

COMBINED GEOPHYSICAL AND
GEOCHEMICAL REPORT

COPPER #1 to #4- POISON MOUNTAIN, B.C.
and P.M. #1 to #3
51°, 122°, S.W.

(45 miles West of Clinton)

R.C. Macdonald, P.Eng. *92-0/2E*

Aug. 5th to Sept. 5th., 1959
920/

COPPER #1 to #4 owned by H. Reynolds.

P.M. #1 to #3 owned by R.C. Macdonald.

Work done for H. Reynolds, and for
New Jersey Zinc Exploration Co. (Canada) Ltd.

0278

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Two maps in pocket.

#1 No. 22-2	Layout & Soil Survey
#2 No. 22-3	Magnetometer Survey

MAGNETIC & SOIL SAMPLING SURVEYS

POISON MOUNTAIN GROUP - CLINTON MINING DIVISION

Location & Access

This copper prospect is located on the southwest slopes of Poison Mountain near Lat. $51^{\circ}08'N$, Long. $122^{\circ}37'W$, some 45 miles west of Clinton. Access is by means of a Jeep road some 35 miles long from the Fraser River ferry crossing at Big Bar. This road climbs from the river (elevation about 1,000 feet) to the 7,000' summit of China Head Mountain and then over another summit at 6,600' elevation. Alternate access routes are by 12 to 13 miles of trail up the Yalakom River from the road and bridge near Blue Creek, or by about ten miles of trail over Quartz Mountain from the Tyaughton Creek road at Mud Creek junction.

History

Following the discovery of placer gold in Poisonmount Creek in 1932, there was considerable placer activity in the area, but only a limited production was attained. (85ozs Total)¹ The source of this gold is considered to be local, coming from the scattered, narrow, pyritic quartz veinlets which cut the "feldspar bird's-eye porphyry"² exposed "on the lower half of Poisonmount Creek."

1. B.C. Dept. of Mines- Bulletin 28, p.32

2. B.C. Minister of Mines- Annual Report, 1933, p. 188.

Nothing is recorded about the lode claims activity until 1956, but it is obvious that such claims were staked shortly after the first placer activity. In 1956, Granby optioned four claims and constructed the Jeep access road. They carried out a program of geological mapping, surface stripping and sampling, and diamond drilling (10 holes totalling 1973 feet) before dropping the option.

When New Jersey Zinc Exploration Co. (Canada) Ltd., became interested in this prospect it was decided that soil sampling and magnetometer surveys might provide some targets for further investigation of this low grade copper property.

General Geology and Mineralization

Much of the area in the vicinity of Poison Mountain is underlain by medium-to coarse-grained graywacke and arkose, with interbedded argillite, and some areas of coarser conglomerates. These have been mapped as probably Jurassic and Lower Cretaceous in age by Leech,⁽³⁾ and vary from gently to steeply folded. These strata have been intruded by a stock-like body of porphyritic diorite of late Mesozoic or Cenozoic age. There is very little outcrop exposures on the claims, but overburden is generally fairly shallow (excepting in gulleys) and is mostly of local origin. Glaciation hasn't left many marked features for its evidence, and there is no general covering of glacial till.

(3) Leech, G.B., Geology & Mineral Deposits of the Shulap Range; B.C. Dept. of Mines, Bull. 32.

The diorite is somewhat fractured and cut by narrow glassy quartz veinlets containing small quantities of chalcopyrite and pyrite. These minerals also occur sparingly disseminated in the diorite. Magnetite occurs locally in the argillaceous sediments near some of the contacts with the intrusive. Chalcopyrite and pyrite may occur in the argillites near the contact zone along narrow fracture planes, as well as exhibit selective replacement features in the well-graded bedding layers. Malachite occurs mostly as a surface stain where the chalcopyrite has been exposed to weathering. There is no deeply weathered or oxidized zone which could result in secondary enrichment of the copper.

Survey Procedures

A grid system was laid out with true north-south lines spaced 400 feet apart, and extending as much as 3,000 feet each way from an east-west base line. All lines were cut and blazed, and then surveyed by compass and chain. Stations were marked at intervals of not more than 200 feet, but magnetometer readings and soil samples were taken at 100 foot intervals along the lines by pacing between the marked pickets.

Magnetometer Survey

The magnetometer survey was done by using two Arvela type Levanto magnetometers. These were calibrated on the property with an Helmholtz coil, and found to have sensitivities

of 42 gammas per scale division. Their individual temperature coefficients were applied to the calculations of the results. Base stations were established (assuming an arbitrary value of 4000 gammas at the master base) and check readings made on them at one to two hour intervals throughout the survey periods. When running the more distant lines, one magnetometer remained at the master base station in camp and was read at regular intervals, while the other was thus able to carry straight through without checking except at the start and finish of a day's work. The diurnal fluctuations varied from about 50 to 100 gammas during the work, and there were no wide temperature fluctuations. The magnetometer survey results have been plotted on a 200 scale map No. 22-3, which can be used as a layover in conjunction with the general layout and claims map No. 22-2.

The strongest magnetic anomaly is the ridge from 1000 to 2500 gammas above background and extending in an east-southeast direction for about 2,000 feet from drill holes 7 and 8. A small amount of magnetite is present in the argillite in D.H. 7 (at 67½'), and a small blob or seam is exposed on surface near D.H. 10 in a contact zone between intrusives and sediments. These small occurrences may be typical of others in the same area, and could conceivably cause this low magnetic anomaly, but the quantity of magnetite indicated is certainly quite small. There may be some relationship between magnetite

and chalcopyrite content. To the south of this ridge, a magnetic low belt trending west-southwest coincides (at least in that portion for 3000 feet east of Poisonmount Creek) with a major topographic low feature in the form of a steep-walled gully. A similar but rather vague coincidence occurs along part of Poisonmount and Copper Creek valleys.

Soil Sampling Surveys

Soil samples were taken at 100 foot intervals along the base and grid lines. Loose vegetation and topsoil were removed to a depth of about 6 inches and small samples of the soil placed in a marked plastic bags. Analyses were made in the camp on the claims, using the "Rhubarbic" Acid "Spot Method" developed by R.E. Delavault of the University of B.C. Although the procedure for this method hasn't been published, it has been so widely used in B.C. at least that no description is deemed necessary here. The intensity of the resulting dark spot on the treated paper provides a relative measure of the quantity of copper present in the soil. We have used the figures 0,1,2,3,4 and 5 to record the results. They were then plotted on a 200 scale general layout map (No. 22-2) alongside the locations of the samples. The high soil values (those rated 4 or 5) have been outlined or contoured to indicate areas where copper minerals may be expected to occur in higher than normal amounts in the underlying bedrock.

It will be noted there is a fair coincidence between the soil "highs" in the vicinity of drill holes 1 to 5 and the known area of copper mineralization explored by bulldozer stripping. The same belt of highs continues easterly along Copper Creek, where again it parallels certain known occurrences of low grade copper mineralization. The coincidence of soil highs with known mineralization in the vicinity of drill holes 6, 7, and 8 is also remarkable, and suggests that line 96E near 120N should be a fair place for further prospecting. But the sediments exposed along the road cut there contain pyrite only. Another soils high area on lines 112E and 116E north of 100N was found to contain the favorable porphyry with local chalcopyrite mineralization. The malachite-stained treeless area on line 116E was reflected by the results. All these facts lend weight to the method as an exploration tool.

R. C. MacDonald, P. Eng.

To Whom It May Concern

This is to certify that the following is a true statement of the number of days worked in the field and salaries or wages paid to the persons below in connection with the grid preparation and geophysical and geochemical surveys on the Copper, PM, Jeep, and Cheap claims at Poison Mountain between August 5th., and September 5th., 1959:

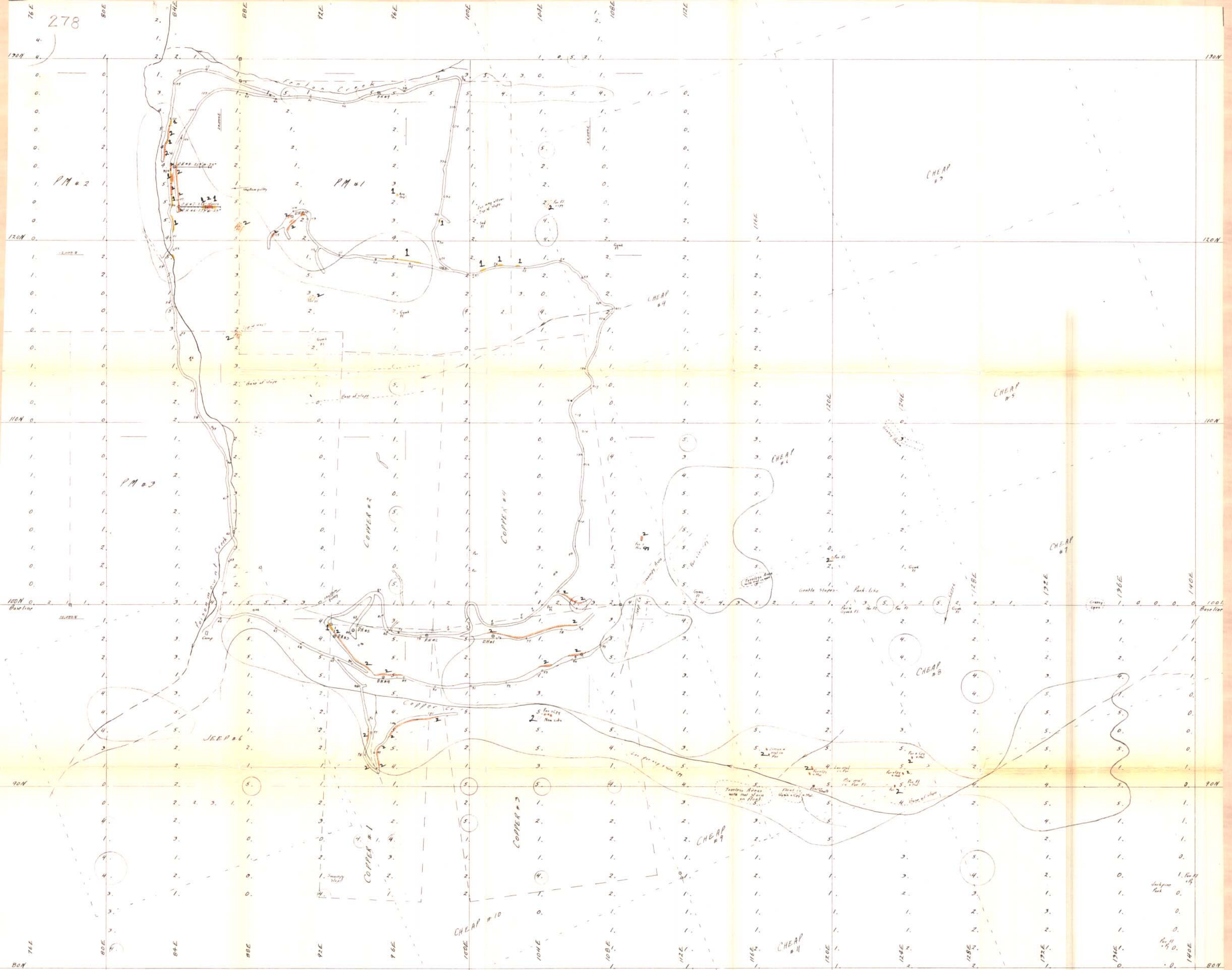
<u>Name</u>		<u>Days</u>	<u>Amount</u>
R.C. Macdonald, P.Eng.	Surveys & Supervision	12	\$ 350.
E. Livingston	"		
W.W. Schwartzenhauer	Asst. Surveyor, axeman & magnetometer operator.	4 30	100. 450.
D.J. O'Neil	Axeman; technician for soil sample analyses.	30	420.
D.G. Macdonald	Axeman, Magnetometer operator.	20	240.
Arthur Lance	Axeman, Soil Sampler.	20	240.
	Total		<u>\$1,800.</u>

The chief magnetometer operator, W.W. Schwartzenhauer, has been trained thoroughly in that work whilst in our employ during the last 3½ years, and has done several similar surveys under our direction. The assistant operator, D.G. Macdonald, is a first year engineering student, who was trained on this job.

New Jersey Zinc Exploration Co.(Canada) Ltd.

per

R.C. Macdonald



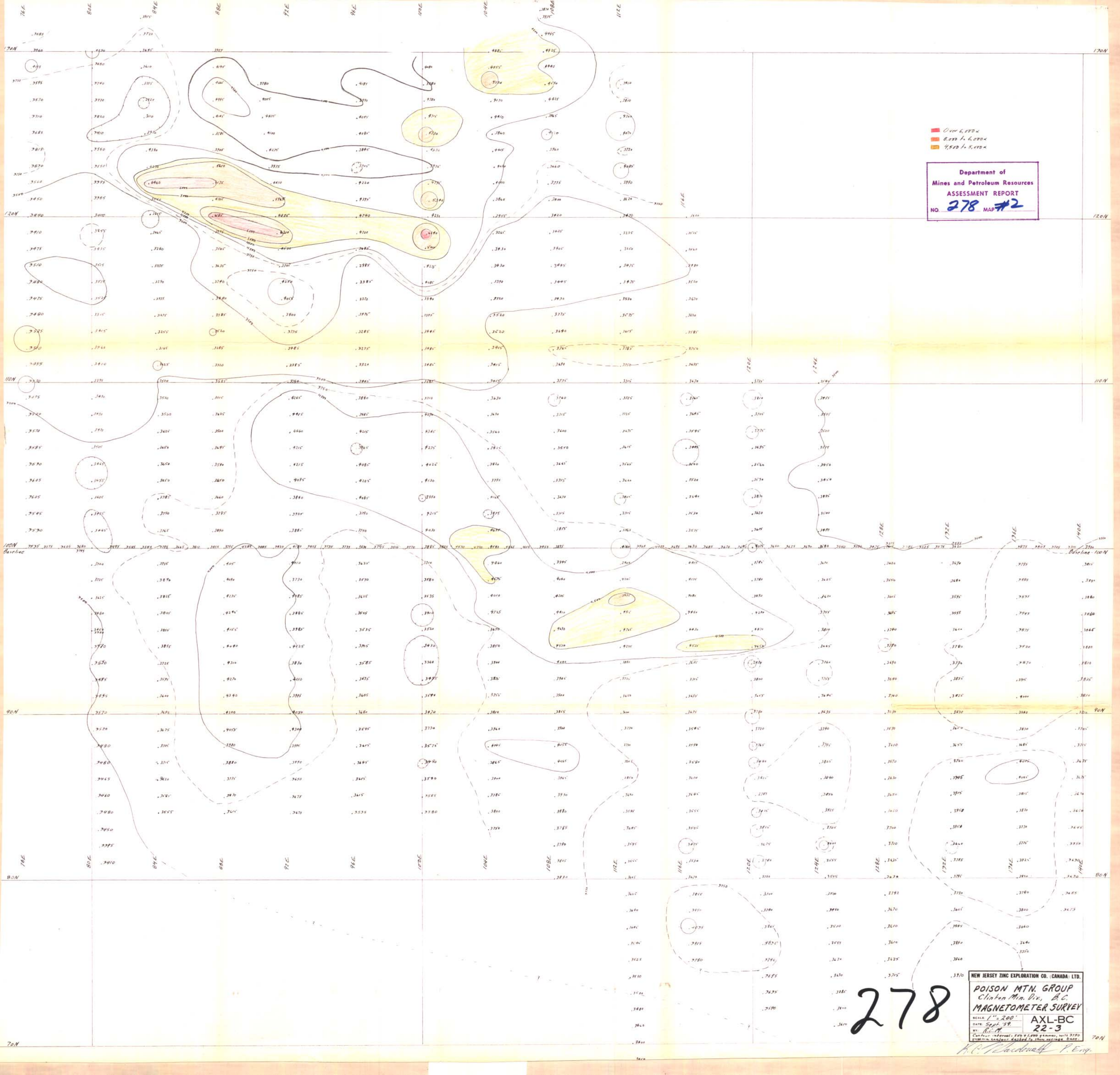
LEGEND
 [Symbol] - Feldspar porphyry
 [Symbol] - Graywacke, argillite
 3. Location & relative grade of copper in soil sample.
 092 - Triangulation survey station (from Grant's map).

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 278 MAP #1

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NEW JERSEY ZINC EXPLORATION CO. (CANADA) LTD.
 POISON MTN. GROUP
 Clinton Min. Div., B.C.
 LAYOUT & SOIL ANALISES
 SCALE 1" = 200'
 DATE Sept. 59.
 BY R.C.M.
 AXL-BC
 22-2

R.C. Macdonald, P.E. Eng.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 278 MAP #2

Over 6,000
5,000 to 6,000
4,500 to 5,000

NEW JERSEY ZINC EXPLORATION CO. (CANADA) LTD.
POISON MTN. GROUP
Clinton Mtn. Div., B.C.
MAGNETOMETER SURVEY
SCALE 1" = 200'
DATE Sept. 59
BY: R.C. ...
AXL-BC 22-3
C. C. ... P. Eng.

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