REPORT OF GEOPHYSICAL & GEOCHEMICAL SURVEYS

TOKETIC GROUPS - Kamloops M.D.

Lat. 50°28'N, Long. 121°10'W.

Survey by: D. Watson, D. Pickering, etc.

Supervised by: R.C. Macdonald, P. Eng.

Claims: NW13, 22, 24 to 33, 38 to 49, & 76 to 87.

92I/6E

Nov/56.

50° 121° SE

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TOKETIC PROPERTY - GEOPHYSICAL REPORT

The purpose of this report is to meet the requirements of the B.C. Mineral Act as it pertains to the granting of credit for assessment work on account of a geophysical survey. In this case a magnetometer survey was carried out over an area of 36 claims in five groups. The total cost of this work was in excess of $1,080., and a credit of $30. per claim is requested in the accompanying Form D affidavits.

The instrument used was a Levanto pocket magnetometer having a sensitivity of 100 gammas per scale division in the sensitive part of the scale range. Readings were taken at 100 ft. intervals along the north-south grid lines over most of the claims and at 200 ft. intervals on five of the lines. The instrument is mounted on a wooden staff to assist in its levelling and steadying while reading. It is always faced with the magnifying glass on the north side. The reading is made by rotating the graduated ring until the moving index wire is in line with the fixed wire. The readings were taken by two university students, D. Watson of U.B.C. and D.G. Pickering of

Willowdale, Ontario. The final copies of the maps were drafted by T.D. Campbell, a graduate mining engineer. This work was done under the writer's supervision, and sufficient checking was done to be confident of the reproducibility of the readings.

The results of this survey are shown on Map 18-4, where the actual scale readings have been recorded and contoured. The scale readings are directly proportional to the magnetic intensity and are convertible to an arbitrary gamma level by calibration of the instrument.

It is interesting to note that the three areas of most anomalous readings, viz. at 9,000 N, 17,500 E, and 12,000 N, 7,000 E, and 8,500 N, 7,500 E, all occur in areas where there is a large percentage of outcrop of the diorite country rock of the Guichon Creek batholith. The first of these areas also contains several minor showings of weakly disseminated chalcopyrite, with faint malachite stains. In the second area it is not known why the shape of the contours had a N 60°E trend, and it is possible that this might be refuted by intermediate lines of magnetometer readings. In the last- mentioned anomalous area

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several small inclusions of meta-sediments, as well as some syenitic intrusive masses, probably contain more magnetite as accessory minerals than does the normal host diorite.

R.C. Macdonald

R.C. Macdonald P. Eng.

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To Whom It May Concern:

This is to certify that the expenditures incurred in the magnetometer survey described in the attached report, such expenditures including salaries for the two operators, as well as a proportion of the costs of cutting and surveying the grid lines, were considerably in excess of the $1,080. credit claimed in the accompanying Form D affidavit.

NEW JERSEY ZINC EXPLORATION CO. (CANADA) LTD

per R.C. Macdonald

R.C. Macdonald.

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TOKETIC PROPERTY - GEOCHEMICAL REPORT

The purpose of this report is to describe the soil sampling procedure used on the Toketic group of claims, and also the method of analyses, in order to meet the requirements of the B.C. Mineral Act as applied to assessment work by geochemical work.

Soil samples were taken over the 36 claims concerned (five groups) at 100 ft. intervals along the north-south grid lines which were cut, blazed and surveyed at 500 ft. east-west intervals. To collect a sample the vegetation and surface soil was removed to a depth of about 4 to 6 inches, and a small sample of the sub-surface soil was placed in a polyethylene bag which was marked as from that particular location.

Analyses were run in the field camp using the "Field Method for the Determination of Ammonium Citrate-Soluble Heavy Metals in Soils and Alluvium", as described by H. Bloom et al in Economic Geology, August, 1955. This method failed to reveal any reproducible anomalies, and does not appear to be a satisfactory method when copper is the only heavy metal present. All of the samples we re-analysed later in the fall using a copper-specific method devised by Dr. R.E. Delavault of the geology department, U.B.C., but not yet published. Briefly, the method involves the solution of the soluble

copper fraction of a measured quantity of soil in a small quantity of acetic acid-acetate solution. This is filtered in such a manner that the point of the filter paper rests on a small square of treated test paper, and the small quantity of filtrate is soaked into the test paper. The test paper is prepared by soaking chromatography filter paper in rubeanic acid (which is prepared by dissolving one gram of dithio-oxamide in 100 ml. of C.P. acetone) and then drying it. A small blue-black spot of copper rubeanate on the test paper at the point where the filter paper touches it is an indication of the presence of soluble copper in the sample, and the size and intensity of the spot is an approximate measure of the relative amount of copper. This present work used the figures, 0, 1,2,3,4, and 5 as the range of values.

The results of the soil analyses by Delavault's "spot" method are shown on Map 18-5. A dot without a number indicates the sample was rated at zero, while a dot with a number indicates the relative intensity of the soluble copper in the soil. The soluble copper is considered to be proportional to the total copper. This method showed a soil anomaly at 9000 N, 17,500 E, in the area where malachite stain and disseminated

chalcopyrite were noted in small amounts in several places. An anomalous soil copper area is also indicated near 11,000 N, 10,000 E, close to the "JAY" zone where small percentages of chalcopyrite, malachite and hematite are present here and there in a fairly extensive chloritized and sericitized area. A high single sample near 9,000 N, 6,555 E, corroborates the locally good grade chalcopyrite exposed in the bulldozer and hand trenches there.

The samples were collected by university students D. Watson, and D.G. Pickering, as well as by prospector E.N. Stephenson of Ashcroft and W.W. Schwartzenhauer of Castlegar. These men also shared in the surveying and line-cutting for the grid layout, and were assisted in this for a period of 2½ months by C. Wilson, and for 1½ months by D.G. Macdonald. The final copies of the maps were drafted by T.D. Campbell, a graduate mining engineer. The cost of this work was in excess of $2,520., and a credit of $70. per claim is requested in the accompanying Form D affidavits. The work was done under the writer's direction, and regular checks were made to ensure that the results were satisfactory.

R.C. Macdonald
P. Eng.

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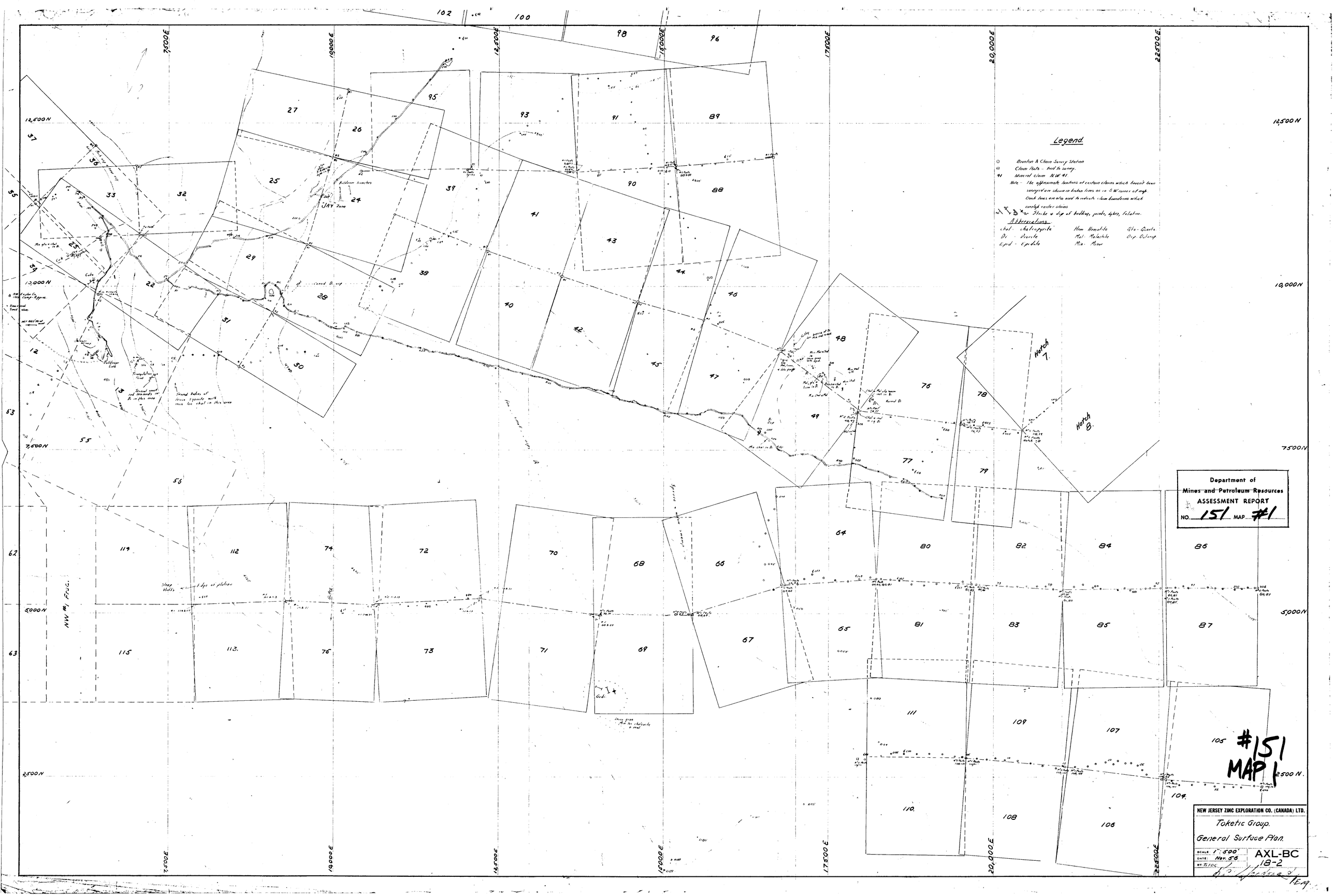
To Whom it may Concern:

This is to certify that the expenditures incurred in the soil sampling survey described in the attached report, such expenditures including salaries for the six men involved, as well as a proportion of the costs of cutting and surveying the grid lines, were considerably in excess of the $2,520. credit claimed in the accompanying Form D affidavit.

per K. C. Macdonald


Legend
Brunton & Chain Survey Station
Claim Posts - tied to survey.
Mineral Claim N.W. #1
Note - The approximate locations of certain claims which haven't been surveyed are shown in broken lines as in S.W. corner of map.
Dash lines are also used to indicate claim boundaries which overlap earlier claims
Strike & dip of bedding, joints, lights, foliations.
Abbreviations
chal - chalcopyrite
Di - Diorite
Epid - Epidote
Hem Hematite
Mal - Malachite
Mag - Magnetite
Qtz - Quartz
Dep. Deposit
JAY Zone
Hatch 7.
Hatch 8.
NW #1 Frac.
Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 151 MAP #1
#151
MAP 1
NEW JERSEY ZINC EXPLORATION CO. (CANADA) LTD.
Toketic Group.
General Surface Plan.
SCALE 1" = 500'
DATE: Nov. 56
BY: T.J.O.C.
AXL-BC
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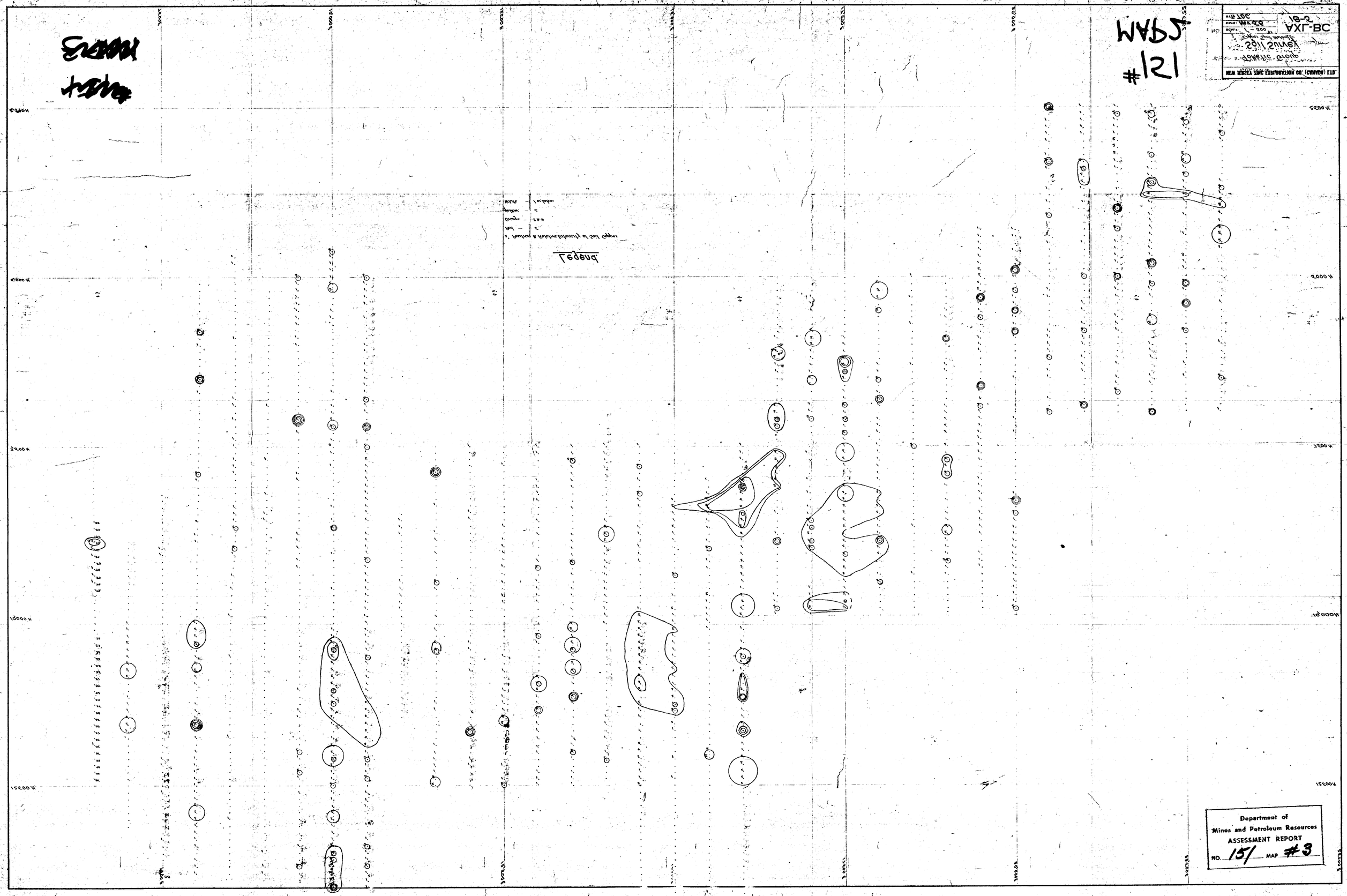
JXA-BC

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 151 MAP #2


NEW JERSEY ZINC EXPLORATION CO. (CANADA) LTD.
Horizontal Loop
Survey
AXL-BC
B-2
Legend
Department of
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ASSESSMENT REPORT
NO. 151 MAP #3