93N/14W

CHEMICAL & GEOLOGICAL REPORT

GROUP OF MINERAL CLAIMS

Duckling Creek Area

OMINECA MINING DIVISION

D. Johnson, Geologist
W. Meyer, P. Eng.

(Work done on behalf of Tupco Mines Ltd.)

Claims: Ted 1-90, 92, 94, 96-120

Location: 8 miles north of the junction of Duckling Creek and Omineca River
55° 60' 125° 20' N.W.

Owner: Estey Agencies Ltd.
Mineral Mountain Mining Co. Ltd.
Granite Mountain Mines Ltd.

Dates: July 17 - Aug. 3, 1972

November 10, 1972

[redacted]

4151

4151

GEOCHEMICAL & GEOLOGICAL REPORT

ON

THE TED GROUP OF MINERAL CLAIMS

Duckling Creek Area

OMINECA MINING DIVISION

by

D. Johnson, Geologist
W. Meyer, P. Eng.

(Work done on behalf of Tupco Mines Ltd.)

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SUMMARY

The group of 117 "Ted" claims owned by Tupco Mines Ltd. (N.P.L.) is located near Duckling Creek in the Omineca Mining Division. The group lies entirely within the Hogem batholith and covers a part of the Duckling Creek syenite complex. Adjacent properties on which significant mineralization occurs in the syenite complex include the Tyee Resources Ltd. "Duck" and "Rondah" groups (under option to Cominco) and the Kennco Explorations Ltd. "Lorraine" group (under option to Granby).

During July and August of 1972 a programme of geological mapping and geochemical surveys found direct evidence of copper mineralization and a number of geochemical anomalies in the southwest area which warrant a follow-up programme.

During September, 1972 and I. P. survey was carried out in the southwest quadrant of the group and is described in a separate report by McPhar Geophysics Ltd.

INTRODUCTION

The following report is based on field work carried out during July and August, 1972, by personnel of W. Meyer & Associates on the 117 claim "Ted" group. This property is wholly owned by Tupco Mines Ltd. (N.P.L.) of Vancouver, B. C.

Work consisted of cutting a baseline, blazing and flagging grid lines, soil sampling, and geological mapping.

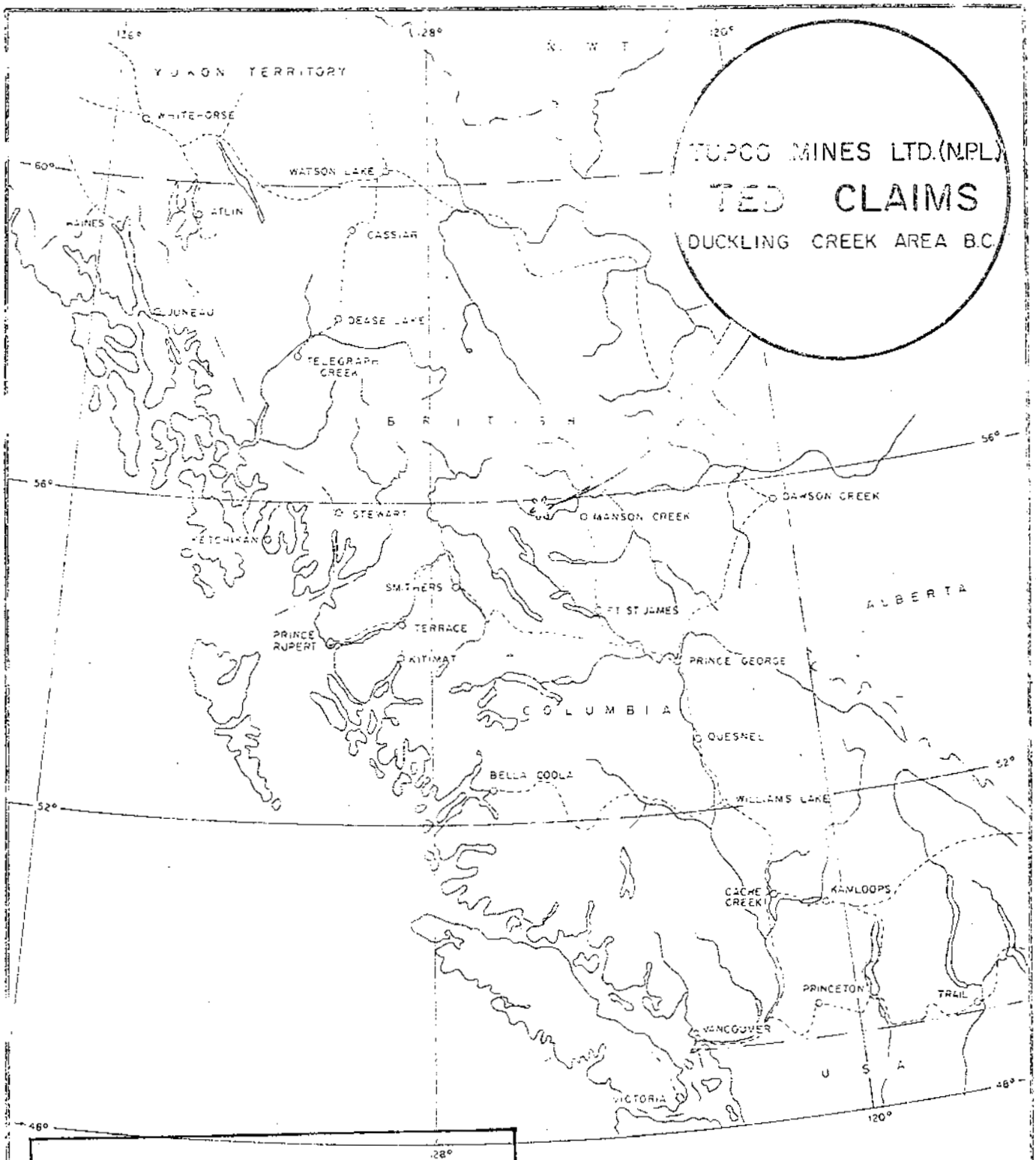
The crew consisted of a geologist and four experienced line-cutters/soil samplers.

In October, 1972, 6.9 miles of I.P. was completed by McPhar Geophysics Ltd. and is described in a separate report.

LOCATION AND ACCESS

The "Ted" claims are centred around 55°60' N. Lat. and 125°20' W. Long. in the Omineca Mining Division on a main north-south tributary of Duckling Creek, approximately eight miles north of the junction of Duckling Creek and the Omineca River (Fig. 1). This is in an area of moderate to steep topography varying from an elevation of 4,000 feet in the broad north-south valley to approximately 5,500 feet at the extreme ends of the group.

The property can be reached by main provincial highways via Prince George and Vanderhoof to Fort St. James. From Fort St. James, access is by gravel road to Germansen Landing and 40 miles of 4-wheel drive road to the property via the Tyee Resources "Rondah" property. Alternatively, the property can be reached by helicopter from Germansen Landing, an 18 mile flight to the northwest.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4151 MAP #1

TUPCO MINES LTD. (N.P.L.)
~~TED CLAIMS~~

PROPERTY LOCATION MAP

BRITISH COLUMBIA
SCALE : 1" = 125 MILES

Fig. 1

CLAIMS

The group of 117 "Ted" claims consists of the following full-sized claims located in the Omineca Mining Division:

Claim Name	Record Number	Tag Number	Expiry Date
Ted 1	105912		Nov.12/72
Ted 2-90	105823-105911 incl.		"
Ted 92	(not available)	366082M	Aug.28/73
Ted 94	"	366084M	"
Ted 96	"	366086M	"
Ted 97-108	"	366087M-366098M	"
Ted 109-113	"	228324M-228328M	"
Ted 114-120	"	287029M-287035M	"

GEOLOGY

General

The "Ted" claims lie entirely within the Hogem batholith near its northeast margin. The Hogem batholith is the largest intrusive body in the series of Omineca intrusions. The batholith is bounded on the west by the Pinchi Fault Zone and on the east intrudes Takla volcanics.

Associated with the Hogem batholith is one large area and three smaller areas of syenites known as the Duckling Creek syenites. J.E.Armstrong (GSC Memoir 252, 1965) suggests a late Upper Cretaceous or Tertiary age for the syenites on the basis of lithology. A recent age dating by the B.C. Department of Mines, however, has established an age of approximately 170 million years for a sample of syenite, making the age approximately the same as the main mass of the batholith. The syenite, therefore, may be a late phase of the Hogem batholith.

Outcrop on the "Ted" claims is quite limited. Near the western edge of the claims are bare rocky ridges, trending roughly east-west. Only a few small outcrops were found east of Duckling Creek. Rock exposed on the property consists mainly of diorite, syenite and monzonite, with dikes of pegmatite (Fig. 2).

LITHOLOGY

Diorite

The diorite is generally coarse grained. Mafic content is high, about 40-50%, much of which is epidote, with some hornblende and biotite. Magnetite is present in varying amounts.

Monzonite

The monzonite is much finer-grained than the diorite, and occasionally is slightly foliated. Content of mafic minerals and magnetite are less, possibly 35-40% total.

Syenite

The syenite varies widely in composition, and is often difficult to distinguish from the monzonite. Colour is usually pinkish, with a mafic content of about 30% and magnetite content very low. Texture varies widely, from fine-grained and sugary to very coarse.

Pyroxenite

Dikes and irregular pods of pyroxenite are found at various locations on the property. This rock is massive and structureless, quite dense, and composed entirely of mafic minerals, some of which is magnetic. Pyroxenite is a major constituent of the copper deposit on the "Lorraine" property.

Pegmatite

The main characteristic of the pegmatite are the long bladed crystals of potassium feldspar, with the remainder consisting of mafic minerals. Minor amounts of copper are found near the contact of the pegmatite body with the monzonite.

MINERALIZATION

Copper bearing float is well distributed in the talus slopes on the western portion of the property. This consists mostly of malachite, with some bornite and chalcopyrite. Pyrite is abundant. The ridges above these slopes were prospected where a few copper occurrences were noted. Mineralization is in shear zones, and is associated with syenite and potash feldspar fracture filling. No estimate could be made of grade or extent of these occurrences.

GEOCHEMISTRY

A total of 1,456 soil samples were collected at 100 foot intervals along N-S lines spaced 800 feet apart. Grid lines, totalling 28.5 miles, were compassed, chained and flagged simultaneously with the collection of samples. Spades and mattocks were used to collect samples from the "B" horizon, which ranged in depth from a few inches to about one and one-half feet. Where organic material was too abundant in the soil, no samples were taken.

Samples were placed in kraft paper envelopes and shipped to Acme Analytical Laboratories in Burnaby for analysis for Cu and Mo. In the laboratory the samples were dried, screened to -80 mesh, digested with nitric and perchloric acids, then analyzed by atomic absorption.

As an aid to determining background, threshold and anomalous values, a frequency histogram was plotted, giving a graphic representation of copper distribution in the soil. Sample locations and values were plotted on a grid map (Fig. 3) and Cu values are contoured at 100 ppm intervals.

Anomous zones are evident in two parts of the property - the far western and far eastern areas, with a relatively featureless area extending from Duckling Creek to about 90W.

The relatively featureless area west of Duckling Creek is covered by an unknown thickness of glacial till and it is this feature that is probably reflected in the geochemical data rather than the nature of the underlying bedrock.

Some of the scattered "one reading" anomalies can be related to local occurrences of mineralized float such as the anomalies at 38N-152W and and 0+00 -160W.

A number of scattered anomalies occur in the southwest quadrant on or south of the base line which cannot be related to known occurrences and are in an area underlain by the "syenite complex".

CONCLUSIONS

The "Ted" claims,in part, cover a portion of the contact of the main northwest trending Duckling Creek syenite complex within the Hogem batholith. This geological environment is considered favourable for the ocurrence of large tonnage, low grade copper and copper-molybdenum deposits. Significant copper-molybdenum prospects occur elsewhere along the syenite complex.

During July and August, 1972, a programme of geochemical and

geological work was carried out on the "Ted" claim group. A total of 1,456 soil samples was collected from 28.5 miles of grid lines. Geological mapping and prospecting was carried out on the rather limited amount of outcrop on the property.

Some direct evidence of copper mineralization was found.

An I.P. survey, under the supervision of D. Johnson, was carried out in October, 1972 and is described in a separate report.

Respectfully submitted,

W. Meyer, P. Eng.

D. Johnson, B. Sc.

APPENDIX 1

PERSONNEL & DATES

Name	Position	Dates of Work	Days
D. Johnson	Geologist	July 17-Oct. 25/72	29-2/3
J. Bacon	Linecutter & soil sampler	July 26-Aug. 3/72	6
R. Fassler	"	July 17-Aug. 3/72	18
R. Schneider	"	July 17-Aug. 2/72	17
D. Stevenson	"	July 17-Aug. 2/72	17

APPENDIX 2

AFFIDAVIT RE COST OF SURVEY

I, W. Meyer, do solemnly declare that the geological, geochemical and geophysical work done on the Tupco Mines Ltd. (N.P.L.) "Ted" claims was done during July, August and October of 1972 and is described in this report. The data were obtained by W. Meyer & Associates Ltd. for Tupco Mines Ltd. (N.P.L.) at a total property related cost of at least $9,300.00. I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act".

DECLARED before me at the City of Vancouver, in the Province of British Columbia, this _____ day of _____, A.D. 1972

W. Meyer

Declared before me at the
of VANCOUVER, B. C. in the
Province of British Columbia, this
day of DEC 6 1972, A.D.

Sub - Mining Recorder

A Commissioner for taking Affidavits for the Province of British Columbia

APPENDIX 3

CERTIFICATE

I, William Meyer, do hereby certify that:

1. I am a geologist with residence at 911 Jarvis Street, Coquitlam, B. C.
2. I am a graduate of the University of British Columbia (B.Sc. 1962).
3. I am a member of the Association of Professional Engineers (Geological) of the Province of British Columbia.
4. I am a Fellow of the Geological Association of Canada.
5. I have practiced my profession for eleven years.
6. The work was carried out by W. Meyer & Associates Ltd. staff under my direction and under the field supervision of D. Johnson, geologist.
7. I have not received, nor do I expect to receive, any interest directly or indirectly in the properties or securities of Tupco Mines Ltd. (N.P.L.) or any of its affiliates.

W. Meyer, P. Eng.

November 10, 1972

APPENDIX

CERTIFICATE

I, Darrel Johnson, do hereby certify that:

1. I am a geologist with residence at 550 Hamilton Avenue, Nanaimo, B.C.

2. I am a graduate of the University of British Columbia (B.Sc. 1970, Geology).

3. I have been employed by W. Meyer and Associates from July 15, 1972 to present.

4. I personally conducted the geological mapping and supervised the geochemical survey described by this report.

Darrel Johnson

D. Johnson

160 W

100 W

40 N

B.L. 00 N

40 S

Monz.

Monz.

Fl. Qtz. vein Mal. Py.

Py. Pxt. inclusions

Peg.

Epidote

Pxt.

Sy. Mal. Peg.

Sy. Pxt. // Mal.

Pxt.

Pxt.

Sy. Dikes

Fl. Mal. Cpy.

Fl. Mal. Cpy.

Peg. Sy. Pxt.

Foliated Mal Py. Cpy.

Py Mal

LEGEND

- MONZONITE
- SYENITE
- OUTCROP
- FAULT
- RIDGE
- JOINTS
- DIKE
- SHEAR ZONE

Peg.	Pegmatite
Pxt.	Pyroxenite
Cpy.	Chalcopyrite
Py.	Pyrite
Mal.	Malachite
Fl.	Float

To accompany a geological report on the "Ted claims"
by W. Meyer P. Eng. Date Nov. 10, 1972

Fig 2

TUPCO MINES LTD.

GEOLOGY
TED CLAIMS

DUCKLING CREEK AREA
55°50' 125° 20'
OMINECA M.D.

SCALE:		
1 inch = 400 feet	W. MEYER & ASSOCIATES	AUGUST, 1972

160 W — 152 W — 144 W — 136 W — 128 W — 120 W — 112 W — 104 W — 96 W — 88 W — 80 W — 72 W — 64 W — 56 W — 48 W — 40 W — 32 W — 24 W — 16 W — 8 W — 0-00 — 8 E — 16 E — 24 E

CLAIM BOUNDARY

Approximate Limit of Granby Claims

RONDAH CLAIMS

0+00 BASE LINE

CLAIM BOUNDARY

LEGEND

Mo - Cu (ppm)

100 ppm
200 ppm
300 ppm
400 ppm
500 ppm

To accompany a geochemical report on the "Ted claims" by W. Meyer P.Eng. Date Nov 10, 1972

FIG. 3

4151 M-3

TUPCO MINES LTD

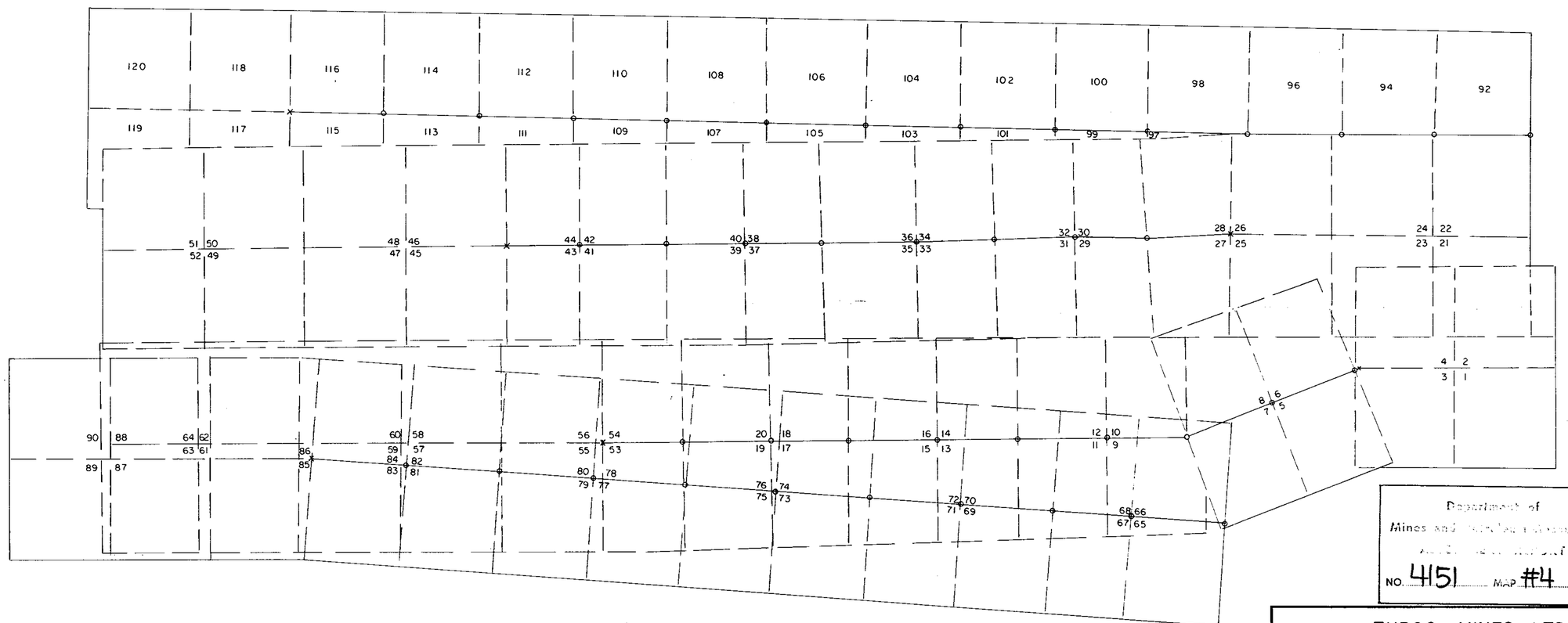
TED CLAIMS

DUCKLING CREEK

GEOCHEMICAL SURVEY

Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 415 MAP #3

SCALE 1" 400' W. MEYER & ASSOCIATES AUG. 1972



Note.

o - CLAIM POST

x - WITNESS POST

To accompany a geological & geochemical report on the "Ted claims" by W. Meyer P.Eng.
Dated Nov. 10, 1972

W. Meyer

TUPCO MINES LTD.

TED CLAIM GROUP

OMINECA M.D.

SCALE		
1 inch = 1000 feet	W. MEYER & ASSOCIATES	AUGUST, 1972