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R E POR T on Property of TRILLER EXPLORATIONS LIMITED JANES TOWNSHIP SUDBURY MINING DIVISION ONTARIO

D. W. Esson, P. Eng.

Toronto, Ontario

September 25, 1968



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SUMMARY:

Triller Explorations Limited acquired a mining property consisting of 17 unpatented mining claims in Janes Township, Sudbury Mining Division of Ontario during early 1968.

This group of seventeen (17) claims is located in an area of mafic rocks (norite) that are intrusive into metamorphosed Huronian and Keewatin sediments. The identification of norite was a result of thin section study of samples blasted from an outcrop east of the Sturgeon River near the common boundary of claims S 147:30 and S 147431 to the west of the subject property.

The company has recently completed a program of line cutting, magnetometer surveying, test electromagnetic surveys and is presently carrying a program of prospecting, trenching and sampling. Particular attention is being paid to areas of interest indicated from the geophysical work completed to date and results of work completed on properties adjoining to the east and west.

It is therefore recommended that stripping, trenching and sampling be carried out to completion to allow an evaluation for diamond drilling as warranted.

INTRODUCTION:

Explorations Limited.

PROPERTY:

Consists of seventeen (17) unpatented contiguous

mining claims of approximately 40 acres each.

S 147435 to S 147442 inclusive	8 claims
S 147445 to S 147447 inclusive	3 claims
S 147416 and S 147695	2 claims
S 147707 to S 147710 inclusiv :	4 claims
Total	17 claims

LOCATION AND ACCESS:

The claim group is located in the west central part of Janes Township in the Sudbury Mining Division of Ontario near the junction of the Sturgeon and Chiniguchi Rivers.

It lies 1 - 1/4 miles north of Chudleigh on the main line of the Canadian National Railways which passes through the s outhern part of Janes Township. It is readily accessible by a good gravel road which passes through the property from Sturgeon Falls or Warren on Highway 17. The distance from Sturgeon Falls by road is approximately 37 miles.

TOPOGRAPHY:

Generally rugged, particularly at the junction of the two rivers with local relief of about 150 feet. Relief is due mainly to ridges and hills of Precambrian sediments and sills and masses of basic rocks typical of the area between Lake Temiskaming and Lake Wanapitie.

RESOURCES:

The district is timbered with secondary spruce, pine, balsam, birch and maple. Local lumbering operators are active. Power is available from the North Bay-Sudbury grid of Ontario Hydro.

HISTORY:

Prospecting and some exploration has been carried on for several years in the area, more especially in Davis Township to the west.

Minor showings of copper and gold have been found in quartz veins in crush zones in gabbro and old sediments in Janes Township. A 30 foot shaft was sunk north of Sargesson Lake one mile to the east but no values were reported.

This discovery of base metals in norite warrants further investigation and the large areas of mafic rocks seen on the property require careful investigation. This discovery of sulphides in rock of the Sudbury type is the first known indication in this area.

GENERAL GEOLOGY:

All the rocks in the area are Precambrian in age.

The Grenville Front crosses the southern part of Janes Township and the Ess Creek Fault coincides with the Front. A relatively strong north-south fault extends from Ess Creek up the Sturgeon River and is evident in the field on the east side of the river.

The rocks south of the Ess Creek fault are Killarnean (Grenville) and consist of granite gneiss, migmatites, amphibolites and metasediments. North of the fault in the area of the property the rocks consist of metamorphosed Cobalt and Keewatin sediments intruded by diabase, gabbro, amphibolite (Sudbury gabbro) shown as mafic intrusives on O. D. M. Map P-367(1966).

The mafic intrusives cover a large area in Janes Township as were seen by the writer during field examinations on June 24th - 25th and August 14th, 1968.

It is of particular interest to note that the large area of mafic intrusives between Lake Temiskaming, Gowganda and Sudbury, show variations in composition from quartz diabase to quartz norite (Sudbury norite) with the latter type increasing from northeast to southwest approaching the Sudbury base metal area (see G. S. C. Memoir 95, pp. 88 - 91). As mentioned earlier, a sample from a test pit on the common boundary of mining claims S 147430-431 of an adjoining property has been identified as norite of the Sudbury type. This sample showed from a thin section and

polished section study to have 3% intersticial sulphides (chalcopyrite,

pentlandite, pyrrhotite), 50% plagioclase, 40% hypersthene and minor biotite, hornblende, chlorite, ilmenite and quartz (see photomicrographs). The above determinations were done for the Company by the Geological Survey of Canada and given to the writer for his study.

It would appear that the large areas of basic intrusive mapped as diabase and gabbro east-northeast of the Sudbury nickel area warrant careful examination since they appear to be in part related to the favourable Sudbury norite. Careful examination of the larger intrusive masses or sills should be made for possible magnetic segregations within them which may contain concentrations of base metal sulphides.

GEOPHYSICAL SURVEYS:

North-south picket lines were cut on the property at intervals of 300 feet with stations established every 100 feet along the lines. East-west base line controls were established.

MAGNETOMETER SURVEY:

A ground magnetic survey utilizing a Sharpe MFI Fluxgate magnetometer was completed using the pre-established picket line grid. The usual corrections for instrument drift and diurnal variations were applied and readings were recorded to the

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nearest 5 gammas. Technical details of the instrument used are outlined in Appendix "A" of this report.

RESULTS OF MAGNETIC SURVEY:

As will be noted on the accompanying magnetometer map there are at least four areas of magnetically high relief.

The first and most extensive of these extending from east of the Sturgeon River in claim S 147708 to the eastern boundary of the claim S 147710 with a range of 2100 gammas or some five times background.

The second area of high magnetic relief is located in claims S 147695 and S 147707 with a east-northeast trend and relief to 1400 gammas.

The third area of magnetic relief extends east-west along the common boundary of claims S 147437 and S 147438 with a maximum relief of 4000 gammas.

There are other smaller areas with lesser relief that require further investigation.

ELECTROMAGNETIC SURVEY:

This survey was conducted in the areas of magnetic relief utilizing the same grid pattern as was used for the magnetometer survey. The instrument used was the Ronka E. M. 16 series and technical details relative to this equipment are to be found in Appendix "B" to this report.

RESULTS OF ELECTROMAGNETIC SURVEY:

The accompanying electromagnetic map indicates three (3) significant electromagnetic conductors both in the northwest portion of the property and both related to areas of above normal magnetic relief.

Conductor "A" is located on claim S 147438 extending from Line 36E to Line 42E and trending generally in an east-west direction. This particular conductive zone is known to extend into the properties adjoining to the east and west.

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Conductors "B" and "C" located on claim S 147439 both extending from Line 36E to Line 42E and related to an area of above normal magnetic relief. Both these conductors are known to extend east and west into adjoining properties.

The overall picture indicates the possible existence of sulphide zones and requires that additional exploration be undertaken.

CONCLUSIONS:

The results of exploration to date justifies the continuation of the recommended program of stripping, trenching and sampling. This phase of the program is currently underway and will be reported upon separately.

Since the area is known to contain basic rocks including Sudbury type norite and since it is known that copper nickel sulphides are associated with these basic rocks to the east and west of this property the property should be systematically mapped geologically. This geological information along with the information from the stripping, trenching and sampling currently underway will provide ample information to recommend subsurface exploration as warranted.

RECOMMENDATIONS:

It is therefore recommended that the stripping, trenching and sampling be completed along with the systematic geological mapping as set out in a report by D. W. Sullivan dated April 23rd, 1968.

The results of the above will then provide sufficient information to initiate stage two of the program outlined in a report dated April 23rd, 1968.

Respectfully submitted

CERTIFICATE

I, Donald W. Esson, of the City of Toronto, in the County of York, in the Province of Ontario, hereby certify:

- That I am a consulting geological engineer and reside at 122
 Blythwood Road, Toronto 12, Ontario.
- 2. That I graduated from the University of Toronto in 1957 with the degree of B. A. Sc. in Mining Geology and have practised my profession as field geologist, mining securities analyst and consulting geologist continuously since graduation with the exception of the year 52-64.
- 3. That I am a member of The Association of Professional Engineers of Ontario.
- 4. That my deport on the Janes Township property of Triller
 Explorations Limited is based on review of maps and reports as listed in the attached Acknowledgements, on personal visits to the property and surrounding area during June and August, 1968 and on my specific knowledge of exploration programs being conducted by others in the same general area.
 5. That I have no direct or indirect interest, nor do I expect to receive any direct or indirect interest, in the properties described herein. I do not own beneficially, directly or indirectly, any shares in Triller Explorations Limited, nor shares in any affiliate of that Company.

DATED at Toronto this 30th day of September, 1968.

Donald W. Esson, B. A. Sc., P. Eng.

ACKNOWLEDGEMENTS:

Ontario Department of Mines Ontario Department of Mines

Report of D. A. Duff, B. Sc., P. Eng.

Report of D. W. Sullivan, B. Sc., P. Eng., F. G. A. C.

Department of Mines, Geological Survey,

Ontario Department of Mines

Photomicrographs (4), Sample #BA-D-3

Report of D. W. Sullivan, B. Sc., P. Eng., F. G. A. C. Vol. XLl Part IV 1932

Geological Report 15, 1963

Dated November 13, 1967, Janes Township

Dated March 1, 1968 Janes Township

Memoir 95

Preliminary Report P. 367(1966)

Thin section and polished sections carried out by Geological Survey of Canada.

Dated April 23, 1968 Janes Township

APPENDIX "A"

VERTICAL INTENSITY FLUXGATE MAGNETOMETER MF-1 SPECIFICATIONS

<u>Model MF-1</u> Standard surveying and prospecting magnetometer with self-levelling sensor.

Ranges:	Plus or 1	Plus or minus -						
	1,000 gammas f. sc.			Sensitivity: 20 gammas per		nmas per div		
	3,000	ri			50	Ð		
	10,000	11			200	11		
	30,000	u.			500	H		
	100, 000	11	,		2000	11		
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 Meter:
 Taut-band suspension, 1,000 gamma scale: 1 7/8" long 50 div.

 3,000
 "
 1 11/16" long 60 div.

Accuracy: 1,000 to 10,000 gamma ranges $\stackrel{+}{-}$ 0.5% of full scale 30,000 to 100,000 gamma ranges $\stackrel{+}{-}$ 1% of full scale

Operating Temperature:	-40° C to 40°
	-40° F to 100° F
Temperature Stability:	Less than 2 gammas per $^{\circ}$ C (1 gamma/ $^{\circ}$ F)
Bucking Adjustments:	10,000 to 75,000 gammas by 9 steps of approximately 8,000 gammas and fine control by 10-turn potentiometer. Convertible for Southern hemisphere or \pm 30,000 gammas equatorial.
Batteries: 12×1 . $5V - f$	lashlight batteries ("C" cell type) (AC Power supply available)
Consumption:	50 milliamperes
Dimensions:	Instrument: 6 1/2" x 3 1/2" x 12 1/2" - 165 x 90 x 320 mm
	Battery Pack: 4" x 2" x 7" 100 x 50x 180 mm Shipping Container: 10" dia. x 16" - 255 mm dia. x 410 mm
Weights:	Instrument: 5 lbs. 12 oz 1.6 kg. Battery Pack: 2 lbs. 4 oz 1 kg.
	Shipping: 13 lbs.

APPENDIX "B"

PRINCIPLE OF OPERATION (RONKA EM 16)

The VLF-radio stations operating for communications with submarines have a vertical antenna. The antenna current is thus vertical, creating a concentric horizontal magnetic field around them. When these magnetic fields meet conductive bodies in the ground, there will be secondary fields radiating from these bodies. This equipment measures the vertical components of these secondary fields.

The EMI6 is simply a sensitive receiver covering the frequency band of the new VLF-transmitting stations, with means of measuring the vertical field components.

The receiver has two inputs with two receiving coils built into the instrument. One coil has normally vertical axis and the other is horizontal.

The signal from one of the coils (vertical axis) is first minimized by tilting the coil. The tilt-angle is calibrated in percentages. The remaining signal in this coil is finally balanced out by a measured percentage of a signal from the other coil, after being shifted by 90° . The axis of this coil is at right angles to the axis of the first coil. This coil is kept normally parallel to the primary field.

Thus, if the secondary signals are small compared to the primary horizontal field, the mechanical tilt-angle is an accurate measure of the vertical real-component, and the compensation $\Pi/2$ signal from the horizontal coil is a measure of the quadrature vertical signal

APPENDIX "B" (Cont'd)

SPECIFICATIONS

Primary field:

Frequency range:

Station selection:

Measured field:

Accuracy of readings:

Range of measurements:

Output readout:

Batteries:

Size:

Weight:

Accessories:

Horizontal from any selected VLFtransmitting station.

Approximately 15 - 25 kc.

By plug-in units. Two stations selected by a switch on front panel.

Vertical field, in-phase and quadrature components.

 $\frac{1}{2}$ 1% resolution.

In-phase $\frac{+150\%}{-150\%}$ or $\frac{+90^{\circ}}{-90^{\circ}}$, guadrature $\frac{+40\%}{-40\%}$.

Null-detection by an earphone, real and quadrature components from mechanical dials.

6, size AA penlight cells. Life about 200 hours.

 $16 \times 5.5 \times 3.5$ in. (42 x 14 x 12 cm).

2.4 lbs. (l.1 kg).

l earphone and cord.
 l carrying bag.
 l set of batteries.
 l Manual of Operation.

2 plug-in units for station selection- additional optional units available.



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SUMMARY REPORT on Property of TRILLER ENPLORATIONS LIMITED IANES TOWNSHIP SUDBURY MINING DIVISION ONTARIO



SUMMARY

The following summary is provided by D. W. Sullivan, P. Eng., F. G. A. C. whose full report is available in the Public Files of the Ontario Securities Commission.

Triller Explorations Limited has acquired by outright purchase a contiguous group of seventeen (17) unpatented mining claims in the west central part of Janes Township, Sudbury Mining Division of Ontario.

They are known more precisely as follows:

5147435 to \$147442 inclusive	8 claims
5147445 to \$147447 inclusive	3 claims
5147416 and S 147695	2 claims
5147707 to 5147710 inclusive	4 claims
	<u>17</u> claims

The claim group is readily accessible by a good gravel road which traverses the central part of the property. This road joins Highway 17 at Sturgeon Falls and Warren. It is 37 miles by road from Sturgeon Falls. The C. N. Railway passes through the southern part of Janes Township.

HISTORY

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Prospecting has been carried out in this general area for several years but no early work has been reported on this property. In the fall of 1967 a small pit was blasted on a sulphide showing in mafic rock on the common boundary between claims S147430 and S147431 a quarter mile west of claim S147438. The latter claim forms part of the property under consideration here. Microscopic examination of this sulphide bearing rock by the Geological Survey of Canada indicated the rock to be a norite similar to the Sudbury norite which is known to contain copper and nickel sulphides. Similar basic rock was seen by the writer in the area of the claims during a personal visit February 22, 1968.

CONCLUSIONS

On the basis of the presence in the area and immediately adjoining the property of favourable mafic rocks some of which have been identified as norite, the property is considered worthy of careful exploration for economic concentrations of base metal sulphides.

RECOMMENDATIONS

It is recommended that the entire property be geologically mapped and any promising occurrences of sulphides be trenched and sampled.

It is also recommended that the whole claim group be covered by a geophysical magnetometer survey on lines cut at 300 foot spacing and readings taken every 100 feet.

A test programme of electromagnetic geophysical surveying should be done over any showings. The estimated cost of the above exploration is as

follows:

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Line cutting	\$1,700.00
Magnetometer survey	2,200.00
Prospecting	1,300,00
Geological mapping	2,400,00
Trenching and sampling	1,300.00
Electromagnetic test survey	<u>60,00</u>
Total estimated cost	\$10,000.00

If the above exploration should indicate that diamond

drilling is warranted, the following cost estimate is recommended:

2, 500 feet of diamond drilling at \$6, 00/ft. \$15, 000, 00

Engineering and contingencies 2,500,00

\$17,500.00

Respectfully submitted,

D. W. Sullivan, P. Eng., F. G. A. C.



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I, D. W. SULLIVAN, of the Township of Esquesing, in the County of Halton, Province of Ontario, hereby certify:

 That I am a Mining Engineer and reside at R. R. #3, 5th Line, Georgetown, Ontario.

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- 2. That I am a graduate of Queen's University with a B. Sc. degree and that I have been practising my profession as a Mining Engineer for the past twenty years.
- 3. That I have no interest, either directly or indirectly, nor do I expect to receive any interest, either directly or indirectly in the property of Triller Explorations Limited or any affiliated company.
- 4. That I do not beneficially own, either directly or indirectly, any securities of Triller Explorations Limited or any affiliated company.
- 5. That the following report is based on a personal visit to the property on February 22nd, 1968 and upon available geological reports and maps of the general area. Photomic rographs of the rock types and sulphides were given to the writer by the Company for his study.
- 6. That I am a member of the Association of Professional Engineers of the Province of Ontario and the Geological Association of Canada.

Dated this 23rd day of April, 1968.



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D. W. Sullivan, B. Sc., P. Eng. F. G. A. C.

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ACKNOWLEDGEMENTS

Ontario Department of Mines

Vol. XLI Part IV 1932

Ontario Department of Mines

Geological Report 15, 1963

Report of D. A. Duff, B. Sc., P. Eng., dated November 13, 1967, Janes Township

Report of D. W. Sullivan, B. Sc., P. Eng., F. G. A. C. dated March 1, 1968 Janes Township

Department of Mines, Geological Survey, Memoir 95.

Ontario Department of Mines

Preliminary Report P. 367(1966)

Photomicrographs (4), Sample #BA-D-3. This section and polished sections carried out by Geological Survey of Canada.













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