JAN 9 1976

Mining Recorder

BRITISH NEWFOUNDLAND EXPLORATION LIMITED

Office Of The Supervising Mining

JAN - 9 1976

Yukon Territory

GEOLOGICAL AND GEOCHEMICAL REPORT

CYPRESS RESOURCES LTD. PROPERTY

MAYO MINING DISTRICT

64° 15'   133°   NE

RECEIVED

JAN 09 1976

MINING INSPECTORS OFFICE WHITEHORSE, Y.T.

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 $ 9,200.00

ORIGINAL SIGNED BY DR. D.B. CRAIG

Resident Geologist or Resident Mining Engineer

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

B.R. BAXTER

Supervising Mining Recorder

for Commissioner of Yukon Territory

By: K.B. McHale, F.G.A.C.

Field Period: June 14 to July 26, 1975

Report Period: October 1 to December 15, 1975

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ILLUSTRATIONS

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INTRODUCTION

The Cypress Resources Limited claims are located in the Bonnet Plume Range of the Wernecke Mountains, approximately 110 miles northeast of Mayo on the north side of the Bonnet Plume River in the Yukon Territory (see Fig. 1). Co-ordinates of the property are 64° 15' North latitude and 133° West longitude.

Elevations range from 2,800 to 6,500 feet, and local relief is rugged. Tree line is approximately 4,500 feet.

The property is accessible by helicopter and fixed wing aircraft from Mayo. Both Porter Puddle (5 miles southeast of the property) and Rackla Lake (12 miles southwest) are suitable for fixed wing aircraft. However, Porter Puddle is too short to allow take offs with a full load.

Geological and geochemical surveys, and trenching were conducted on the claims during 1975. The field crews were employees of Brinex and Cordilleran Engineering Ltd.

The principals included in the program were:

> Mr. C.J. Sampson, Manager - Western Exploration,
> British Newfoundland Exploration Limited,
> 704 - 602 West Hastings Street, Vancouver, B.C. V6B 1P2
>
> Mr. K.B. McHale, Project Geologist,
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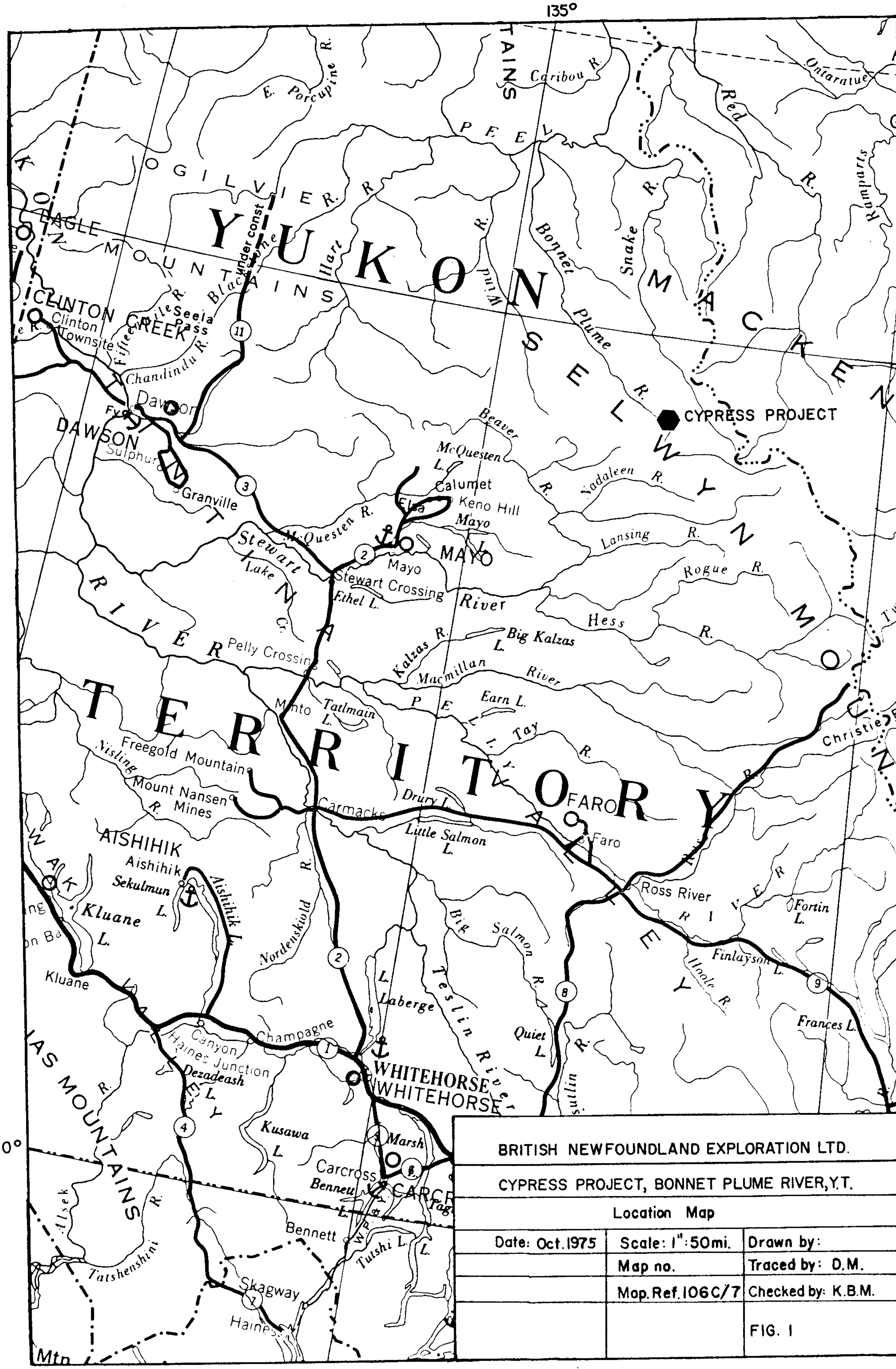
One Westmount Square, Montreal, Quebec. H3Z 2X5



BRITISH NEWFOUNDLAND EXPLORATION LTD.

CYPRESS PROJECT, BONNET PLUME RIVER, Y.T.

Location Map

Date: Oct. 1975	Scale: 1":50mi.	Drawn by:
	Map no.	Traced by: D.M.
	Map. Ref. 106C/7	Checked by: K.B.M.
		FIG. 1

SUMMARY

The 1975 field work was to test the potential of the lower dolomite unit and its associated Pb-Zn soil geochemical anomalies (see Brinex report G74501). Field work during the 1975 season has shown that the lower dolomite unit has narrow zones of weakly developed solution collapse breccia. These zones are best developed in the vicinity near strong cross structures. No economic mineralization was found and none appears to be indicated by the soil geochemistry results. The shales that occur stratigraphically below the dolomite unit contain minor amounts of zinc and lead. A weathering and concentration process has resulted in development of iron oxide cemented "false" gossans that assay up to 3.2% zinc. The soils over this unit are enriched in Pb and Zn and give high results but are not related to economic mineralization.

No further work is recommended on this property.

GEOLOGY

A. Regional

The area has been mapped by Dr. S. Blusson of the Geological Survey of Canada. Open File maps were issued in June, 1974. The maps that pertain to the area are Nadaleen River (106 C, scale 1:250,000) and Goz Creek (106 C/7, scale 1:50,000) (see Fig. 2).

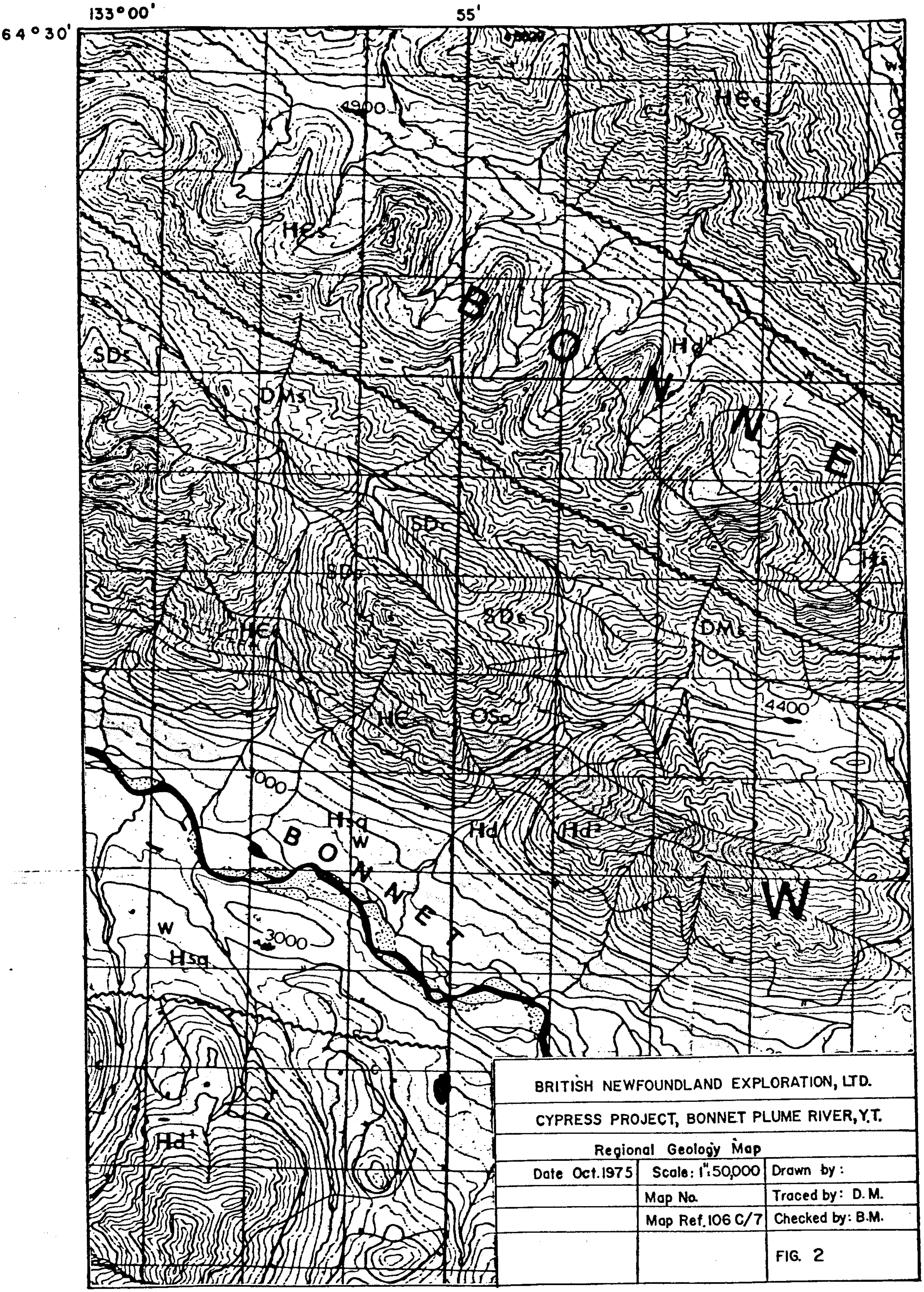
The area is underlain by a thick sedimentary sequence ranging in age from Hadrynian to Mississippian. The sediments, predominantly dolomite, limestone, shale and minor quartz arenite, strike northwesterly and dip steeply to the northeast.

B. Property (see Figs. 3 to 5)

The Hadrynian to Devonian rocks on the property strike N70°W and dip 40 to 70° northeasterly. Field work was confined primarily to the ?Upper Proterozoic - Lower Cambrian portion of the sequence, which has a thickness of at least 4,500 feet and can be divided into five units (see Figs. 6 and 7) that overlie each other conformably. The 1975 field work was confined primarily to Units One and Two, with Units Three to Five having been examined in 1974.

Unit One - ?Upper Proterozoic (Hadrynian)

This unit, lowermost in the section, is poorly exposed, with the majority of the outcrops confined to the creeks on the property. The estimated thickness is at least 2,500 feet. The lithologies consist of interbedded shale, siltstone and purple quartz arenite. The arenite accounts for



BRITISH NEWFOUNDLAND EXPLORATION, LTD.		
CYPRESS PROJECT, BONNET PLUME RIVER, Y.T.		
Regional Geology Map		
Date Oct. 1975	Scale: 1":50,000	Drawn by:
	Map No.	Traced by: D. M.
	Map Ref. 106 C/7	Checked by: B.M.
		FIG. 2

L E G E N D

(To Accompany Goz Creek $106^c/7$ Geology Map)

Paleozoic

DEVONIAN & MISSISSIPPIAN

DMs	Besa River Formation: black shale and siltstone, commonly pyritic.

SILURIAN & DEVONIAN

SDs	Light grey, well bedded dolomite, minor limestone near top; ODc undivided OSc and SDc.

ORDOVICIAN & SILURIAN

OSc	Mount Kindle Formation: light and minor dark grey regularly bedded dolomite; OSc^1, light grey dolomite; OSc^2, dark grey dolomite; OSc black shale.

LOWER CAMBRIAN

Ccs	Sekwi Formation: brown and orage weathering thin-bedded dolomite, grey ~~and buff~~ mottled limestone, brown shale and sandstone.
Ccq	Backbone Ranges Formation: EG, varicoloured quartzite, siltstone and shale, minor silty and sandy dolomite, Ecq buff to orange weathering and mauve dolomite, in part silty and sandy, minor quartzite and shale Ec^1 pale buff grey weathering poorly bedded in part pisolitic dolomite, minor quartzite. Ec^2 buff yellow weathering, in part porous fine-grained dolomite. May be Hadrynian in part.

Proterozoic

HADRYNIAN

HIЄsc	Sheepbed Formation: brown and black recessive slate, siltstone minor quartzite, conglomerate and light grey carbonate.
HId_1	1. Grey weathering, medium to thick bedded fine-grained dolomite; basal dark brown conglomerate Hcgl.
HId_2	2. Light grey buff weathering, porous fine-grained dolomite.
Hsq	Hsq, brown shale, siltstone and conglomerate, minor orage weathering platy dolomite.

approximately 20% of the unit. Shales are dark brown to black in color, fine grained and locally, phyllitic. In part, the shale is quite pyritiferrous and has gossan development. Sedimentary features, such as ripple marks, mud crack in-fillings, flute and groove casts, all suggest that the unit was deposited in relatively shallow water. The quartz arenites are thin-medium bedded units with a thickness of 6 to 12 inches. Some of the beds are orange-brown from iron oxide staining but the predominant color is purple. Locally, white bull quartz veins, the emplacement subparallel to bedding, suggest an origin derived from remobilized quartzite.

Unit Two - ?Lowermost Cambrian

This unit is approximately 500 feet thick and overlies Unit One conformably. The primary lithology is a mottled light to dark grey medium to coarse crystalline dolomite with minor thin bedded cream to dark grey-black fine grained dolomite. The dolomite unit to the west is replaced by dark grey-black shales. The unit, where exposed in Wolverine Creek, consists of interbedded dolomite and shale and where the unit is exposed in a creek (approximately 1 mile northwest of Wolverine Creek), it is composed completely of shale with the facies boundary located probably just west of Wolverine Creek.

Where there are strong cross fractures, the thinly bedded dolomite has undergone dissolution processes with the development of micro solution collapse breccias. These breccias are very narrow in thickness, on the order of less than 5 feet, and are lensoidal along strike. In places the thin bedded dolomites form cyclic subunits with interbeds of massive medium to coarse grained dolomite. The rhythmites are on the average approximately 5 to 10 feet thick.

Within the medium crystalline dolomites there are spheroidal structures composed of dolomite and/or silica. The structures may be pisolites, concretions (accretions) or cone-in-cone structures as suggested (personal communication) by Dr. Fritz of the Geological Survey of Canada. These cone-in-cone structures would suggest an age of Lowermost Cambrian for this unit.

Unit Three - ?Lower Cambrian

This unit is moderately well exposed on the property and its thickness varies from 1,800 to 2,400 feet. The unit thins both to the east and west on the property. The unit is predominantly a light grey clay to fine crystalline dolomite. Locally, there are moderate amounts of frosted detrital quartz grains and traces of disseminated pyrite.

In part, the unit is oolitic to pisolitic and also exhibits stromatolitic banding. Also in places the dolomite has minute lenticular vugs that are subparallel to bedding and were probably formed by some dissolution process. Near the base, in the vicinity of strong cross fractures, there is some minor solution recrystallization banding present. Within the unit, there are some fairly consistent, but discontinuous, lensoidal subunits.

Near the base of the unit in the eastern part of the property, west of Grayling Creek, there is a discontinuous sandy dolomite conglomerate that represents a local disconformity. The light grey subrounded fine grained dolomite fragments are cemented by frosted quartz grains. This conglomerate is usually less than 10 feet in thickness.

The major subunit is a sandy dolomite to dolomitic quartz arenite that varies in thickness from 0 to 400 feet and occurs 100 to 600 feet below the top of Unit Three. It exhibits strong crossbedding and graded bedding, and east of Grayling Creek, becomes conglomeratic. Locally there is oolitic to pisolitic dolomite above and below the sandy dolomite which is also oolitic in places. West of Grizzly Creek, a few narrow sandy dolomite clastic dikes were noted at the same stratigraphic position.

Unit Four - ?Lower Cambrian

This unit is well exposed and has, over most of the property, an average thickness of 450 to 500 feet. West of Barite Hill, however, the unit thins rapidly and on Ptarmigan Ridge is 250 feet thick.

In the area west of Grayling Creek, the unit consists primarily of a porous, buff, fine to medium crystalline dolomite with both lateral and vertical facies variations. There are local areas of probable "solution collapse" cavity breccia and vug development but these are minor and restricted in size. In general the breccias are cemented and the vugs filled with quartz and minor dolomite and sulphides. But on Barite Hill, and to the west, the vugs are filled predominantly with coarse white crystalline barite. On Ptarmigan Ridge the unit can be subdivided into several subunits of which a zone in the upper part, with 1 to 5 feet thick bands of quartz, is the most distinctive. East of Ptarmigan Ridge, in the middle to upper part of the unit, there are locally, zones with quartz bands parallel to bedding, but these are not continuous and cannot be used as a marker horizon.

East of Grayling Creek, the unit is a repetitive sequence of porous buff dolomite and dark "wavybedded" dolomite. The wavybedded dolomite comprises most of the section and is thought to be a product of a "sabkha" environment. The wavybedded texture results from alternating broken bands of light and dark dolomite. In the unit there are good examples of solution channel in-fillings with dark sandy material which shows that a dissolution process was at work. As in the eastern part, the major cement in the breccias is quartz with minor sulphides.

<u>Unit Five - Lower Cambrian</u>

Unit Five is up to 1,600 feet thick and consists of strongly cleaved, thinbedded brown to black shale. The lower contact is gradational to Unit Three with dark impure dolomite that contains intraformational breccias and moderate to abundant pyrite. Within this unit and near the base there is a blue-grey fossiliferous (archaeocyathids, trilobites) limestone to ferro dolomite reefal detritus breccia that varies from 40 to 100 feet in thickness.


4000'
3000'
1
3_J
3_K
3_J
4
5
Scale: 1" = 400'
GEOLOGIC CROSS SECTION
LINE 250 E
looking Northwest
5 Shale
4 Porous buff dolomite
3 3_J light grey fine crystalline dolomite
3_K sandy dolomite to quartz arenite
2 Light to dark grey mottled dolomite, minor siltstone, limestone
1 1_A brown dark grey siltstone shale
1_{Aq} purple quartz arenite

Fig. 6

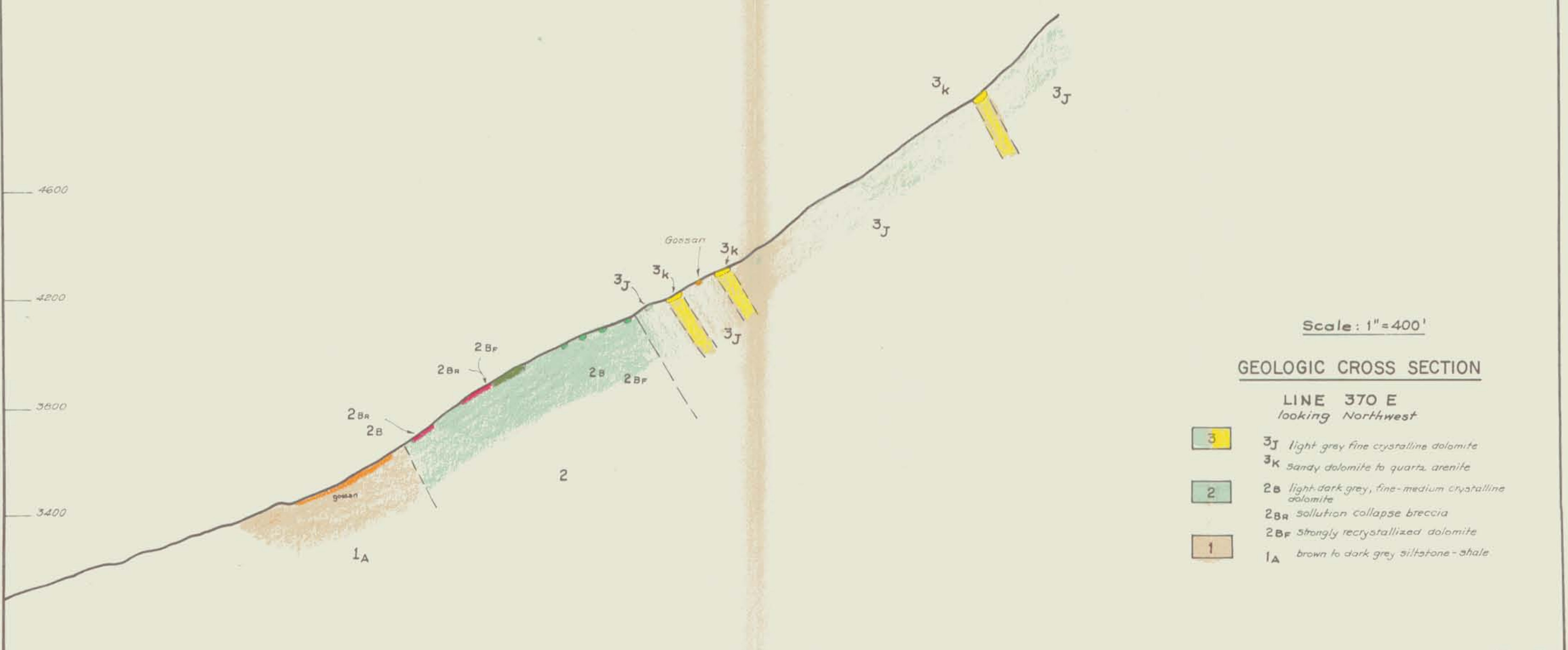

4600
4200
3800
3400
Gossan
3K
3K
3J
3J
3K
3J
3J
2BF
2BR
2B
2BF
2BR
2B
2
gossan
1A
Scale: 1" = 400'
GEOLOGIC CROSS SECTION
LINE 370 E
looking Northwest
3
3J light grey fine crystalline dolomite
3K sandy dolomite to quartz arenite
2
2B light-dark grey, fine-medium crystalline dolomite
2BR sollution collapse breccia
2BF strongly recrystallized dolomite
1
1A brown to dark grey siltstone-shale

Fig. 7

MINERALIZATION

Sulfide mineralization is found throughout the whole sequence. The types and nature of mineralization for each unit will be discussed separately. The sulphide mineralization in Units Three and Four was examined in 1974 but a description is included here for completeness.

Unit One

The only sulphide found in this unit to date, that is megascopic in size, is pyrite. With weathering, the unit forms false gossanous talus breccias that assay anomalously high in zinc, lead or iron. The best developed gossanous zone occurs at the shale-dolomite contact east of Grayling Creek. Within the gossan there is a strongly developed south dipping lineation suggestive of cleavage in the shales. No primary sulphide mineralization was uncovered in trenching. The relatively high (see Table I) zinc content (2 to 3%) of the gossan is probably a result of concentration and enrichment from weathering of the pyritiferrous shales which themselves have assayed as high as 6,500 ppm zinc.

Minor, strongly oxidized pyrite veinlets were noted with some of the quartz arenite in the lower part of the unit.

Unit Two

In general, this unit is devoid of sulphide mineralization except for two known occurrences.

TABLE I

Rock Type Sample No.	Pb ppm.	Zn ppm.	Cu ppm.	Ag ppm.	Fe %	Mn ppm.
Shale						
24144	500	1,300				
24145	200	1,300				
24782	270	6,500	7	0.8	14.6	1,750
24787	31	155	30	0.8	5.2	450
Average:	250	2,314	18	.8	9.9	1,100
Dolomite						
24735	100	100				
24150	400	1,800				
24786	104	900	1	.5	2.76	700
24788	58	420	4	.5	1.60	1,250
Average:	166	805	2.5	0.5	2.18	975
Dolomite Gossan						
24776	1,200	575	1	.5	53.6	1,000
24777	2,800	482	13	.5	53.6	800
24778	3,700	406	6	.5	48.4	500
24780	3,850	550	7	.8	51.6	800
24781	960	2,320	7	.8	53.6	500
Average:	2,502	867	8	.6	52.16	720 (gossan)
	166	805	2.5	.5	2.18	975 (dolomite)
Shale Gossan						
24779	100	23,500	4	.5	53.6	250
24783	414	28,600	7	.5	41.6	350
24784	108	9,600	12	.5	36.0	800
24785	112	9,200	12	.5	30.2	500
Average:	184	15,225	9	.5	40.35	475 (gossan)
	250	2,314	18	.8	9.9	1,100 (shales)

In Wolverine Creek, strongly oxidized pyrite occurs as masses in cavities or in very narrow bands, subparallel to bedding.

On the eastern part of the property (Line 392 E, Station 78 N) near the Great Plains property boundary, a narrow zone of fairly massive galena was found in a shallow south dipping structure. The zone strikes almost east-west and dips 20 to 30° to the south, or roughly subparallel with the slope of the topography. The mineralized zone is approximately three feet thick and contains predominantly galena with a trace of sphalerite. The zone assayed 18% Pb and 10% Zn. This mineralized shear zone and the strongly developed cleavage in the shales are probably related to the same south dipping structure.

Unit Three

The major sulphide present is pyrite. The pyrite occurs as disseminated crystals and is more predominant near the base of the unit. West of Duo Hill, minor sphalerite, galena and pyrite mineralization with quartz and dolomite crystals may occur in isolated solution cavities that are close to strong cross-cutting fracture zones. The largest cavity is approximately two feet thick and 20 feet long, and thus the mineralization is of no importance from an economic viewpoint.

Unit Four

The majority of the mineralization so far observed on the property occurs in this Unit. The main sulphide mineral present is sphalerite with minor galena, pyrite and smithsonite, and the gangue is composed of quartz, dolomite, minor barite and calcite. The sulphide mineralization is found in solution cavities and local collapse breccias, solution channel in-fillings, primary bedded material and also in late stage cross cutting structures, and each type of occurrence is described separately.

1. Solution Cavities and Collapse Breccias

The major occurrence of mineralization is in the breccias, but these are discontinuous and restricted in size. Maximum outcrop thickness is approximately 20 feet.

The best mineralized breccias occur east of Grayling Creek, where the dolomite fragments are cemented with sphalerite and quartz. The sphalerite varies in colour from white, through pale yellow to a yellow green. Some of the cavities are filled mostly with quartz (as botryoidal chalcedonic, massive white and clear to white subhedral crystals) and dolomite with only minor sulfides. Galena is not as common as sphalerite and usually occurs as discrete crystalline masses separate from the sphalerite.

West of Grayling Creek the mineralization is confined primarily to solution cavity in-fillings. The cavities are usually less than 6 inches in length, and are filled with clear to milky white quartz crystals, dolomite crystals and coarse euhedral galena and fine crystalline white to pale yellow sphalerite. On Barite Hill the cavities are filled with coarse crystalline white barite and minor coarse crystalline galena with traces of fine grained white sphalerite.

2. Solution Channel In-Fillings

This type of mineralization seems to be a product of dissolution of the rock after mineral deposition. Sphalerite grains and detrital quartz have been carried into the solution channels where they are redeposited. Textures show laminated and graded bedding. This type of mineralization was found only on Vega Hill.

3. Primary (?) Bedded Mineralization

This type of occurrence is minor and was noticed in only two areas. On Knob Hill fine to medium crystalline galena is present in discontinuous bands in a folded fine grained dolomite. The mineral occurs over a 5 to 10 feet length with ½ to ¼ inch bands of galena approximately every 12 inches over a thickness of 5 feet. The other occurrence of this type of mineralization is east of Grizzly Creek, on the lower slope of Tiddalick Ridge, where a few ¼ inch bands, parallel to bedding, of pale yellow fine grained sphalerite occur over a 30 foot width.

4. Late Stage Structures

Galena is the most common sulphide in-filling of cross cutting joints. It is coarsely crystalline, forming masses up to 6 inches across, and the best occurrence of this type of mineralization is on Knob Hill. In the mineralized breccia zones east of Grayling Creek remobilized pale yellow sphalerite often occurs along cross cutting joints. The veinlets are usually less than ¼ inch in width.

Unit Five

Pyrite occurs as disseminations along bedding and as large fragments in small scale sedimentary breccias in the dark impure dolomite at the base of this unit. Minor sphalerite was noted in one drillhole (74-6).

SAMPLING AND ASSAY RESULTS

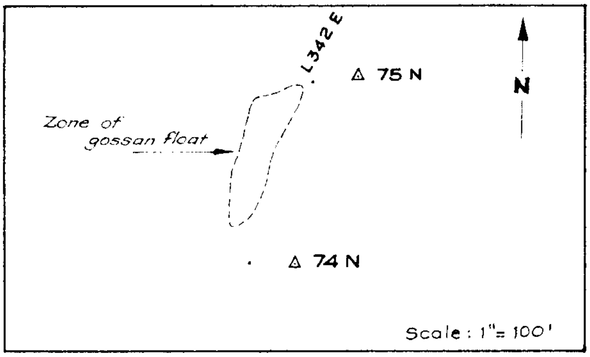
Trenching with the use of cobra drill and dynamite was carried out over the soil geochemical anomalies. Chip samples were taken from the various trenches and all the pertinent data is shown in Tables I to II and Figs. 8 to 14.

The assay results show that the high values in the gossan samples are related to a weathering and concentration-enrichment process. It appears that the average Fe and Zn values are directly relatable and there probably has been scavenging of, in particular, Zn by the Fe oxides with gossanous material related to the shales. However, the gossanous material collected over areas underlain by dolomite show an enrichment in Pb and Fe with no appreciable enrichment in zinc.

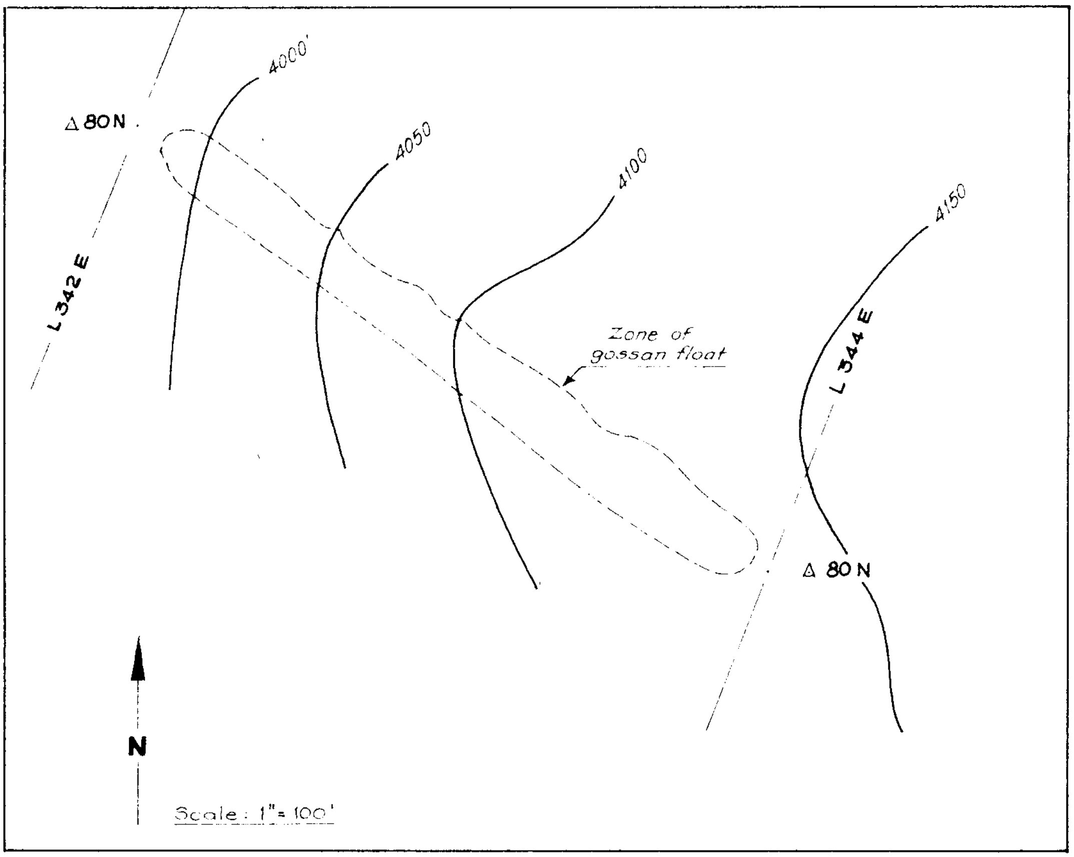
TABLE II

TRENCH SAMPLES

Sample No.	Type	Thickness	Rock Type	Pb	Zn
24789	Chip	36 in.	Galena-sphalerite vein	18.1%	10.0%
24790	Chip	56 in.	Mottled dolomite	0.28%	0.32%
24791	Chip	30 in.	Mottled dolomite	191 ppm.	440 ppm.
24792	Chip	60 in.	Fe stained shale	231 ppm.	2,300 ppm.
24793	Representative		Gossan from weathered joint fillings in dolomite	.11%	2.46%
24794	Chip	48 in.	Gossanous shale	142 ppm.	1.30%
24795	Chip	50 ft.	Shale and minor quartz arenite	64 ppm.	760 ppm.
24796	Chip	63 in.	Fe stained shale	320 ppm.	.38%

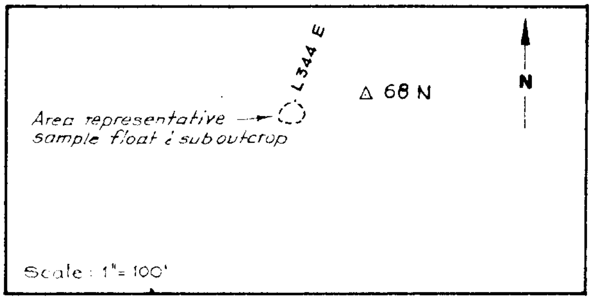


Sample No. 24776 Representative Sample

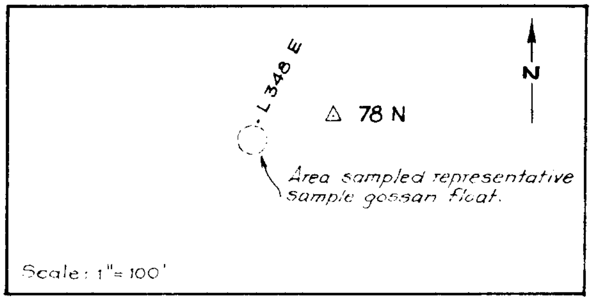


Sample No. 24777 Representative Sample

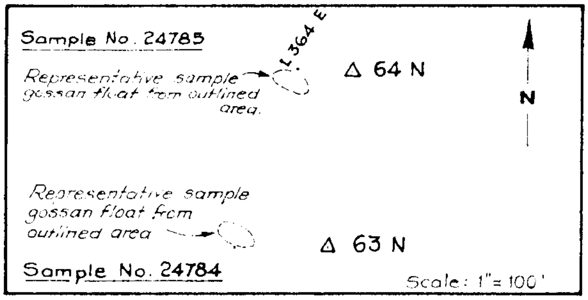
BRITISH NEWFOUNDLAND EXPLORATION LTD.		
SAMPLE LOCATION MAP		
CYPRESS PROJECT BONNET PLUME RIVER Y. T.		
DATE: DEC. 1975	SCALE: 1':100'	DRAWN BY D. M.
	MAP NO.	TRACED BY
	MAP REF. 106 C/7	CHECKED BY K.B.M.
		Fig. 8



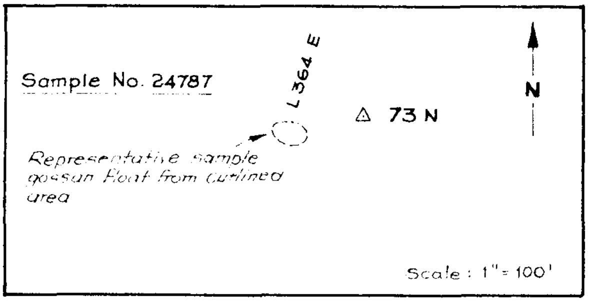
Sample No. 24788

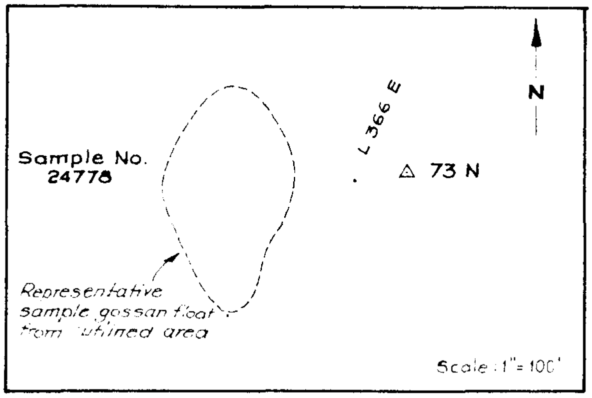


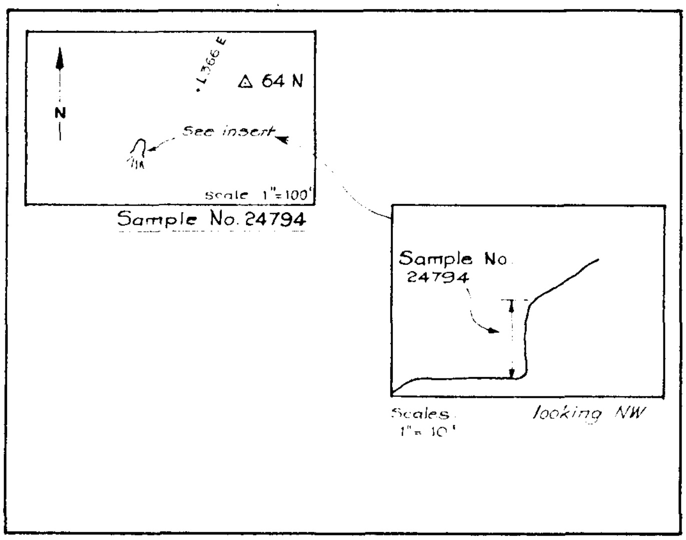
Sample No. 24780



BRITISH NEWFOUNDLAND EXPLORATION LTD.		
SAMPLE LOCATION MAP		
CYPRESS PROJECT BONNET PLUME RIVER Y. T.		
DATE: DEC. 1975	SCALE: 1" : 100'	DRAWN BY D. M.
	MAP NO.	TRACED BY
	MAP REF. 106 C/7	CHECKED BY K.B.M.
		Fig. 9







BRITISH NEWFOUNDLAND EXPLORATION LTD.		
SAMPLE LOCATION MAP		
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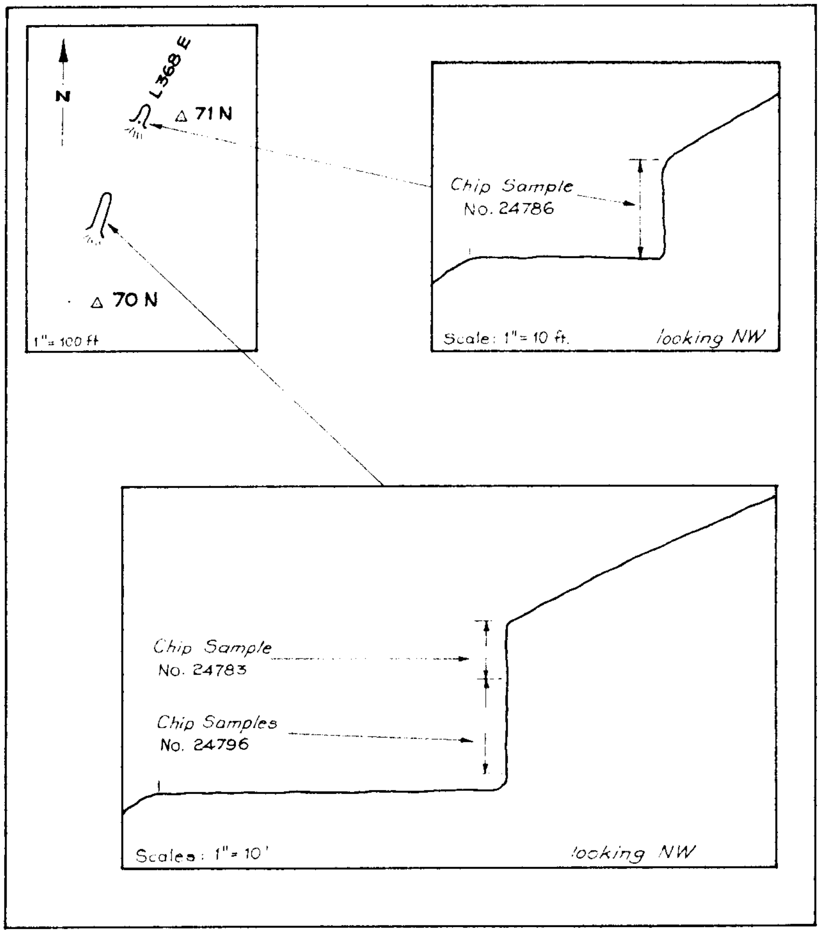
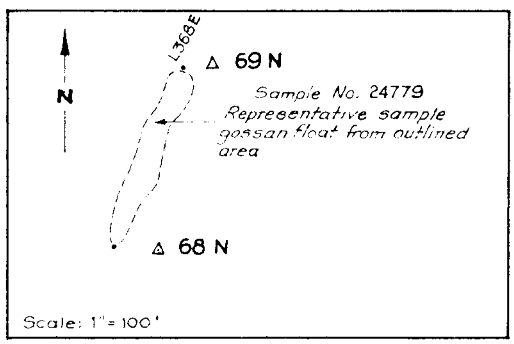
		Fig. 10





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SAMPLE LOCATION MAP		
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	MAP NO.	TRACED BY
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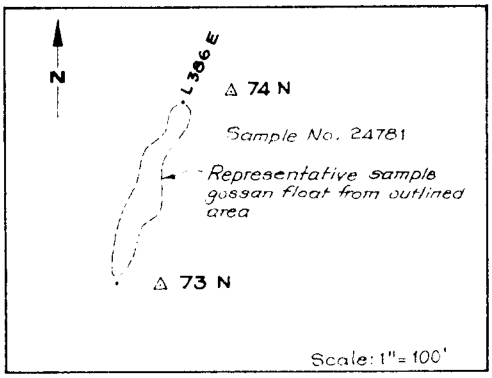
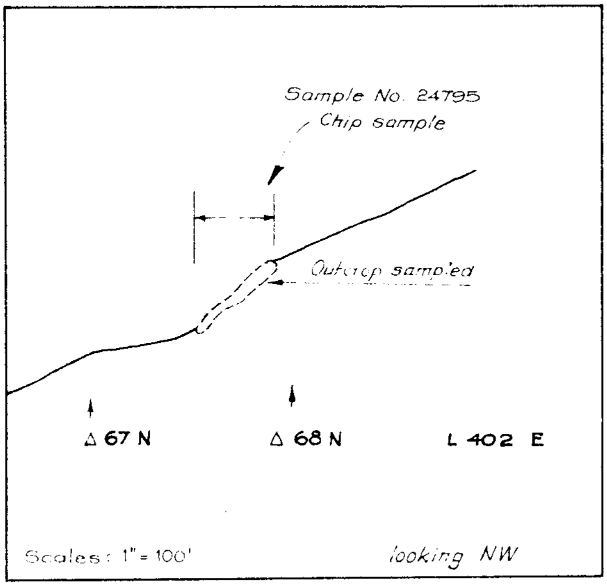
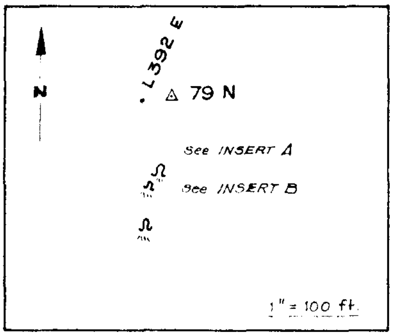
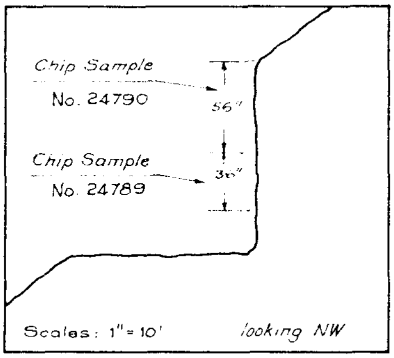
		Fig. 11





BRITISH NEWFOUNDLAND EXPLORATION LTD.		
SAMPLE LOCATION MAP		
CYPRESS PROJECT BONNET PLUME RIVER Y. T.		
DATE: DEC. 1975	SCALE: 1' : 100'	DRAWN BY D. M.
	MAP NO.	TRACED BY
	MAP REF. 106 C/7	CHECKED BY K.B.M.
		Fig. 12





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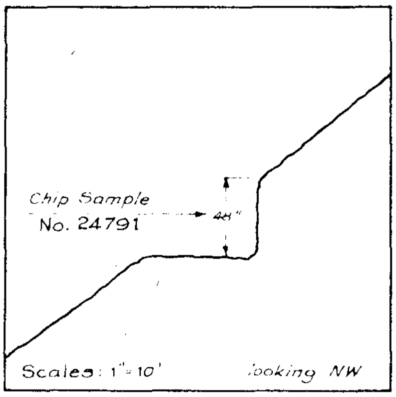
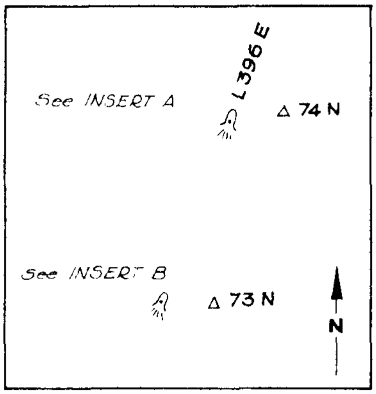
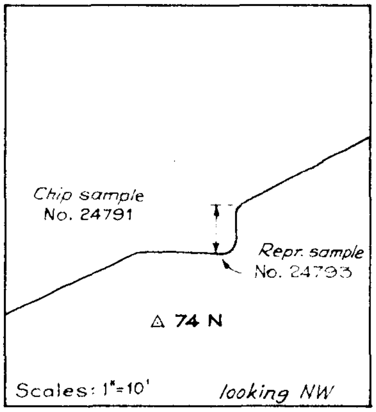


INSERT B

BRITISH NEWFOUNDLAND EXPLORATION LTD.		
SAMPLE LOCATION MAP		
CYPRESS PROJECT BONNET PLUME RIVER Y. T.		
DATE: DEC. 1975	SCALE: 1" : 100'	DRAWN BY D. M.
	MAP NO.	TRACED BY
	MAP REF. 106 C/7	CHECKED BY K.B.M.
		Fig. 13





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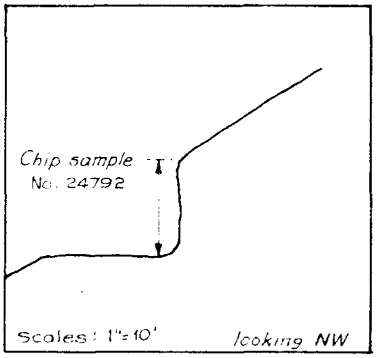


INSERT B

BRITISH NEWFOUNDLAND EXPLORATION LTD.		
SAMPLE LOCATION MAP		
CYPRESS PROJECT BONNET PLUME RIVER Y. T.		
DATE: DEC. 1975	SCALE: 1':100'	DRAWN BY D. M.
	MAP NO.	TRACED BY
	MAP REF. 106 C/7	CHECKED BY K.B.M.
		Fig. 14

GEOCHEMISTRY (Figs. 15 to 20)

A total of 166,600 line feet of grid was soil sampled on the Cypress property, with 22,000 feet of baseline cut and picketed. The lines were flagged with line spacing of 200 feet and sample spacing of 100 feet east of Grayling Creek and 400 feet line spacing and 200 feet sample spacing west of Grayling Creek. Survey control was maintained with tape and brunton surveys and altimeter readings with topographic control from prepared base maps. Approximately 1,350 samples were collected. Most of the samples were collected from the C Horizon or colluvial soil and where possible the B Horizon. In general, the soils contain moderate amounts of organic material. The samples were dried and the -80 mesh fraction was analyzed (by atomic absorption) for zinc and lead.

The results are shown in Table III and Figs. 21 to 24.

TABLE III

STATISTICAL ANALYTICAL RESULTS

Unit Two (Dolomite)

Category	Pb	Zn
Background	0 < 340 ppm.	0 < 400 ppm.
Zone of Mixing	≥ 340 < 600 ppm.	400 < 1,300 ppm.
Poss. Anomalous		1,300 < 2,500 ppm.
Anomalous	≥ 600 ppm.	≥ 2,500 ppm.

Unit One (Shale)

Category	Pb	Zn
Background	0 < 280 ppm.	0 < 500 ppm.
Zone of Mixing	280 < 300 ppm.	500 < 2,300 ppm.
Poss. Anomalous	> 300 < 480 ppm.	
Anomalous	> 480 ppm.	> 2,300 ppm.

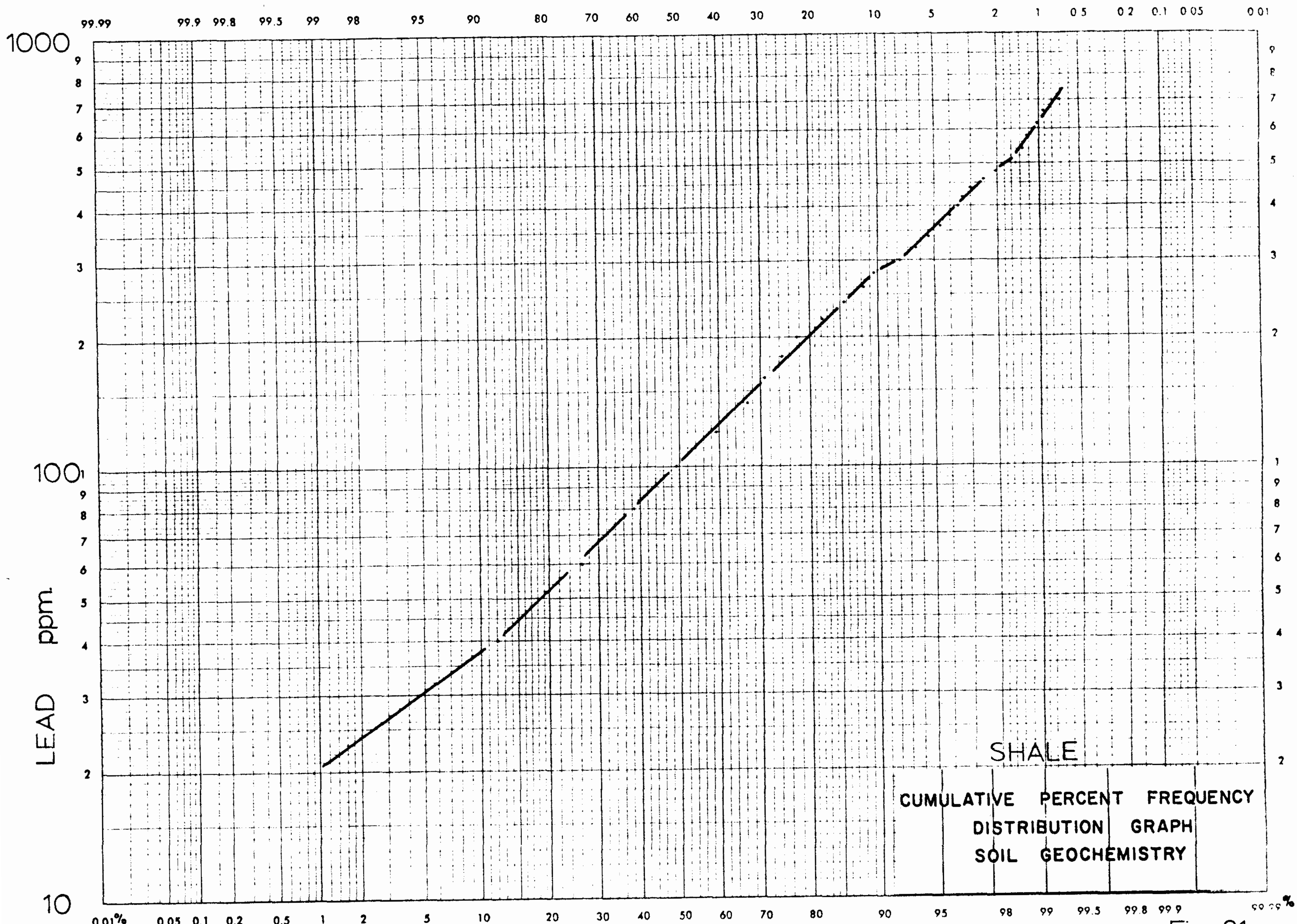

1000
100
10
LEAD ppm.
SHALE
CUMULATIVE PERCENT FREQUENCY
DISTRIBUTION GRAPH
SOIL GEOCHEMISTRY
0.01%
0.05
0.1
0.2
0.5
1
2
5
10
20
30
40
50
60
70
80
90
95
98
99
99.5
99.8
99.9
99.99

Fig. 21

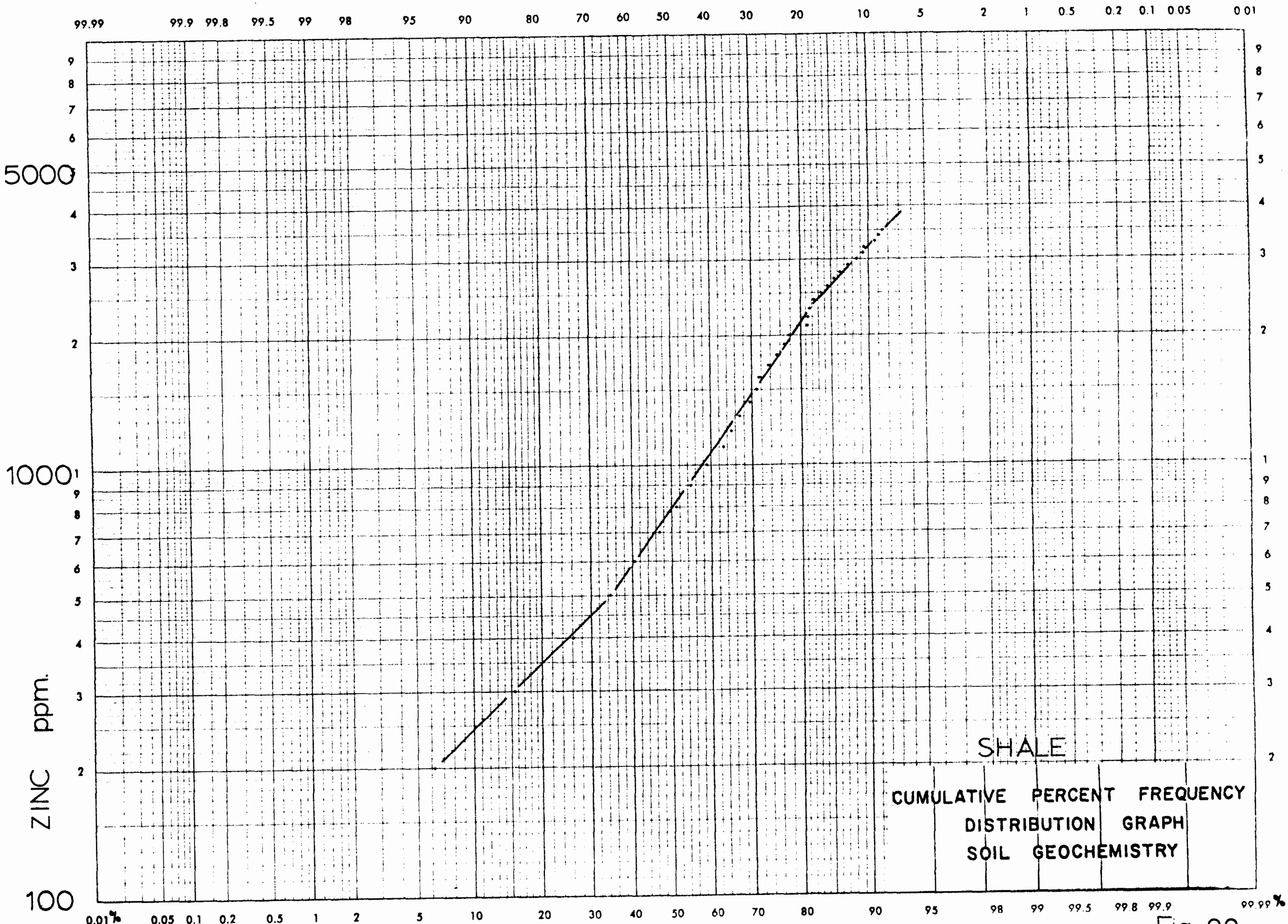

99.99 99.9 99.8 99.5 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
5000
1000
100
ZINC ppm.
0.01% 0.05 0.1 0.2 0.5 1 2 5 10 20 30 40 50 60 70 80 90 95 98 99 99.5 99.8 99.9 99.99%
SHALE
CUMULATIVE PERCENT FREQUENCY
DISTRIBUTION GRAPH
SOIL GEOCHEMISTRY

Fig. 22

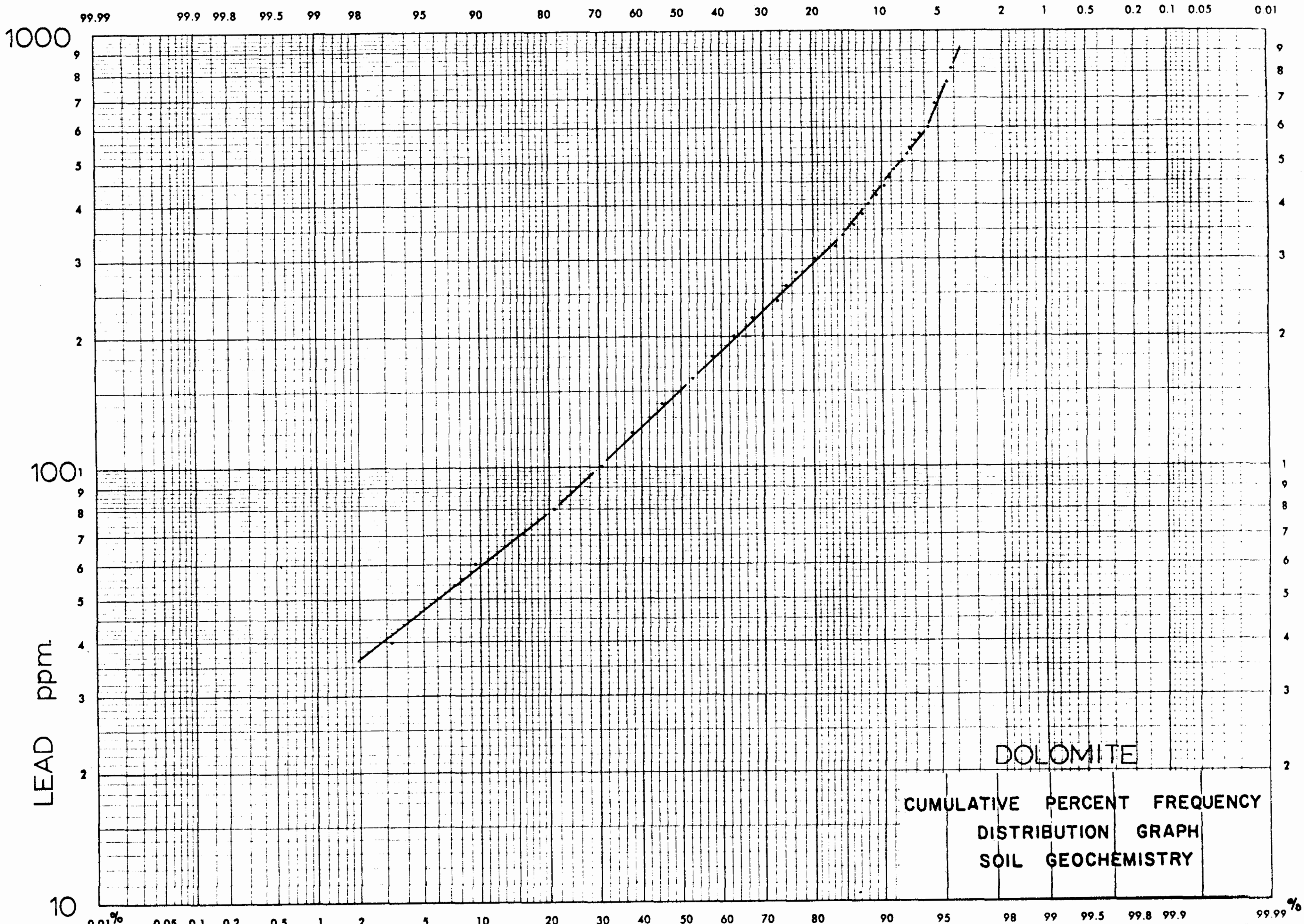

LEAD ppm.
DOLOMITE
CUMULATIVE PERCENT FREQUENCY
DISTRIBUTION GRAPH
SOIL GEOCHEMISTRY

Fig. 23

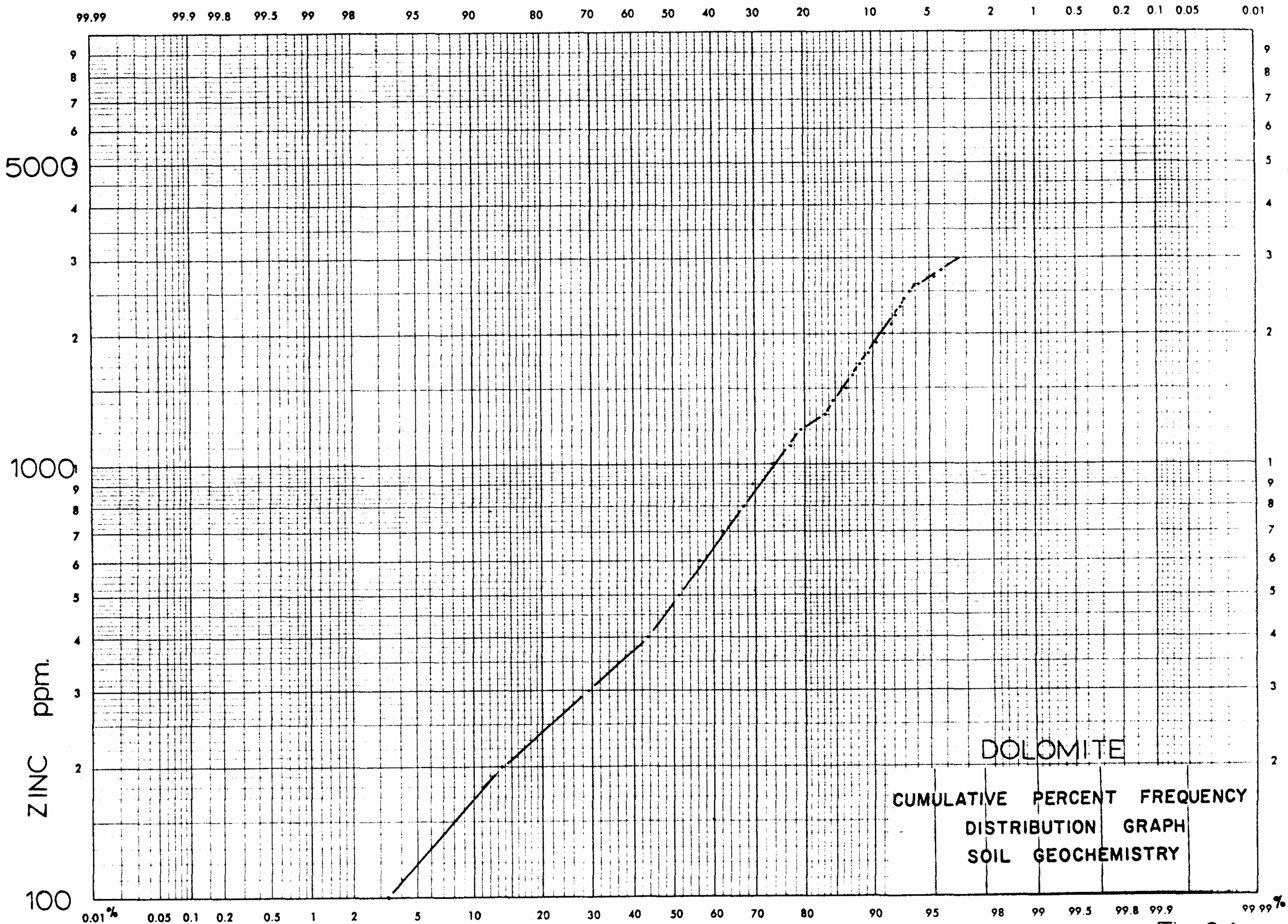

99.99 99.9 99.8 99.5 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
5000
1000
100
ZINC ppm.
0.01 % 0.05 0.1 0.2 0.5 1 2 5 10 20 30 40 50 60 70 80 90 95 98 99 99.5 99.8 99.9 99.99 %
DOLOMITE
CUMULATIVE PERCENT FREQUENCY
DISTRIBUTION GRAPH
SOIL GEOCHEMISTRY

Fig. 24

DISCUSSION

Anomalous results occur over Units One and Two. These will be discussed separately.

A. Unit One

The major anomalous zones consist of zinc values with several small coincidental lead anomalies. Trenching and rock chip sampling over the anomalous zones has shown that most of the anomalies are related to a weathering and process concentration of minor metal values contained in the underlying pyritiferrous shales. The major exception to this is the anomaly on Line 394E between Station 70 North and 77 North. This anomaly is caused by downslope migration of sulphides and metal ions from the small galena-sphalerite vein that was exposed 50 feet south easterly of Line 392E Station 79 North. Another contributor to the geochemical zinc soil anomalies, is downslope mechanical and probably chemical transport from the mineralization known to occur in Unit Four. The anomalies do not appear to be related to potential economic mineralization.

B. Unit Two

The anomalies developed over this unit are predominantly zinc with two minor lead anomalies. In general, the anomalous zones are related to the concentration of metals in an iron rich organic soil developed over a dolomite that contains only minor amounts of zinc and lead. Again downslope mechanical and chemical transport from mineralization in Unit Four has probably contributed to some of the anomalies.

The small lead anomaly on Line 394E is related to the small galena-sphalerite vein that was exposed 50 feet southeasterly of Line 392E Station 79 North.

The anomalies developed over this unit do not appear to be related to potential economic mineralization.

CONCLUSION

No follow-up work is needed on the anomalous zones outlined by the soil survey.

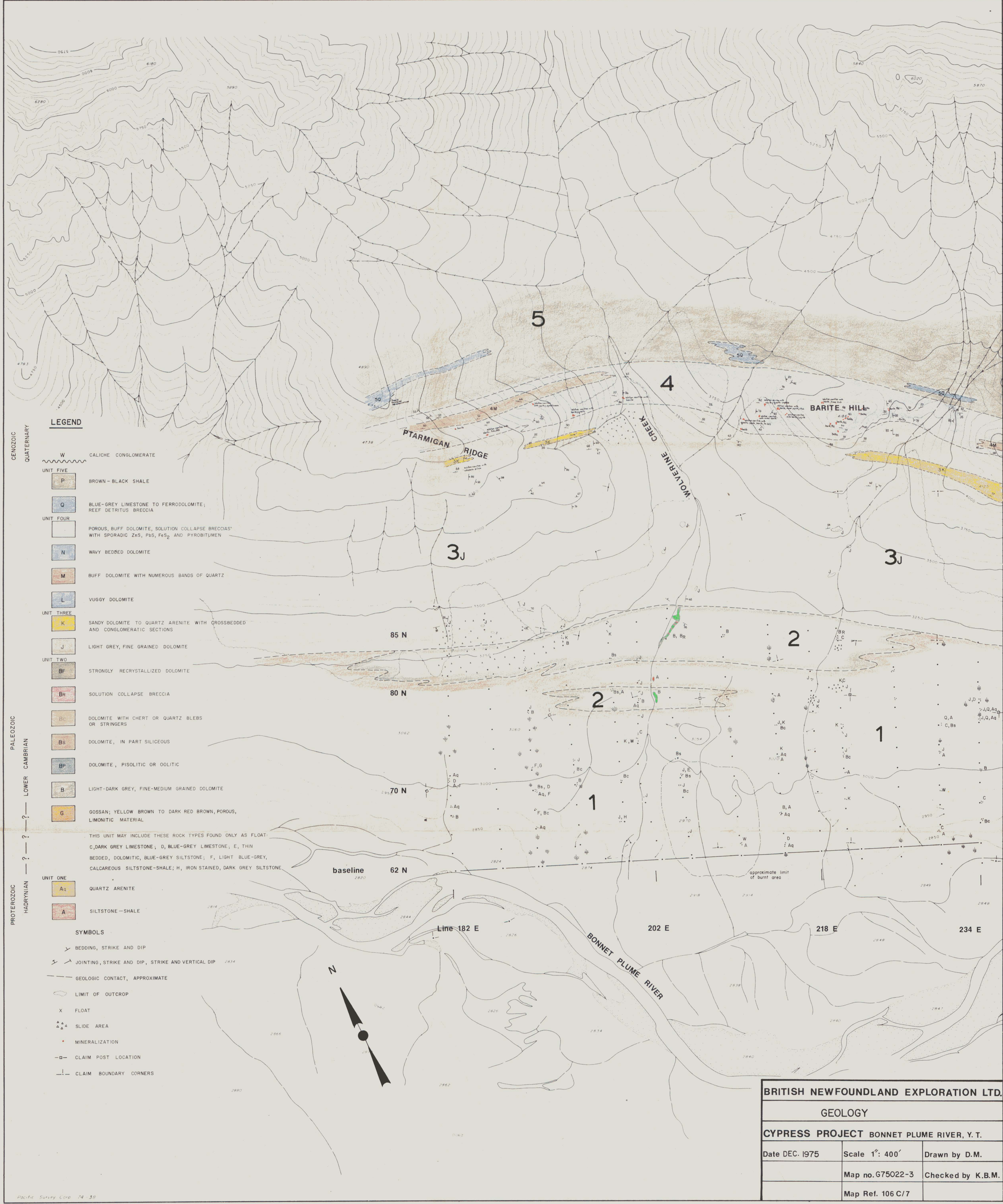
Respectfully submitted,

K. Barry McHale

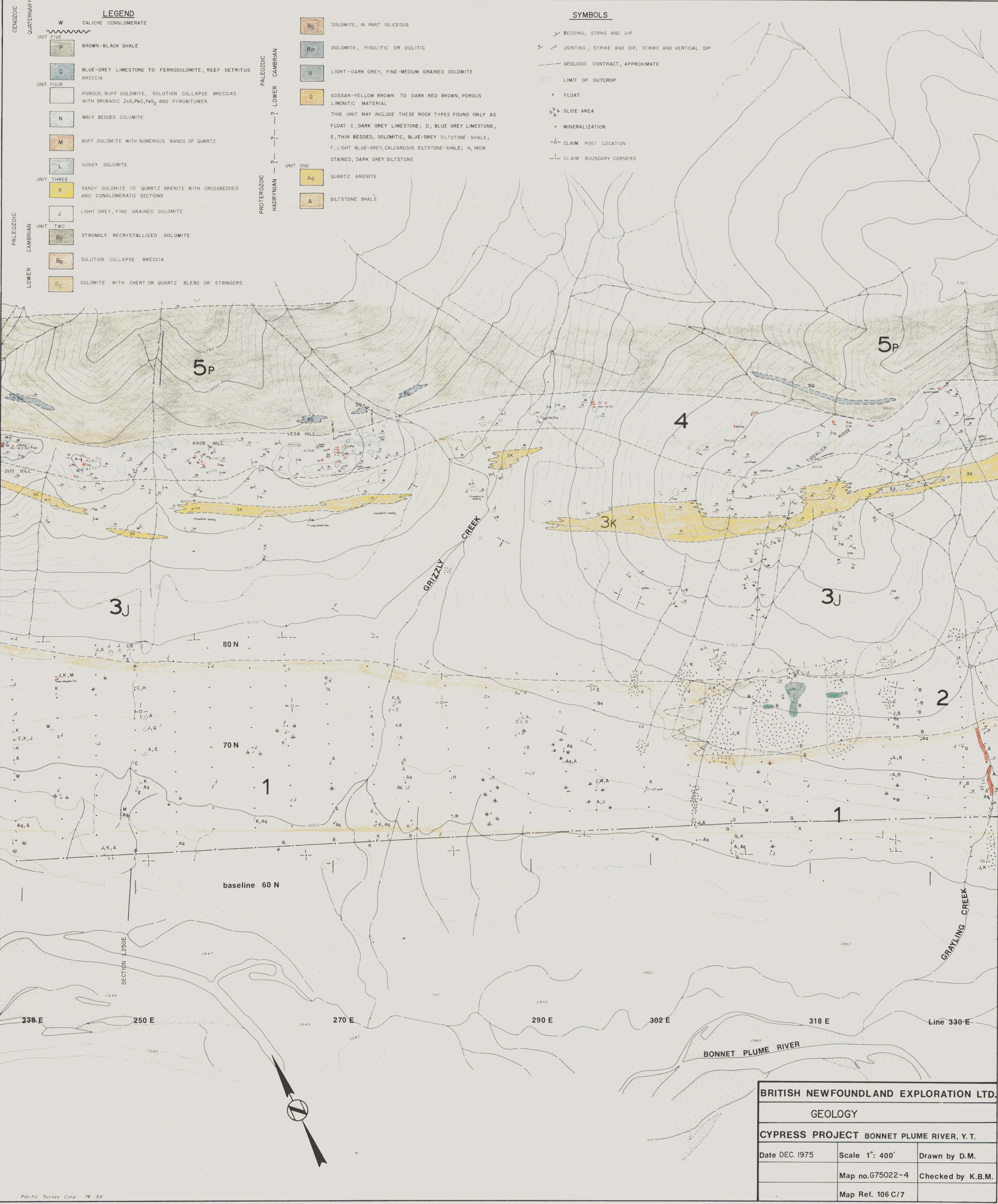
K.B. McHale, F.G.A.C.

Vancouver, B.C.
December 15, 1975

KB McHale



5
4
3J
3J
2
2
1
1
BARITE HILL
PTARMIGAN RIDGE
WOLVERINE CREEK
BONNET PLUME RIVER
85 N
80 N
70 N
baseline
62 N
Line 182 E
202 E
218 E
234 E
approximate limit of burnt area
N
LEGEND
CENOZOIC
QUATERNARY
W
CALICHE CONGLOMERATE
UNIT FIVE
P BROWN - BLACK SHALE
Q BLUE-GREY LIMESTONE TO FERRODOLOMITE; REEF DETRITUS BRECCIA
UNIT FOUR
POROUS, BUFF DOLOMITE, SOLUTION COLLAPSE BRECCIAS WITH SPORADIC ZnS, PbS, FeS2 AND PYROBITUMEN
N WAVY BEDDED DOLOMITE
M BUFF DOLOMITE WITH NUMEROUS BANDS OF QUARTZ
L VUGGY DOLOMITE
UNIT THREE
K SANDY DOLOMITE TO QUARTZ ARENITE WITH CROSSBEDDED AND CONGLOMERATIC SECTIONS
J LIGHT GREY, FINE GRAINED DOLOMITE
UNIT TWO
BF STRONGLY RECRYSTALLIZED DOLOMITE
BR SOLUTION COLLAPSE BRECCIA
Bc DOLOMITE WITH CHERT OR QUARTZ BLEBS OR STRINGERS
Bs DOLOMITE, IN PART SILICEOUS
BP DOLOMITE, PISOLITIC OR OOLITIC
B LIGHT-DARK GREY, FINE-MEDIUM GRAINED DOLOMITE
G GOSSAN; YELLOW BROWN TO DARK RED BROWN, POROUS, LIMONITIC MATERIAL
THIS UNIT MAY INCLUDE THESE ROCK TYPES FOUND ONLY AS FLOAT: C, DARK GREY LIMESTONE; D, BLUE-GREY LIMESTONE; E, THIN BEDDED, DOLOMITIC, BLUE-GREY SILTSTONE; F, LIGHT BLUE-GREY, CALCAREOUS SILTSTONE-SHALE; H, IRON STAINED, DARK GREY SILTSTONE
PALEOZOIC
LOWER CAMBRIAN
PROTEROZOIC
HADRYNIAN
UNIT ONE
Aq QUARTZ ARENITE
A SILTSTONE — SHALE
SYMBOLS
BEDDING, STRIKE AND DIP
JOINTING, STRIKE AND DIP, STRIKE AND VERTICAL DIP
GEOLOGIC CONTACT, APPROXIMATE
LIMIT OF OUTCROP
X FLOAT
SLIDE AREA
MINERALIZATION
CLAIM POST LOCATION
CLAIM BOUNDARY CORNERS
BRITISH NEWFOUNDLAND EXPLORATION LTD.
GEOLOGY
CYPRESS PROJECT BONNET PLUME RIVER, Y. T.
Date DEC. 1975
Scale 1": 400'
Drawn by D.M.
Map no. G75022-3
Checked by K.B.M.
Map Ref. 106 C/7
Pacific Survey Corp. 74-38


LEGEND
CENOZOIC
QUATERNARY
W CALICHE CONGLOMERATE
UNIT FIVE
P BROWN-BLACK SHALE
Q BLUE-GREY LIMESTONE TO FERRODOLOMITE, REEF DETRITUS BRECCIA
UNIT FOUR
POROUS, BUFF DOLOMITE, SOLUTION COLLAPSE BRECCIAS WITH SPORADIC ZnS, PbS, FeS_2 AND PYROBITUMEN
N WAVY BEDDED DOLOMITE
M BUFF DOLOMITE WITH NUMEROUS BANDS OF QUARTZ
L VUGGY DOLOMITE
UNIT THREE
K SANDY DOLOMITE TO QUARTZ ARENITE WITH CROSSBEDDED AND CONGLOMERATIC SECTIONS
J LIGHT GREY, FINE GRAINED DOLOMITE
UNIT TWO
PALEOZOIC
LOWER CAMBRIAN
B_F STRONGLY RECRYSTALLIZED DOLOMITE
B_R SOLUTION COLLAPSE BRECCIA
B_C DOLOMITE WITH CHERT OR QUARTZ BLEBS OR STRINGERS
B_S DOLOMITE, IN PART SILICEOUS
B_P DOLOMITE, PISOLITIC OR OOLITIC
B LIGHT-DARK GREY, FINE-MEDIUM GRAINED DOLOMITE
G GOSSAN-YELLOW BROWN TO DARK RED BROWN, POROUS LIMONITIC MATERIAL
THIS UNIT MAY INCLUDE THESE ROCK TYPES FOUND ONLY AS FLOAT: C, DARK GREY LIMESTONE; D, BLUE GREY LIMESTONE; E, THIN BEDDED, DOLOMITIC, BLUE-GREY SILTSTONE-SHALE; F, LIGHT BLUE-GREY, CALCAREOUS SILTSTONE-SHALE; H, IRON STAINED, DARK GREY SILTSTONE
PALEOZOIC LOWER CAMBRIAN — ? — ? — ? — HADRYNIAN PROTEROZOIC
UNIT ONE
Aq QUARTZ ARENITE
A SILTSTONE SHALE
SYMBOLS
BEDDING, STRIKE AND DIP
JOINTING, STRIKE AND DIP, STRIKE AND VERTICAL DIP
GEOLOGIC CONTRACT, APPROXIMATE
LIMIT OF OUTCROP
FLOAT
SLIDE AREA
MINERALIZATION
CLAIM POST LOCATION
CLAIM BOUNDARY CORNERS
5P
5Q
4
3K
3J
2
1
DUO HILL
KNOB HILL
VEGA HILL
TIDDALICK RIDGE
GRIZZLY CREEK
GRAYLING CREEK
BONNET PLUME RIVER
80 N
70 N
baseline 60 N
SECTION L250E
238 E
250 E
270 E
290 E
302 E
318 E
Line 330 E
BRITISH NEWFOUNDLAND EXPLORATION LTD.
GEOLOGY
CYPRESS PROJECT BONNET PLUME RIVER, Y. T.
Date DEC. 1975
Scale 1": 400'
Drawn by D.M.
Map no. G75022-4
Checked by K.B.M.
Map Ref. 106 C/7
Pacific Survey Corp 74-38

LEGEND

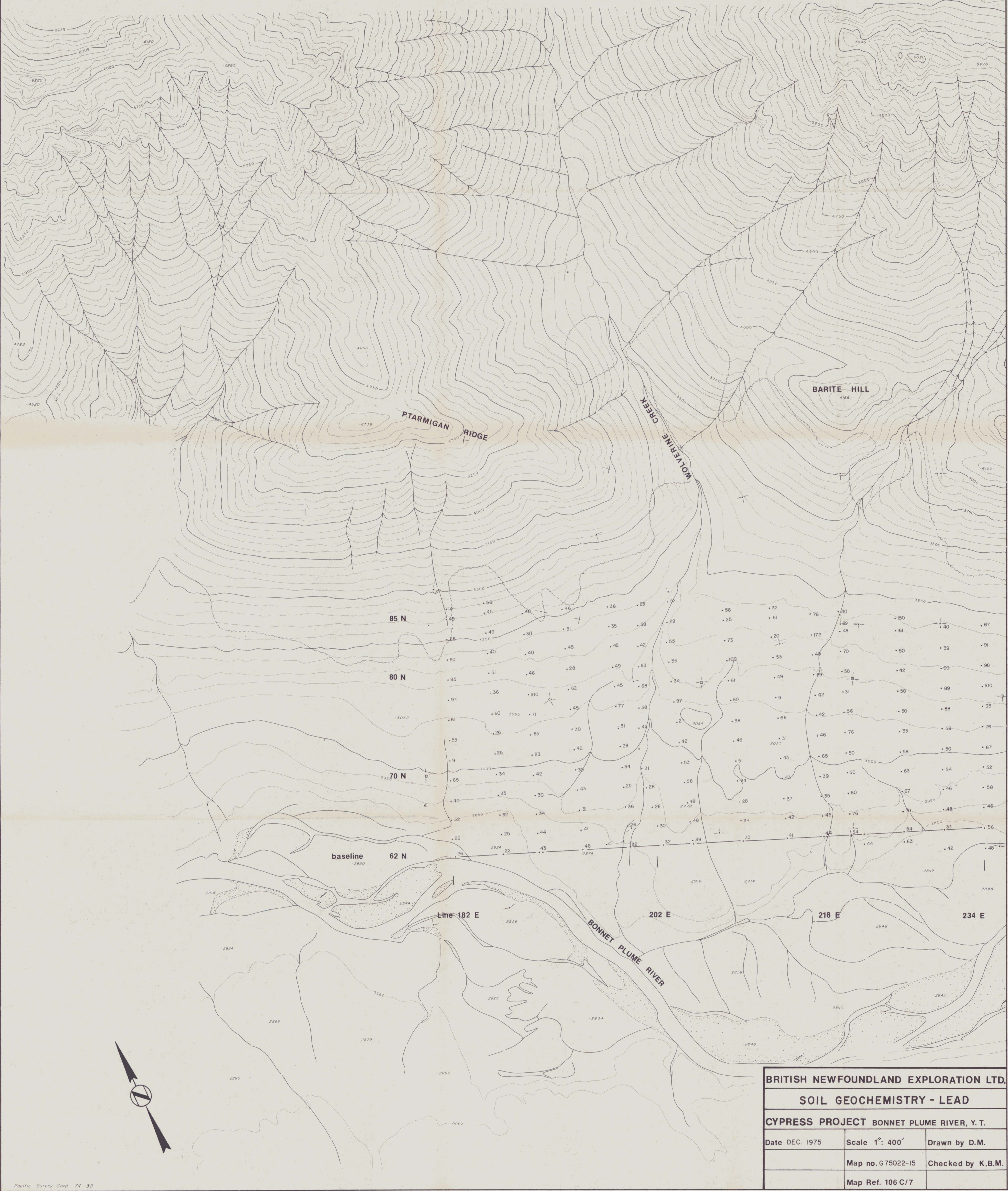
CENOZOIC	QUATERNARY		W	CALICHE CONGLOMERATE
PALEOZOIC		UNIT FIVE	P	BROWN - BLACK SHALE
			Q	BLUE-GREY LIMESTONE TO FERRODOLOMITE; REEF DETRITUS BRECCIA
		UNIT FOUR		POROUS, BUFF DOLOMITE; SOLUTION COLLAPSE BRECCIA WITH SPORADIC ZnS, PbS, FeS_2 AND PYROBITUMEN
			N	WAVY BEDDED DOLOMITE
			M	BUFF DOLOMITE WITH NUMEROUS BANDS OF QUARTZ
			L	VUGGY DOLOMITE
		UNIT THREE	K	SANDY DOLOMITE TO QUARTZ ARENITE WITH CROSSBEDDED AND CONGLOMERATIC SECTIONS
			J	LIGHT GREY FINE GRAINED DOLOMITE
	LOWER CAMBRIAN	UNIT TWO	BF	STRONGLY RECRYSTALLIZED DOLOMITE
			BR	SOLUTION COLLAPSE BRECCIA
			Bc	DOLOMITE WITH CHERT OR QUARTZ BLEBS OR STRINGERS
			Bs	DOLOMITE, IN PART SILICEOUS
			BP	DOLOMITE, PISOLITIC OR OOLITIC
			B	LIGHT - DARK, FINE - MEDIUM GRAINED DOLOMITE
			G	GOSSAN; YELLOW BROWN TO DARK RED BROWN, POROUS LIMONITIC MATERIAL
				THIS UNIT MAY INCLUDE THESE ROCK TYPES FOUND ONLY AS FLOAT: C, DARK GREY LIMESTONE; D BLUE GREY LIMESTONE; E, THIN BEDDED, DOLOMITIC, BLUE GREY SILTSTONE - SHALE; F, LIGHT BLUE-GREY, CALCAREOUS SILTSTONE - SHALE; H, IRON STAINED, DARK GREY SILTSTONE
PROTEROZOIC	HADRYNIAN — ? — ? — ? —	UNIT ONE	Aq	QUARTZ ARENITE
			A	SILTSTONE - SHALE

SYMBOLS

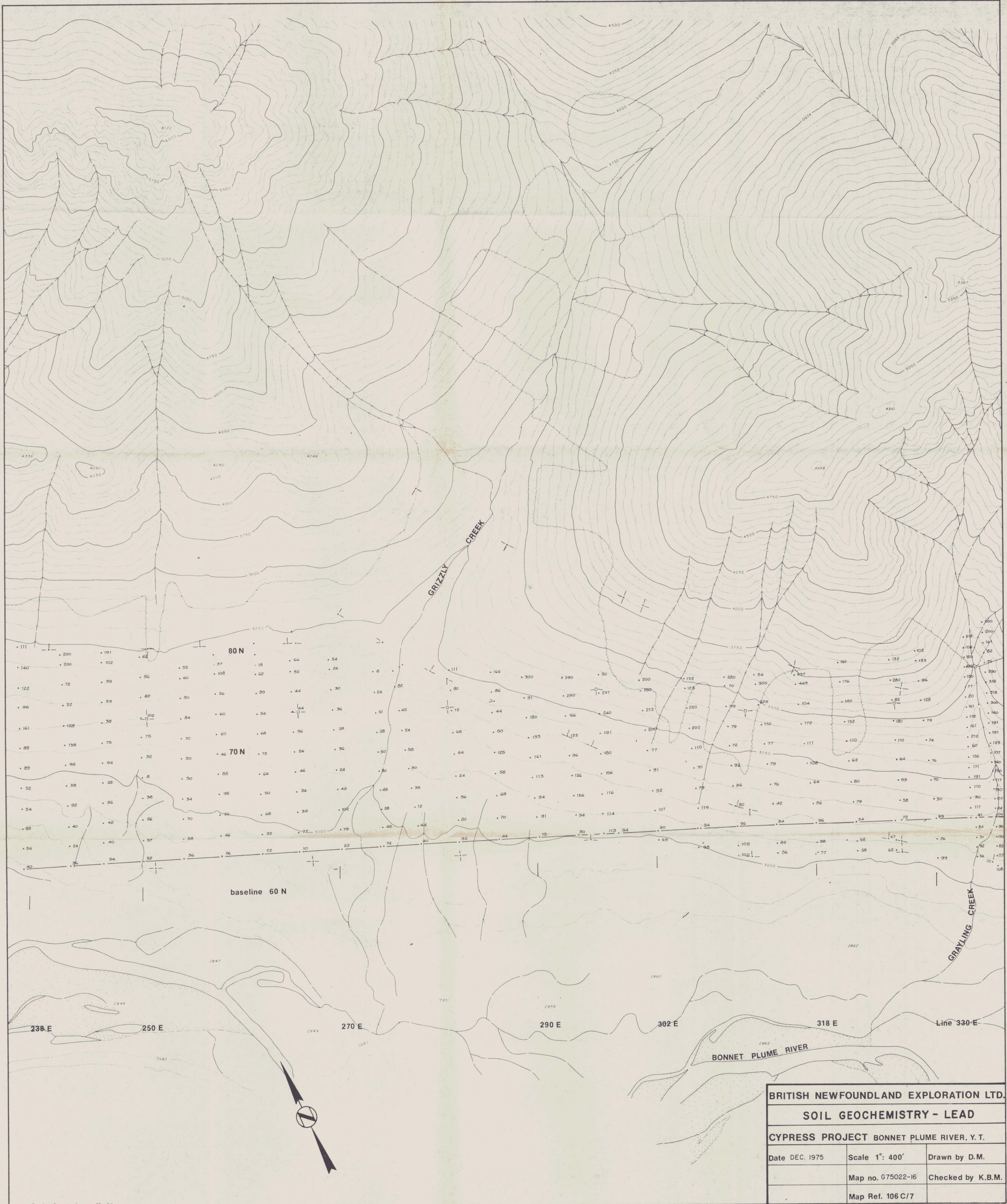
- BEDDING, STRIKE AND DIP
- JOINTING, STRIKE AND DIP; STRIKE AND VERTICAL DIP
- GEOLOGIC CONTACT, APPROXIMATE
- LIMIT OF OUTCROP
- FLOAT
- SLIDE AREA
- MINERALIZATION
- CLAIM POST LOCATION
- CLAIM BOUNDARY CORNERS
- FAULT, APPROXIMATE

BRITISH NEWFOUNDLAND EXPLORATION LTD.		
GEOLOGY		
CYPRESS PROJECT BONNET PLUME RIVER, Y. T.		
Date DEC. 1975	Scale 1": 400'	Drawn by D.M.
	Map no. G75022-5	Checked by K.B.M.
	Map Ref. 106 C/7	

Pacific Survey Corp.



PTARMIGAN RIDGE
WOLVERINE CREEK
BARITE HILL
85 N
80 N
70 N
baseline 62 N
Line 182 E
202 E
218 E
234 E
BONNET PLUME RIVER
BRITISH NEWFOUNDLAND EXPLORATION LTD.
SOIL GEOCHEMISTRY - LEAD
CYPRESS PROJECT BONNET PLUME RIVER, Y. T.
Date DEC. 1975
Scale 1": 400'
Drawn by D.M.
Map no. G75022-15
Checked by K.B.M.
Map Ref. 106 C/7
Pacific Survey Corp 74-38



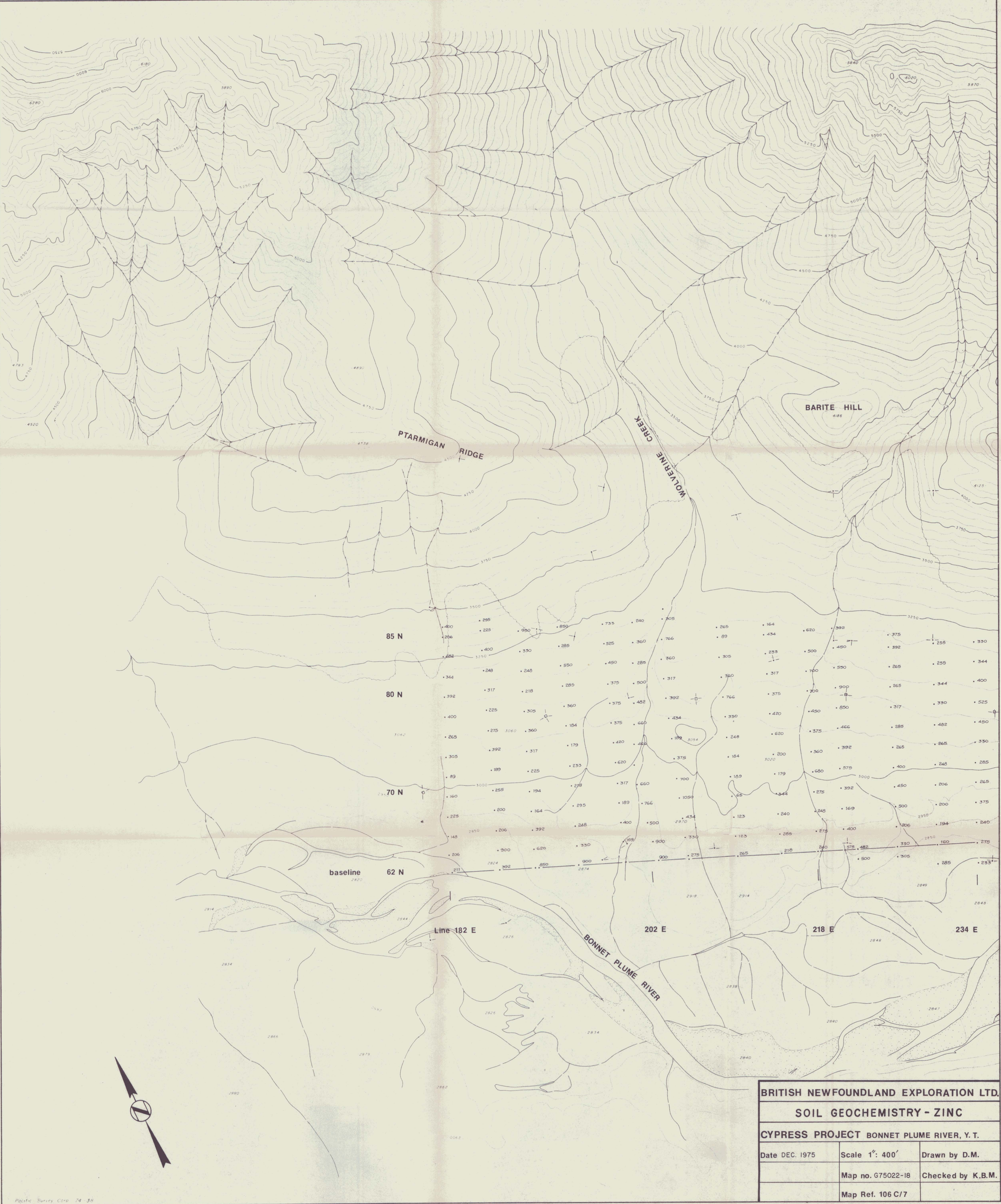
BRITISH NEWFOUNDLAND EXPLORATION LTD.

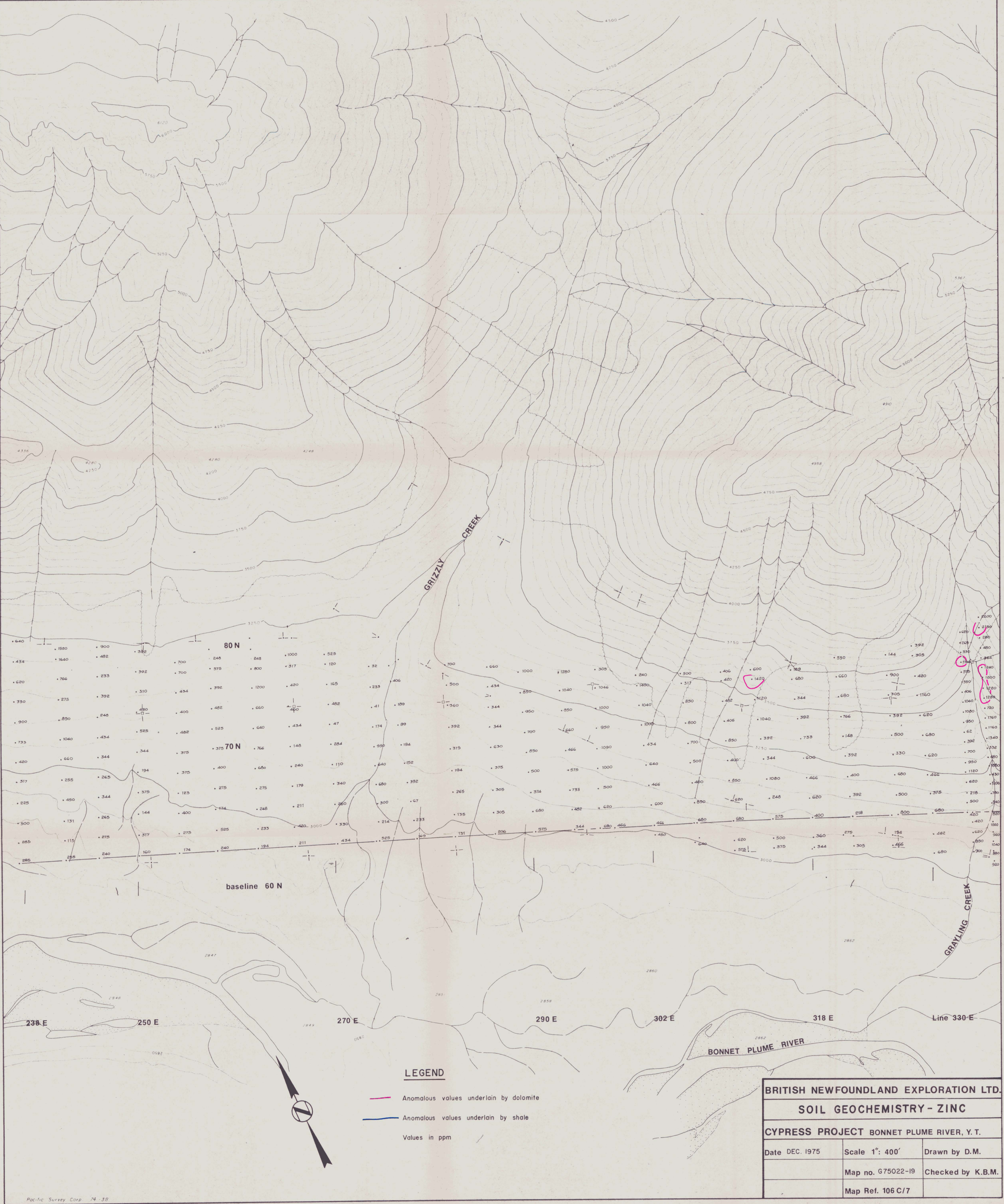
SOIL GEOCHEMISTRY - LEAD

CYPRESS PROJECT BONNET PLUME RIVER, Y. T.

Date DEC. 1975	Scale 1": 400'	Drawn by D.M.
	Map no. G75022-16	Checked by K.B.M.
	Map Ref. 106 C/7	

BRITISH NEWFOUNDLAND EXPLORATION LTD.		
SOIL GEOCHEMISTRY - LEAD		
CYPRESS PROJECT BONNET PLUME RIVER, Y. T.		
Date DEC. 1975	Scale 1": 400'	Drawn by D.M.
	Map no. G75022-17	Checked by K.B.M.
	Map Ref. 106 C/7	


PTARMIGAN RIDGE
WOLVERINE CREEK
BARITE HILL
BONNET PLUME RIVER
85 N
80 N
70 N
baseline
62 N
Line 182 E
202 E
218 E
234 E
BRITISH NEWFOUNDLAND EXPLORATION LTD.
SOIL GEOCHEMISTRY - ZINC
CYPRESS PROJECT BONNET PLUME RIVER, Y. T.
Date DEC. 1975
Scale 1": 400'
Drawn by D.M.
Map no. G75022-18
Checked by K.B.M.
Map Ref. 106 C/7



BRITISH NEWFOUNDLAND EXPLORATION LTD.

SOIL GEOCHEMISTRY - ZINC

CYPRESS PROJECT BONNET PLUME RIVER, Y. T.

Date DEC. 1975	Scale 1": 400'	Drawn by D.M.
	Map no. G75022-19	Checked by K.B.M.
	Map Ref. 106 C/7	

BRITISH NEWFOUNDLAND EXPLORATION LTD.

SOIL GEOCHEMISTRY - ZINC

CYPRESS PROJECT BONNET PLUME RIVER, Y. T.

Date DEC. 1975	Scale 1": 400'	Drawn by D.M.
	Map no. G75022-20	Checked by K.B.M.
	Map Ref. 106 C/7	

PLAN SHOWING PRELIMINARY CLAIM SURVEY FOR

CYPRESS RESOURCES LTD.
BRITISH NEWFOUNDLAND EXPLORATION LTD.

BONNET PLUME PROJECT

64°30' LATITUDE; 132°55' LONGITUDE (APPROX.)

MAP SHEET 106C-7

YUKON TERRITORY

JUNE, JULY, 1974

SCALE 1" = 1000'

MAP G75022-25

LEGEND:

- Indicates claim posts found and station number
- Indicates diamond drill holes.
- Indicates approximate position of claim posts not found or destroyed and station number

Refer to control plan and coordinate list submission for station coordinates and elevations.

Solid lines indicate boundaries of claims surveyed, dotted lines indicate claim boundaries within prior claims.

CLAIM GROUP NUMBER

- ONE
- TWO
- THREE
- FOUR
- FIVE
- SIX
- SEVEN
- EIGHT
- NINE
- TEN

WHITE, HOSFORD & IMPEY LTD.
BOX 4418
WHITEHORSE, YUKON