OCCIDENTAL MINERALS CORPORATION OF CANADA

GEOLOGY AND GEOCHEMISTRY OF THE PELLY CLAIM GROUP

PELLY RIVER AREA - YUKON TERRITORY

CLAIM SHEET NO. 115 I/14

Lat. : 62° 49'
Long.: 137° 18'

RECEIVED [illegible] 1971

CLAIMS

PELLY	1-6	Y57541-Y57546)	Dawson Mining District
	15-20	Y57547-Y57552)	
	7-14	Y59079-Y59086))	
	21-22	Y59089-Y59090))	
	23-24	Y59087-Y59088))	Whitehorse Mining District
	25-80	Y59091-Y59146))	
	81-88	Y59257-Y59264))	
	89-104	Y59155-Y59170))	

Numbers 69, 71 & 73 do not exist

This report has been examined by the Geological [illegible] Unit and is recommended [illegible] to be considered as [illegible] of 33,777.83

[illegible] under Section [illegible]

Commissioner of Yukon Territory

BY

D. NUTTER)
Geology
P. MEHROTRA)

C.F. GLEESON Geochemistry

COVERING WORK COMPLETED DURING PERIOD

MAY 16, 1971 TO JULY 26, 1971

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Plans Accompanying Report

INTRODUCTION

The Pelly group, consisting of 104 claims, was staked as a result of a reconnaissance geochemical stream sediment survey carried out by Occidental Minerals Corporation of Canada during 1970.

This report will describe the geology of the claim area and the results obtained from a geochemical soil and rock sample survey carried out during the 1971 field season.

OBJECTIVE

The purpose of the project was to map and evaluate the area of granite intrusion from which several rock samples containing disseminated chalcopyrite were found in 1970.

LOCATION

The Pelly claims were staked under contract by Joe Yanisiw of Whitehorse.

The claims Pelly 1-6, 15-20 were recorded on August 24, 1970 at Dawson, while Pelly 7-14, 21-80, 89-104 were recorded on September 24, 1970 and Pelly 81-88 on October 5, 1970 in Whitehorse. See Figure 1.

Their location is shown on claim sheet 115 I/14 and lie at the junction of the Pelly and Yukon Rivers. Five claims, Pelly 1, 2, 3, 5 and 7

(Y57541 to Y57543, Y57545, Y59079) overlap on to the Pelly River Ranch, owned by the Bradley Bros. Nine claims, Pelly 63, 65, 66, 67, 87, 88, 89 to 92 (Y59129, Y59131, Y59132, Y59263, Y59264, Y59155 to Y59158) are shown on the claim sheet to cover wholly or partially land leased by John Lammers and claims Pelly 64, 85 and 86 (Y59130, Y59261 and Y59262) to partially cover land owned by John Lammers.

Claims Pelly 69, 71 and 73 were found to cover ground which was occupied by other claims and hence do not exist.

A large gap was found to exist between Pelly 22, 24, 26, 28, 30, 57, 58, 77, 55, 53, 51, 49, 47, 45, 43 and 41. This ground was staked during August 1971 and covered by claims Dary 1-18. Dary 19 and 20 cover a gap between Pelly 54, 72, 94, 96 and 74.

VEGETATION

A thick growth of white spruce covers the north slopes of the area, while poplar, willow and dwarf birch are the most abundant deciduous trees. Also, the recent alluvial flats along the Pelly River are thickly wooded by poplar and in places willow. The property has about 20% open slope, 10% semi-wooded and 70% heavily wooded areas.

PHYSIOGRAPHY

The map area lies in the southern portion of the Klondike Plateau which forms part of the Yukon Plateau Physiographic Province. The claim group encloses a smooth-topped plateau which slopes off rapidly to the north and west down to the Pelly River. The plateau is drained by numerous seasonal streams which follow narrow, V-shaped valleys. The average gradient of these valleys is 35% on the northwestern and southern slopes and 15% on the northeast slope.

There are extensive river flats of recent alluvium on the north, west and south-west portions of the property. There are also remanent Tertiary gravel terraces on the north-east and south-west slopes of the plateau.

ACCESS

The claim group may be reached via a dirt road which follows the north shore of the Pelly River from Pelly Crossing to the Pelly River Ranch, a distance of 33 miles. There are also two trails terminating on the claim area which originate on the Klondike highway, several miles north of Minto. The easterly trail was a former tote road used to reach the Pelly River Ranch, but was subsequently replaced by a road along the north side of the Pelly River to eliminate the river crossing. The westerly

trail represents the old Dawson Trail from Carmacks en route to Dawson City. This road is no longer in use, but is in fair condition. Also, the property may be reached by riverboat from Pelly Crossing or Minto or by float plane.

PERSONNEL

The claim area was covered by a picket line grid with lines spaced 400 feet apart and picketed every 100 feet.

The claims south of the Pelly River were covered, but excludes the area on the southeast corner which overlap leases held by J. Lammers.

This work was completed under contract by Harman Management Limited from Whitehorse during the period May 17 to June 15.

Total footage cut: 477,000 feet.

Footage cut per man per day: 2051 feet.

Geology of the claims was mapped during period May 23 to July 26, 1971 by Mr. Dave Nutter under supervision of Mr. P.N. Mehrotra. See Figure 2.

A soil sample geochemical survey was completed by Mr. C. Dary under supervision of Dr. C.F. Gleeson. See Figures 3 and 4.

NAMES AND ADDRESSES OF PERSONNEL

Name	Address	Company and Position
		Occidental Minerals Corporation of Canada
J.J. Brummer	801-161 Eglinton East Toronto 12, Ontario	Exploration Manager
P.N. Mehrotra	801-161 Eglinton East Toronto 12, Ontario	Geologist
D. Nutter	801-161 Eglinton East Toronto 12, Ontario	Geologist
C. Dary	9730-106 Street Edmonton, Alberta	Soil Sampler
M. Gartner	812 Wood Street Whitehorse, Y.T.	Cook
C.F. Gleeson	764 Belfast Road Ottawa K1G 0Z5	Consulting Geochemist
		Harman Management Ltd.
K. Butler	General Delivery Whitehorse, Y.T.	Cook
D. Carlick	General Delivery Whitehorse, Y.T.	Line-cutter
F. Charlie	General Delivery Ross River, Y.T.	Line-cutter
J. Etzel	General Delivery Ross River, Y.T.	Line-cutter
N. Glass	3024 Proctor Ave. West Vancouver, B.C.	Line-cutter
T. McCrory	RR #1 New Denver, B.C.	Line-cutter
J. McInnis	1894-5th Avenue Prince George, B.C.	Line-cutter
R. Milledge	5794 Atlantic St. Halifax, N.S.	Line-cutter
C. Ollie	General Delivery Whitehorse, Y.T.	Line-cutter
S. Williams	622 Vancouver St. Prince George, B.C.	Line-cutter

GENERAL GEOLOGY (BY D. NUTTER AND P.N. MEHROTRA)

The table of formations found on the property is as follows:

Table of Formations

Tertiary(?)	4.	Basic Dykes
Jurassic(?) or Later - Intrusive Rocks	3.(a)	Granodiorite
	(b)	Quartz diorite
	(c)	Granite
- Mount Nansen Group	2.(a)	Andesites
	(b)	Dacite
	(c)	Pyroxenite
Precambrian(?) or Later Yukon Group	1.(a)	Chlorite schist
	(b)	Quartzite
	(c)	Quartz-sericite schist

The Pelly claim group is underlain by 3 major rock types. Quartzite and schists of the Yukon Group outcrop in the northeast portion of the property. Andesite and allied rock types of the Mount Nansen Group overlie rocks of the Yukon Group along the eastern half of the plateau and outcrop near the southeast boundary of the property. Granodiorite and allied rock types intrude the volcanics and underlie the western half of the plateau; they outcrop on the northern, western and south-western slopes. Basic dykes of probable Tertiary age outcrop on the southern slope of the plateau where they intersect the intrusive rock units.

The sulphide mineralization observed on the property is probably later than all rock units except the basic dykes.

DETAILED GEOLOGY

Description of Rock Units

1. Yukon Group

The Yukon Group is represented by 3 rock types: chlorite schist, quartzite and quartz-sericite schist. Chlorite schist is by far the most common rock type in this group. It outcrops along the major stream in the eastern portion of the northern escarpment. It is moderately foliated ($312^{o}T/90^{o}$), pale to dark green and in some places slightly porphyoblastic. There is no visible sulphide mineralization; however, limonite (goethite) often occurs along fractures and on weathered surfaces. Frequently, irregular calcite veins and quartz veinlets occur and micro-fractures are usually calcareous. The schists have been observed in sharp contact with pyroxenite of the younger Mount Nansen Group.

Two outcrops of medium- to coarse-grained quartzite were found in close proximity to the chlorite schist. These have a faint, regular pale-green to pink banding. No iron staining was observed along fractures or weathered surfaces; however, one sample contained small, rusty leached cavities which could represent oxidized sulphides.

One outcrop of quartz-sericite schist was located along base line 70+00N at about station 95E. It is medium-grained, strongly foliated and slightly

rusty along irregular micro-fractures.

2. Mount Nansen Group

Andesite is the most common rock type of this group. It is dark green and often very fine-grained. Some specimens are slightly porphyritic with feldspar phenocrysts. Others are vesicular or amygdaloidal with pyroxene inclusions. Minor epidote is common in the amygdaloidal rocks. Irregular calcite stringers occur frequently and there is minor quartz veining where these rocks occur in contact with intrusive rocks. There is a fairly regular jointing pattern at 050°T/70°SE and a less prominent one at 120°T/10°N. Shear zones (080°T/80°S) are common where these rocks outcrop along the north slope of the plateau. The fractures are often heavily coated with iron and manganese hydroxide stains and minor bleaching is common along micro-fractures.

Andesite occurs in sharp contact with younger acid intrusives in a breccia zone along the north slope of the plateau. The volcanic rock is often highly micaceous in this contact zone and limonite coating is particularly noticeable along micro-fractures. The intrusive rocks are usually bleached in this zone and frequently occur as highly altered inclusions with the andesite.

No sulphide mineralization has been observed in this rock type. However, the presence of

strong iron staining suggests that sulphides may have been present along the fractures.

Minor amounts of very fine-grained dacite occur along the north slope of the plateau and a large outcrop area is present on the south slope. Some specimens are slightly porphyritic and contain quartz phenocrysts. Iron and manganese hydroxide staining occurs along irregular fractures. However, the only metallic mineralization observed was disseminated sulphides (0.5 per cent) in rocks outcropping south of the claim group in the vicinity of the original Cu-Zn stream sediment anomaly.

On the east side of the property, between lines 132E and 136E, coarse-grained pyroxenite occurs in sharp contact with chlorite schist of the Yukon Group. Here there is a slight "chilling" of the pyroxenite. Pyroxenite is found also in the breccia zone on the north slope between lines 32E and 36E. This zone typifies the contact between the Mount Nansen Group and the younger acid intrusive rocks. In this area, the pyroxenite appears to occur as "room-sized" inclusions within the intrusive. The rock is composed almost totally of pyroxene with minor feldspar. There is little or no weathering in these rocks; they are fresh with almost no "rusting" on weathered surfaces.

3. Intrusive Rocks

Granodiorite is the most common intrusive rock on the property and it occurs along the northern

western and southern slopes of the plateau. It is particularly abundant in the western half of the property. The granodiorite ranges from fine-grained to very coarse-grained and contains up to fifty per cent coarse hornblende. Chloritization is common and minor epidote and clay alteration are found in exposures which crop out along the western slope in the region of geochemical anomaly #3 (i.e. line 4E). In the contact zone on the north slope and underlying geochemical anomaly #1 (i.e. between lines 2E and 76E), granodiorite is found as altered masses within the intermediate volcanics. Here, the intrusive is very rusty due to strong limonite-goethite staining along irregular fractures. The staining probably is derived from oxidation of iron sulphides. Hematite staining is common along weathered surfaces and appears to be derived from the weathering of ferromagnesium minerals.

In those rocks west of line 4E (geochemical anomaly 3), traces of disseminated pyrite and minor chalcopyrite and chalcocite occur as fracture-filling minerals. The rocks of the showing are fresh, showing only minor clay alteration.

Fine- to medium-grained quartz diorite occurs in minor amounts on the western and southern slopes and along the Pelly River in the northeastern corner of the property. It generally shows minor chloritization with traces of epidote. There is only minor goethite along irregular micro-

fractures. Pyrite may occur as a trace dissemination. A quartz diorite float (NT-60) was recovered below the anomaly #3 showing with 1% disseminated sulphides (mostly chalcopyrite) and up to 5% malachite along irregular fracture surfaces.

Granite was encountered in several outcrops on the western slope north of anomaly #3. It is medium-grained with minor chlorite-epidote alteration. There is finely disseminated magnetite and possibly a trace of chalcopyrite in some specimens which are very rusty (goethite) along irregular micro-fractures.

The contacts between these intrusive units are gradational and not well-defined.

Basic dykes intersect the quartz diorite on the south slope. The contacts are relatively sharp. Texture vary from fine-grained quartz diorite to fine-grained amygdaloidal diabasic rocks and then to coarse-grained variety resembling quartz gabbro in the centre of the dyke. The parallel dykes appear to trend 010°. No attitude could be defined.

GEOCHEMISTRY (C.F. GLEESON)

Field Procedures

Soil samples were taken over the whole property at 200 feet intervals along all lines. Where possible, the soil samples were taken from the "B" horizon; however, in places the presence of permafrost, especially in the creek valleys, meant

that samples of organic material from the "A" horizon had to be taken. Permafrost underlies approximately twenty per cent of the property and occurs almost exclusively on the north side of the plateau. Organic samples were also taken in swampy areas on the northern river flat.

A total of 2700 soil samples were taken.

In addition, some 67 rock samples were obtained and analyzed geochemically for Cu, Zn and Mo.

All soil samples were stored in heavy kraft envelopes and pertinent notes were entered on sample cards set up on an eighty-character base.

Laboratory Procedures

All soil samples were dried, screened and the minus eighty mesh fraction was analyzed for Cu, Zn and Mo by atomic absorption at the Bondar-Clegg and Company Ltd. laboratories in Whitehorse.

Statistics

Following receipt of the geochemical analyses of the soil samples, all extremely anomalous Cu, Zn and Mo values were eliminated and the remaining values were evaluated statistically to determine the background for each of these elements.

Background values were determined to be as follows:

Copper : 100 ppm

Zinc : 150 ppm

Molybdenum: 3 ppm.

All results and sample numbers were plotted on the accompanying geochemical map at a scale of 1" = 400' (Figure 3). Values for each element were contoured and the contoured results combined with background geology shown on Figure 4.

Results

The soil sampling program carried out on the Pelly claim group has outlined several geochemical anomalies. See Figure 4.

Anomaly #1

Anomaly #1 is located along the north slope of the plateau and extends in a southeasterly direction from line 2E to line 72E. It is 7500 feet long and varies in width from 200 to 1000 feet along the slope. In the vicinity of the streams, it extends onto the recent alluvial flats.

This is essentially a Cu-Mo anomaly. Values for copper range from 30 to 1000 ppm and for molybdenum from 3 to 58 ppm. The strongest part of the Cu-Mo zone is bounded by the two creeks between lines 32E and 52E.

In general, the geology underlying this soil anomaly consists of slightly altered intrusive rocks. At the east end (i.e. east of line 60E), chlorite schist of the Yukon Group predominates and is in contact with dacite of the Mount Nansen Group. West of line 60E, the core of the Cu-Mo soil anomaly is underlain by slightly chloritized granodiorite. Alteration increases towards the western end of the

intrusive body with the appearance of epidote and minor kaolinization. The intrusion grades in composition from granite to quartz diorite with granodiorite being the most common rock type.

The strongest portion of the anomaly is located between lines 28 and 40 E. This area is underlain by what appears to be a surficial remnant of the contact zone between the intrusive and the older intermediate volcanics. This is a breccia zone consisting of pods of chloritic granodiorite, andesite and pyroxenite. The andesite contains inclusions of highly altered granodiorite; values of up to 140 ppm Cu were found in the latter. Other granodiorite samples taken from the contact zone gave values of up to 225 ppm Cu. The pyroxenite is located within or adjacent to the intrusive body and gives values of up to 115 ppm Cu. Andesite samples taken from the breccia zone contain up to 182 ppm Cu. Massive quartz veins are sometimes found intersecting the pyroxenite within the granodiorite, but yielded negligible geochemical values. Farther to the west (between lines 4E and 16E), samples of quartz diorite and granodiorite contain traces of chalcopyrite and pyrite and analyzed between 50 and 250 ppm copper. One sample of quartz diorite (NT35) in contact with a quartz vein contained 32 ppm molybdenum.

Anomaly #3

Along the east shore of the Pelly River

and north of BL 0+00 between the river shore and line 4E, a copper showing was found containing chalcopyrite and chalcocite with malachite and neotosite along weathered surfaces. A rock sample (NT70) from this showing contained 3700 ppm copper. It was medium-grained granodiorite with minor epidote and clay alteration. A fresh, fine-grained quartz diorite float taken downhill from the showing contained 4500 ppm Cu (NT60) and 150 ppm Zn. Both samples contained 1 ppm Mo. No other specimens of granodiorite, quartz diorite or granite collected in this area gave anomalous geochemical values. The soil anomaly here is weak (50 to 58 ppm Cu) and limited in extent.

Anomaly #2

This copper soil anomaly is located along the south slope of the plateau and extends in an easterly direction between lines 64E and 124E. Values within the anomalous zone vary between 30 and 320 ppm copper. In general, molybdenum is low over the anomalous zone (N.D.* to 5 ppm); similarly zinc is low and ranges from 40 to 150 ppm.

At the west end of the anomaly, the rock consists of relatively fresh granodiorite and quartz diorite intruded by basic dykes. The intrusive rocks show slight chloritization. A sample of granodiorite (NT66) taken adjacent to the dyke rock gave 123 ppm

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* N.D. indicates not detected

Cu; the dykes themselves were low in Cu, Zn and Mo (11 ppm, 8 ppm and N.D. respectively).

Further east, dacite, probably belonging to the Mount Nansen Group volcanics, is the major rock type. These rocks are frequently cut by irregular quartz veins and in places they are intruded by small exposures of rather fresh granodiorite containing minor amounts of epidote.

Anomaly #4

Several coincident linear copper-molybdenum anomalies have been delineated along the slopes of streams at the east end of the property. Values for copper range from 30 to 150 ppm and for molybdenum from 1 to 8 ppm.

These weak linear anomalies are thought to be related to fracture or fault zones in the Mount Nansen volcanics and along their eastern contact with the Yukon Group. These fractures are probably slightly mineralized with copper and molybdenum. Rock samples (NT12 and NT15) of fractured chlorite schist and andesite taken in the vicinity of line 136E are slightly anomalous in copper (76 to 100 ppm).

Four hundred feet south of BL 0+00 on line 144E, a single station zinc anomaly (400 ppm) occurs. The soils here also contain 35 ppm copper and 2 to 3 ppm molybdenum. Geologically the area is supposedly underlain by rocks from the Yukon Group; however, to evaluate the significance of this anomaly

would require additional soil sampling to the east.

Anomaly #5

This is an extensive zinc anomaly which is wholly confined to the alluvial flats on the north and west sides of the property. These areas are composed of highly organic silts up to several feet thick overlying river gravels. These areas are thickly treed by poplars and willows.

The abnormally high zinc values here are thought to be due to natural accumulations of this metal by organic material.

Aeromagnetic Anomaly

There is a small aeromagnetic high trending roughly east-west over the plateau. See GSC Map 3315G. At the west end, it overlies the intrusive rocks (granodiorite, quartz diorite and granite). It gets slightly stronger towards the east over the presumed contact of the Yukon and Mount Nansen Groups.

A ground magnetometer survey will help define the formational contacts more accurately than has been possible by the geological survey.

Summary

Follow-up geological mapping and geochemical soil sampling were completed over a 400 x 200 feet grid on the Pelly Claim Group during May, June and July, 1971.

The geological work indicated that schists and quartzites of the older Yukon Group occupy the

eastern and northeastern parts of the prospects where they are in contact with the later Mount Nansen (Jurassic?) volcanics (mainly andesite). The whole has been intruded by later granitic rocks (granodiorite, quartz diorite and granite) which occupy the western half of the property. The acid intrusives appear to have been chloritized and show minor epidote and clay alteration.

At the western edge of the property, a small showing containing minor chalcopyrite-chalcocite as fracture fillings in the granodiorite was found.

The soil geochemical survey outlined five anomalous geochemical zones; two of them are abnormally high in copper-molybdenum, two are anomalous in copper and one is high in zinc.

The strongest anomaly (anomaly #1) consists of coincident copper-molybdenum values in the northwest corner of the property. The copper anomaly here extends in an east-west direction for a length of 7500 feet. The core of the zone is also high in molybdenum. Geologically, this anomaly is underlain principally by fractured granodiorite and quartz diorite. Samples of rock from this zone contain above-background amounts of copper (58 to 240 ppm) and in places high molybdenum values.

Anomaly #2 is a relatively weak but extensive (6000 x 1500 feet) copper anomaly which occurs in the southern part of the property and it is underlain by granodiorite which has intruded Mount Nansen Group volcanics.

Anomaly #3 is a weak copper anomaly overlying a small copper showing in granodiorite at the western extremity of the property.

Anomaly #4 is made up of a series of weak, elongated anomalies along the banks of streams in the eastern portion of the claim group. The anomaly is postulated to be due to minor copper-molybdenum mineralization in fractures or fault zones which cut the Mount Nansen and Yukon Groups in this area.

Anomaly #5 is an extensive zinc zone which is confined to the recent alluvial flats on the north and western portions of the property. The abnormally-high zinc here is thought to be due to natural accumulations of this metal by the organic-rich silty soils.

RECOMMENDATIONS

To better delineate geological contacts and rock types, especially in non-outcrop areas, a magnetometer survey should be carried out over the claim group.

Also, to further evaluate the possible economic potential of the Pelly Group and to outline drill targets, an I.P. survey is recommended over geochemical anomalies 1 and 2.

Signed: D. Nutter

P. Mehrotra

C.F. Gleeson

August 17, 1971

GEOLOGICAL ASSOCIATION OF CANADA · P. N. MEHROTRA · FELLOW ·

C. F. GLEESON

GEOCHEMICAL RESULTS OF ROCK SAMPLES

Sample	Cu	Zn	Mo	Pb	Location	Particulars
					Anomaly #1	
1-NT 1	26	61	ND	-	L16E, 43N	-F- GRDT - ch, Py, Mo(?)
1-NT 2	250	51	ND	-	L16E, 42H	-F- GRDT - ch, Py, Cp, mal.
1-NT 4	77	29	ND	-	L15+50E, 38+50N	-X- QRZD - Py, chrysocolla (?)
1-NT 5	28	40	ND	-	L0N, 15E	-X- GRDT
1-NT 6	31	46	ND	-	L0+20N, 12E	-X- GRDT - Cp
1-NT 7	20	47	2	-	L0+50N, 9E	-X- GRDT - Cp
1-NT 8	21	21	1	-	L0+20N, 7+50E	-X- QRZD
1-NT 9	9	33	ND	-	L1N, 1E	-X- GRDT - ch, Cp, Py
					Anomaly #2	
1-NT10	122	36	1	-	L0N, 153E	-X- ANDS.
					Anomaly #4	
1-NT12	76	54	ND	-	E. bank of stream	-X- chl. schist
1-NT13	96	41	ND	-	E. bank of stream	-X- ANDS. - ep (prpr) after Pyrox.
1-NT14	100	111	2	-	E. bank of stream	-X- chl. schist - rusty fracture
1-NT15	78	34	1	-	E. bank of stream	-X- Pyroxenite quartz veins
					Anomaly #1	
1-NT16	140	25	3	-		-X- GRDT - inclusion in ANDS.
1-NT18	9	23	1	-		-X- GRDT
1-NT19	182	30	3	-		-X- ANDS. - breccia zone
1-NT20	155	29	3	-		-X- ANDS. - breccia zone
1-NT21	103	31	2	-		-X- GRDT
1-NT22	115	13	1	-		-X- Pyroxenite? - contact zone
1-NT24	11	38	ND	-		-X- GRDT - Py - By ANDS. contact
1-NT25	225	23	1	-	L32+20E, 51+80N	-X- QRZD - chilled - 2%-3% Py
1-NT28	42	22	ND	-		-X- Pyroxenite - contact zone
1-NT29	69	28	1	-		-X- GRDT - Py(?)
1-NT32	14	3	ND	-		-X- Qtz. vein in Pyroxenite
1-NT33	105	62	ND	-	'Fall'	-X- QRZD - ch, Cp, Py(Tr)
1-NT34	171	52	32	-		-X- QRZD - ch, Py(Tr) - dissem. & q.v., Cp
1-NT36	19	52	ND	-		-X- shear in QRZD
1-NT38	50	40	ND	-		-X- GRDT - ch, Tr. Py
1-NT39	72	71	2	-		-X- GRDT - ch, Cp, clay
1-NT40	80	77	1	-		-X- GRDT - ch + Cp along fractures, Tr. Fe_3O_4?

GEOCHEMICAL RESULTS OF ROCK SAMPLES

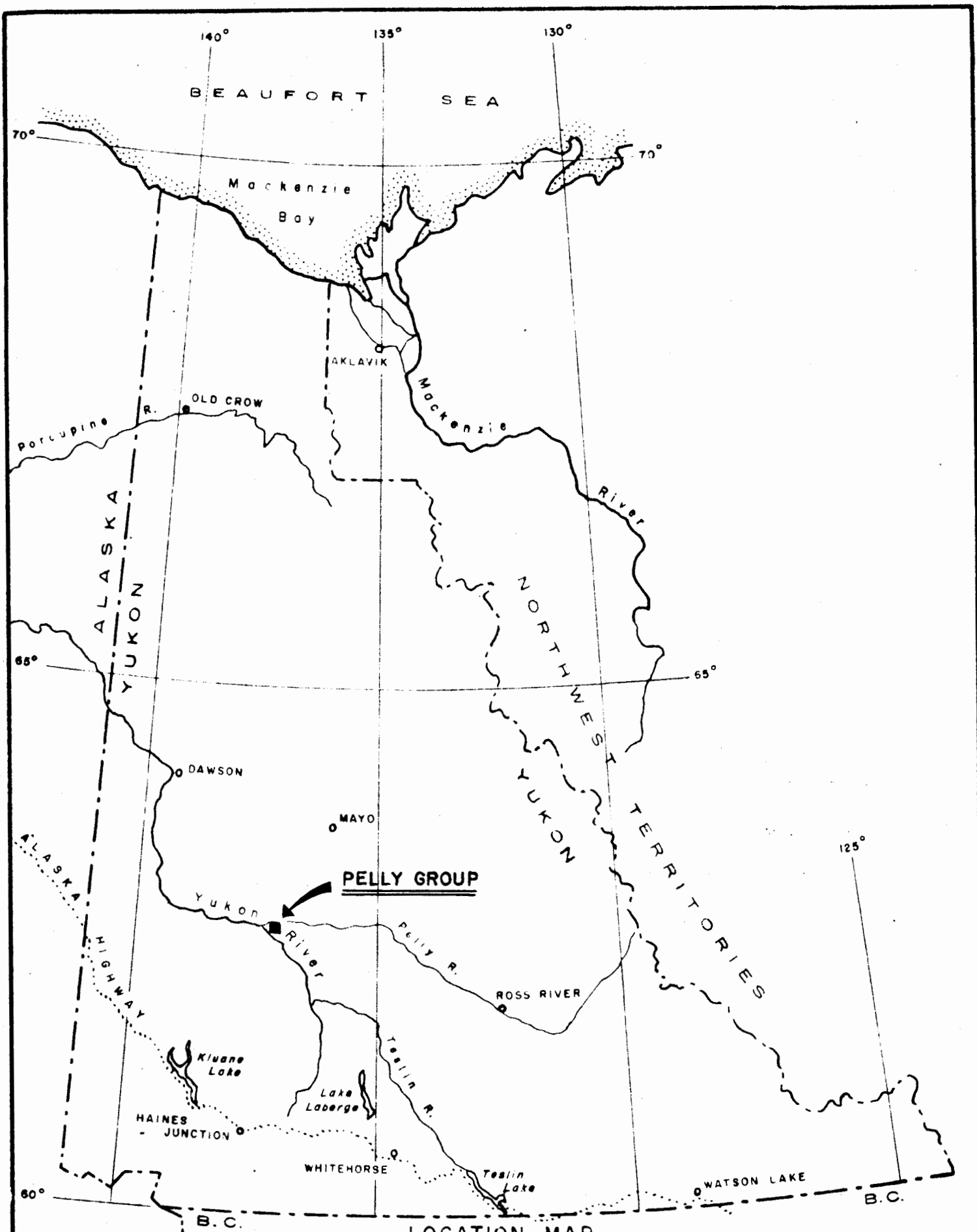
sample	Cu	Zn	Mo	Pb	Location	Particulars
1-NT41	58	40	ND	-		-X- QRZD - Py?
1-NT45	240	70	2	-		-F- GRDT - ch, (Mo?)
1-NT46	112	45	1	-		-X- GRDT - ch
1-NT47	11	63	8	-		-X- q.v. - breccia zone
1-NT48	147	73	2	-		-X- GRDT - ch - borders breccia zone
					Anomaly #3	
1-NT51	25	26	ND	-		-F- GRDT - ch, Fe_3O_4
1-NT52	26	42	ND	11		-X- GRDT - ch, Cp, (Mo?), (Py? Fe_3O_4 - PbS, clay
1-NT53	20	38	ND	12		-X- GRDT, ch, Cp, (Mo?) (hydrothermal)
1-NT54	26	24	ND	-		-X- QRZD - (Mo?)
1-NT55	20	42	ND	-	L4E, 8N	-X- GRDT - ch, Cp, (Mo?)
1-NT56	30	30	ND	9	L4+50E, 5N	-X- GRDT - ch, ep, (Cp?)
1-NT57	20	27	ND	-	L3E, 5N	-X- GRDT - (bor.?), ch
1-NT60	4500	152	1	-	Showing	-F- QRZD - 5% mal., 1% sulphides - Cp
1-NT61	114	40	ND	-		-X- GRNT - ch, ep, Tr. Cp
1-NT62	24	19	ND	-		-X- GRDT - ch - (bor. + Cp?), clay
1-NT64	9	40	1	-		-X- GRDT - purple stained
					Anomaly #2	
1-NT65	13	15	ND	-	S. side	-X- GRDT - fresh
1-NT66	123	16	1	-		-X- GRDT - rusty - beside dyke?
1-NT67	11	8	ND	-	L63+80E, 19+25S	-X- Diabase dyke (?)
1-NT68	38	49	ND	-		-X- GRDT - ch, ep - clay - Tr. Py + Cp
1-NT69	38	89	ND	-		-X- GRDT - ch
					Anomaly #3	
1-NT70	420	52	ND	-	Showing	-X- GRDT - ep, 5% sulphides et Py,Cp,Chc, mal.+neotosite
#70	3700	49	1	-	Showing	-X- GRDT - ep, 5% sulphides et Cp,Chc, mal.,Py+neotosite
					Anomaly #4	
1-NT71	120	39	ND	-	L120+50E, 70N	Dacite(?) - rusty, irreg. fractures
1-NT73	64	40	ND	-	L120E, 67N	ANDS.
1-NT74	73	40	ND	-	L120E, 67N	Chlorite schist

GEOCHEMICAL RESULTS OF ROCK SAMPLES

Sample	Cu	Zn	Mo	Pb	Location	Particulars
1-NT75	47	37	ND	-	L94+90E, 70N	Qtz. Sericite schist
					Anomaly #1	
1-NT76	20	28	5	-	L73E, 70N	Quartzite
1-NT77	122	46	1	-	L64E, 65+25N	Chlorite schist
1-NT81	26	44	ND	-	L53E, 46N - #2 gorge	-X- GRDT - fresh
					SE Anomaly	
1-NT82	173	24	1	-		-X- Dacite - 0.5% disseminated sulphides
1-NT84	15	26	ND	-		GRDT
1-NT85	78	35	6	-		-X+F- QRZD - Diorite or ANDS. - 2% disseminated sulphides
					Pelly - N. Shore	
1-NT86	6	55	ND	-	L112E	-X- QRZD - ch, Tr. Py
					Fort Selkirk	
1-NT87	67	87	1	-		-X- siliceous breccia, qtz. veins - jarosite
					Anomaly #2	
1-NT88	9	13	ND	-	L87+50E, 29+50S	Dacite
1-NT89	70	8	1	-	Beside 1-NT88	Quartz vein
1-NT90	102	32	1	-	L91E, 23S	Dacite
					Anomaly #1	
1-NT91	146	38	2	-	L33E, base of scarp.	GRDT - altered inclusion in volcanics
1-NT92	82	10	1	-	Beside 1-NT91	Vlcc. - dacite

---

ch = chlorite GRDT = granodiorite Vlcc = volcanics Tr = trace
ep = epidote QRZD = quartz diorite prpr = porphyritic Qtz = quartz
F = float ANDS = andsecite Py = pyrite bor = bornite
X = outcrop GRNT = granite Mo = molybdenite q.v. = quartz vein
Chc = chalcocite mal = malachite
Cp = chalcopyrite



LOCATION MAP

PELLY GROUP

YUKON TERRITORY

(1)

July/71 S.

LEGEND

TERTIARY
4 Basic Dykes

JURASSIC OR LATER
3 +a Granodiorite
+b Quartz diorite
×c Granite

MOUNT NANSEN GROUP
2 a Andesite
b Dacite
c Pyroxenite

PRECAMBRIAN OR LATER
1 YUKON GROUP
a Chlorite Schist
b Quartzite
c Quartz sericite schist

Geological boundary (defined, inferred)
Fault
Base of Escarpement
Edge of Plateau
Stream
Claim line
Claim posts
Mineral location - Pyrite (Py) Chalcopyrite (Cp) Chlorite (Ch), Epidote (ep) Neotocite (nt), Quartz vein (qv)
Rock sample location

115-1-14

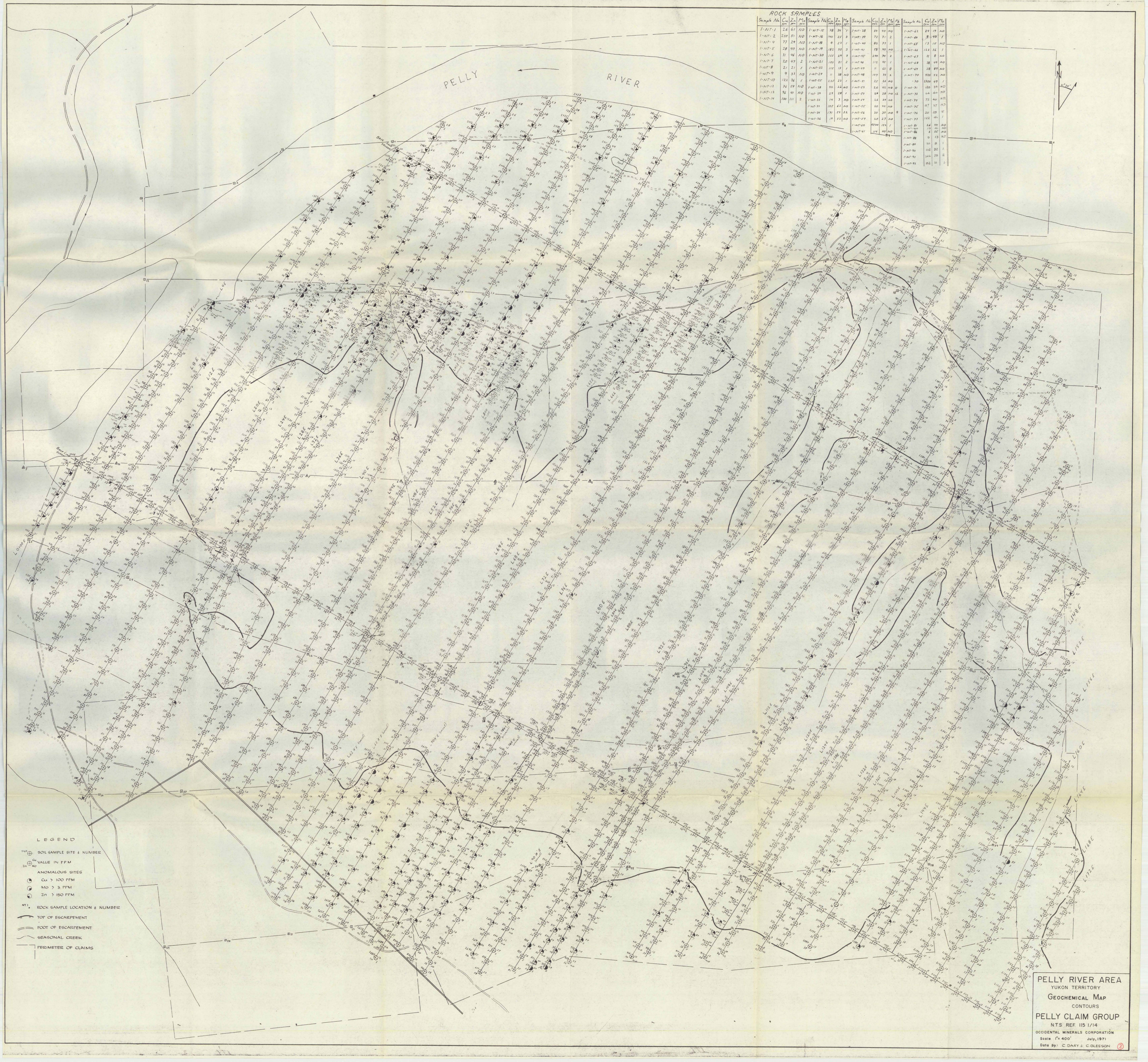
OCCIDENTAL MINERALS CORP. OF CANADA
PELLY RIVER AREA - YUKON TERRITORY
PELLY CLAIMS

GEOLOGICAL MAP

0 400 800 1200 1600 FEET

GEOLOGY BY D. NUTTER & P.N. MEHROTRA
MAY 23 - JULY 26, 1971

(2)



ROCK SAMPLES

Sample No.	Cu ppm	Zn ppm	Mo ppm
1-NT-1	26	61	ND
1-NT-2	250	51	ND
1-NT-4	77	29	ND
1-NT-5	28	40	ND
1-NT-6	31	46	ND
1-NT-7	20	47	2
1-NT-8	21	21	1
1-NT-9	9	33	ND
1-NT-10	122	36	1
1-NT-12	76	54	ND
1-NT-13	96	41	ND
1-NT-14	100	111	2

Sample No.	Cu ppm	Zn ppm	Mo ppm
1-NT-15	78	34	1
1-NT-16	140	25	3
1-NT-18	9	23	1
1-NT-19	182	30	3
1-NT-20	155	29	3
1-NT-21	103	31	2
1-NT-22	115	13	1
1-NT-24	11	38	ND
1-NT-25	225	23	1
1-NT-28	42	22	ND
1-NT-29	29	28	1
1-NT-32	14	3	ND
1-NT-33	105	62	ND
1-NT-34	171	52	32
1-NT-36	19	52	ND

Sample No.	Cu ppm	Zn ppm	Mo ppm	Pb ppm
1-NT-38	50	40	ND	
1-NT-39	72	71	2	
1-NT-40	80	77	1	
1-NT-41	58	40	ND	
1-NT-45	240	70	2	
1-NT-46	112	45	1	
1-NT-47	11	63	8	
1-NT-48	147	73	2	
1-NT-51	25	26	ND	
1-NT-52	26	42	ND	11
1-NT-53	20	38	ND	12
1-NT-54	26	24	ND	
1-NT-55	20	42	ND	
1-NT-56	30	30	ND	9
1-NT-57	20	27	ND	
1-NT-60	4500	152	1	
1-NT-61	114	40	ND	

Sample No.	Cu ppm	Zn ppm	Mo ppm
1-NT-62	24	19	ND
1-NT-64	9	40	1
1-NT-65	13	15	ND
1-NT-66	123	16	1
1-NT-67	11	8	ND
1-NT-68	38	49	ND
1-NT-69	38	89	ND
1-NT-70	420	52	ND
-70	3700	49	1
1-NT-71	120	39	ND
1-NT-73	64	40	ND
1-NT-74	73	40	N.D.
1-NT-75	47	37	ND
1-NT-76	20	28	5
1-NT-77	122	46	1
1-NT-81	26	44	ND
1-NT-84	15	26	ND
1-NT-86	6	55	ND
1-NT-88	9	13	N.D.
1-NT-89	70	8	1
1-NT-90	102	32	1
1-NT-91	146	38	2
1-NT-92	82	10	1

PELLY RIVER AREA

YUKON TERRITORY

GEOCHEMICAL MAP

CONTOURS

PELLY CLAIM GROUP

N.T.S. REF. 115 I/14

OCCIDENTAL MINERALS CORPORATION

Scale 1" = 400'   July, 1971

Data by: C. DARY & C. GLEESON

3

PELLY RIVER

ANOMALY No.5

ANOMALY No.3

ANOMALY No.1

ANOMALY No.5

BASE LINE 70:00N

ANOMALY No.4

ANOMALY No.2

BASE LINE 0:00N

PELLY RIVER

n

LEGEND

TERTIARY
- 4 — Basic dykes

JURASSIC OR LATER
- 3 — Granodiorite, Quartz diorite, Granite

MOUNT NANSEN GROUP
- 2 — Andesite, Dacite, Pyroxenite

PRECAMBRIAN OR LATER
YUKON GROUP
- 1 — Chlorite schist, Quartzite, Quartz sericite schist

- Geological boundary
- Fault (inferred)
- Foot of Slope
- Top of Escarpement
- Top of Escarpement
- Seasonal Creek

SOIL SAMPLE CONTOURS
- Mo in P.P.M.
- Cu in P.P.M.
- Zn in P.P.M.

115-1-14

OCCIDENTAL MINERALS CORP. OF CANADA

PELLY RIVER AREA - YUKON TERRITORY

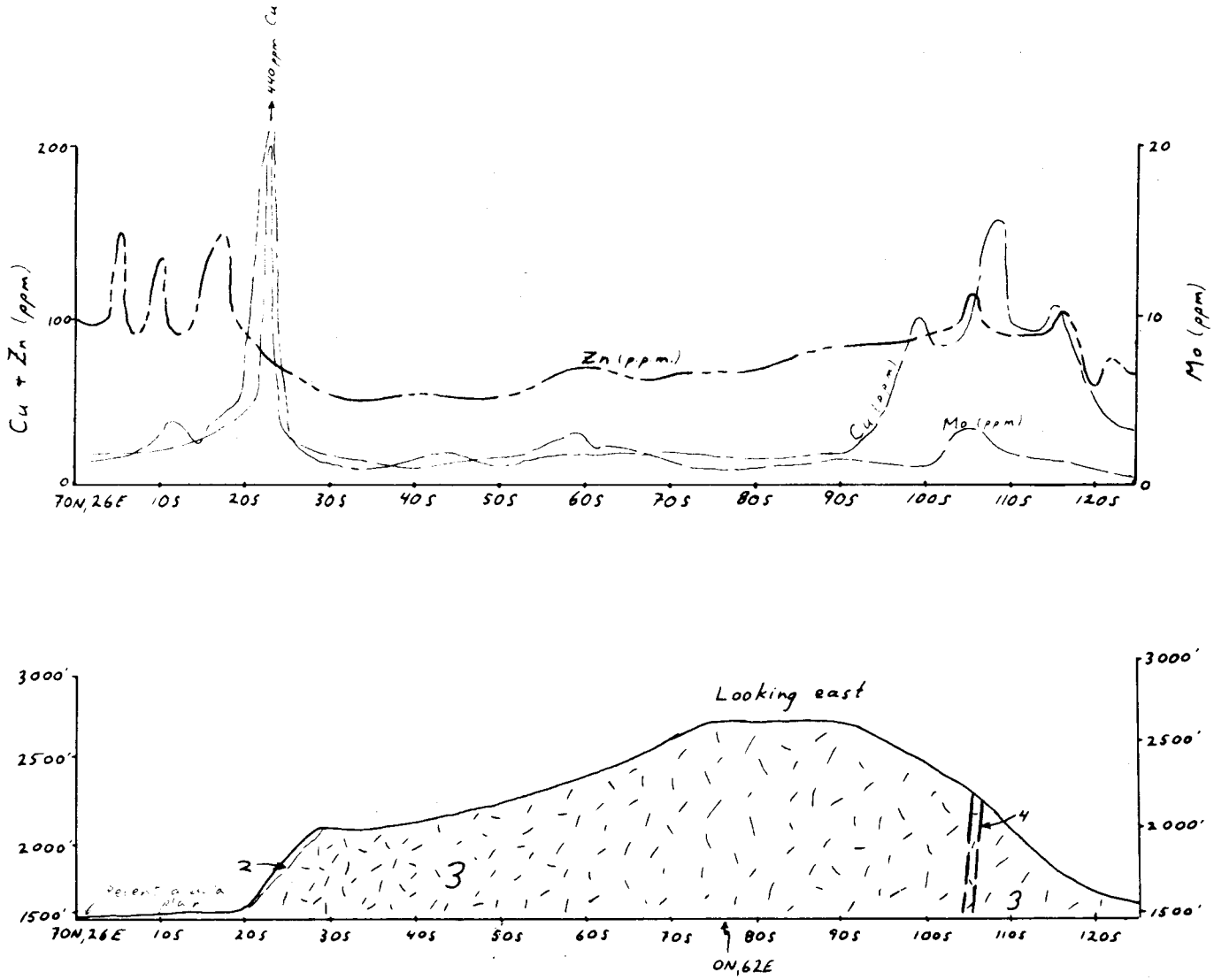
PELLY CLAIMS

GEOLOGY & GEOCHEMISTRY

0 400 800 1200 1600 FEET

GEOLOGY BY D. NUTTER & P.N. MEHROTRA

GEOCHEMISTRY BY C.F. GLEESON



LEGEND

4 · Basic dykes

3 · Granodiorite, quartz diorite, granite

2 · Andesite, dacite, pyroxenite

GEOLOGICAL CROSS-SECTION AND GEOCHEMICAL PROFILES

BEARING 185° true from 70N, 26E