MOUNTAINEER MINES LTD. - PAN OCEAN OIL LTD.

JOINT VENTURE

ASSESSMENT REPORT

ON THE

Ursus 1-24 Mineral Claims

Ursus 25-66 Mineral Claims

NTS 106D/16

64°55'N Latitude, 134°15'W Longitude

Yukon Territory

D. L. Dick
D. B. Harmeson
PAN OCEAN OIL LTD.
Calgary, Alberta

Report Date:
February, 1981
Report No. 8-81

090818

Pan Ocean

This report has been examined by the Geological Evaluation Unit and recommended to the Gold Commissioner to be accepted as representation

$ 19,215.00

R. Dubicki, A. Reg. Geol.
Registered Geologist or
Registered Mining Engineer June 1/81

Considered as representation work under Section 5 of the Quartz Mining Act.

E. R. BAXTER
Supervising Mining Recorder

for Commissioner of Yukon Territory

INDIAN and NORTHERN AFFAIRS

TRANSMITTAL FORM

S.M.R. File No. ~~27/4/80~~

Date Fwd. ~~27/4/80~~ 25/5/81

FROM. Mining Recorder at ..... MAYO .....

TO: Supervising Mining Recorder at Whitehorse, Y.T.

Office of the Supervising Mining Recorder
MAY 26 1981
WHITEHORSE
Yukon Territory

FOR ACTION ARE:

☐ NEW APPL'N for PLACER LEASE to PROSPECT: Name:

☐ RENEWAL APPL'N PLACER LEASE to PROSPECT: Name: Lease No. .....

☐ AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name: Lease No. .....

☐ ASSIGNMENT of PLACER LEASE No. .....
From: To:

☐ GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.
Owner:

☐ DIAMOND DRILL LOGS:
Claims: Claim sheet no:

☑ QUARTZ ASSESSMENT REPORT:
Claims: URSUS 1-24
25-66
Claim sheet no. 106-D-16

Type of report: G.C. TRENCHING

Submitted by: PAN OCEAN OIL LTD

Cls. work performed on: URSUS 44

$ Req. for ren. application 19215.00

Signature

REPLY ACTION:

Date Ret.

Signature

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1. INTRODUCTION

The original Ursus 1-24 mineral claims were staked on August 26, 1976 to investigate copper and uranium showings discovered as a result of a regional prospecting program carried out for Mountaineer Mines Ltd. Pan Ocean Oil Ltd. acquired majority interest in the claims in the fall of 1976.

In July 1980, the Ursus 25-66 mineral claims were staked by Pamicon Developments Ltd. for the Pan Ocean Oil Ltd.-Mountaineer Mines Ltd. joint venture. During the 1980 field season prospecting, geological mapping, geochemistry, geophysics and trenching were carried out by Pamicon Developments Ltd., McCrory Holdings (Yukon) Ltd. and Pan Ocean Oil Ltd. personnel under the field supervision of D. L. Dick (Pan Ocean Oil Ltd.).

2. LIST OF CLAIMS

Claim Name	Staking Date	Recording Date	Grant No.
Ursus 1-24	August 26/76	September 16/76	YA6875-6890 incl.
Ursus 25-66		July 21/80	YA41913-41954 incl.

3. LOCATION AND ACCESS

The Ursus claims are located on NTS Sheet 106D/16 approximately 188 km northeast of the community of Mayo, Yukon. The property lies 24 km SSE of Quartet Lakes, 23 km NW of Gillespie Lake, and 10 km north of the Bear River airstrip at approximately 64°55'N latitude, 134°15'W longitude.

MOUNTAINEER-PAN OCEAN JOINT VENTURE

YUKON LOCATION MAP

Figure 1

URSUS GROUP

SCALE IN MILES
0 25 50 100 200

DRAWN	PROJECT	DATE	FIG. 1
Allaire		NOV. ~~1977~~ 1980	

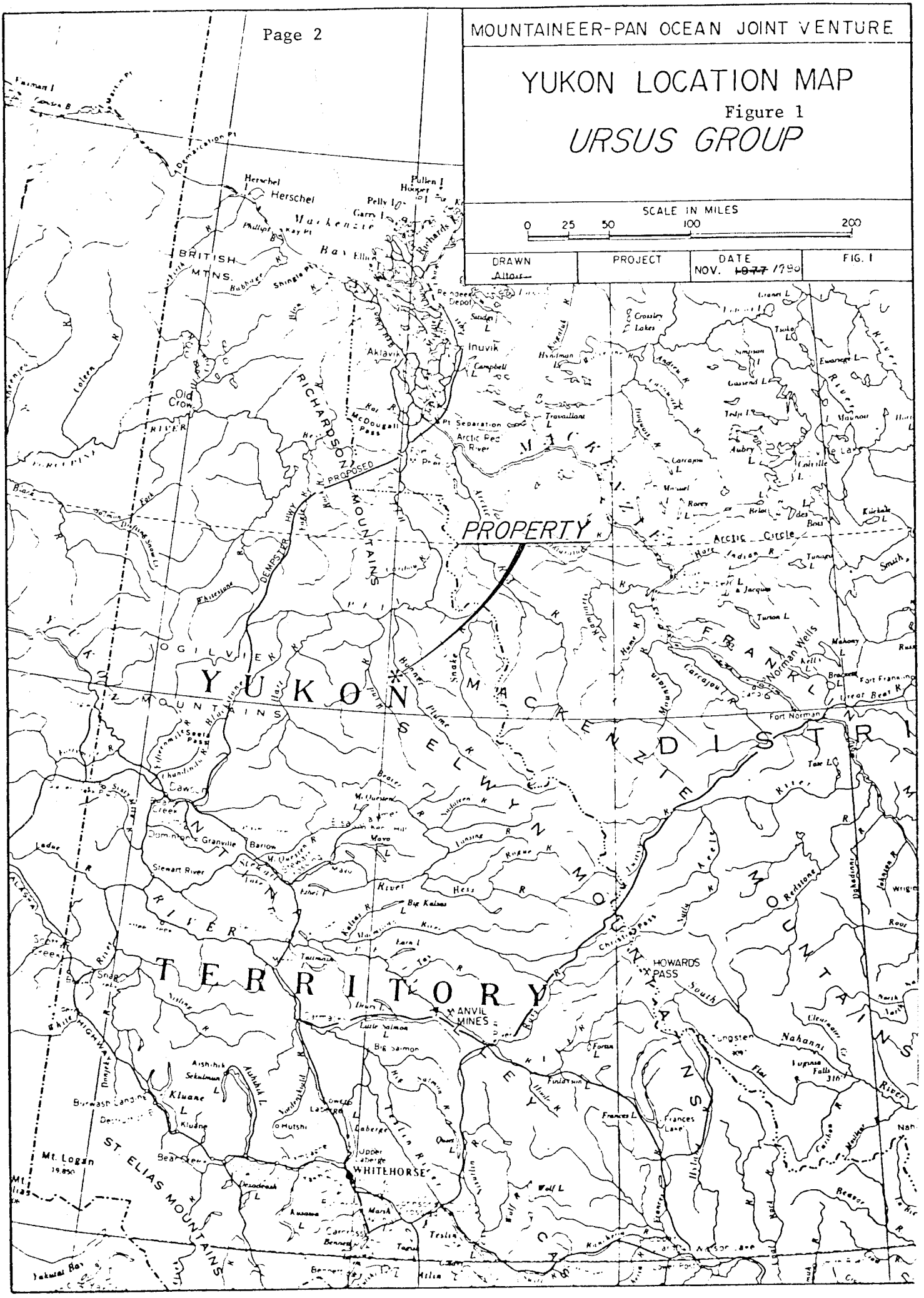
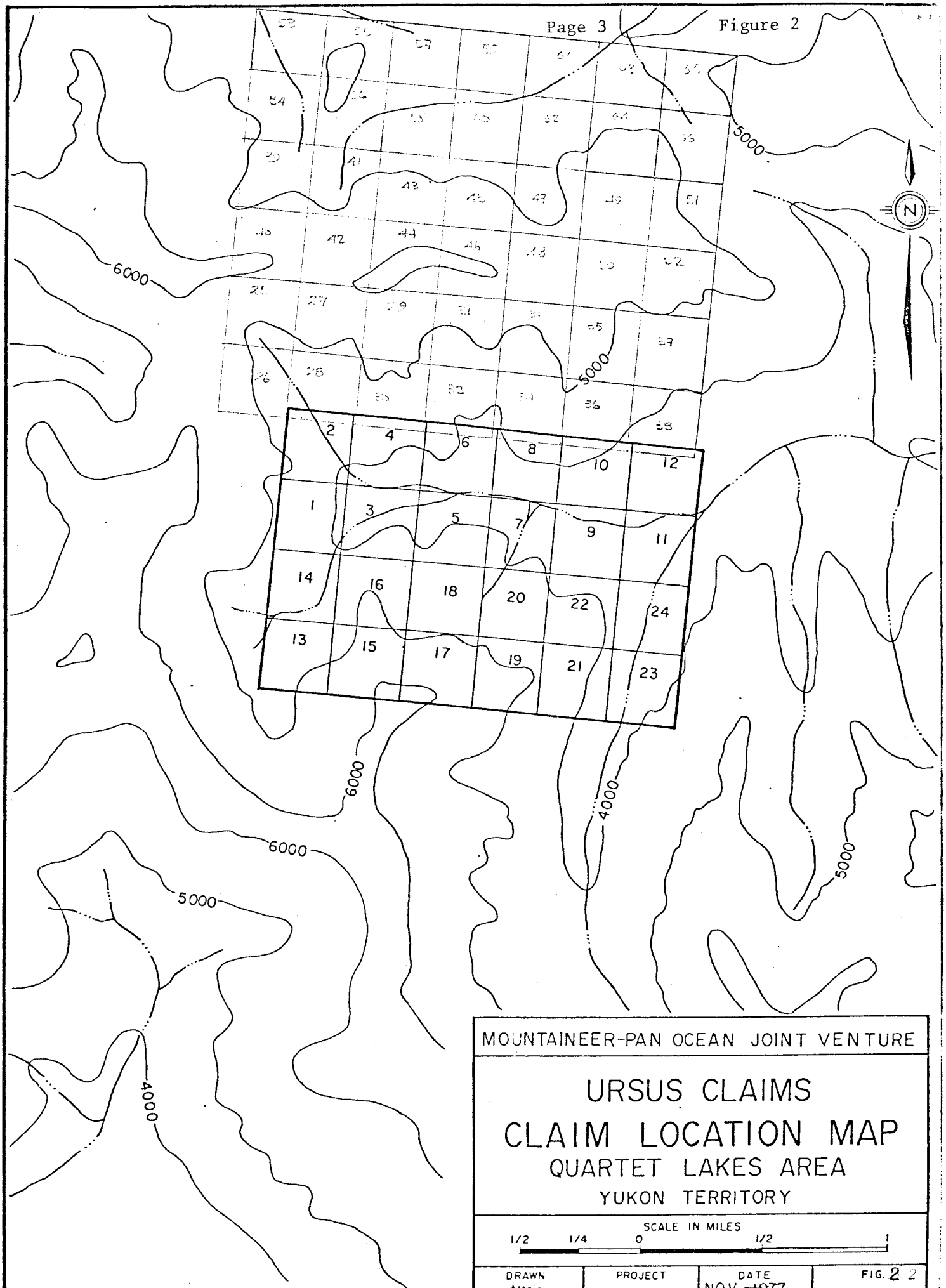


Figure 2



MOUNTAINEER-PAN OCEAN JOINT VENTURE

URSUS CLAIMS

CLAIM LOCATION MAP

QUARTET LAKES AREA

YUKON TERRITORY

SCALE IN MILES

1/2 1/4 0 1/2 1

DRAWN	PROJECT	DATE	FIG. 2
Allgaier		NOV -1977	

Access to the property is by helicopter and fixed-wing aircraft; full expediting services are available in Mayo. A winter road exists from Elsa to Dolores Creek and Fairchild Lake via Braine Pass.

4. TOPOGRAPHY AND VEGETATION

The Quartet-Fairchild region lies in the Wernecke Mountains of the northeastern Yukon Territory. In the general area, the Werneckes consist of local ranges which include the Racklan Range, Bonnet Plume Range and Knorr Range. Elevation within the area of investigation ranges from 610 to 1,980 m (3,000 to 6,500 ft.) A.S.L., where topography is extreme in most cases.

The major river valleys are broad, timbered and extensively overburden covered, while most mountain slopes present greater than 60% outcrop above the 1,220 m (4,000 ft.) level.

The vegetation throughout the immediate region is composed largely of black spruce and willow thickets at low elevations which give way to dwarf birch, grasses and moss above the 910 m level.

5. REGIONAL GEOLOGY

The entire area has been mapped by the Geological Survey of Canada, and three separate publications are presented. The following memoir and open file reports give 1" = 4 miles geological coverage of the Nash Creek, Nadaleen River, Wind River and Snake River map areas.

1) Geology of Nash Creek, Larsen Creek and Dawson Map-Area, Yukon Territory by L. H. Green 1972 (Memoir 364).

2) Open File 205 (Geology of Nadaleen River and Bonnet Plume Lake Map sheets by S. Blusson) 1975.

3) Open File 279 (Geology of Snake River and Wind River sheets by D. K. Norris) 1975.

In the Quartet-Fairchild-Gillespie Lakes region, Helikian rocks are exposed over an area of some 1,500 sq. miles in a roughly circular fashion centered near longitude 134°00'W and latitude 65°00'N.

These rocks have been described as Units 1 and 2 by L. Green on the Nash Creek Sheet.

Recent GSC stratigraphic work by Bell and Delaney (1976) has redesignated Units 1A, 1 and 2 (Green 1972) as Units A, B, and C respectively. The unit designations as established by Bell and Delaney will be used in this report.

The area of immediate economic interest lies on the northern half of the Helikian assemblage along a sinuous linear approximately 45 km long and 15 km wide, following the Kiwi Lake, and Bonnet Plume River drainage system.

About this linear, a window of upper Lower Proterozoic rocks is exposed. Extensive exposures of the basement forming succession of moderately metamorphosed and structurally complex fine grained clastic sediments with interbedded carbonates forming Unit A

(Fairchild Group) are overlain by the shale-slate-quartzite sequence of Unit B (Quartet Group).

To the south and southwest, Units B and C (Gillespie Group) outcrop within a lobe approximately 20 km wide by 30 km long with faulted fingers trailing out to the west.

Unit C comprises a sequence of thickly bedded orange weathering dolomites having a basal sequence of transitional beds of alternating buff weathering dolomites and intercalated slates and quartzites.

The conformable relationships within the supergroup are complicated by local uplift and subsidence and by the division of the assemblage into two main blocks as described above. Units A and B are conformable to a high degree north of the Unit B-Unit C contact and Unit B and C are relatively conformable south of this contact. An overturned block of Fairchild Group occurs south of Fairchild Lake.

The Helikian assemblage is regionally bounded by the following unconformable units:

1. To the east a unit of undivided clastics and carbonates of Hadrynian age overlie Unit C.
2. To the south and west, carbonates of Ordovician-Devonian age overlie Units B and C.
3. To the north, the Hadrynian sediments directly overlie Unit B.

4. In the upper west region undivided clastics and carbonates of Cambrian age directly overlie Units A and B and in turn are unconformably overlain by Ordovician-Devonian carbonates.

5. To the north and west, Tertiary and Cretaceous strata of the Bonnet Plume Basin abound.

Throughout the Helikian section, local zones of brecciation occur. The presence of contact metamorphic effects along the margins, the common occurrence of country rock clast development, and the apparent transitional gradation of brecciation suggest a structurally controlled diatreme igneous event.

Locally, the breccia zones are of erratic distribution and of variable dimension, but overall appear to occur along two arcuate trends north and south of the central sinuous linear in close proximity to or within Unit A. Occasional outcrops of breccia occur north and south of these trends within Units B and C.

Alteration zones exhibiting moderate to intense K-feldspar and/or hematite alteration are common. The intensely hematized breccias have a purplish scintered appearance, whereas the intensely feldspathized breccias have a buff to pink coarse igneous appearance.

Within, immediately adjacent to and following regional trends, fracture controlled occurrences of metallogenically complex sulphide, arsenide, hozoxide, carbonate, and oxide mineralization of

variable intensity occur in relation to the breccia zones. The mineralization includes elements of copper, lead, zinc, gold, silver, tungsten, molybdenum, iron, tin and manganese.

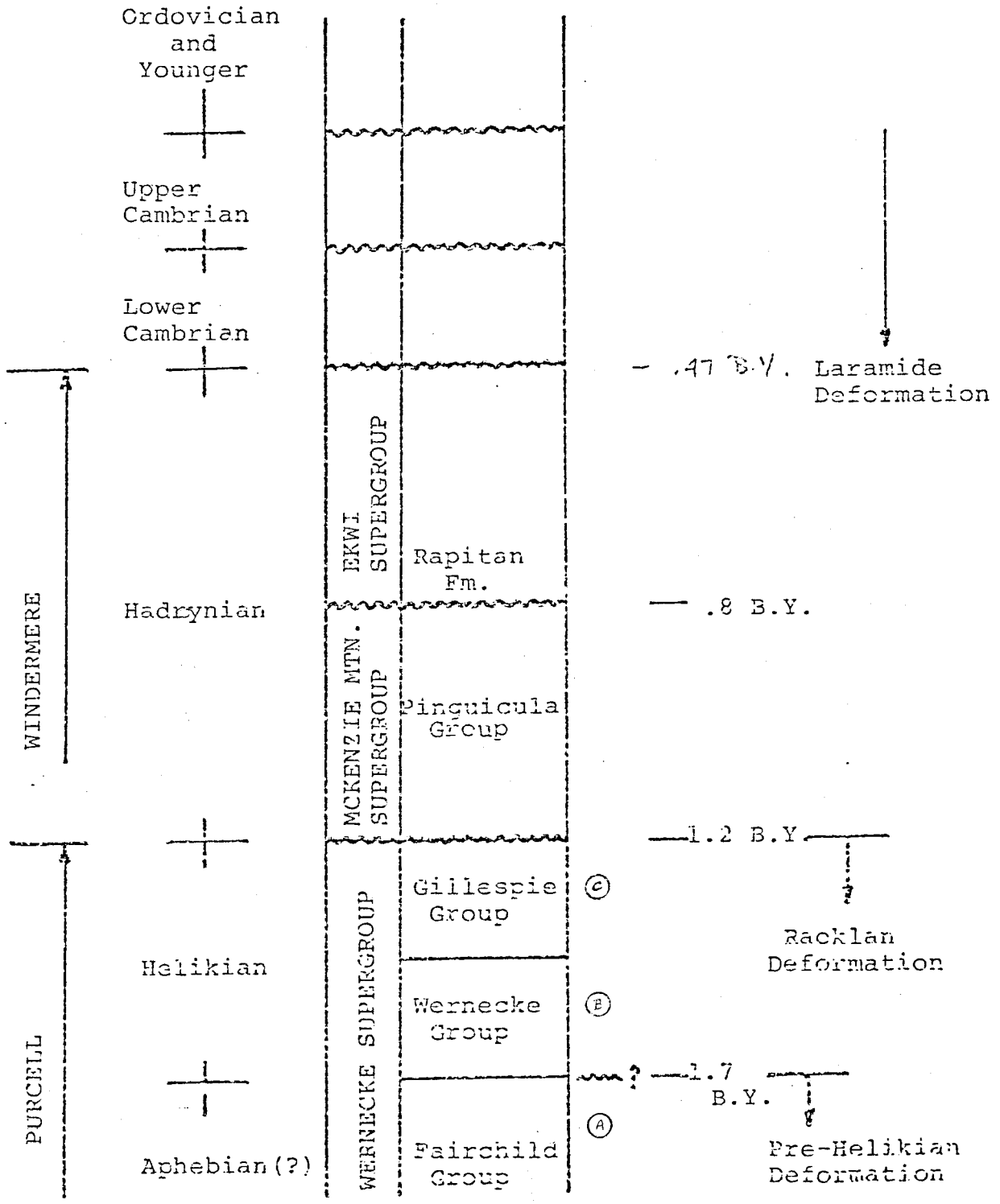
Complex metamorphic regimes involving regional, dynamic, thermal, contact and metasomatic processes are locally imprinted on each other in varying degrees, resulting in widely different alteration and metallogenic effects.

Intrusive activity involving diabase-diorite dyke development is present within the Helikian section. The diabase-diorite relationship appears to be transitional. Metasomatic alteration in one locality suggests that this development is either earlier or contemporaneous with the regional diatreme event. The location and local metasomatic effects of these dykes is still only sketchy and it may be that there is more than one generation.

At least two major periods of deformation have affected the region. The pre-Hadrynian Racklan deformation moderately deformed the Helikian assemblage resulting in steep to isoclinal folding within the development of axial plane cleavage. A more recent deformation, the Laramide, has resulted in broad gentle folding. Block movement and local thrusting is indicated for both orogenies and a number of minor movements may have taken place. The basement forming Fairchild Group exhibits the most intense deformation, and this may be related to an earlier Aphebian event.

FIG. 3

IDEALIZED SECTION SHOWING REGIONAL CORRELATIONS & STRUCTURAL HISTORY



6. PROPERTY EVALUATION, SUMMARY OF PREVIOUS ACTIVITY, (1977-1979)

6.1 Introduction, Ursus 1-24

In 1977, a preliminary prospecting, geologic and geophysical investigation was initiated over the property. In 1978, following promising results, additional geologic mapping and geochemical prospecting was performed over Ursus 1-24; additional geochemical prospecting was carried out in 1979.

The property is underlain entirely by Units A (Fairchild) and C (Gillespie). Faulting is very common and breccia intrusion accompanied by folding, shearing and metasomatism was noted in many localities. Uranium and copper mineralization was located which was largely associated with the breccias and their related alteration zones.

6.2 Lithology

The oldest exposed rocks on the claim constitute the Proterozoic rocks of Unit A (Fairchild Group). There are five distinctive subunits within Unit A.

The oldest and lowest exposed rocks, Unit 1, are composed of thin to medium bedded, variably limonitic, grey green siltstones. This siltstone unit is locally phyllitic and exhibits a gradational contact with younger, overlying phyllites.

Unit 2 consists of varying interbeds of dark green siltstone, mudstone, argillite and transitional rock types. Several mineralized breccia bodies are present.

Unit 3 is composed of grey-green phyllites which are often banded, locally crenulated and abundant in chlorite and sericite alteration.

Unit 4 is composed of interbedded light green and purple siltstones. This unit occurs at higher elevations, close to the contact with overlying Unit C. Breccia bodies at higher elevations are noted to contain clasts of Unit 4.

Unit 5 is a dark brown to grey, thick bedded dolomitic siltstone. Unit 5 was spatially associated with the contact of Unit C orange weathering dolomite and was the major rock type of most of the breccias mapped in that area. As a result, this unit is variably metasomatized resulting in obliteration of bedding features, migration and flooding of dolomite and occasionally dissemination of dolomite in tiny prophyroblasts throughout the rock.

The overlying Unit C consists of grey to orange weathering dolomites, thin to thick bedded and occasionally contains shaley interbeds.

A large number of intrusive breccia bodies outcrops within the claims' boundary. They were noted to intrude all the lithologic types found on the property with the exception of the Unit C dolomites. They are made up of clasts derived from stratigraphically nearby rock types, and in many cases resulted from nothing more than a shattering and reorientation of material virtually in situ. It appeared that the breccia bodies having a greater variety of size and

compositon of clasts (hence greater transport distances?) were accompanied by more obvious indications of hydrothermal activity. These indications included chloritic and/or siliceous alteration haloes in the country rock around the bodies as well as feldspathization, hematization, silicification, and dolomitization within and immediately adjacent to the bodies themselves. Copper and uranium mineralization were noted in several of the breccia bodies or in altered rocks contacted by the breccias.

6.3 Structure and Stratigraphy

As is commonly the case in areas of intense breccia emplacement, extreme structural deformation has occurred in the rocks within the Ursus claims. The folding is very complex. In many cases the folds can be seen to be the result of warping and dragging along fault surfaces, however, they more commonly appear to be a chaotic style of deformation related to the breccia intrusions. This folding has resulted in extreme fracturing in many locations on the property with resultant quartz, feldspar, and dolomite veining and flooding. Minor fold axes in the Unit C dolomites on the other hand, tend to parallel the strikes of beds within the unit and are therefore thought to be drag folds related to the underlying thrust fault.

The thrust fault bringing the Unit C dolomites in contact with the Unit A siltstones is the most predominant fault feature in the area, and extends for many tens of miles in either direction from the property. The prevailing fault direction in the Unit A rocks is

070° to 080°, roughly parallel to the large regional fault. A large number of faults and shears with other orientations were noted during the mapping, the most important of which are plotted in Figure 3.

6.4 Mineralization

A number of copper and uranium showings were located along a band of Unit 2 siltstones which trends east-west through the central part of the property. The showings are either associated directly with breccia bodies or their alteration halos, and most appear to occur near the contact with the overlying Unit 3 phyllites.

The "Eastern Showing" occurs on a talus-covered knob near the middle of the eastern boundary of the property. The anomalous siltstone unit has been silicified, feldspathized and hematized until resembling a quartzite. This zone contains sporadic amounts of chalcopyrite and brannerite, where the brannerite occurs along minor shears, fractures and in more feldspathized portions of the altered siltstone; disseminated chalcopyrite occurs with brannerite in the feldspathized, altered siltstone as well as within the matrix of localized shear or fracture controlled breccia pods.

The "Central Showing" lies in the central part of the property, approximately 840 m WNW of the "East Showing", where chalcopyrite is observed associated with quartz-feldspar invasion of an interlaminated silty-dolomite of Unit 2. This invasion or flooding

appears to be both fracture and bedding controlled. Immediately up-section, the silty dolomite has been intruded by fracture controlled hematite-stringers carrying brannerite mineralization which has been localized around the breccia.

A number of other chalcopyrite-brannerite-breccia showings were noted during mapping, but were too limited in size for further consideration.

Results of geochemical sampling from the "Central Showing" indicate values ranging from 0.03-0.212% U_3O_8, while values from the "Eastern Showing" range from 0.008-0.046% U_3O_8.

It appears that the contained mineralization occurs in isolated feldspathized pods within the breccias and/or altered siltstone rather than disseminated throughout them.

6.5 Geochemistry

Apart from analytical rock geochemistry, further geochemical investigation was carried out in 1978 and 1979.

In 1978, stream-silt and water samples were collected along the main drainage areas of the claim property. Soil samples were also collected on either side of the main valley.

Results of the 1978 program indicate the presence of high uranium values both in silts and water although the best values indicate a source entering the property from the north and northwest. Soil sampling failed to delineate anomalous zones.

In a follow-up geochemistry program in 1979, more detailed sampling was carried out to further delineate the source of anomalous readings to the north and northwest of the property. The results of 1979 indicated a sharp drop-off in uranium values near the western and northwestern edge of the property, therefore suggesting a uranium source fairly close to the north and western extremeties of the property but further inside the boundary.

7. ACTIVITIES, 1980

7.1 Introduction, Ursus 25-66

During July 1980, ground prospecting north of the Ursus 1-24 claims led to the discovery of a U, Cu mineralized ridge. The continuity of the mineralization was the basis for staking Ursus 25-66.

Along with the prospecting, 1980 activities included geological mapping, geophysics, trenching and rock geochemistry.

7.2 General Lithology

Geological mapping during August 1980, revealed similar lithologies and spatial relationships as those encountered within the Ursus 1-24 property.

Proterozoic rocks of Unit A (Fairchild Group) constitute the largest rock unit within the area. Thin to medium bedded, locally phyllitic grey-green siltstones Unit 1, are the oldest and lowest exposed rocks lying adjacent to weathered lower-elevation creek beds. An assemblage of Units 2 and 3, composed of phyllitic dark green-grey

phyllitic argillites, and mudstones make up a large portion of the valley areas within the immediate area of investigation. This unit is locally crenulated along structural lineations and contains numerous radioactive "spot" anomalies.

Overlying both Units 2 and 3 exists a buff brown-purple siltstone unit, Unit 4, which in a large portion of the area is poorly exposed as it is extensively talus covered. Unit 4 is observed to be locally strongly calcified and silicified in higher elevations.

Unit 5 consists of a brown-grey, thick bedded calcareous-dolomitic-siltstone. Unit 5 hosts the major breccia-associated uranium-copper mineralization, and as a result, is locally and differentially metasomatized and altered.

The youngest unit, Unit C, consists of grey to orange weathering dolomites, these appear thin bedded and occur as isolated, remnant pods.

A sinuous, continuous intrusive breccia, and associated copper, uranium mineralization exists within the claim property, and observed to lie in higher elevation areas, located mostly within Units 4 and 5.

In most cases, the breccia clasts are composed of nearby country rock, normally involving shattering and realignment of fragments. The majority of clasts were angular, but in isolated talus areas, fragments appeared well rounded indicating possible

high gas activity. Hydrothermal activity is indicated through chloritic and/or siliceous alteration halos within the adjacent country rock, as well as feldspathization, hematization (specularite) and dolomitization within and immediately adjacent to the breccia bodies. The breccias are commonly associated with anomalous uranium and copper mineralization.

7.3 Structure

The mode of intense breccia emplacement within the Ursus 25-66 claim group has resulted in extreme structural deformation. The resultant folding appears very complex. In many locales, especially marginal to the breccia body, the folds are the culmination of warping and dragging along fault lineament surfaces. The emplacement of the main breccia body has developed through upwelling , resulting in extreme fracturing through which quartz, feldspar and carbonate solutions have mobilized.

The phyllites of Unit 4 commonly show a crenulated secondary cleavage subparalleling the trend of the breccia zone.

Extreme talus cover hampered further structural and stratigraphic observations.

7.4 Mineralization

Anomalous quantities of copper and uranium mineralization were encountered spatially associated with lensoid development within the main breccia intrusive. The copper and uranium were generally interrelated and generally confined to dominant fracturing. Peripheral

to the main breccia body, large quantities of massive specularite and magnetite were encountered.

The mineralized lens, see Figure 6, was developed more towards the central breccia core. Hydrothermal activity appears to be the primary source of the mineralization as evidenced through the presence of intense silica, hematitic and carbonate veining and flooding. Minor amounts of contained molybdenite, arsenopyrite and barite further relate hydrothermal solutions to the observed mineralization. Trace amounts of tourmaline were also located within the breccia aureole which emphasizes the role of hydrothermal alteration.

The association of breccia intrusion into calcareous sediments may represent a skarn envelope, although no definite field evidence was noted during this present survey.

Minor amounts of pyrite were located as fine disseminations within pods of calcareous shaley siltstone (Unit 4).

Chalcopyrite constituted the major copper mineral within the immediate area of investigation, ranging from fine disseminations within localized portions of the breccia matrix to massive fracture-control-related blocks.

The uranium mineralization appears to be in the form of brannerite. The anomalous uranium values (800-4,400 cps) appear quite spotty, and in the majority of cases, associated with fracture-filling and ubiquitous red hematitic alteration. A few uraniferous pods were noted in hematitic, calcareous feldspathized silty breccia.

The mineralization was unidentified but appeared associated with the altered matrix rather than the breccia fragments.

The breccia emplacement appears to have caused complex physical forms of folding. Correlating results of geological mapping and trenching activity, one may resolve two modes of mineral emplacement. During the breccia intrusion hydrothermal solutions appear to have found easiest access subparallel to the trend of the breccia. Later solutions are also apparent which are observed to lie at right angles or perpendicular to the main breccia trend, possibly suggesting secondary pulses during cooling or later structural deformation.

7.5 Trenching

Four trenches were excavated on the north side of the Ursus Mountain ridge, located approximately 1,600 ft. at Az. 115° from Post No. 1, Ursus Claim No. 44.

The four trenches were placed within an anomalous, linear zone trending roughly 335°. This linear zone was visually enhanced through the presence of an orange lichen which trended subparallel to the strike of the trenching activity. Numerous anomalously mineralized boulders were also located down slope within an extensively covered talus zone.

The trenching was performed by hand by McCrory Holdings (Yukon) Ltd. personnel, and the mapping of the trenches was carried out by Pamicon Developments Ltd. personnel.

Trenching was carried out using air hammer, powder and hand-mucking equipment. The dimensions of the trenches are as follows:

Trench No. 1 - 2 m x 6 m x 1.5 m = 23.56 cu. yds.

Trench No. 2 - 1.5 m x 2 m x 0.75 m = 2.96 cu. yds.

Trench No. 3 - 1.5 m x 12 m x 1 m = 23.46 cu. yds.

Trench No. 4 - 2 m x 4 m x 1 m = 10.46 cu. yds.

Total = 60.44 cu. yds.

(x $30/cu. yd. = $1,813.20)

Geochemical rock samples were taken in Trenches 1, 3 and 4.

8. SUMMARY AND CONCLUSION

Significant values of tin, gold and copper suggest further detailed work is required.

Exploration should also continue north and south along the regional trends.

APPENDIX I

ENGINEER'S CERTIFICATE

ENGINEER'S CERTIFICATE

I, Donald L. Dick, of #11-15 Point Drive N.W., Calgary, in the Province of Alberta, do hereby certify that:

1. I am a graduate of the University of Saskatchewan and hold a B.Sc. degree in Geology.

2. The work reported herein was conducted during a program under my supervision and under the supervision of geologists whom I have confidence in.

Dated this 2 day of April, 1981

D. L. Dick

Donald L. Dick, B.Sc.

LIST OF PERSONNEL

URSUS 1-24 MINERAL CLAIMS
JULY 21 - SEPTEMBER 8

Donald Dick P.O. Bag 2533 Station M Calgary, Alberta	Geologist	Sept. 8
George Chabot P.O. Bag 2533 Station M Calgary, Alberta	Geologist	Sept. 8
Yasu Hashimoto 72 - 12th Avenue Whitehorse, Y.T.	Blaster	Aug. 8, 10, 11
Gorden Clark 72 - 12th Avenue Whitehorse, Y.T.	Trencher	Aug. 8, 10, 11
Randy Beaton 1405 Spartan Avenue Sarnia, Ontario	Asst. Geologist	July 21
Neil Debock 3506 R.R. #1 Clearwater, B.C.	Prospector	July 21
Ken McNaughton 1584 Moy Street Windsor, Ontario	Asst. Geologist	July 21
Dave Leis 4831 Harkin Street Burnaby, B.C.	Prospector	July 21
Don Dombrowski R.R. #1 Sechelt, B.C.	Labourer	July 21
Rene Flinn 208, 850 West Hastings Street Vancouver, B.C.	Labourer	July 21

CANADA) In the matter of an evaluation program on the Ursus 1-24
) Mineral Claims.

TO WIT) On behalf of PAN OCEAN OIL LTD.

I, David Yeager for Pamicon Developments Ltd., of 208, 850 West Hastings Street, Vancouver, B.C. do solemnly declare that a program consisting of geological mapping, geochemistry, geophysics and trenching were carried out on the Ursus 1-24 Mineral Claims during the period of July 21 to September 8, 1980.

The following expenses were incurred during the course of this work and in the compilation and reporting of the results:

Food	$ 177.54
Expediting	46.62
Camp and Miscellaneous Fuels	68.99
Camp Fixed Wing Support	396.00
Wages	650.00
Helicopter Support	1,224.00
Trenching	1,500.00
TOTAL	$4,063.15

And 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 Vancouver in)
the Province of British Columbia this)
16 day of April, 1981) David Yeager

H.S. Ahn

A Commissioner for Oaths for,
or Notary Public for the Yukon Territory

APPENDIX V

GEOCHEMICAL AND ASSAY RESULTS

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C
CANADA V7J 2C

TELEPHONE: (604)984-022
TELEX: 043-5259

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Pamicon Developments Ltd.,
208 - 850 W. Hastings St.,
Vancouver, B.C.
V6B 1P1

CERT. # : A8010580-005-
INVOICE # : 39737
DATE : 22-OCT-80

D.YEAGER-FAIRCHILD

CC: PAN OCEAN

Sample description	Prep code	Cu ppm	Mo ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm
86445 - RAM	205	2200	--	--	--	0.6	--
86446 - ARCTOS FLR-28	205	9500	--	--	--	13.0	--
86447 LOST FINES FOR -185	205	58	3	--	--	0.2	--
86448 -185	205	20	--	--	10	0.4	--
86449 -168 -172	205	--	--	--	--	--	--
86450	205	9700	1	--	6	0.6	--
86451 SLAB FLR-1 -2	205	7300	12	--	--	1.2	--
86452	205	>10000	3	--	--	1.0	--
86457	205	>10000	>250	--	--	2.2	--
86458	205	255	5	--	--	0.2	--
86459	205	9300	32	--	--	1.6	--
86460 URSUS MAPPING SAMPLES	205	>10000	1	--	--	1.4	--
86461	205	620	62	--	--	5.4	--
86462	205	>10000	250	--	--	14.0	--
86463	205	>10000	100	--	--	3.0	--
86464	205	1400	4	--	--	0.2	--
86465 URSUS TRENCH #1	205	1800	4	--	--	0.2	--
86466	205	950	4	--	--	--	--
86467	205	500	7	--	--	0.1	--
86468 URSUS	205	530	66	--	--	0.2	--
86469 TRENCH	205	340	1	--	--	0.1	--
86470 #3	205	1200	5	--	--	0.1	--
86471	205	380	10	--	--	0.1	--
86472	205	--	--	--	--	--	--
86473 URSUS	205	>10000	120	--	--	1.4	--
86474 TRENCH #4	205	>10000	98	--	--	0.8	--
86475	205	8900	30	--	--	0.2	--
86476			--		--	---	--
86477			--	--	--		--
86478 VOLE	205	>10000	--	--	--	3.8	--
86479 NOT MAIN SAMPLE	205	>10000	--	--	--	2.4	--
86480	205	>10000	--	--	--	2.2	--
86481	205	>10000	--	--	--	>20.0	--
86482	205	--	--	--	--	--	--
86483 ARCTOS	205	>10000	--	--	--	>20.0	--
86484 PROSPECTING	205	>10000	--	--	--	>20.0	--
86485 & MAPPING GEOCHEM	205	3900	--	--	--	13.0	--
86486	205	>10000	--	--	--	1.0	--
86487 SLAB	205	--	--	--	--	--	--
86488 PROSPECTING TELUS	205	--	--	--	--	--	--

Certified by Hans Biedle

CTA MEMBER CANADIAN TESTING ASSOCIATION

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

RECEIVED NOV 1 2 1980

"CORRECTED COPY". " Sb changed "

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. SP A 766

TO: PAMICON DEVELOPMENTS LTD.
#208, 850 W. Hastings Street
Vancouver, B.C.
V6B 1P1

also on
A801058
70276

INVOICE NO. 40009

RECEIVED Sept. 29, 1980

ANALYSED Oct. 31, 1980

ATTN: D. Yeager PROJECT: FAIRCHILD LAKE

cc - Pan Ocean Oil, Calgary, Attn: D. Foster

SAMPLE NO. :	Lower Concentration Limit (PPM)	86404	86449	86472	86482	86487	86488	86489	86501
Antimony	50	bcl	bcl	bcl	bcl	bcl	bcl	bcl	bcl
Arsenic	50	500	bcl	bcl	200	1000	200	bcl	> 5000
Barium	5	20	700	>5000	1500	1000	700	1000	> 5000
Beryllium	5	bcl	bcl	bcl	bcl	bcl	bcl	bcl	bcl
Bismuth	5	70	bcl	20	70	5	bcl	bcl	30
Boron	20	bcl	150	20	bcl	bcl	100	100	bcl
Cadmium	20	bcl	bcl	bcl	bcl	bcl	bcl	bcl	bcl
Calcium	0.05%	2%	0.3%	0.3%	0.5%	0.07%	7%	3%	1%
Chromium	10	200	150	100	30	100	150	150	100
Cobalt	10	70	10	100	300	500	70	100	5000
Copper	1	> 5000	300	> 5000	>5000	> 5000	>5000	5000	1000
Gallium	5	bcl	10	20	bcl	5	20	20	bcl
Germanium	20	bcl	bcl	bcl	bcl	bcl	bcl	bcl	bcl
Indium	50	bcl	bcl	bcl	bcl	bcl	bcl	bcl	bcl
Iron	0.05%	3%	7%	> 20%	7%	20&	2%	3%	20%
Lead	5	20	300	20	20	5	70	10	10
Magnesium	0.02%	1%	0.15%	0.5%	0.7%	0.02%	1.5%	1%	1%
Manganese	5	700	2000	150	500	150	500	500	> 5000
Molybdenum	10	< 100	< 100	< 100	< 100	< 100	500	200	< 100
Nickel	5	100	20	70	5	15	20	50	500
Niobium	50	bcl	bcl	bcl	bcl	bcl	bcl	bcl	bcl
Silver	1	20	bcl	bcl	500	15	1	bcl	bcl
Strontium	2	10	10	300	7	7	150	100	500
Tellurium	200	bcl	bcl	bcl	bcl	bcl	bcl	bcl	bcl
Thorium	200	bcl	bcl	bcl	bcl	bcl	bcl	bcl	bcl
Tin	10	bcl	bcl	20	bcl	bcl	bcl	bcl	bcl
Titanium	5	70	1500	700	500	70	1000	1000	1000
Vanadium	20	50	200	100	200	200	100	100	50
Zinc	50	150	bcl	50	bcl	bcl	100	50	200
Zirconium	20	bcl	100	70	20	50	100	100	100

SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES

>5000 ppm = > 5000 ppm	50 ppm = 25–100 ppm
5000 ppm = 2500–10000 ppm	20 ppm = 10–50 ppm
2000 ppm = 1000–4000 ppm	10 ppm = 5–20 ppm
1000 ppm = 500–2000 ppm	5 ppm = 2–10 ppm
500 ppm = 250–1000 ppm	2 ppm = 1–4 ppm
200 ppm = 100–400 ppm	1 ppm = 0.5–2 ppm
100 ppm = 50–200 ppm	bcl = below concentration limit

Ranges for Iron, Calcium & Magnesium are reported in %

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [signature]

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

••ANALYTICAL CHEMISTS ••GEOCHEMISTS ••REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. SP 766
INVOICE NO. 40009
RECEIVED Sept. 29/80
ANALYSED Oct. 28/80

TO: Pamicon Developments Ltd.,
208 - 850 W. Hastings St.,
Vancouver, B.C.
V6B 1P1

ATTN: D. Yeager CC. Pan Ocean Oil, Calgary, Alta.

SAMPLE NO. :	Lower Concentration Limit (PPM)	86404 RAO-Billy	86449 Lost Fork	86472 URSUS #4	86482 ARCTOS	86487 ARCTOS	86488 SUBTALUS
Antimony	50	50	bcl	bcl	100	200	bcl
Arsenic	50	500	bcl	bcl	200	1000	200
Barium	5	200	700	> 5000	1500	1000	700
Beryllium	5	bcl	bcl	bcl	bcl	bcl	bcl
Bismuth	5	70	bcl	20	70	5	bcl
Boron	20	bcl	150	20	bcl	bcl	100
Cadmium	20	bcl	bcl	bcl	bcl	bcl	bcl
Calcium	0.05%	2%	0.3%	0.3%	0.5%	0.07%	7%
Chromium	10	200	150	100	30	100	150
Cobalt	10	70	10	100	300	500	70
Copper	1	> 5000	300	>5000	> 5000	> 5000	> 5000
Gallium	5	bcl	10	20	bcl	5	20
Germanium	20	bcl	bcl	bcl	bcl	bcl	bcl
Indium	50	bcl	bcl	bcl	bcl	bcl	bcl
Iron	0.05%	3%	7%	> 20%	7%	20%	2%
Lead	5	20	300	20	20	5	70
Magnesium	0.02%	1%	0.15%	0.5%	0.7%	0.02%	1.5%
Manganese	5	700	2000	150	500	150	500
Molybdenum	10	<100	< 100	< 100	< 100	< 100	500
Nickel	5	100	20	70	5	15	20
Niobium	50	bcl	bcl	bcl	bcl	bcl	bcl
Silver	1	20	bcl	bcl	500	15	1
Strontium	2	10	10	300	7	7	150
Tellurium	200	bcl	bcl	bcl	bcl	bcl	bcl
Thorium	200	bcl	bcl	bcl	bcl	bcl	bcl
Tin	10	bcl	bcl	20	bcl	bcl	bcl
Titanium	5	70	1500	700	500	70	1000
Vanadium	20	50	200	100	200	200	100
Zinc	50	150	bcl	50	bcl	bcl	100
Zirconium	20	bcl	100	70	20	50	100

SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES

>5000 ppm = > 5000 ppm	50 ppm = 25–100 ppm
5000 ppm = 2500–10000 ppm	20 ppm = 10–50 ppm
2000 ppm = 1000–4000 ppm	10 ppm = 5–20 ppm
1000 ppm = 500–2000 ppm	5 ppm = 2–10 ppm
500 ppm = 250–1000 ppm	2 ppm = 1–4 ppm
200 ppm = 100–400 ppm	1 ppm = 0.5–2 ppm
100 ppm = 50–200 ppm	bcl = below concentration limit

Ranges for Iron, Calcium & Magnesium are reported in %

RECEIVED NOV - 4 1980

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [signature]

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

: Pamicon Developments Ltd.,
208 - 850 W. Hastings St.,
Vancouver, B.C.
V6B 1P1

CERT. # : A8010580-005-B
INVOICE # : 39737
DATE : 22-OCT-80

D.YEAGER-FAIRCHILD

CC: PAN OCEAN

Sample description	Prep code	Co ppm	U ppm	AU-FA+AA ppb			
86445 - Rom	205	14	~~>400.0~~ >2500	--	--	--	--
86446 - Arctos	205	220	~~>400.0~~ 983	--	--	--	--
86447	205	72	395.0	--	--	--	--
86448 (lost fuel)	205	12	--	--	--	--	--
86449	205	--	--	10	--	--	--
86450	205	6	--	--	--	--	--
86451 (SLAG)	205	24	--	245	--	--	--
86452	205	24	--	115	--	--	--
86457	205	1300	--	1600	--	--	--
86458	205	46	--	15	--	--	--
86459	205	52	--	975	--	--	--
86460	205	44	--	105	--	--	--
86461	205	66	--	270	--	--	--
86462	205	52	--	>5000	--	--	--
86463	205	66	--	445	--	--	--
86464	205	6	19.0	--	--	--	--
86465	205	10	8.0	--	--	--	--
86466 (CORES)	205	12	29.0	--	--	--	--
86467	205	26	125.0	--	--	--	--
86468	205	58	~~>400.0~~ 1925	--	--	--	--
86469	205	32	11.0	--	--	--	--
86470	205	58	35.0	--	--	--	--
86471	205	72	~~>400.0~~ >2500	--	--	--	--
86472	205	--	--	465	--	--	--
86473	205	64	281.0	--	--	--	--
86474	205	52	65.0	--	--	--	--
86475	205	52	35.0	--	--	--	--
86476	205	>10000	--	--	--	--	--
86477	205	132	--	<5	--	--	--
86478	205	26	--	--	--	--	--
86479 - Core	205	12	--	--	--	--	--
86480	205	24	--	--	--	--	--
86481	205	470	--	--	--	--	--
86482	205	--	--	5	--	--	--
86483	205	34	--	--	--	--	--
86484 (Arctos)	205	32	--	--	--	--	--
86485	205	355	--	--	--	--	--
86486	205	172	--	--	--	--	--
86487 (slab)	205	--	--	120	--	--	--
86488	205	--	--	95	--	--	--

Certified by Howard Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

) : Pemicon Developments Ltd.,
208 - 850 W. Hastings St.,
Vancouver, B.C.
V6B 1P1

CERT. # : A8011149-002-A
INVOICE # : 40684
DATE : 24-NOV-80
P.O. # : NONE

Sample description	Prep code	Cu percent	Ni percent	Co percent	U3O8 (%) (conc.)	Ag oz/t	Au oz/t
86136 E-6-SC	214	0.35	--	--	--	--	--
86229	214	0.38	--	--	--	--	--
86230	214	0.48	--	--	--	--	--
86231	214	3.85	--	--	--	--	--
86232	214	0.93	--	--	--	--	--
86233	214	0.76	--	--	--	--	--
86234	214	0.90	--	--	--	--	--
86235	214	1.64	--	--	--	--	--
86236	214	0.51	--	--	--	--	--
86237 E-8-SC	214	0.59	--	--	--	--	--
86238	214	0.08	--	--	--	--	--
86239	214	0.03	--	--	--	--	--
86240	214	0.02	--	--	--	--	--
86241	214	0.05	--	--	--	--	--
86242	214	0.04	--	--	--	--	--
86243	214	0.04	--	--	--	--	--
86244	214	0.21	--	--	--	--	--
86245	214	0.39	--	--	--	--	--
86246	214	0.43	--	--	--	--	--
86247	214	1.17	--	--	--	--	--
86443	214	--	--	--	DELAYED	--	--
86444	214	--	--	--	DELAYED	--	--
86445	214	--	--	--	DELAYED	--	--
86446	214	--	--	--	DELAYED	--	--
86468	214	--	--	--	DELAYED	--	--
86469	214	--	--	--	DELAYED	--	--
86470	214	--	--	--	DELAYED	--	--
86471	214	--	--	--	DELAYED	--	--
86551	214	--	--	--	DELAYED	--	--
86552	214	1.66	--	--	DELAYED	DELAYED	DELAYED
86462	214	--	--	--	--	--	DELAYED
86481	214	3.75	--	--	--	DELAYED	DELAYED
86483	214	36.00	--	--	--	DELAYED	DELAYED
86484	214	12.40	--	--	--	DELAYED	DELAYED
86501	214	0.17	0.06	0.830	--	DELAYED	--
86502	214	0.55	0.10	0.840	--	DELAYED	--
86503	214	0.18	0.06	0.360	--	DELAYED	--
86504	214	1.28	1.30	11.100	--	DELAYED	--
05	214	0.27	0.74	7.000	--	DELAYED	--
86506	214	0.52	1.30	10.200	--	DELAYED	--

.....
Registered Assayer, Province of British Columbia

MEMBER
CANADIAN TESTING
ASSOCIATION

DRAWING NO
X-1207

GREY-BLACK META-PHYLLITE

CREEK

GREY-GREEN META-SILTSTONE
PHYLLITIC INTERLAMINAE

BLACK META-PHYLLITE

GREEN-BLACK PHYLLITIC TALUS

TALUS KNOLL
WEAKLY BRECCIATED, CALCAREOUS
META-SILTSTONE

SCHISTOSE, CRENULATED BLACK PHYLLITE
RIBBED WITH CALCITE,
QUARTZITIC BRECCIA BANDS

INCREASE IN Fe CONTENT

LENSES OF CHERTY META-SILTSTONE COARSER MORE CALCIC

BLACK, FINELY LAMINATED PHYLLITE

MORE SILICIFIED & CALCIC

VF-F GRAINED, SILICEOUS
WEAKLY CALCAREOUS META-PELITE
- CALCITE VNS
- DISSEMINATED SULPHIDES

MORE BRECCIATED HEMATIZED APPEARANCE
- DISSEMINATED SULPHIDES

WEAKLY CALCAREOUS METASILTSTONE
FLAKES SPECULARITE

PYRITIFEROUS, CHLORITIC, SILICEOUS
CALCAREOUS META-SILTSTONE

FINELY LAMINATED CHERT

WEAKLY CALCAREOUS
QUARTZITIC META-PELITE

CHERTY META-SILTSTONE
PORPHYRITIC, CHORITIC LENSES

PATCHES SPECULARITE

REMANENT MAGNETITIC, SILICEOUS

INCREASE IN HEMATITIC ALTERATION
SPECULARITE - RIMMED, ROUNDED CALCITE FRAGMENTS

GRAPHITIC SCHIST

WEAKLY BRECCIATED
CALCAREOUS, SILICEOUS
SILTY META-PELITE

STRONGLY FOLDED
CHLORITIC PHYLLITE

1x GOSSAN
300-2000 CPS

SPECULARITE

SILICEOUS BRECCIA-ANGULAR FRAGMENTS
INTERBDS OF META-SILTSTONE
& BLACK META-PHYLLITE
VARYING DEGREES OF - CHLORITIC
FELDSPATHIC
HEMATITIC
CALCAREOUS
ALTERATION

FINELY LAMINATED SLATE / MUDSTONE

CALCAREOUS, QUARTZITIC
META-PELITE

CLAIM POST ?

PORPHYRITIC MARGIN

SPECULARITE

MAGNETITE

CHLORITIC ALTERATION
CALCIC MATRIX

INCREASE IN HEMATITE ALTERATION

SILICEOUS GREY META-SILTSTONE

CHERTY, SPECULARITE ZONE

BARITE FLOAT

Cu > 10,000 ppm
Mo 250 ppm
Ag 14.0 ppm
Co 52 ppm
Au > 5,000 ppb

Cu > 10,000 ppm
Mo 1 ppm
Ag 1.4 ppm
Co 44 ppm
Au 105 ppb

PATCH OF ORANGE LICHEN
HIGH Cu

Cu FLOAT

HIGH Cu TALUS

U, Cu
500-4000 cps

SPECULARITE

PYRITIC, MAGNETIC DOLOMITE

SILICEOUS, BRECCIATED META-SILTSTONE
MAGNETITE
SPECULARITE
CHLORITE
HEMATITE
ALTERATION

TALC SCHIST

PORPHYRITIC, FELDSPATHIC META-SILTSTONE

WEAKLY BRECCIATE META-SILTSTONE

CHLORITIC BRECCIA (MAGNETITE, SPECULARITE)

PORPHYROBLASTIC MARGIN

PORPHYRITIC, CALCAREOUS CHLORITIC BRECCIA

"SPECULARITE" ZONE MAGNETITIC ZONE

SILICEOUS CHLORITIC META-PELITE

SANDY CALCAREOUS META-SILTSTONE

RED-BROWN DOLOMITE

CALCAREOUS META-SILTSTONE

Cu 9300 ppm
Mo 32 ppm
Ag 1.6 ppm
Co 52 ppm
Au 975 ppb

Cu > 10 000 ppm
Mo 250 ppm
Ag 2.2 ppm
Co 1300 ppm
Au 1600 ppb

Cu 620 ppm
Mo 92 ppm
Ag 5.4 ppm
Co 66 ppm
Au 270 ppb

Cu 2250 ppm
Co 56 ppm
Ag 4.4 ppm
Mo 8 ppm

Cu 60 ppm
Co 40 ppm
Ag 0.1 ppm
Mo 30 ppm

Cu 32 ppm
Co 24 ppm
Ag 0.4 ppm
Mo 42 ppm

Cu 295 ppm
Co 220 ppm
Ag 8.0 ppm
Mo 85 ppm

Cu > 10 000 ppm
Mo 100 ppm
Ag 3.0 ppm
Co 66 ppm
Au 445 ppb

SPECULARITE / QUARTZ VEIN

SILICEOUS META-SILTSTONE

FELDSATHIZED - SILICEOUS META-SILTSTONE

SILICEOUS, CHERTY META-SILTSTONE

CHLORITIC META-PELITE

SILICEOUS, CALCAREOUS META-ARKOSE

KILL ZONE

BRECCIA AUREOLE

F-VC. GRAINED QUARTZOSE BRECCIA
- SILICEOUS, HEMATITIC
- CALCAREOUS-CHLORITIC MATRIX

HEMATIZED, SPECULARITE PHYLLITIC BRECCIA WEAK CALCIC TOURMALINE

HEMATIZED, SILICEOUS META-PHYLLITE

CHERTY LENS

INCREASE IN GRAIN SIZE

BANDED, SILICEOUS META-SILTSTONE

LIMONITIC GOSSAN

CALCAREOUS BRECCIA (MAGNETITE, HEMATITE)
1000 cps

QUARTZ VEINING

ARSENOPYRITE
BARITE

U, Cu

BARITE VEIN

MASSIVE SPECULARITE

MASSIVE SPECULARITE LENS

MINERALIZED LENS

RIDGE

F CHERTY SCHIST
HEMATIZED FELDSPATHIZED SILICEOUS BRECCIA
400 cps

D.A.

LEGEND

- ATTITUDE OF BEDDING
- ATTITUDE OF DOMINANT FRACTURES, VERTICAL
- GENERALIZED LITHOLOGIC, COMPOSITIONAL BOUNDARIES
- AERIAL EXTENT OF OUTCROP
- ATTITUDE OF FAULT
- PLUNGE OF FAULT
- ASSUMED FAULT
- AIRPHOTO LINEAMENT (FAULT CONTROLLED)
- ATTITUDE OF MINERALIZATION, FRACTURE CONTROLLED
- U — URANIUM MINERALIZATION
- Cu — COPPER MINERALIZATION
- × — LOCATION OF ROCK FLOUR
- (H) — AREA OF RELATIVE HIGH (H) / LOW (L) MAGNETIC RESPONSE
- TREND OF MAIN ALTERATION ZONE

m 40 0 40 80 120 160 200m

TO ACCOMPANY REPORT NO. 8-81 BY DLD & DBH

PAN OCEAN OIL LTD.
CALGARY ALBERTA

GEOLOGY AND COMPILATION MAP
URSUS NORTH
FAIRCHILD LAKE, PROJECT, 1980

DATE	SCALE	NTS	DRAWING NO.
OCT., 1980	1: 2 000	106 D/16	X-1207

DP441B1P00

UNMAPPED

UNMAPPED

UNMAPPED

UNMAPPED

POST No.1
CLAIM 44

CLAIM BOUNDARY

JCC

LEGEND

UNIT C : ORANGE WEATHERING DOLOMITES

UNIT A :

- 5 — DOLOMITIC SILTSTONE
- 4 — INTERBEDDED LIGHT GREEN & PURPLE SILTSTONE, SILICEOUS
- 3 — GREY-GREEN PHYLLITE
- 2 — DARK GREEN SILTSTONE, MUDSTONE & ARGILLITE
- 1 — GREY-GREEN SILTSTONE
- INTRUSIVE BRECCIA & RELATED METASOMATITES

SYMBOLS

- GENERAL LITHOLOGICAL BOUNDARY
- 30 — BEDDING ATTITUDE
- TRENCHED AREA
- AIR PHOTO LINEAMENTS (FAULT RELATED)
- RIDGE OF URSUS MOUNTAIN

300 150 0 300 600 900

TO ACCOMPANY REPORT NO. 8-81 BY D.L.D. & D.B.H.

PAN OCEAN OIL LTD.
CALGARY ALBERTA

GENERAL GEOLOGY
URSUS 25-66 CLAIM GROUP
YUKON TERRITORY
FAIRCHILD LAKE PROJECT, 1980

DATE	SCALE	NTS	DRAWING NO.
MAR., 1981	1:15000	106 D/16	B-1208

St. 14
1764.60

St. 13
1774.64

St. 11
1822.91

E

St. 12
1795.73

BH -1
1753.93

F
1751.70

G
1746.93

St. 15
1746.20

St. 16
1737.59

St. 17
1733.48

H
1734.84

St. 18
1730.95

D
1732.97

St. 19
1735.65

J
1731.18

St. 20
1741.17

St. 21
1730.7

R.B. 12
1793.42

R.B. 14
1790.05

R.B. 13
1791.88

R.B. 15
1785.59

R.B. 16
1776.82

MID. St. 'A'
1776.05

R.B. 17
1766.87

R.B. 18
1762.01

R.B. 19
1740.84

R.B. 20
1732.51

St. 1
1844.79

St. 2
1842.03

St. 3
1852.94

134
127
143
No. 1
No. 2
No. 3
No. 4
No. 5
No. 6
No. 7
No. 8
No. 9
No. 10
No. 11
No. 12
No. 13
No. 4
No. 15
No. 16
No. 17
No. 18
No. 19
No. 20
No. 21
No. 22
192
194
199
219
211

MAGNETITIC SILICEOUS SILTSTONE
BARITE
Cu MINERAL
WEAKLY CALCAREOUS, MAGNETITIC CHERTY SILTSTONE
MAGNETITIC, HEMATITIC, CALCAREOUS BRECCIA
LIMONITE
SPECULARITE RICH SiO_2 VEINS

N

INDEX

m20 0 20 40 60m

TO ACCOMPANY REPORT NO. 8-81 BY DLD & DBH

PAN OCEAN OIL LTD.
CALGARY ALBERTA

GEOLOGY AND ELEVATIONS
URSUS NORTH

FAIRCHILD LAKE, PROJECT, 1980

DATE	SCALE	NTS	DRAWING NO.
OCT. 1980	1:1000	106 D/16	D-1209

D. A.

LIMONITE & SPECULARITE
MASSIVE SPECULARITE
No. 22
192
194
199
MAGNETITIC SILICEOUS, METASILTSTONE
219
21
MAGNETITIC CALCAREOUS SILICEOUS METASILTSTONE
No. 27
No. 24
No. 25
No. 28
No. 29
No. 26
St. 17 1857.71
MINOR AMOUNT Cu MINERALS
C
MAGNETITIC, CHERTY, METASILTSTONE
SOME SPECULARITE, MINOR MALACITE
PORPHYRITIC, FELDSPATHIC, THINLY LAMINATED
METASILTSTONE
RESINOUS METASILTSTONE
CALCAREOUS CHERTY SCHIST
Cu MINERALS SPECULARITE PRESENT
Cu MINERALS, SPECULARITE
SPECULARITE Fe GOSSAN
St. 5 1879.74
St. 4 1873.12
No. 34
No. 35
WEAKLY CALCAREOUS SILTSTONE
MAGNETITIC CALCAREOUS CHERTY SILTSTONE AND LIGHT GREEN FELDSPATHIC METASILTSTONE
Cu MINERALS IN FLOAT
Cu MINERALS, LIMONITE, SPECULARITE IN METASEDEMENT?
St. 3 1850.61
No. 33
No. 30
No. 31
No. 32
MAGNETITIC, CALCAREOUS METASILTSTONE
CALCAREOUS SANDY-SILTSTONE
MAFIC, SILICEOUS META-PELITE
St. 1 1826.55
A
SPECULARITIC CALCAREOUS METASILTSTONE
St. 2 1846.31
PORPHYROBLASTIC CALCAREOUS META SILTSTONE
CHLORITIC BRECCIA WITH CALCIC CLAST
PYRITE, MAGNETITE, DIRTY DOLOSTONE
Cu MINERALS
189
187
184
180
St. 6 1868.06
RED LICHEN GROWTH ALONG THIS TREND
No. 36
Fe GOSSAN
R.B. 1 1863.38
R.B. 2 1860.87
K.M. 101 1857.34
R.B. 108 1856
K.M. 102 1852.96
K.M. 103 1848.47
K.M. 106 1854.24
R.B. 3 1852.48
R.B. 4 1850.90
MID St. 'C' 1849.59
K.M. 107 1848.52
K.M. 104 1839.56
R.B. 5 1844.26
R.B. 6 1842.44
R.B. 7 1836.77
K.M. 111 1833.78
K.M. 113 1830.26
R.B. 9 1834.13
K.M. 108
K.M. 109
R.B. 8 1834.02
K.M. 114 1822
K.M. 115 1820.76
K.M. 116 1823.33
K.M. 117 1824.42
MID St. 'B' 1819.18
K.M. 118 1817.92
R.B. 10 1816.40
K.M. 120 1810.47
R.B. 12 1793.42
R.B. 11 1795.8
R.B. 13 1791.88
St. 21 1730.7
St. 22 1715.04
St. 23 1704.14
St 24 1689.41
St. 15 1681.61
K 1683.83
St. 26 1668.40
L.A.
St. 27 1650.85
N
St. 28 1620.10
16
St. 29 1616.71
St. 30 1616.52
1608.39
St. 31 1603.39
St. 32 1588.30
L.D.
No. 5
L.E.
No. 7
No. 8
No. 9
No. 11
No. 12
L.E.
No. 6

GEOLOGY & ELEVATIONS
URSUS NORTH

INDEX

D - 1209

DRAWING NO
X-1210

CREEK

LEGEND

- STATION
- -200 MAGNETOMETER READING (γ)
- (100-120) CORRESPONDING SINITILLOMETER READING (cps)
- (L) RELATIVE HIGH (H) / LOW (L) TREND
- 0 CONTOUR INTERVAL 100 γ

m 40 0 40 80 120 160 200 m

TO ACCOMPANY REPORT NO. 8-81 BY DLD & DBH

PAN OCEAN OIL LTD.
CALGARY ALBERTA

MAGNETOMETER ORIENTATION SURVEY
URSUS NORTH

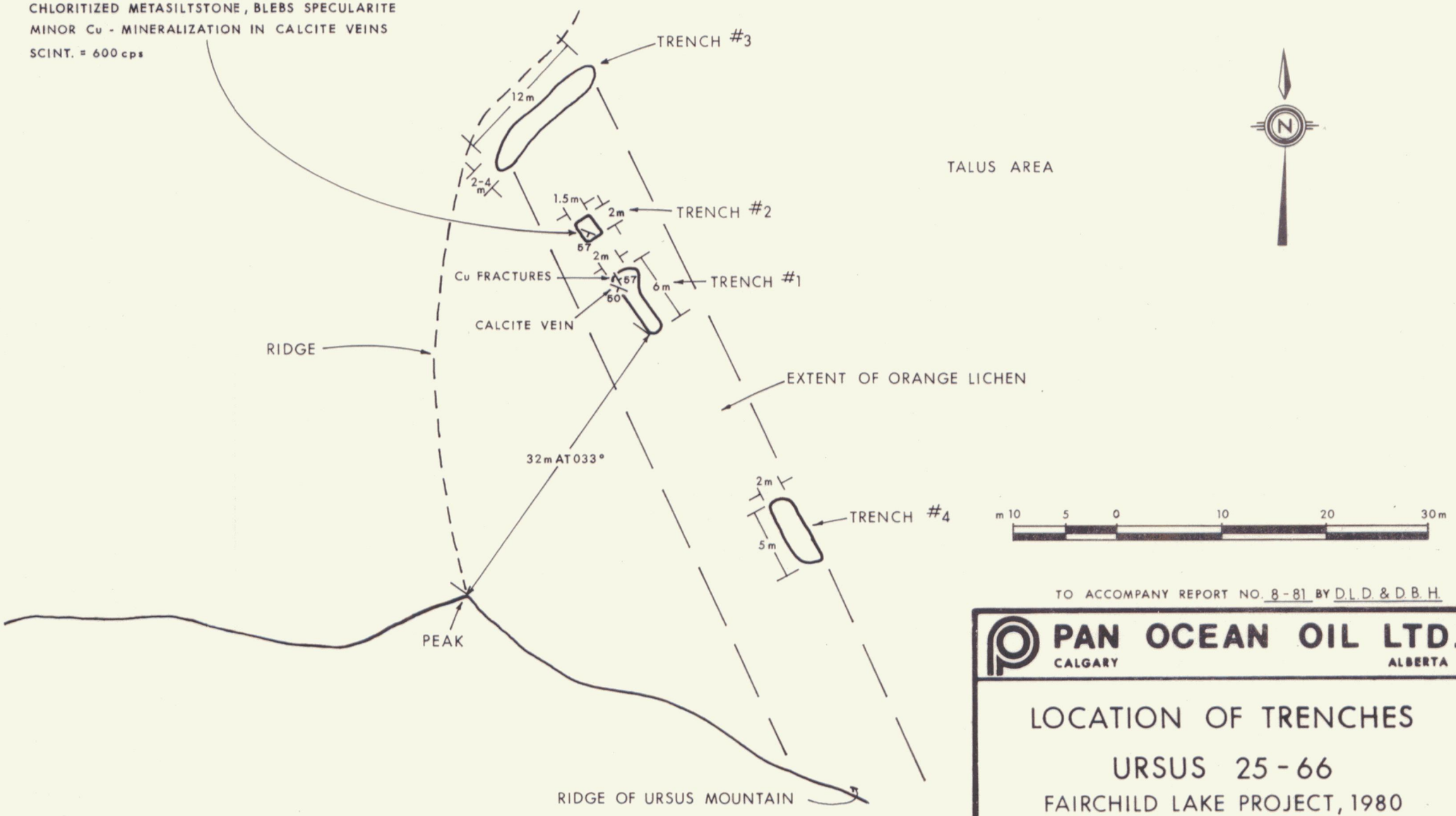
FAIRCHILD LAKE, PROJECT, 1980

DATE	SCALE	NTS	DRAWING NO.
OCT, 1980	1:2000	106 D/16	X-1210

D.A.

DP441B1P00

#2 TRENCH COMPOSED OF STRONGLY CALCAREOUS, CHLORITIZED METASILTSTONE, BLEBS SPECULARITE MINOR Cu - MINERALIZATION IN CALCITE VEINS
SCINT. = 600 cps



TO ACCOMPANY REPORT NO. 8-81 BY D.L.D. & D.B.H.

PAN OCEAN OIL LTD.
CALGARY ALBERTA

LOCATION OF TRENCHES
URSUS 25-66
FAIRCHILD LAKE PROJECT, 1980

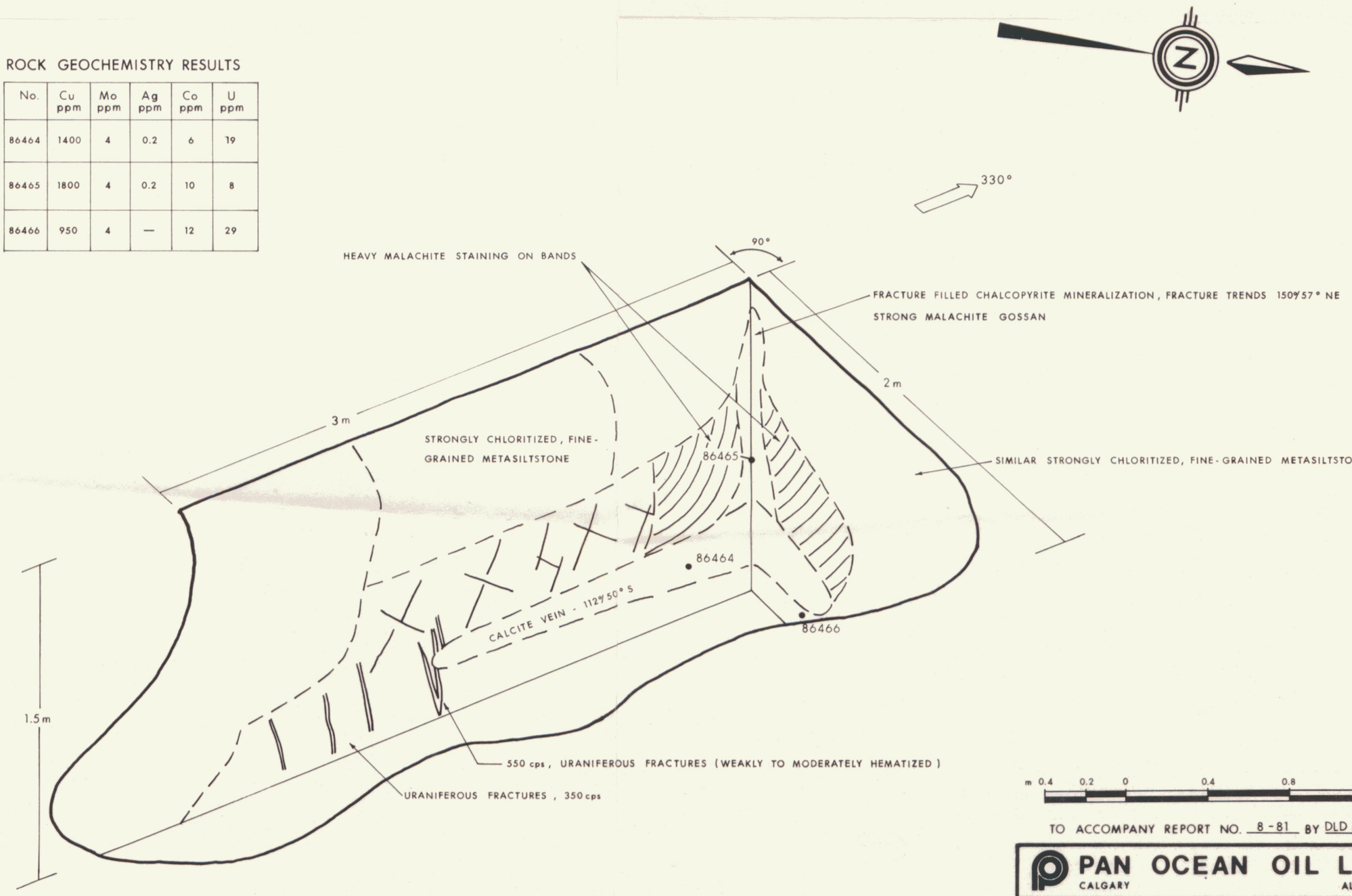
DATE	SCALE	NTS	DRAWING NO.
FEB., 1981	1:500	106 D/16	A-1211

JCC

NOTE: LOCATED ON URSUS 44 - YA41932

ROCK GEOCHEMISTRY RESULTS

No.	Cu ppm	Mo ppm	Ag ppm	Co ppm	U ppm
86464	1400	4	0.2	6	19
86465	1800	4	0.2	10	8
86466	950	4	—	12	29



TO ACCOMPANY REPORT NO. 8-81 BY DLD & DBH

PAN OCEAN OIL LTD.
CALGARY ALBERTA

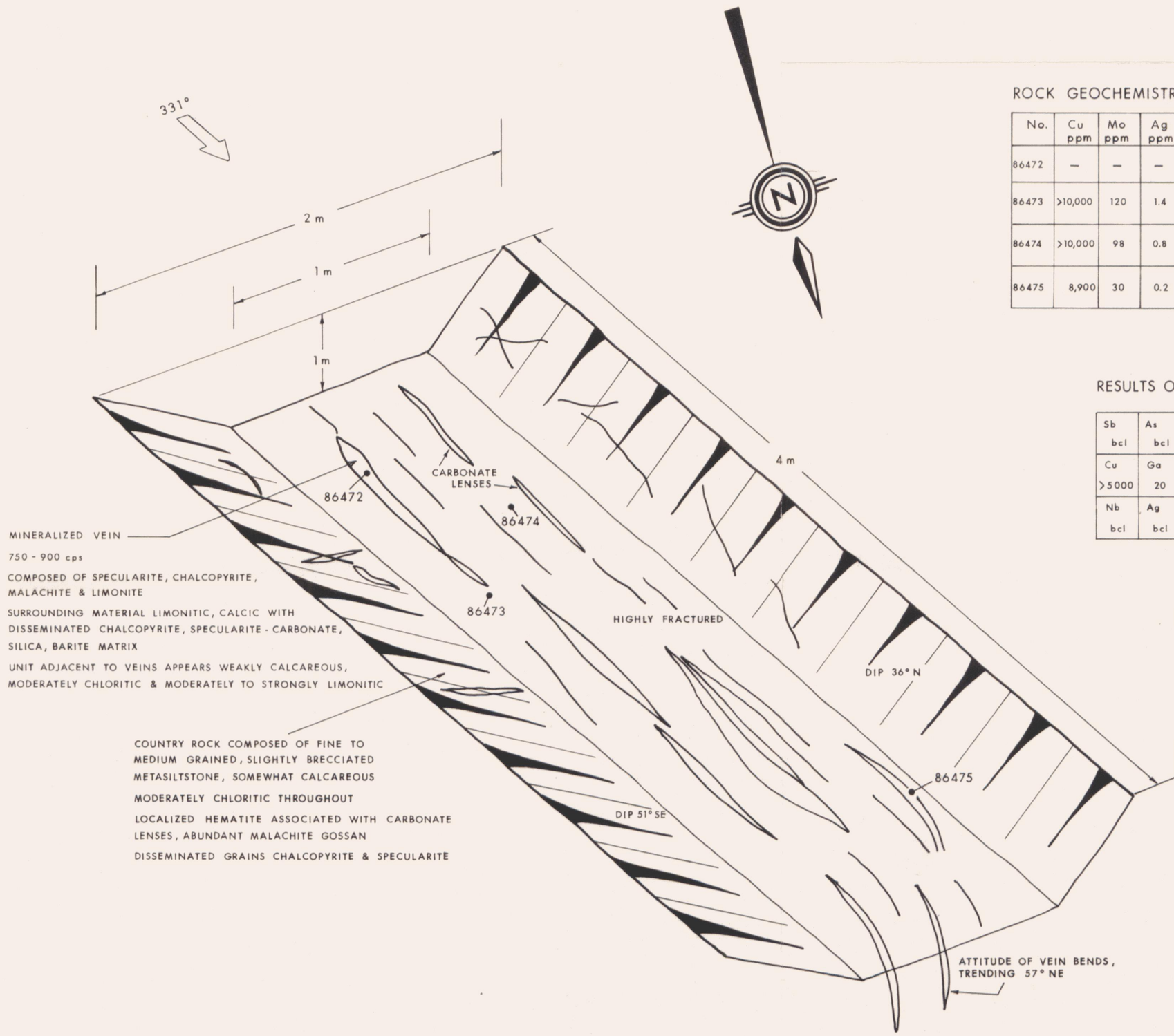
URSUS TRENCH No. 1

FAIRCHILD LAKE PROJECT, 1980

DATE	SCALE	NTS	DRAWING NO.
MAR., 1981	1:20	106 D/16	B-1212

JCC

NOTE: LOCATED ON URSUS 44 - YA41932



ROCK GEOCHEMISTRY RESULTS

No.	Cu ppm	Mo ppm	Ag ppm	Co ppm	U ppm
86472	—	—	—	—	—
86473	>10,000	120	1.4	64	281
86474	>10,000	98	0.8	52	65
86475	8,900	30	0.2	52	35

→ SPECTROGRAPHIC ANALYSIS : 465 ppb Au

RESULTS OF SPECTROGRAPHIC ANALYSIS OF No. 86472

Sb bcl	As bcl	Ba >5000	Be bcl	Bi 20	Bo 20	Cd bcl	Ca 0.3%	Cr 100	Co 100
Cu >5000	Ga 20	Ge bcl	In bcl	Fe >20%	Pb 20	Mg 0.5%	Mn 150	Mo <100	Ni 70
Nb bcl	Ag bcl	Sr 300	Te bcl	Th bcl	Sn 20	Ti 700	V 100	Zn 50	Zr 70

SEMI-QUANTITATIVE SPECTROGRAPHIC ANALYSES

5000 ppm = 5000 ppm	50 ppm = 25 - 100 ppm
5000 ppm = 2500 - 10000 ppm	20 ppm = 10 - 50 ppm
2000 ppm = 1000 - 4000 ppm	10 ppm = 5 - 20 ppm
1000 ppm = 500 - 2000 ppm	5 ppm = 2 - 10 ppm
500 ppm = 250 - 1000 ppm	2 ppm = 1 - 4 ppm
200 ppm = 100 - 400 ppm	1 ppm = 0.5 - 2 ppm
100 ppm = 50 - 200 ppm	bcl = below concentration limit

RANGES FOR IRON, CALCIUM & MAGNESIUM ARE REPORTED IN %

m 0.4 0.2 0 0.4 0.8 1.2 m

TO ACCOMPANY REPORT NO. 8-81 BY DLD & DBH

NOTE: LOCATED ON URSUS 44 - YA41932

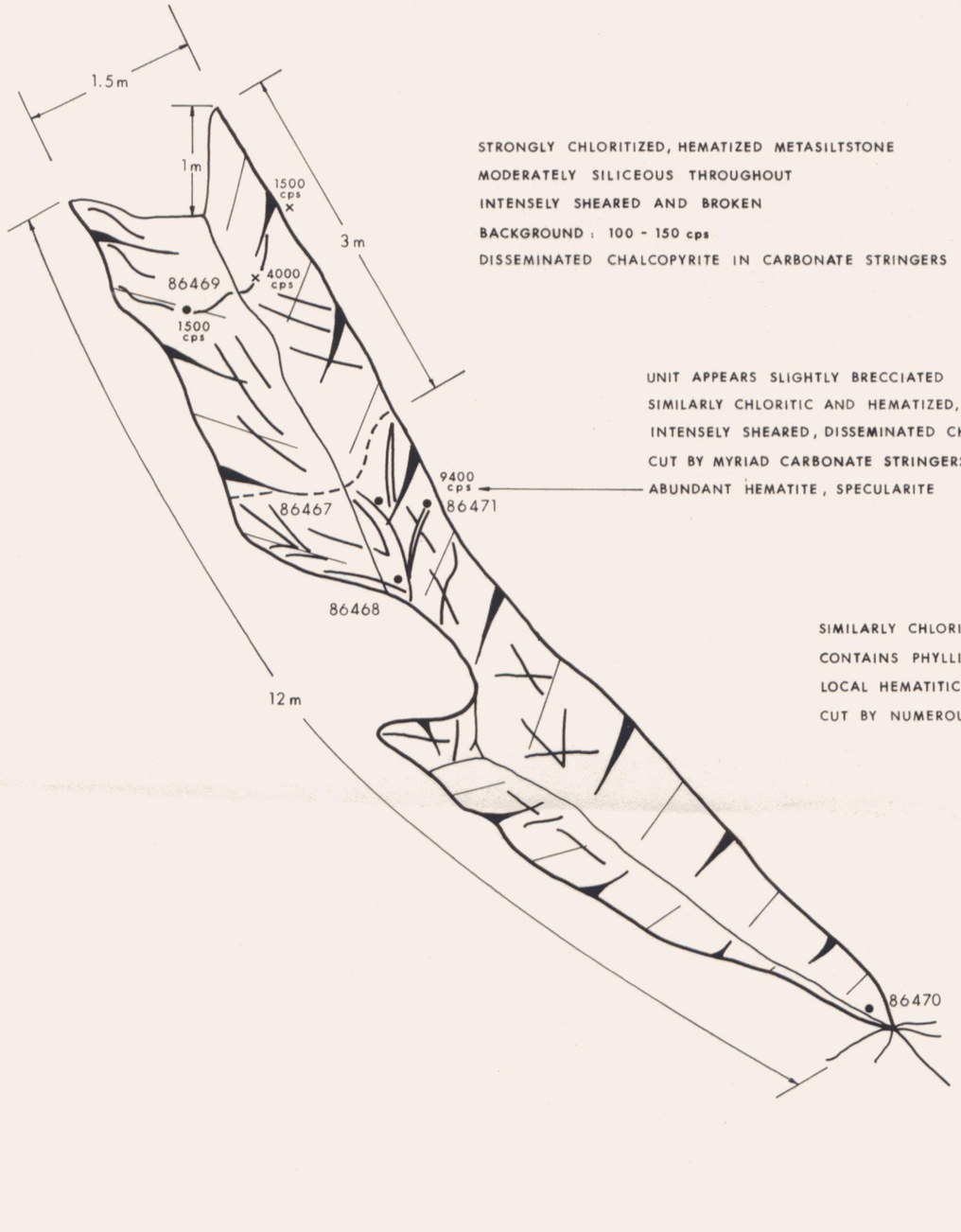
JCC

PAN OCEAN OIL LTD.
CALGARY ALBERTA

URSUS TRENCH No. 4

FAIRCHILD LAKE PROJECT, 1980

DATE	SCALE	NTS	DRAWING NO.
MAR., 1981	1 : 20	106 D/16	B-1214



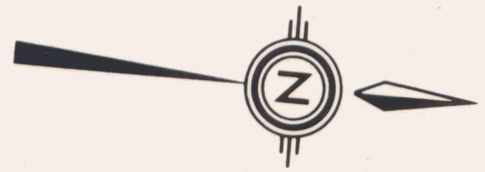
STRONGLY CHLORITIZED, HEMATIZED METASILTSTONE
MODERATELY SILICEOUS THROUGHOUT
INTENSELY SHEARED AND BROKEN
BACKGROUND : 100 - 150 cps
DISSEMINATED CHALCOPYRITE IN CARBONATE STRINGERS

UNIT APPEARS SLIGHTLY BRECCIATED
SIMILARLY CHLORITIC AND HEMATIZED, LOCALLY LIMONITIC
INTENSELY SHEARED, DISSEMINATED CHALCOPYRITE
CUT BY MYRIAD CARBONATE STRINGERS - APPEAR FRACTURE CONTROLLED
ABUNDANT HEMATITE, SPECULARITE

SIMILARLY CHLORITIC, WEAKLY HEMATIZED METASILTSTONE
CONTAINS PHYLLITIC INTERLAMINAE
LOCAL HEMATITIC LENS, MINOR GRAINS SPECULARITE
CUT BY NUMEROUS CARBONATE VEINS AND LENSES OF VARYING ORIENTATION

ROCK GEOCHEMISTRY RESULTS

No.	Cu ppm	Mo ppm	Ag ppm	Co ppm	U ppm
86467	500	7	0.1	26	125
86468	530	66	0.2	58	1925
86469	340	1	0.1	32	11
86470	1200	5	0.1	58	35
86471	380	10	0.1	72	2500



TO ACCOMPANY REPORT NO. 8-81 BY DLD & DBH

PAN OCEAN OIL LTD.
CALGARY ALBERTA

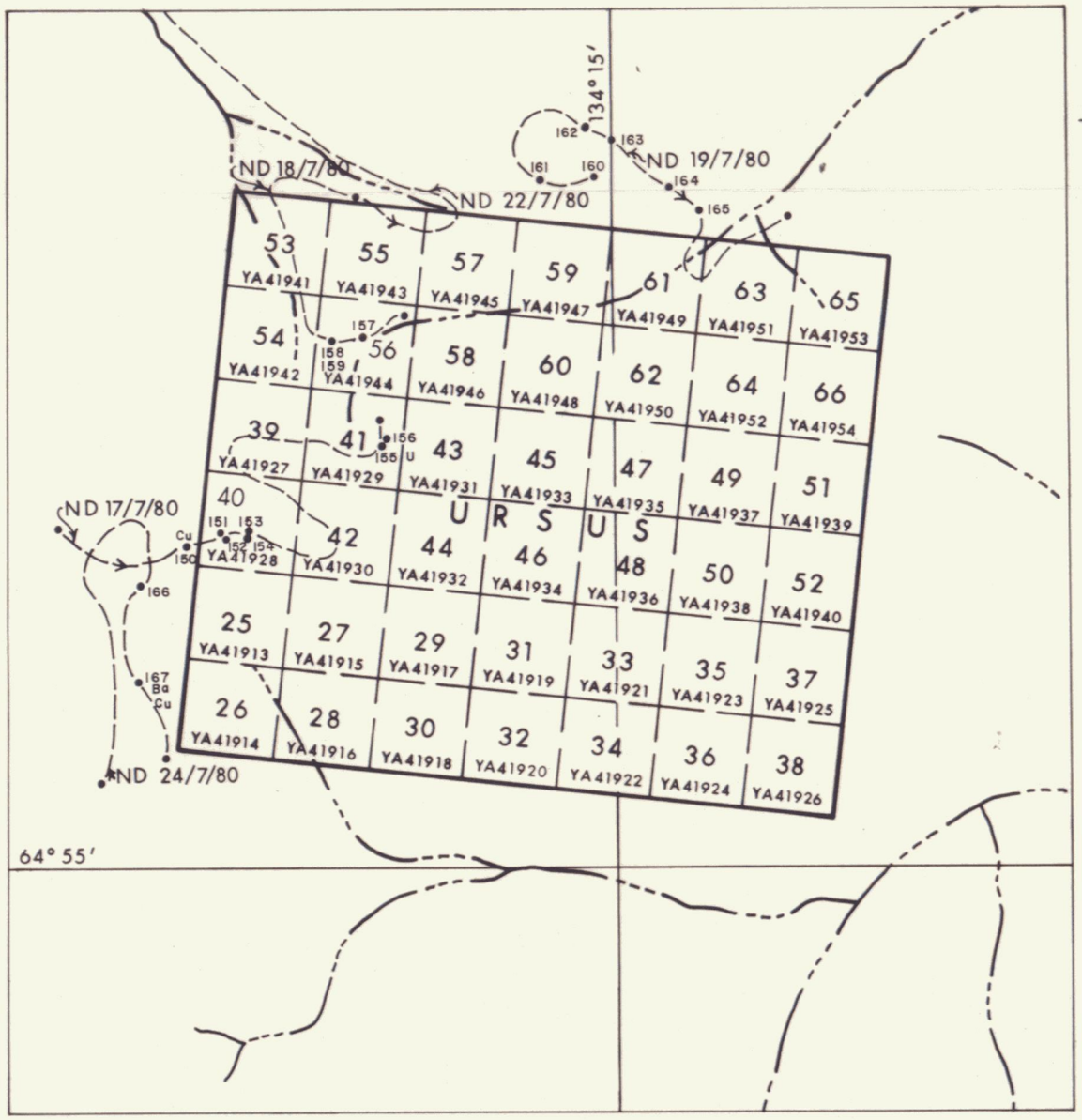
URSUS TRENCH No. 3

FAIRCHILD LAKE PROJECT, 1980

DATE	SCALE	NTS	DRAWING NO.
MAR., 1981	1:50	106 D/16	B-1213

NOTE: LOCATED ON URSUS 44 - YA41932

JCC



Mi. 1/2 1/4 0 1/2 1 Mi.

TO ACCOMPANY REPORT NO 8-81 BY D.L.D. & D.B.H.

PAN OCEAN OIL LTD.
CALGARY ALBERTA

TRAVERSING ON URSUS CLAIMS
FAIRCHILD LAKE PROJECT

DATE	SCALE	NTS	DRAWING NO.
APRIL, 1981	1" = 1/2 Mi.	106 D/16	A-1260

JCC