 are recorded in the name of B. W. Lang, 80 Fichmond Street West, Toronte l, Ontario.

## Location and Access:

The claims are located in the south half of Lot 10 , Concession III, Tully Township, Porcupine Mining Division and are easily accessible via a network of winter roads from Connaught, Ontarie.

## Previous Work:

Two combined airborne magnetic and electromagnetic surveys have been flown over the group. In 1964, Texas Gulf Sulphur Company concucted a ground electromagnetic survey and drilled one hole on the ground.

## Geology:

Two small outcrops occur in the centre of the property. The outcrops are predominately fragmental, felsitic volcanic rocks. The larger of the two is cut by a narrow, andesitic northeasterly striking band which is probably intrusive in nature.

South of the outcrop area Texas Gulf Sulphur Company drilled one hole and encountered rocks of andesitic composition and one narrow band of graphitic material.

## Instruments Used and Survey Method:

A crone dual frequency J.E.N. Unit and a Crone dual frequency vertical loop unit were used for the survey. The J.E.M. unit was employed in a broadside configuration while the larger vertical loop unit was used in the fixed transmitter, fan method. The instruments and methods employed are fully described in the appendix to this report.

## Survey Results:

Three distinct conductors were detailed on the claim group. The profile shapes and the good ratio between the high frequency responses indicate that the conductors are likely to be bedrock conductors with good to excellent conductivity.

The most southerly conductor has already been tested by Texas Gulf Sulphur Company.

The central conductors are almost certainly related structures which have been faulted.

The most northerly conductor which has a northeasterly strike is open at both ends.

## Conclusions and Fecommendations:

Before drilling is recommended a detailed magnetic survey should be performed and assessed.

It would appear that at least two drill holes would be necessary to assess the conductors on this ground.


## Introduction

During the period from February 27 to February 29, 1968, a magnetic survey was carried out over a group of five claims by Mespi Mines Limited, Box 807, Timmins, Ontario. The survey was conducted at the request of Mr. B. H. Lang.

## Location and Access

Claims $\mathrm{P}-88213$, 88214, 88216,88217 and 88218 recorded in the name of $\leftrightarrows . W$. Lang, 1705 Victory Building, 80 Fichmond Street West, Toronto l, Ontario are located in west central Tully Township, Porcupine Mining Division, approximately eighteen miles north of the Town of Timmins, Ontario. The group is readily accessible via a network of bush roads which join Highway 67 at Connaught, Ontario.

## Geology

Only two small outcrops occur on the property. Both outcrops are rhyolitic in composition. The larger of the two is intruded by a medium grained chloritic rock of andesitic composition. The contact between the two rocks has a northeasterly strike.

Several years ago, previous operators drilled one hole southeast of the outcrons which intersected rhyolitic rocks and intercalated carbonaceous sedimentary rocks.

All of the underlying rocks are believed to be of Precambrian Age.

Previous Work
In addition to the diamond drill hole previously discussed the area was covered by at least two combined airborne magnetic and electromagnetic surveys conducted by Hunting Services Limited and Canadian fero Survevs Limited.

Prior to the magnetic survey, liesni inines Limited conducted a detail electromafnetic survey.

## Survey liethod and Hesults

The entire survey was conducted with a Sharpe nir-l fluxcate magnetometer which has a scale sensitivity oi twenty fammas. All stations are related to station uld on line 36 E and have oeen corrected for diurnal variation.

The readings were plotted on the accompanying map and contoured. The isomagnetic contour lines were drawn at one hundred gamma intervals.

Maximum magnetic relief in the survey area is 1640 gamines. Numerous relatively isolated "highs" and "lows" occur within the survey area, none of which have any direct electromagnetic coincidence.

Conductors "L" and " L " were probably the same conductor and have been faulted. These two conductors appear to be generally associated with a two to three hundred gamma anomaly.

Conductor "A" occurs in a pronounced magnetic low and is probably due to carbonaceous sedimentary rocks. Conductor "D" which has no apparent magnetic association, was drilled by previous operators and is due to carbonaceous rocks.
'Two depth determinations were carried out over the nomalously high areas on lines 46 and 48 west with questionable results. Indicated depths to the tops of these anomalies is 120 feet, however, the anomaly profiles are not very sharply defined so that the determination may be in error as much as 50 feet.

## Conclusions and Recommendations

Conductors "C" and "L" are enhanced by their apparent magnetic association and should be drilled on lines $34^{\text {w }}$ and 42 w .

The holes should be spotted at $34 \%, 5+50 \mathrm{~N}$, and 42 W at $6+40 N$. Both holes should be drilled grid south at $-50 \%$

Conductor "C" also warrants a drill hole which might be spotted to test the conductor as well as the magnetic anomaly on line 48 W .


Exploration manager, Mespi Mines Limited

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\mathrm{FOR}
$$ <br> MR. B. W. LANG 

## I. INTRODUCTION



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This report pertains to the coinbined airborne EM and magnetometer survey flown on behalf of Mr. B.W. Lang in the Tully Township area of Ontario. The flyin! was accomplished between September 7 and 9, 1966 by the Canadian Aero Mineral Surveys Limited geophysically equipped Otter aircraft (registration CF-IGM) besed at South Forcupine.

The survey was flown at mean terrain clearance of $150^{\circ}$ with flight lines apaced at $1 / 8$ mile intervale. All Iines were oriented north-soutin. The geophysical data sequired totalled 163 Ifne miles.

Canadian Aero Mineral Surveys Limited personmel associated with the project were as follow:
G. A. Curtis - Project Manager
K. Dempster - Pilot
T. Korpatt - Navigato.:
T. Peacock - Operatior
D. Sarazin - Lata Compiler
G. Granger - Draftemen
P. Tallyhoe - Data Clief
R. V. Steep. - Geophyefist.

The EM data and all magnetic anomalies colncident with conductors are plotted on a plan map at the scale of $1^{i}=\frac{1}{2}$ mile which accompanies this report.

The magnetic results are also presented in "redball" form for anomalies 100 g or greater in emplitude. An alrphoto laydown provided the base for this map.

## II. DISCUSSION OF RESULTS

A number of conductors have been outlined by the airborne suivey but most of thea are grouped together in the northern portion of the area. Conductors 1-7 are probably related to a siniar bedrock origin. The nature of the conductors, plus the lack of associated magnetics, would tend to favour graphitic sediments as the source. However, we cannot rule out the possibility of sulphides. The response is strongest in conductor 7 and it would be the best spot to investigate on the ground to determine the source material.

Conductors 8 and 9 may be an extension of the above group of conductors. The response in very weak except on line 85.

Conductor 10 exhibits good conductivity and is isolated which makes it a sood sulphide prospect. Isolated graphitic zones are not toc comon in the Shieid area. Conductor il is a meak anomaly which is probably related to conductor 10 even though it appears to be a separate feature.

Conductor 12 exhtbits iow conduceivity out is a 180 an isolated feature so should definitely be ahecked out on the ground.
III. RECOMMENDATIONS AND CONCLUSIONS

Conductors 10, 11 and 12 appear to be the best sulphide prospects because of their isolated nature. Conductor 10 exhibits the best conductivity and is given top priority for gound followup.

The remaining conductors are of the formational type and their characteristics tend to favour a graphitic rather than sulphide scurce. This formational zone should be investigated in the vicinity of conductor 7 to determine the source material.

OTTAWA, Ontario, November 1, 1966.
R. W. Stemp, P.Enk., Geophysicist.

PROJECT NO. 6113 - TULLY TWP AREA

In-Phase

|  | omaly | Fiducials | Quad | Altitude | Magnetics | Rate | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 59 | A | 987/901 | 40/120 | 125 | nil | 3 |  |
| 64 | A | 513/5 | 40/20 | 155 | nil | 3 |  |
| 65 | A | 243/6 | 50/10 | 125 | nil | 3 |  |
| 66 | A | 109/12 | 50/20 | 155 | S.edge 50g | 3 |  |
| 66 | B | 161/5 | 60/30 | 150 | nil | 3 |  |
| 66 | C | 180/3 | 0/20 | 125 | N.edge 100 g | 3 |  |
| 67 | A | 9974/7 | 140/40 | 140 | $\begin{aligned} & \text { S. Flank } \\ & \text { 100g } \end{aligned}$ | 3 |  |
| 67 | B | 9915/22 | 80/30 | 150 | nil | 3 | Broad, 直ult. |
| 67 | C | 9899/902 | 80/20 | 120 | Assoc. 110g | 3 |  |
| 68 | A | 9807/12 | 40/60 | 140 | ni1 | 3 |  |
| 68 | B | 9821/4 | 40/20 | 125 | nil | 3 |  |
| 69 | A | 9493/6 | 0/30 | 170 | N.edge 6708 | 3 |  |
| 69 | B | 9441/5 | 60/40 | 160 | nil | 3 | Broader quad |
| 69 | C | 9427/30 | 203/20 | 155 | E.edge 50 g | 3 | Weak |
| 70 | A | 9331/4 | 302/20 | 150 | nil | 3 |  |
| 70 | B | 9341/5 | 830/20 | 160 | nil | 3 |  |
| 70 | C | 9352/6 | 0/20 | 135 | Dir 7180 g | $\mathbf{x}$ |  |
| 70 | D | 5362/5 | 20/20 | 145 | nil | 3 | Weak |
| 71 | A | 9101/6 | 0/70 | 145 | nil | 3 |  |
| 71 | B | $9092 / 5$ | 40/30 | 165 | S.Flank 200g | 3 |  |
| 71 | C | 9074/80 | 0/60 | 125 | nil | 3 | Broad |
| 71 | D | $9070 / 4$ | 140/140 | 130 | nil | 3 |  |

PROJECF NO. 6113-TULIY THP. AREA

| Anomaly | Fiducials | In-Phase <br> Quad | Altitude | Magnetice | Rete | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 AA | 2847/9 | 30/10 | 170 | $\begin{aligned} & \text { S. Flank } \\ & 440 \mathrm{~g} \end{aligned}$ | 3 | Weak |
| 78 A | 8987/92 | 160/80 | 150 | nil | 2B |  |
| 72 B | 9012/7 | 30/20 | 160 | nil | x |  |
| 73 A | 8747/58 | 600/220 | 140 | nil | 2B | Very Broad, mult |
| 74 A | 8616/9 | 50/30 | 165 | nil | 3 |  |
| 74 B | 8619/25 | 220/60 | 165 | S. side 340 g | 28 | Malt. |
| 74 C | 8636/9 | 40/20 | 170 | n11 | 3 |  |
| 74 D | 8641/4 | 40/30 | 170 | nil | 3 |  |
| 75 A | 8398/400 | 40/20 | 150 | n11 | 3 |  |
| 75 B | 8392/5 | 70/30 | 165 | Dir? 100g | 3 |  |
| 75 c | 8372/5 | 50/20 | 160 | nil | 3 |  |
| 75 D | 8367/70 | 60/60 | 160 | nil | 3 |  |
| 81 A | 7459/64 | 0/40 | 120 | S edge 60 g | 3 | Weak |
| 83 A | 7173/9 | 920/50 | 130 | n11 | 3 |  |
| 83 AA | 222:/36 | 0/60 | 135 | nil | 3 | Broad |
| 84 A | 713410 | 320/20 | 140 | 011 | 3 |  |
| 85 A | 6:03/8 | 70/40 | 130 | nil | 3 | Double |

# REMOLT ON TII: CONDICT OT AN AIBRORNT: GIEOPIVSTCAL SURVI:Y IN THIE DJSTRIC: OI COMUNNE 

On the following rlates, Aughst 26, 28,30 , May l, "ay 8,1961, Hunting Survey Corporation carriod out flyinf njerations on a combined magnetometer and electrmagnetometer survey over parts nt the tomships of Tully and little.

The work was carried out under contract to $B . W$. I,ang.
The location of the area surveyed is shown on a map accompanying this report.

Two data men vere stationed in Timmins to give preliminary information to the client.

Final plotting and preparation of maps were carried nut in ilunting's Toronto office. FLYING SPECIIICATIONS
 i.e. pilnt, instrument operator, electronic tochmician anl aircraft engineer.

The technician and engineer did not accomany the :orraft on nll survoy flights.
 of 660 foet.

Terrain clearance was maintained hotiveen 450 and 500 foet. where safety would permit.

Fifty-five traverses were flown over the area, for a tot:al of 220 lincar miles. instrumentation

The following instruments were operated during the survey:

1. finlf magnetoneter.
2. Hunting Survey Corporation - Canadian Mpitied Besearch limited dual frequency electromanommeter mensuring the phase dianlacement of the resultant ficid vith roapect to ampled fiedri for frefuencies of 400 and 2,300 cycies per second.
3. Modified $\mathrm{A} N-1$ radio altimeter.
4. C.A.R.L.-H.G.G. 35 mm discrete frame positioning camera.
5. A four channel curvilinear recorder, flomina irmn top th hotton:
(1) Nitimeter record and camera fiducial milonc.
(2) Magnetometer profile showing variationc in the trongth of earth's magnetic fiedi, sonsitivity jol gamer per centimeter channel.
(3) Phase angie of the resultant ficid with respect to: 2,300 crele mplied ficid, sensitivity $2^{\circ}$ per centimenter across $n$ four centimeter channei.
(4) Piase angle of the resultant finld with respect to a 400 cycle applied field, sensitivity $1^{\circ}$ per contimeter across $n$ four centimeter channel.
6. A two pen rectilinear recorder with a five inch recording width, showing:
(1) In red ink the terrain clearance record and camera fiducial pulsos.
(2) In black ink the variations in strength of the earth's magnetic field, sensitivity 100 gammas per inch.

NOTE: A pulse was shown on the altimeter record, co-jncident with every tenth exposure of the 35 mm canera.

This served to relate the records to the terrain over which they were made.

The magnetometer and EAM, detectors were located in separate "birds" towed behind and below the aircraft. MAPS AND DATA COMPILATION

Navigation mosaics were prepared on n scale of 1 inch to 2,640 feet utilizing "Overthrust" mosaics availahle to the contractor.

For preparation of base maps, uncontrolled mosaics were made on a scale of 1 inch to 1,320 feet, utilizing photogr.....s obtained from the Department of Lands and Forests (Year 1961 photography).

Flight path was established by visual comparison of the 35 mm film with the alove mentioned mosaics.

Base maps were traced from these mosaics also, showing recognizable planimetric features.

Township boundaries shown on the base maps were positioned by reference to Ontario nepartment of Nines claim maps.

A map was compiled showing:
(a) flight traverses and
(b) magnetic contours referred to an arbitrary datum. Contour interval was 20 gammas.

A second map was prepared showing:
(a) flight traverses.
(b) extent and location of the peak of the observed low frequency anomalies.
(c) extent of residual low frequency anomalies.
(d) the phase angle of observed high ind low frequency anomalies read at peak values.
(e) the phase angle of residual high and low frequency anomalies read at peak values.
(f) value and location of magnetic peaks and lows, referred to on arbitrary datum.

R. N. Parkinson P. ling.

HF HINT: SURVEY CORPORATION lIMITED



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THE TOWNSHIP, OF
TULLY
DISTRICT OF COCHRANE PORCUPINE MINING DIVISION SCALE:I-INCH=40 CHAINS


PLAN NO. - M: 607
DEPARTMENT OF MINES ${ }^{H}$.
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TULLY
DISTRICT OF COCHRANE
PORCUPINE MINING DIVISION
SCALE: $I-I N C H=40$ CHAINS

## LEGEND

PATENTED LAND
CROWN
LOCATED LAND
Located Land
LICENse of occupation
LICENSE OF OCC
ROADS
MPRROVED
RAILWAYS
RAILWATS
POWER LINE
POWER LINES
MARSH OR MUEKEG
MARSH
TRALL

| MARSH OR MUSKEG | " |
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NOTES
400' Surfoce Right: Retervation around
all Lakes and Rivers.

PLAN NO. - M. 607
DEPARTMENT OF MINES

- ONTARIO-







