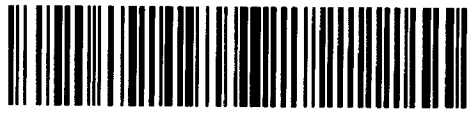
63.1633



010

The President and Directors,
Conigo Mines Ltd.,
Suite 907,
100 Adelaide Street West,
Toronto, 1, Ontario.

Gentlemen:

This report describes the results of a program of geophysical survey conducted on your property known as Block "C", located in Bartlett Township, Porcupine Mining Division, Ontario. The results are interesting, and a program of test diamond drilling is recommended. The geophysical survey data, interpretation and proposed diamond-drill holes are depicted on the plan accompanying this report, plotted to a scale of 1" = 200'.

PROPERTY, LOCATION AND ACCESS -

Block (or Group) "C" covered by the survey, is comprised of the following twenty-two (22) contiguous, unpatented mining claims:

P-78215 to P-78221, inclusive;

P-59088 to P-59091, inclusive;

P-75183 to P-75193, inclusive.

They are located at the southeast section of Bartlett Township, with the south boundary on the Bartlett-English Township Line and the east boundary along Redstone River, within two claims of the Bartlett-Geikie Township Line.

The property is tied on to the west of a large block of claims held by Texmont Mines (formerly Fatima) and about three miles to the south of its shaft, where a nickel deposit is under further development.

The location is about 30 air-miles south of Timmins.

Access was by bush-plane from Timmins, to the south part of Scott Lake, located on the property, and by a gravel road, a few miles from Timmins, for about 36 miles to the southwest corner of the property.

TOPOGRAPHY -

The topography as noted by the geophysical operators, is given on the plan accompanying this report. The ground surrounding Scott Lake and at the west part of the property, is rugged. The narrow hill located between the southeast claims P-75184 and P-75183, is apparently an esker. There are a few small swamps on the property and a few hilly places at the northeast boundary area, near the Redstone River. Because of snow and ice on the ground, only a few small outcrop areas were noted on the property.

HISTORY, GEOLOGY AND AEROMAGNETIC DATA -

Readers are referred to a property report by R. J. Bradshaw, Consulting Geologist, for the history and geology of the property. As noted by Mr. Bradshaw, the property lies on the same general

stratigraphic horizon as the Texmont nickel deposit. The east half of the property is underlain by gabbro and peridotite. These intrusives are well indicated by the aeromagnetic data published on Map 291G, G. S. C.

It should be noted here, that the geology at the said area of basic and ultrabasic intrusives is complicated, and probably includes many basic dikes and volcanics such as indicated by five shallow EXT (7/8") holes drilled by Queenston Gold Mines Ltd., in 1957, at the northeast boundary area of the property close to Redstone River. These five holes are the only diamond drilling known to have been done in the vicinity of the property and filed for assessment work at the Resident Geologist's office in Timmins.

One of the above-said drill holes was located between Lines 15N. and 18N., near the east boundary of your property. It is probably the No. 1 and most westerly hole of Queenston. The hole cut peridotite, serpentinite, diorite, basalt, tuff, greywacke and diabase, with some pyrrhotite and pyrite mineralization in the peridotite and basalt, abundant disseminated pyrite in greywacke.

SURVEY DATA -

The geophysical survey was carried out along picket lines cut at 300-ft. intervals east-westerly, turned off from a base line

which runs in a N. 0° W. direction, more or less parallel to a power line which runs across the central part of the property. Three tie lines were cut at the east and south boundary areas and one at Scott Lake.

A total of 31.61 miles of lines was cut on the property.

A total of 27.24 miles of magnetometer survey was carried out, with 100-ft. stations, using a Sharpe A-2 Magnetometer.

A total of 25.66 miles of electromagnetic survey and an additional 3 miles of check survey were carried out, using a Ronka Mark IV unit and a Ronka Mark III unit, both with 300-ft. cables.

SURVEY RESULTS AND INTERPRETATION -

The magnetometer survey outlined several interesting magnetic zones at the eastern part of the property where an aeromagnetic anomaly is located. These magnetic zones have high readings in the order of 2,500 to over 10,000 gammas, and can roughly be grouped into a west-magnetic zone and an east-magnetic zone. They are apparently irregular in shape, though they appeared to be, in general, running in a north-northeasterly direction across the length of the property but cut off by several east-westerly breaks. Several of these breaks have the characteristics of cross-faults,

with the exception of two, which are inferred as diabase dikes.

The magnetic area where the said magnetic zones are located, has readings, in general, over 1,000 gammas. It covers all the eastern-most five claims and about half or more of the adjoining four claims to the west. This magnetic area is inferred as underlain by basic and ultra-basic intrusives cutting basic volcanics and minor sediments such as described in the section on geology.

To the west of the magnetic area, the readings decreased to background readings in the order of 500-600 gammas. This area is inferred as underlain by sediments, volcanics and some acidic intrusives such as shown on the plan accompanying Mr. R.J. Bradshaw's report, but there is no magnetic indication of his band of iron formation. However, judging from Geological Map No. P. 141, O.D.M., the iron formation is located farther east and probably indicated by the anomaly located at L. 20N., 25 + 50 East. In Claim P-75193, within an area of volcanics, the survey outlines a small anomaly with dipole effects. This anomaly has a high reading of about 4,000 gammas. The survey also encountered a magnetic high with a reading of 9,660 gammas at the north boundary of Claim P-78216, near the granite-sediment contact indicated on Bradshaw's map. The survey encountered no clear indication of the boundaries between the three types of rock formations said to be located at the west and central parts of the property.

The electromagnetic survey encountered several interesting conductors on the property. These conductors have in-phase changes up to -23%, with associated out-of-phase changes of -7%, a ratio of over 3. All but one of these conductors are associated with magnetic anomalies, and partly coincided with strong increments of magnetism.

The conductor not associated with increments of magnetism, is located at the northeast corner of Claim P-59089, with the best indication of -15% phase change and a ratio of better than one encountered at L. 18N., 3000 + east. The conductor appears to be associated with low magnetism. The conductor is about 300 feet to the west of the old hole, probably No. 1 of Queenston Gold Mines Ltd. Judging from the drill log, it is doubtful if the said hole had satisfactorily tested this conductor. The other Queenston holes were located farther to the east. It follows that they were probably not designed to test this conductor.

Along the west magnetic zone described above, there is a series of conductors. These are apparently the most interesting, because of the fact that they are conductors with width expressions, though weak-to-moderate in conductivity, still of some significance, and, at places coinciding closely with increments of magnetic intensities.

The conductor with the widest indicated width, was encountered along L. 3N., from 17 + 50 to 25 + 00 ft. East . The phase changes varied from -21% to -3%, with ratios from 1 to just over 2. Judging from indications picked up along the neighbouring lines, this wide expression of conductivity is inferred as due to three or more bands of sulphide mineralization with mostly pyrrhotite and the south band turned partly westerly. The conductor is cut off by an inferred diabase dike to the north and another diabase dike to the south. The indicated lengths for the inferred mineralized bands, therefore, vary in length from 600 ft. to 850 ft. Proposed Diamond-Drill Holes Nos. 1, 2 and 3 are recommended to cross-section this conducting zone, with No. 1 Hole to be located at L. 3N., 26 + 00 East, drill West at -45° for a core length of 500 ft. D. D. H. No. 2 is to be located at 300 ft. to the West of No. 1, and D. D. H. No. 3 is to be located at 300 ft. to the West of No. 2, each for a core length of 500 ft., to be drilled at -45° West along the picket line.

To the East of this conductor, there is a narrower conductor with an indicated length of about 1, 200 ft., encountered by three traverses. At L. 15N., 27 + 25 East, the conductor appears to be closely associated with a strong magnetic anomaly of over 10, 000 gammas. The conductor, however, is weak, with a phase change of -13% and a ratio of 1. A

diamond-drill hole is spotted here for the testing of this conductor, however, since the conductor appears to be on high ground, it is advisable to decide whether to drill this conductor after an examination for possible outcrops, or an evaluation of the results obtained from proposed Diamond-Drill Hole Nos. 1, 2 and 3.

The strongest conductor encountered on the property, is at L. 9S., 19 + 25 ft. East. The phase change here, is up to -23%, with a ratio of over 3. It coincides closely with a magnetic high (about 4,000 gammas), and is inferred as indicating an appreciable concentration of pyrrhotite. Since nickel-bearing sulphides are commonly associated with pyrrhotite, a diamond-drill hole is spotted to test this conductor. The location of the hole is at L. 9S., 12 + 00 East, drill West at -45° for a core length of 350 ft.

The electromagnetic survey also encountered several other weak conductors at various points in Claims P-75188, P-75189, P-75192 and P-75193. Since most of these are in areas of high ground, a geological examination is recommended.

CONCLUSIONS AND RECOMMENDATIONS -

The geophysical survey outlined an interesting area at the eastern part of the property. A program of diamond drilling with a

total core length of from 1,350 ft. to 2,350 ft., is recommended to test electromagnetic conductors which are spreading northeast-southwest over 3,200 ft. along a magnetic zone. The conductors are moderate-to-weak in conductivity, and have narrow-to-250-ft. widths, but cut off into sections by cross-faults and inferred diabase dikes.

A program of geological prospecting is recommended, to examine several other weak conductors, located to the east of the conductors to be test-drilled, and to examine a weak conductor located in Claim P-75193 at the southwest corner of the property.

Respectfully submitted,

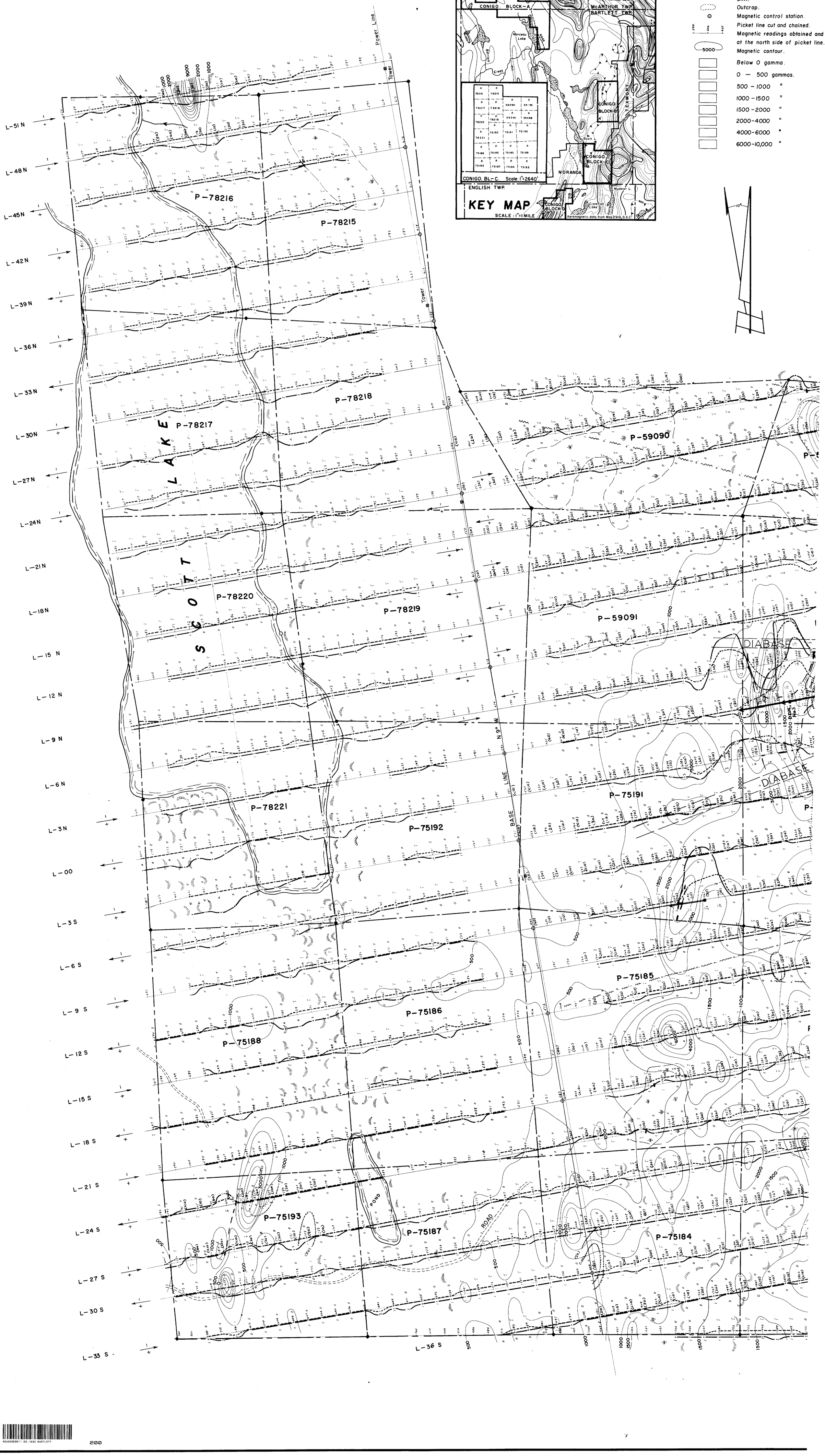
CANA EXPLORATION CONSULTANTS LIMITED

SSS:rw
Encl.

S. S. Szetu, Ph. D.,
Consulting Geologist.

Toronto, Ontario,

May 12th, 1965.

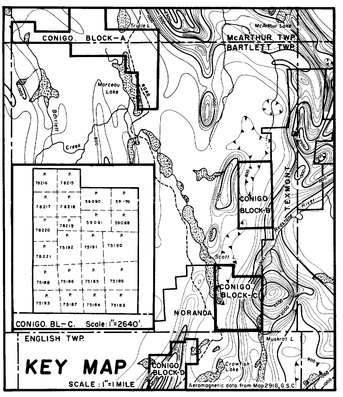


Claim post and claim boundary.
Higher ground.
Swamp.
Cliff.
Outcrop.
Magnetic control station.
599 604 607
Picket line cut and chained.
Magnetic readings obtained and at the north side of picket line.
5000
Magnetic contour.
Below 0 gamma.
0 — 500 gammas.
500 — 1000 "
1000 — 1500 "
1500 — 2000 "
2000 — 4000 "
4000 — 6000 "
6000 — 10,000 "

LEGEND

- Claim post and claim boundary.
- Higher ground.
- Swamp.
- Cliff.
- Outcrop.
- Magnetic control station.
- Picket line cut and chained.
- Magnetic readings obtained and plotted at the north side of picket line.
- Magnetic contour.
- Below 0 gamma.
- 0 — 500 gammas.
- 500 — 1000 "
- 1000 — 1500 "
- 1500 — 2000 "
- 2000 — 4000 "
- 4000 — 6000 "
- 6000 — 10,000 "

- Electromagnetic readings obtained at the receiver station by using a RONKA MARK-IV. unit and a RONKA MARK-III. unit with 300 ft. cables.
- In-phase readings plotted to the South, Out-of-phase readings plotted to the North of picket line.
- Scale of profile: 1/10" = 1% of phase change.
- Direction of traverse.
- Electromagnetic conductor.
- Proposed diamond drill hole.
- Ni in ppm.



GEOPHYSICAL SURVEY DATA ON 22-CLAIM PROPERTY

CONIGO MINES LIMITED.

BLOCK — C.

BARTLETT TOWNSHIP.

PORCUPINE MINING DIVISION

ONTARIO

SCALE: 1" = 200'. MAY 1965

CANA EXPLORATION CONSULTANTS LIMITED.