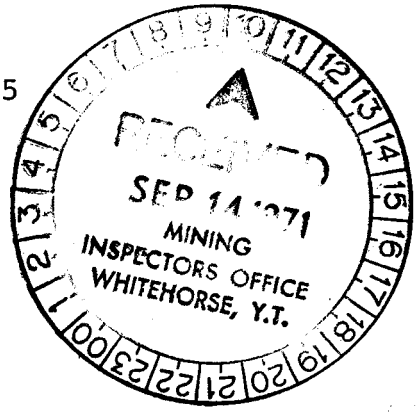
OCCIDENTAL MINERALS CORPORATION OF CANADA

GEOLOGY AND GEOCHEMISTRY
OF THE
PRO CLAIM GROUP

CLAIM SHEET NO. 115 I/5

LAT. : 62° 27'

LONG.: 137° 46'



CLAIMS

PRO 1 - 196: Y58269 - Y58464

WHITEHORSE MINING DISTRICT

BY

G.C. ALLEBONE

P.N. MEHROTRA

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $ 59739.94

D B Craig
Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory

COVERING WORK COMPLETED DURING PERIOD

JUNE 20, 1971 TO AUGUST 23, 1971

CONTENTS

PLANS ACCOMPANYING REPORT

INTRODUCTION

The Pro Claim group consists of 196 claims, which were staked as a result of a reconnaissance geochemical programme completed during the summer of 1970.

This report will describe the geology of the claim area and the results obtained from a geochemical soil survey completed for Occidental Minerals Corporation of Canada, the holder of the claims.

OBJECTIVE

The area is drained by several anomalous streams. The purpose of the project was to evaluate the area geologically and geochemically and to find the cause of Cu, Zn and Mo anomalies. To do this, the claims were soil sampled and mapped geologically.

LOCATION

The claim group is recorded on the current copy of the Department of Northern Affairs & Natural Resources claim map 115 I/5, and lies within the Whitehorse Mining District. The property is located east of the upper part of the Hayes Creek and occupies the area covered by streams draining Prospector Mountain.

VEGETATION

Much of the area is well above timber line. The northern portion of the area has a cover of about 30% spruce. Willows are the most prevalent deciduous trees and are generally confined to the valley bottoms.

LOGISTICS

The area is located about 35 air miles west of Minto and is accessible by helicopter. There is a cat trail to the northern part of the area, from Freegold Mountain to Carmacks.

The work completed was carried out between June 20, 1971 to August 23, 1971 from two different camps.

Line cutting was completed under contract by Harman Management Ltd. from Whitehorse.

Geological mapping was completed by C. Allebone and P. Gannon, under supervision of P.N. Mehrotra.

Geochemical sampling was carried out by R. Geber, C. Dary and S. Donovan, under supervision of C.F. Gleeson.

Names and addresses of all personnel working on the property are listed below:

NAMES AND ADDRESSES OF PERSONNEL

Name	Address	Company & Position
		Occidental Minerals Corporation of Canada
J.J. Brummer	801-161 Eglinton Ave. East, Toronto 12, Ontario.	Exploration Manager

P.N. Mehrotra	801-161 Eglinton Ave. East, Toronto 12, Ontario.	Geologist
C. Allebone	801-161 Eglinton Ave. East, Toronto 12, Ontario.	Geologist
P.J. Gannon	680 - 2nd Ave. Campbell River, B.C.	Geologist
S. Donovan	495 Southborough Dr. West Vancouver, B.C.	Soil Sampler
R. Geber	Cupar, Saskatchwan	Soil Sampler
C. Dary	9730-106 Street Edmonton, Alberta.	Soil Sampler
R. Giannelia	General Delivery, Whitehorse, Y.T.	Labourer
H. Dionne	1818 Ave. D. North Saskatoon, Saskatchewan	Cook
L.B. Ledoux	10395-103 Ave. Edmonton, Alberta	Cook
C.F. Gleeson	764 Belfast Road Ottawa, K1G 0Z5	Consulting Geologist

Harman Management Ltd

J. Etzel	General Delivery Ross River, Yukon	Line-cutter
F. Charlie	General Delivery Ross River, Yukon	Line-cutter
L. Carlick	General Delivery Whitehorse, Yukon	Line-cutter
S. Williams	622 Vancouver St. Prince George, B.C.	Line-cutter
T. McCrory	Rural Route # 1 New Denver, B.C.	Line-cutter
N. Glass	3024 Proctor Ave. West Vancouver, B.C.	Line-cutter
E. Milledge	5794 Atlantic St. Halifax, Nova Scotia	Line-cutter

PHYSIOGRAPHY

The study area lies mainly within the Klondike Plateau of which the Dawson Range is the dominant

physiographic feature. The Prospector Mountain (6,482 feet) is the second highest peak in the Dawson Range.

The topography is made up of a maze of deep, narrow, V-shaped valleys separated by long, smooth-topped and steep-sided ridges. The streams running into Hayes and Big Creeks from the northerly slopes of Prospector Mountain rise in deeply cut, straight valleys having relatively steady gradients.

GENERAL GEOLOGY

The Pro Claim Group is underlain for the most part by Mesozoic igneous formations. Lesser amounts of Precambrian sedimentary rocks and Tertiary extrusives are present as well.

The highest area is underlain by volcanics of the Mount Nansen Group, while the lower portions of the interfluvial ridges are underlain by the Jurassic intrusives, Carmacks volcanics and Yukon Group rocks.

Disseminated sulphide mineralization was found in all but the Precambrian-age rocks.

Table of Formations

Pleistocene	6. Glacial deposits
Tertiary -Carmacks Group	5. Mainly trachyte flows., breccias, and tuffs; minor andesite
Jurassic or Later -Intrusive Rocks	4. Acid dykes
	3. (a) Syenite; minor monzonite. (b) Hornblende Syenite (c) Quartz Monzonite

Mount Nansen Group	2.	(a) Mainly basalt; Andesite (b) Flows, breccias, tuffs and agglomerates
Precambrian or Later	1.	(a) Quartz-biotite schist (b) Limestone

Pleistocene Geology

Alpine glaciation during the Reid advance of early Wisconsin age* has, to a large extent, modified the shapes of the valleys draining north from the Prospector Mountain.

A large cirque is evident at the head of Cal Creek. A kame terrace, some 2150' x 1000' in extent was developed in the middle section of this valley, where the creek is now seen to bend sharply eastward. A hanging valley was developed at the head of Torn Tent Creek to the north west side of Prospector Mountain.

Superimposed on the above-mentioned U-shaped valleys, as well as along Gannon Creek, was subsequent fluvial erosion, leaving each valley with a complex form.

Description of Rock Units

1. YUKON GROUP (PRECAMBRIAN OR LATER:)

The rocks of this group occur in the northeastern part of the study area. They consist of quartz-biotite schist and crystalline limestone.

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*Hughes et al; "Glacial Limits and Flow Patterns, Yukon Terr, South of 65 Degrees North Latitude", G.S.C. Paper 68-34; Ottawa, 1968.

1. (a) The quartz-biotite schist is dark grey and fine-grained. In places this unit is more siliceous and is light grey in colour. The schistosity is well developed and can readily be seen on the weathered surfaces. The strike of this unit is 150°T and the dip 50°T SW.

1. (b) The limestone is light grey to white, crystalline, and forms two-feet-thick beds, with thinner beds along the base. The strike is 150°T but the dip is not certain due to the irregular nature of the outcrop. Small stringers of epidote were occasionally noted along fractures in the limestone.

No mineralization was observed in these rocks.

2. Mount Nansen Group: (Jurassic or Later)

The rocks of the Mount Nansen Group are typically dark green or greenish-grey in colour and andesitic to basaltic in composition, but in a few localities, (northern part of the area) they are grey, red or purple. On the surface they commonly weather brown. A marked feature is their resistance to erosion, so that they form high ridges with long, steep, talus-covered slopes leading down to the floors of the bordering valleys.

2. (a) Basalt and Andesite

The volcanic rocks include many varieties of andesite and basalt. Typically, the andesites are amygdaloidal with pale green feldspar amygdules. Black or dark green crystals of hornblende or pyroxene fill vesicles in the basalts. The ground masses of both types are very fine grained.

2. (b) Flow Breccias, Tuffs & Agglomerates

In places, (L 124N - 25E and L92N-62E) there are flow breccias in which the fragments, up to 5 inches in size, either are closely packed or widely spaced in a matrix of lava. In places, (L156N - 80E) the lavas are vesicular, with vesicles filled with carbonate and zeolites (?)

The lava flows are associated with considerable amounts of tuffs, agglomerates and breccias.

The rocks of the Mount Nansen Group grade into one another, so that it is not possible to map them as individual units.

Chloritization is common and locally, (L 104N - 74E, 25E between L 120N & 124N) chlorite-epidote seams, up to 3 inches in width, were observed.

Fracturing is moderate throughout the exposures of the volcanics and coarse block jointing, paralleled by the drainage pattern, results in a great amount of talus.

Intrusive Rocks: (Jurassic or Later)

3. (a) Syenite is the most common intrusive rock on the property and it occurs in most of the south-western quadrant of the claims, to the west and stratigraphically above the Mount Nansen Group. The syenite is quite uniform in texture. It is medium-grained and sub-equigranular, and locally with feldspar phenocrysts. Hornblende and biotite never exceed 30% by volume in composition, and are generally less than 20%. Chloritization of hornblende is common and clay alteration is found locally.

Syenite locally grades into monzonite, but never for more than 200 feet in width. Monzonite is evident near the Mount Nansen-intrusive contact.

Veinlets and apophyses of syenite are found along the contact zone of the Mount Nansen volcanics with the larger pluton. Tourmaline occurs as a secondary mineral, after hornblende, in places in the contact zone (L44N - 88E).

3. (b) Hornblende Syenite occurs near the eastern claim boundary in the central area of the claims. It is medium-grained and sub-equigranular, with gneissic texture developed locally. This phase is so named as the hornblende content is high relative to the rest of the intrusive, ranging from 30 to 60% by volume.

3. (c) Quartz Monzonite occurs in the east central portion of the property. This phase shows quartz as phenocrysts (?) and in gneissic bands. The quartz content varies up to 30% by volume.

As the intrusive rocks are mineralogically similar and in most places show gradational contacts with one another, the syenitic phases, the quartz monzonite, and the hornblende syenite are all believed to be derivatives of a common magma.

4. Acid Dykes intrude all older formations. Generally they are dense, fine-grained aggregates of quartz and up to 10% tourmaline. They vary in width up to 10 feet. Locally they are vuggy and show euhedral quartz crystals up to ½ inch in length. This unit is not too extensive, occuring mostly in the southern quadrants, with a frequency of 1 per 1000 feet at the most.

5. CARMACKS VOLCANICS: (Tertiary)

This unit contains a succession of flows and breccias and minor andesite with some tuff beds lying between flows. The rocks of this unit occupy the western portion, that appears to be a down-warped or down-faulted block.

The rocks are light brown or grey in colour, fine-grained, andesitic in composition, and show vesicular structure. Small laths of plagioclase and pyroxene are also commonly present (in a fine-grained ground mass). The rocks are coarsely-jointed, commonly breaking into large, flat

blocks. They weather brown or reddish-brown in colour, but on fresh surfaces are dark blue-green, dark brown, or black.

The attitude of the flows is not determinable. The contact with the older volcanic rocks is a fault near B/L OE trending NNW.

In most parts of the study area the Carmacks volcanics show no obvious mineralization. At two localities (L 128N, 33W; and L 136N,ZW) fracture-controlled chrysocolla was observed.

Mineralization and Alteration

Disseminated pyrite was found in all volcanic types of the Mount Nansen Group, but never exceeding 1-2% by volume. Geochemical assays range up to 200 ppm Cu, 370 ppm Zn and 4 ppm Mo for these rocks.

Minor chyrsocolla along fractures was found in andesite at 120N - 27E. Specular hematite is intimately associated with all volcanic rocks.

The syenite phase of the intrusive rocks contain local disseminations of pyrite, (L24N-24E and L40N-56E among others), but never exceeding 1-2% by volume.

Mineralization (chysocolla, native Cu (?) tetrahedrite, malachite and neotocite) occurs at one locality (L60N-65E) along the contact zone.

The acid dykes show moderate to extensive mineralization. Generally this consists of submassive,

fine-grained pyrite, tetrahedrite and minor enargite, with secondary malachite filling vugs, as at L92N-28E. Submassive aggregates of fine-grained proustite are found locally (L96N-76E). Sphalerite was observed in one dyke (L108N-15E).

Chloritization is common in the eastern portion of the area, westward it grades into weak fracture controlled clay alteration in the syenitic phases. Tourmalinization is pervasive in one place (L44N, near 88E) in the syenite.

Most acid dykes show pervasive clay alteration and fracture-controlled 30% jarositic limonite.

GEOCHEMISTRY (C.F. GLEESON)

Field Procedures:

The area was covered by picket lines spaced 400 ft apart completed by Harman Management Ltd., of Whitehorse. Initially, the soil samples were taken every 200 feet but later on the interval was increased to 400 feet. All soil samples were taken from "B" horizon. In places, on the talus slopes, no soil was encountered, therefore some of the samples are organic ("A" horizon).

All soil samples were collected and placed in special heavy kraft envelopes, and pertinent notes were entered on sample cards set up on a 80 character base.

Laboratory Procedures

All samples were dried and sieved to minus eighty mesh. This fraction was analyzed geochemically for copper, zinc and molybdenum using atomic absorption spectrometry after extraction with a hot-solution of $HCl-HNO_3$ by Bondar-Clegg and Company Limited in Whitehorse.

Background and Anomalous Values

To determine background and anomalous values, the geochemical values obtained from the laboratory were grouped into fixed ranges. Histograms were drawn that showed the total number of values within each group. It was found that the histograms for copper and zinc were positively skewed; therefore the high values were eliminated. The cumulative-frequency per centage of each group was calculated. The value or group of values that occurred at fifty per cent was chosen as background. Anomalous values were chosen as those values greater than 97.5%.

Background values for copper, zinc and molybdenum were found to be 26 ppm, 60 ppm and 1 ppm respectively; anomalous values were 65 ppm, 135 ppm and 4 ppm respectively.

Anomalies

All results and sample numbers were plotted on the accompanying geochemical maps (Pro North and Pro South) at a scale of 1" = 400'. Values

for each element were contoured and the contoured results combined with background geology. The following anomalies were outlined.

Anomaly #1

This is strictly a copper anomaly which is located in the north and central portion of Pro North. It trends north-northwesterly. Values for copper range from 4 to 103 ppm and for molybdenum from ND* to 9 ppm. The core of the anomaly is about 7000 feet long and averages 3500 feet in width.

Geologically, the area is underlain by the rocks of the Mount Nansen Group. This copper anomaly is of low intensity and since it lies wholly within the volcanic rocks, no further work is recommended.

Anomaly #2

This is a coincident copper-molybdenum anomaly which is located in the eastern portion of Pro North. It trends north-south. Values for copper range from 5 to 102 ppm and for molybdenum from ND to 5 ppm. Values for zinc range from 6 to 300 ppm with no significant pattern. This anomaly is about 4000 feet long and 4800 feet wide.

At the north end of this anomaly, the rocks consist of quartz-biotite schist and limestone of the Yukon Group and volcanic rocks of the Mount Nansen Group. At the east end of this anomaly, the rocks consist of quartz, monzonite and hornblende

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*ND indicates not detected

syenite. The anomaly dies down towards the contact of the above intrusive rocks. This is a weak but distinct anomaly and seems to be due to underlying volcanic rocks. No further work is recommended.

Anomaly #3

This is a coincident copper-zinc-molybdenum anomaly, trending west-northwest. It is about 7800 feet long and 5000 feet wide and is located on the south side of Pro North and north side of Pro South. With the exception of two samples which analyzed 1300 and 2400 ppm, values for copper range from 4 to 350 ppm. Zinc ranges from 3 to 350 ppm and molybdenum from ND to 6 ppm.

The western portion of the anomaly is underlain by volcanic rocks of both Carmacks Group and Mount Nansen Group. At the east end of the anomaly, the rocks consist of syenite intrusive. The volcanic rocks of the Mount Nansen Group show occasional fracture-controlled chrysocolla. There are a few acid dykes in the area that are highly altered and show specular hematite, sphalerite and fracture-controlled malachite, tetrahedrite and enargite. The soil sample (L92N-26E) analyzed 1300 ppm copper and the rock sample (L92N-28E) analyzed 94,000 ppm copper, 140 ppm molybdenum and 1480 ppm silver.

Anomaly #4

This is a coincident copper-zinc-molybdenum anomaly, trending northwest. It is located on

the south side of Pro North and north side of Pro South and is about 9400 feet long by 4000 feet wide. Values for copper range from 3 to 270 ppm (one sample analyzed 860 ppm), for zinc from 30 to 570 ppm and for molybdenum from ND to 11 ppm (one sample being 40 ppm).

The anomaly is mainly underlain by the volcanic rocks of the Mount Nansen Group. On the east side, the anomaly follows the contact between Mount Nansen volcanics and the intrusive rocks. A syenite dyke is located in the central portion of the anomaly. Andesites of the Mount Nansen Group show about 2 per cent by volume disseminated pyrite. Locally the pyrite in the andesite is fracture-controlled. Minor acid dykes also occur in the area and show about 2 per cent by volume disseminated pyrite, locally tetrahedite, sphalerite and galena.

Anomaly #5

This is a coincident copper-molybdenum anomaly. It is located in the southeast corner of Pro South and trends northeast. Values for copper range from 24 to 208 ppm and for molybdenum from 4 to 37 ppm. The core of the anomaly is about 3400 feet long and 1900 feet wide.

This anomaly lies in swamp, an area which probably is underlain by the volcanic rocks of the Mount Nansen Group. The above could be the cause of this anomaly. No further work is recommended.

Anomaly #6

This is a coincident copper-zinc-molybdenum anomaly and is located in the central and southern portion of Pro South. The anomaly is semi-circular in shape and roughly parallels the contact between the intrusive and the volcanic rocks of the Mount Nansen Group. From the southern portion of the anomaly the trend is to the northwest, then north-south and finally the anomaly swings to the north-east. Values for copper range from 8 to 360 ppm, for zinc from 8 to 305 ppm and for molybdenum from ND to 13 ppm. The core of the anomaly is about 8800 feet long and averages 2400 feet in width.

The anomaly lies wholly within the syenite intrusive. There are zones of disseminated pyrite, about 2 per cent by volume, within the syenite. The syenite shows weak clay alteration. Acid dykes with disseminated pyrite, about 2 per cent by volume, are found locally within this anomalous area.

Aeromagnetic Anomaly

There are several strong airborne magnetic anomalies in the area (See G.S.C. Map 3297G). The axes of these anomalies trend northwest and in general correspond with the trend of geochemical anomalies. The aeromagnetic low corresponds to the intrusive rocks (syenite and monzonite) on the west end. It gets stronger towards the top of Prospector Mountain and continues to the southwest over the Mount Nansen volcanic rocks. The rocks of the Yukon Group and

Carmacks Volcanics show a comparatively weak aeromagnetic anomaly.

Summary

The geological work indicated that the schist and limestone of the older Yukon Group occupy the northeastern part of the claim group, where they are in contact with the later Mount Nansen (Jurassic?) volcanics (mainly basalt and andesite) to the west. The whole sequence has been intruded by later syenitic rocks which occupy the eastern and west-central parts of the property. The acid intrusives show chloritization in the eastern portion of the area; westward it grades into weak fracture-controlled clay alteration. Very rarely, tourmalinization is also found in the syenite. Most acid dykes that occur in the southern quadrants show pervasive clay alteration and fracture-controlled jarositic limonite (averaging 30 per cent).

The rocks of Carmacks Volcanics occur in the northwestern part of the property.

Disseminated pyrite was found in all volcanic types of the Mount Nansen Group. Minor chrysocolla was found in some andesites. Specular hematite was found to be intimately associated with all volcanic rocks.

Of the six geochemical anomalies discussed above, three (Anomalies 1, 2 and 5) are underlain by the volcanic rocks of the Mount Nansen Group.

These volcanic rocks show some pyrite and minor chrysocolla. This distribution is usually erratic and rarely of economic importance, since although the mineralization may be locally high-grade, it is normally dispersed in very low-grade sections. It is believed that geochemical anomalies 1, 2 and 5 could be due to the erratic mineralization in the volcanic rocks. Therefore, no further work is recommended.

Anomalies 3, 4 and 6 are coincident copper-zinc-molybdenum anomalies (6 being the strongest). The southern part of anomaly 3, the central part of anomaly 4 and the whole of anomaly 6 are underlain by syenitic rocks. In general, the rock samples from these zones do not show high values for copper, zinc or molybdenum, with the exception of acid dykes, where values for copper range from 77 to 94,000 ppm, for zinc from 12 to 480 ppm, for molybdenum from 3 to 490 ppm, for silver from 6.5 to 1480 ppm and for lead from 720 to 880 ppm. The syenite rocks, in the anomaly 6 area, show disseminated pyrite and fracture-controlled jarosite with weak clay alteration.

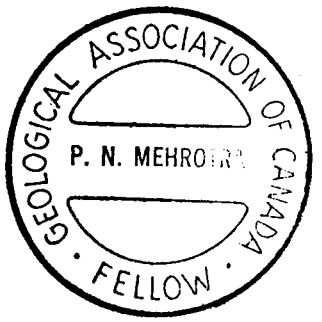
RECOMMENDATIONS

Geological and geochemical evaluation shows Pro North to be an area of no economic significance. For the most part, the area is

covered with volcanic rocks and unmineralized syenite rocks to the south and southeast. However, Pro South seems to be an area of interest, both geologically and geochemically. Therefore, it is recommended that ninety-eight claims covering Pro South should be retained and the balance dropped.

To further evaluate the possible economic potential of Pro South and to outline drill targets, an I.P. survey is recommended over geochemical anomalies 4 and 6 and the southern part of anomaly 3.

To further delineate geological contacts over the aforesaid anomalies, a magnetometer survey is suggested.



G. Calvin Allebone
G.C. Allebone

Signed: P.N. Mehrotra
P.N. Mehrotra

August 27, 1971

APPENDIX A

DETAILS OF TRENCH WORK

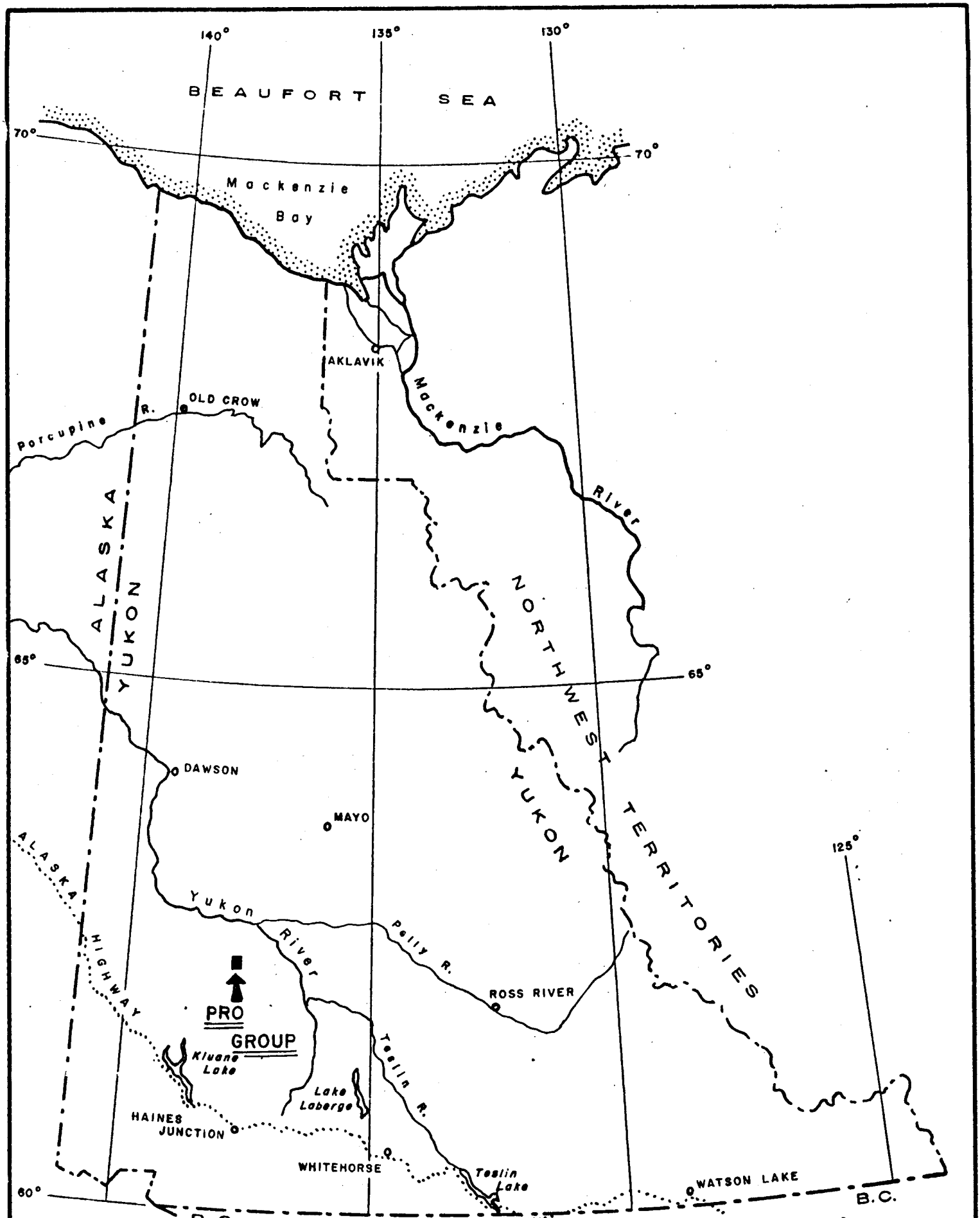
Two trenches were dug by pick and shovel to try to uncover bedrock beneath a surface copper mineral showing. Bedrock was not reached in either trench, as permafrost was encountered at a shallow depth and manual trenching was abandoned.

Trench #	Average Depth	Average Width	Length	Volume
1	5 ft.	3 ft.	13 ft.	195 cu. ft.
2	2.9 ft.	3.9 ft.	47 ft.	531.5 cu. ft.
			Total Volume	726.5 cu. ft.

APPENDIX B

DETAILS OF LINE CUTTING

Total number of cross-lines	= 52
Total number of base-lines	= 2
Total footage of cross-lines	= 1,035,550 feet
Total footage of base-lines	= 41,900 feet
Total footage	= 1,077,400 feet
Total man days	= 196
Average progress/man/day	= 5,497 feet.

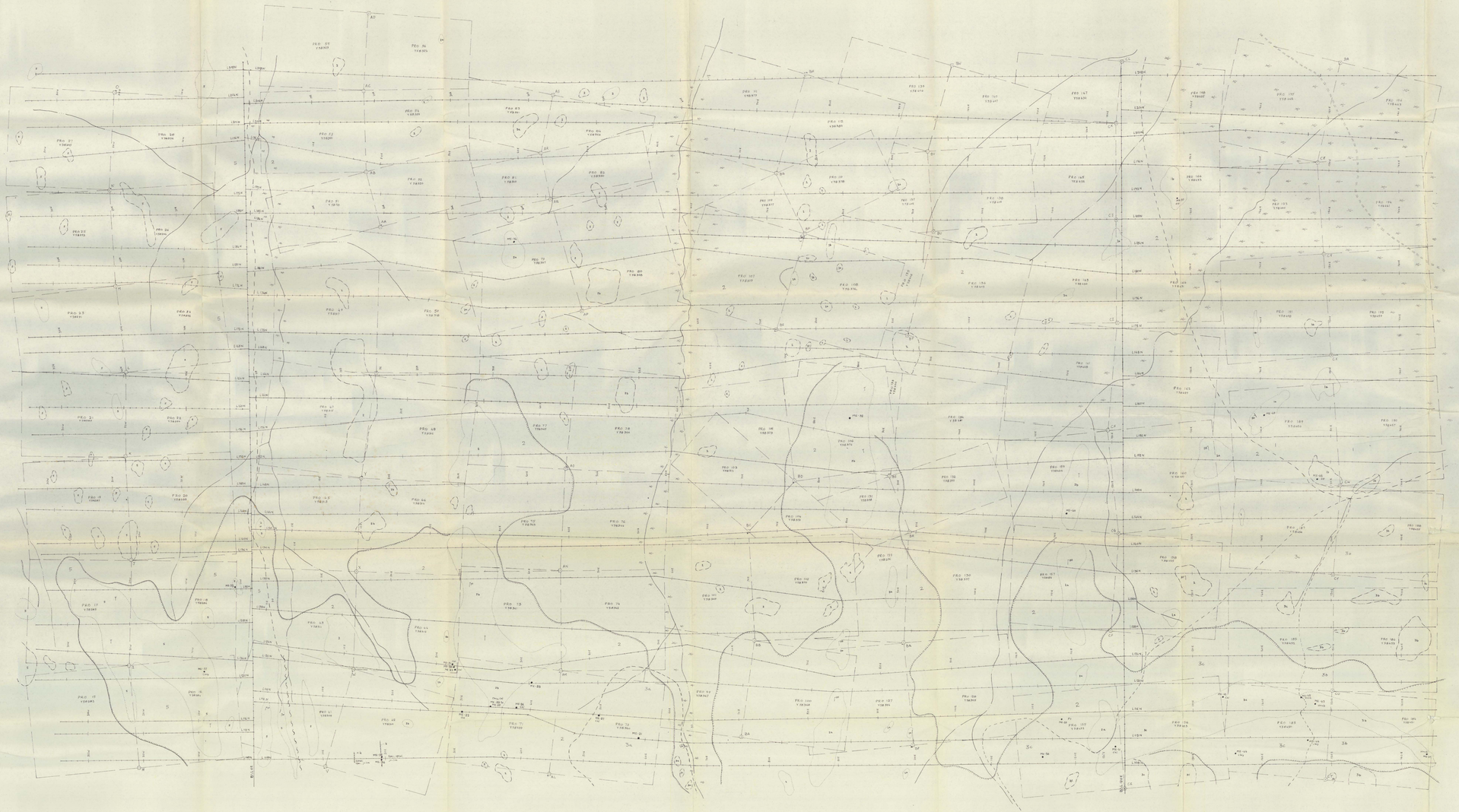


LOCATION MAP

PRO GROUP

YUKON TERRITORY

Figure 1



LEGEND

PLEISTOCENE

6 Glacial deposits

TERTIARY

CARMACKS VOLCANICS

5 Mainly trachyte flows, breccias and tuffs; minor andesite

JURASSIC OR LATER

4 Acid dykes

3 3a, Syenite with minor monzonite; 3b, hornblende syenite; 3c, quartz monzonite

MOUNT NANSEN GROUP

2 2a, mainly basalt, andesite; 2b, flows, breccias, agglomerate, tuff

PRECAMBRIAN AND LATER

YUKON GROUP

1 1a, quartz-biotite schist; 1b, limestone

area of rock outcrop
area of float (> 30% boulders)
limit of talus
geological boundary (defined, inferred)
bedding, dip
fault (defined, assumed)
dyke
joint, strike and dip
terrace boundary
stream
seasonal stream
swamp
claim post
claim line
rock sample location
trench

chl = chlorite; chry, w = chrysocolla; ep = epidote, en = enargite; gal = galena; lm = limonite, jr = jarosite, mal = malachite; nt = neotocite; py = pyrite; spec = specular hematite; sphal = sphalerite; tetra = tetrahedrite

PRO (NORTH)

PRO (SOUTH)

TN

MN

33°

OCCIDENTAL MINERALS CORPORATION OF CANADA

NTS 105 I 15 E,F

PROSPECTOR MOUNTAIN AREA - YUKON TERRITORY

PRO GROUP (NORTH)

GEOLOGICAL MAP

0 400 800 1200 1600

FEET

Geology by: P.N. MEHROTRA

JUNE 20 - AUGUST 23, 1971

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LEGEND

PLEISTOCENE

6 — Glacial deposits

TERTIARY
CARMACKS VOLCANICS

5 — Mainly trachyte flows, breccias and tuffs; minor andesite

JURASSIC OR LATER

4 — Acid dykes

3 — 3a, Syenite with minor monzonite; 3b, hornblende syenite; 3c, quartz monzonite

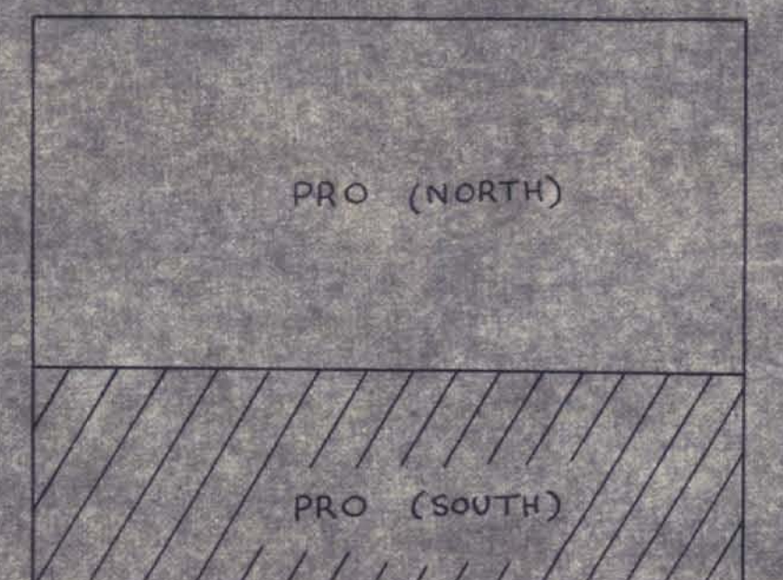
2 — MOUNT NANSEN GROUP
2a, mainly basalt, andesite; 2b, flows, breccias, agglomerate, tuff

PRECAMBRIAN AND LATER
YUKON GROUP

1 — 1a, quartz-biotite schist; 1b, limestone

area of rock outcrop
area of float (> 30% boulders)
limit of talus
geological boundary (defined, inferred)
bedding; dip
fault (defined, assumed)
dyke
joint, strike and dip
terrace boundary
stream
seasonal stream
swamp
claim post — A
claim line
rock sample location — AL-31
trench

chl = chlorite; chry = chrysocolla; ep = epidote; en = enargite; gal = galena; lm = limonite; jr = jarosite, mal = malachite; nt = neotocite; py = pyrite; spec = specular hematite; sphal = sphalerite; tetra = tetrahedrite



OCCIDENTAL MINERALS CORPORATION OF CANADA
NTS REF 115 I/5
PROSPECTOR MOUNTAIN AREA - YUKON TERRITORY
PRO GROUP (SOUTH)

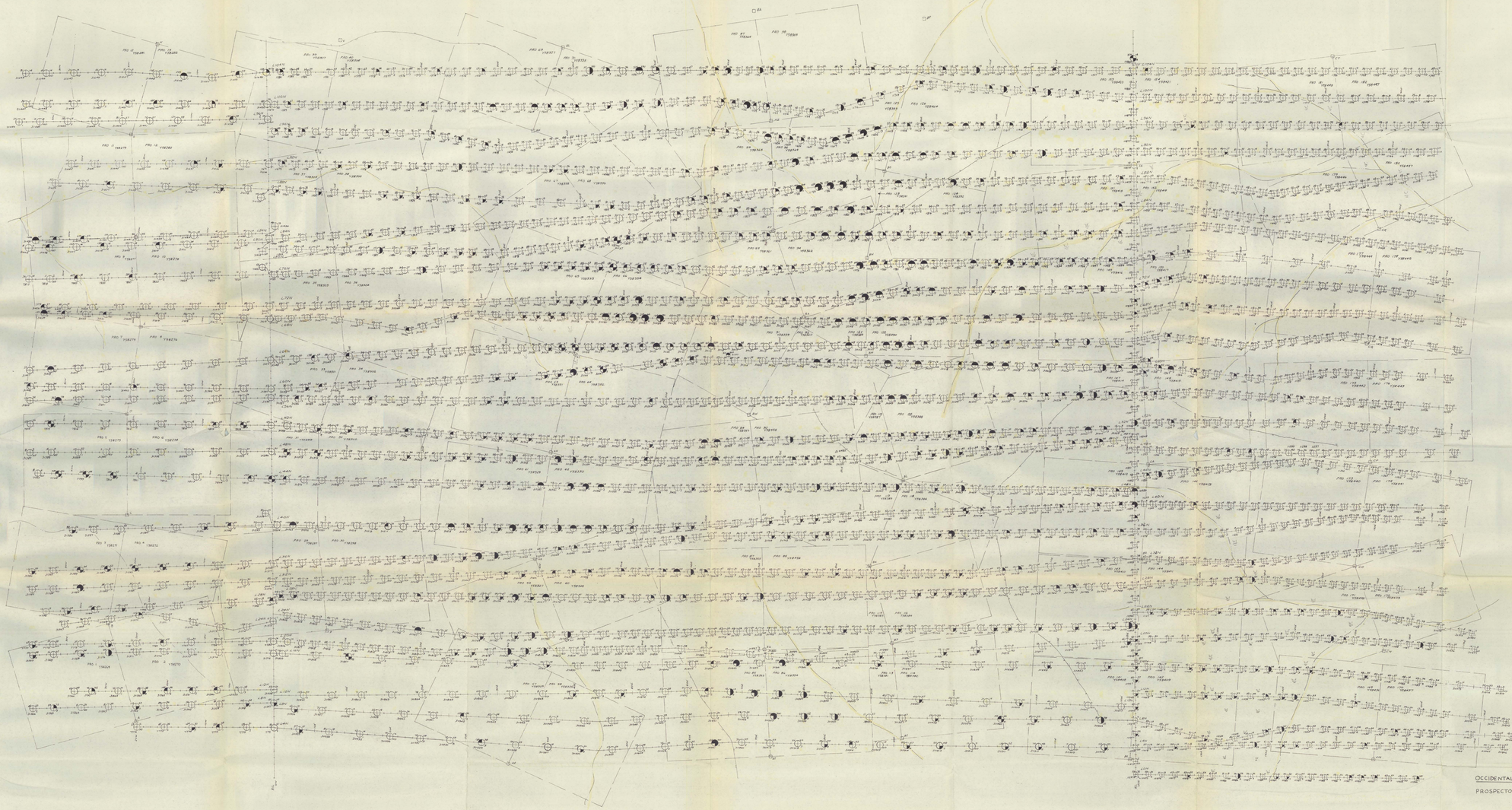
GEOLOGICAL MAP

0 400 800 1200 1600
FEET

Geology by: C. ALLEBONE, P.N. MEHROTRA
JUNE 20 - AUGUST 23, 1971

3

LEGEND
7492 SOIL SAMPLE SITE & NUMBER
Zn Cu Mo VALUE IN P.P.M.
ANOMALOUS SITES
Cu > 65 PPM
Mo > 4 PPM
Zn > 135 PPM
RIDGE CREST
STREAM
SEASONAL STREAM
A CLAIM POST
CLAIM LINE
CAT TRAIL
SWAMP
PRO (NORTH)
PRO (SOUTH)
TN
MN
OCCIDENTAL MINERALS CORPORATION OF CANADA
NTS REF 115 I/5
PROSPECTOR MOUNTAIN AREA - YUKON TERRITORY
PRO GROUP (NORTH)
GEOCHEMICAL MAP
0 400 800 1200 1600
FEET
Data by: S. DONOVAN, C. DARY,
R. GEBER, C.F. GLEESON
June 20 - August 23, 1971
4



LEGEND

- SOIL SAMPLE SITE & NUMBER
- VALUE IN PPM
- ANOMALOUS SITES
  - Cu > 65 PPM
  - Mo > 4 PPM
  - Zn > 155 PPM
- RIDGE CREST
- STREAM
- SEASONAL STREAM
- CLAIM POST
- CLAIM LINE
- SWAMP

PRO (NORTH)

PRO (SOUTH)

TN

MN

23°

OCCIDENTAL MINERALS CORPORATION OF CANADA

NTS 116 I 1/2

PROSPECTOR MOUNTAIN AREA- YUKON TERRITORY

PRO GROUP (SOUTH)

GEOCHEMICAL MAP

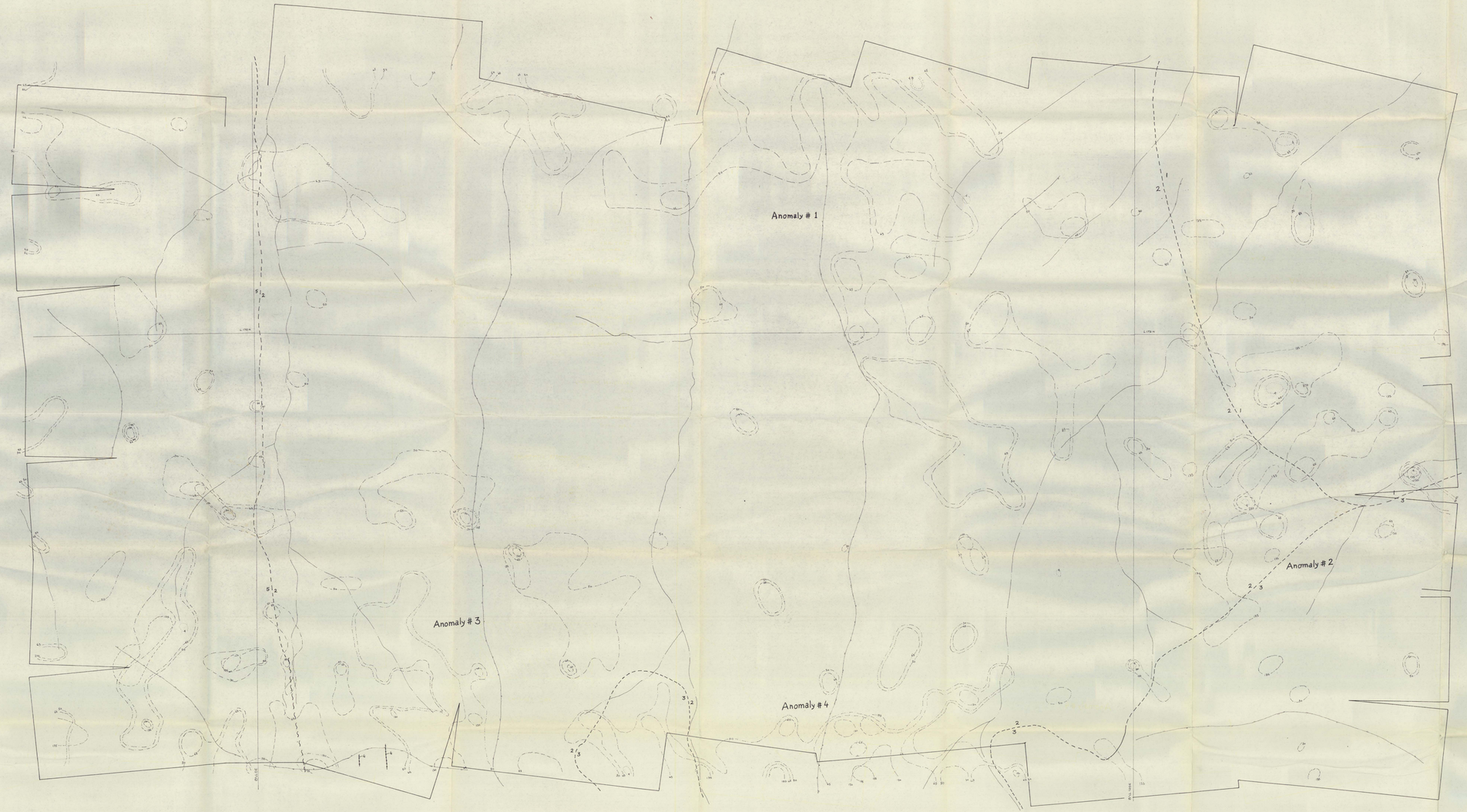
0 400 800 1200 1600

FEET

Data by: R. GEBER, C. DARY, C.F. GLEESON

June 20 - August 25, 1971

E



LEGEND

PLEISTOCENE

6 Glacial deposits

TERTIARY
CARMACKS VOLCANICS

5 Mainly trachyte flows, breccias and tuffs; minor andesite

JURASSIC OR LATER

4 Acid dykes

3 Syenite with minor monzonite; hornblende syenite; quartz monzonite

2 MOUNT NANSEN GROUP
mainly basalt, andesite; flows, breccias, agglomerate, tuff

PRECAMBRIAN AND LATER
YUKON GROUP

1 quartz-biotite schist; limestone

geological boundary .....
fault .....
dyke .....
stream .....
seasonal stream .....
ridge crest .....

SOIL SAMPLE CONTOURS

Mo in PPM.

Cu in PPM.

Zn in PPM.

PRO (NORTH)

PRO (SOUTH)

TN

MN

55°

OCCIDENTAL MINERALS CORPORATION OF CANADA

MTS. REF. 115 I/5

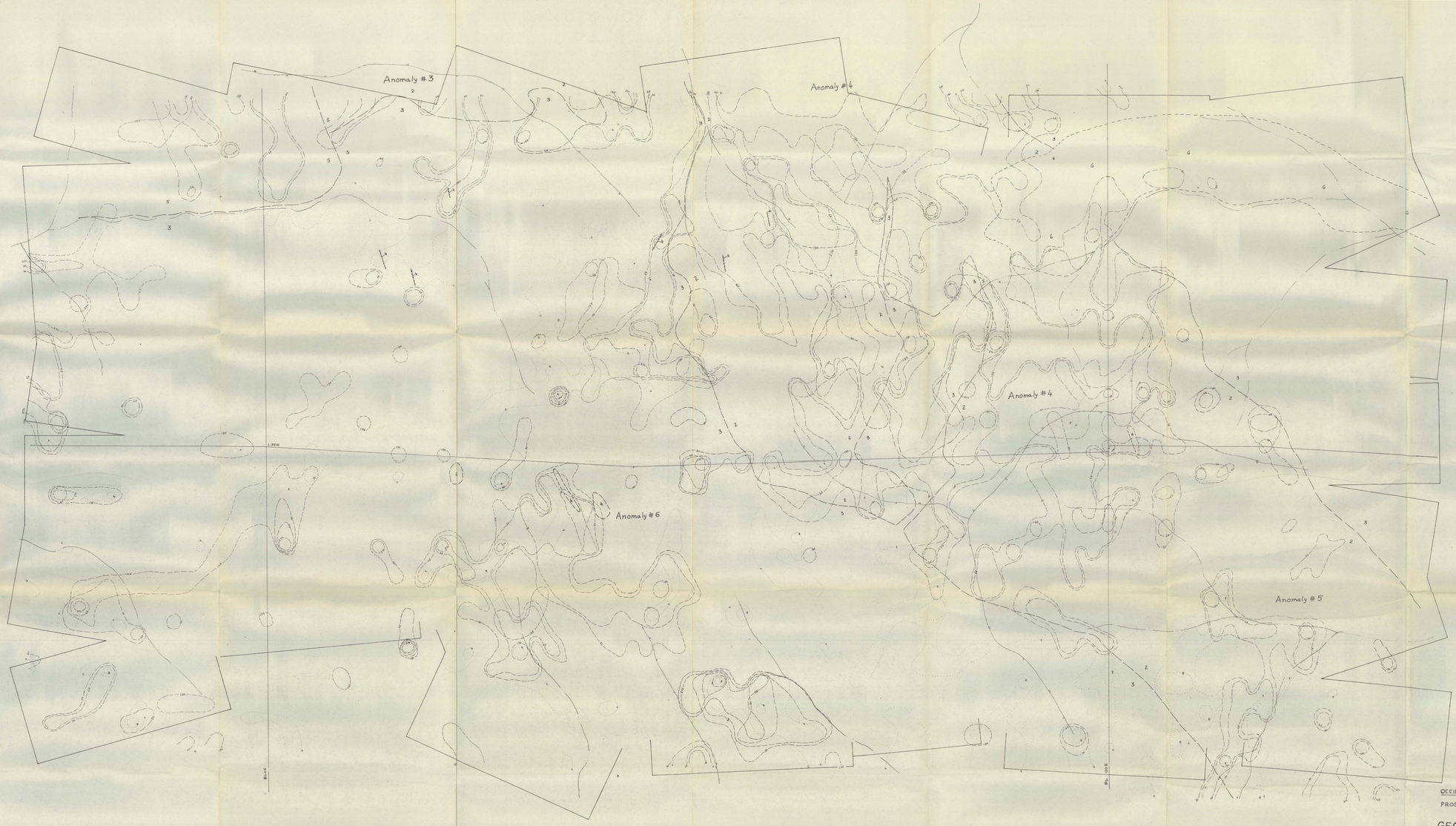
PROSPECTOR MOUNTAIN AREA - YUKON TERRITORY
PRO GROUP (NORTH)

GEOLOGY & GEOCHEMISTRY

0 400 800 1200 1000
FEET

Geology by: P.N. MEHROTRA
Geochemistry by: C.M. GLEESON

6



LEGEND

PLEISTOCENE

6 Glacial deposits

TERTIARY
CARMACKS VOLCANICS

5 Mainly trachyte flows, breccias and tuffs; minor andesite

JURASSIC OR LATER

4 Acid dykes

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mainly basalt, andesite; flows, breccias, agglomerate, tuff

PRECAMBRIAN AND LATER
YUKON GROUP

1 quartz-biotite schist; limestone

geological boundary .....
dyke .....
stream .....
seasonal stream .....
ridge crest .....

SOIL SAMPLE CONTOURS

MO in PPM

Cu in PPM

Zn in PPM

PRO (NORTH)

PRO (SOUTH)

OCCIDENTAL MINERALS CORPORATION OF CANADA
NTS REF 115 I/6
PROSPECTOR MOUNTAIN AREA - YUKON TERRITORY
PRO GROUP (SOUTH)

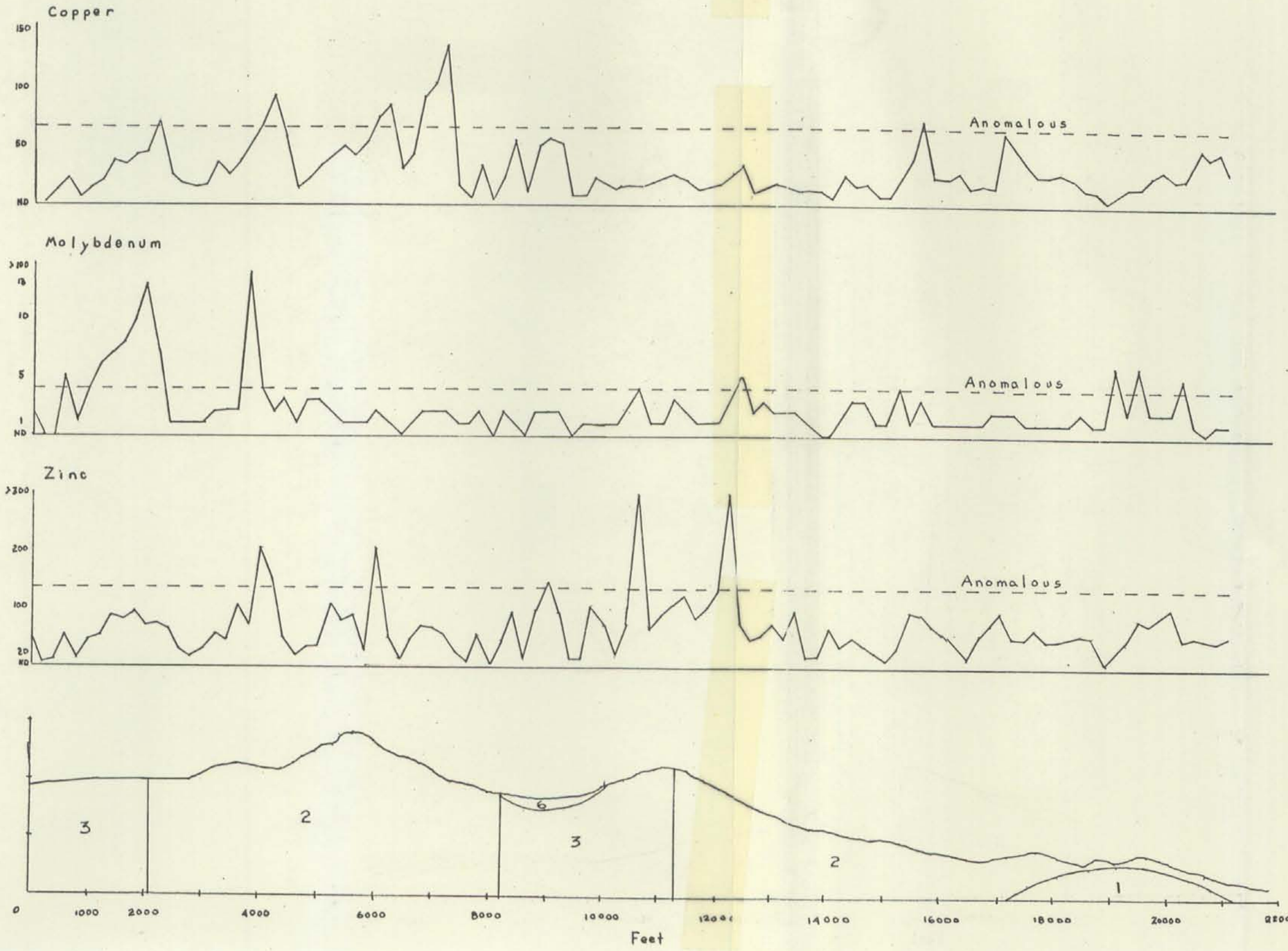
GEOLOGY & GEOCHEMISTRY

0 400 800 1200 1600
FEET

Geology by: C. ALLEBONE, P.N. MEHROTRA
Geochemistry by: C.F. GLEESON

7

Profile of Copper, Molybdenum and Zinc, and Generalized Geological Cross Section Along Base Line 120+00E



LEGEND

- 6 — Glacial deposits
- 3 — Syenite, quartz monzonite
- 2 — Mount Nansen Group: basalt
- 1 — Yukon Group: Limestone

Figure 8

Figure 9
Plan of Trench Work
Scale: 1"=10'