

EXPLORATION
N.T.S. 11E-C-1

This report has been examined by the Geological Evolution Unit and is recommended to the Commissioner to be considered as representative work in the amount of _____

Section 83 Yukon Quaternary Mining Act
Considered representative work under the Yukon Quaternary Mining Act

Yukon Territory



Geochemical and Trenching Report On The
Holly 1 - 47 Claims Situated At
140°17'W Longitude; 64°11' N. Latitude
Dawson M.D., Yukon Territory

Time Period of Work
May 24th - July 25th 1980

090698

OCTOBER 1980

E.G. OLFERT

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

\$ 25,150.00

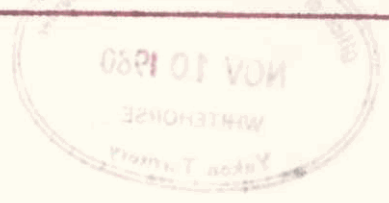
[Signature]

Resident Geologist or
Resident Mining Engineer

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

[Signature]
B. R. BAXTER
Supervising Mining Recorder

[Signature]
Commissioner of Yukon Territory



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COMINCO LTD.

EXPLORATION
N.T.S. 116-C-1

WESTERN DISTRICT
October 14, 1980

Geochemical and Trenching Report
On the Holly Group of Mineral Claims
Situating at 140°17' W. Longitude and 64°11' N. Latitude
Dawson M.D. Yukon Territory

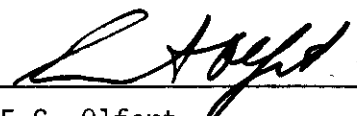
Located claims on which assessment credit is requested:

<u>Claim</u>	<u>Record #</u>	<u>Date Recorded</u>	<u>Assessment Credit</u>	<u>Amount</u>
Holly 1-14	YA47178 - 191	Aug.16/79	(4 1/4 yrs each) 14 X 4 1/4 = 59 1/2 yrs-----	<u>\$5,950.00</u>
Holly 15-35	YA47579 - YA47599	Sept.10/79	(4 1/4 yrs each) 21 X 4 1/4 = 89 1/4 yrs-----	<u>\$8,925.00</u>
Holly 36-47	YA50025 - YA50036	June 9/80	(4 1/2 yrs each) 12 X 4 1/2 = 54 yrs.-----	<u>\$5,400.00</u>
				<u>\$20,275.00</u>

Total Assessment Credit Requested 202 3/4 years.

Line cutting and geochemical sampling was done between May 24th and June 7, 1980.

Trenching was done between July 7th and July 25, 1980.

Report by: 
E.G. Olfert
B. Sc. Honours

Under the supervision of Roy Y. Watanabe.

Trenching and Geochemical Report
on the Holly Group of Mineral Claims
Situated at 140°17'W. Longitude; and 64°11'N. Latitude
Dawson M.D. Yukon Territory

INTRODUCTION

The Holly 1 - 35 claims were staked in Aug./Sept. 1979 to cover an area containing stratabound sphalerite galena mineralization, and a number of significant soil/silt geochemical anomalies. Twelve additional claims (Holly 36 - 47) were staked in June, 1980 to provide additional coverage. The region is underlain by a sequence of metamorphosed quartzites and phyllites of the Nasina Group.

This report is based on a geochemical soil-grid-sampling program conducted between May 24th to June 7th 1980 and a trenching program conducted between July 7th - July 25, 1980.

Personnel employed during the geochemical program include:

E.G. Olfert	4 days	409 Granville Street, Vancouver, B.C.
D. O'Brien	5 days	409 Granville Street, Vancouver, B.C.
D. Coolidge	4 days	409 Granville Street, Vancouver, B.C.
K. Veres	5 days	409 Granville Street, Vancouver, B.C.
A. Roberts	1 day	409 Granville Street, Vancouver, B.C.

The trenching was conducted by R.D. Gillespie of Dawson City using a D-8 cat equipped with a blade and ripper.

LOCATION AND ACCESS

The Holly property consists of 47 claims and is located 42 km. west-northwest of Dawson City and approximately 2 km. south of the road between Dawson City and the Alaska border.

The claims lie within the Dawson Mining Division and are located at 140°17'W. longitude and 64°11'N. latitude, N.T.S.: 116-C-1.

The claims are accessible by a 4 wheel drive road to the north/west edge of the property or by air from a helicopter base at Dawson City.

SUMMARY See Plate #3

Line-cutting, prospecting and geochemical soil-sampling was carried out over the main area of interest. The line-cutting consists of a baseline and four x-lines for a total of 9 kilometers. Soil samples were taken at 25 and 50 m. intervals along x-lines spaced 200 m. - 400 m. apart. Prospecting has led to the discovery of significant Zn/Pb float on the western part of the grid area. Geochemical results indicate a strongly anomalous zone over the central-eastern section of the grid area up to 700 - 800 m. wide and 1.5 km. long. The section of the grid containing the most significant discovered mineralization has only a weak geochemical response. Trenching was conducted to test the above geochemically anomalous area as well as some of the Pb/Zn float occurrences.

GEOLOGY

The regional area is underlain by the ordovician/silurian Nasina Group of the Yukon Crystalline Terrain. This sequence consists predominantly of carbonaceous, graphitic quartzites and phyllites which have undergone intense metamorphic deformation. The stratigraphy on the claim group trends in an approx. E/W direction dipping 15 - 30° to the South. Rocks along the southern boundary of the claim group consist of more massive grey quartzite. A quartz monzonite stock has intruded the sedimentary sequences and is located 1.5 km, to the north of the claims area.

TRENCHING See plate #3

Approximate calculation of the volume of excavation of individual trenches.

<u>Trench</u>	Length	X	Width	X	Depth	X 1/2 = Cu meters	X 1.3 = Cu Yds.
A ₁	370	X	3.5	X	1	X 1/2 = 647.5	X 1.3 = 841.75
A ₂	65	X	3.5	X	1	X 1/2 = 113.75	X 1.3 = 147.88
B	140	X	3.5	X	.75	X 1/2 = 183.75	X 1.3 = 238.88
C ₁	110	X	3.5	X	2	X 1/2 = 385	X 1.3 = 500.50
C ₂	85	X	3.5	X	1.5	X 1/2 = 223.12	X 1.3 = 290.06
D	110	X	3.5	X	1	X 1/2 = 192.50	X 1.3 = 250.25
E	200	X	3.5	X	.75	X 1/2 = 262	X 1.3 = 341.25
F	110	X	3.5	X	.75	X 1/2 = 144.37	X 1.3 = 187.69
H/G	550	X	3.5	X	.75	X 1/2 = 721.87	X 1.3 = 938.43
I	140	X	3.5	X	.75	X 1/2 = 183.75	X 1.3 = 238.87
J.	100	X	3.5	X	1	X 1/2 = <u>175</u>	X 1.3 = <u>227.50</u>
						3,232.61 Cu meters	4,203.06 Cu Yds.
						TOTAL 3,232	Cu meters 4,203 Cu yds.

Trenching was carried out by R.D. Gillespie of Dawson City using a D-8 cat with blade and ripper. Extensive permafrost was encountered along the trail to trench J and in the vicinity of trench J.

GEOCHEMISTRY See plates 1 and 2

Approximately 700 soil samples and 10 rock samples were collected and analyzed for Pb, Zn using the atomic absorption method. Some rock samples were also analyzed for barite.

In contouring the soil geochemical results 25 ppm Pb and 75 ppm Zn were selected as being threshold values, 50 ppm Pb and 100 ppm Zn were selected as anomalous and 100 ppm Pb and 200 ppm Zn as very anomalous values. The most significant geochemical anomaly occurs in the east-central part of the grid area. A zone up to 1.5 - 1.7 km. long and .5 - .7 km. wide is anomalous in both Pb and Zn (Zone A). Common values for Zn are 150 - 350 ppm with a few samples over 700 ppm. Pb values in this zone are commonly in the 50 - 150 ppm range. Higher anomalous Pb values are sporadic in occurrence; the highest Pb value was 870 ppm. A few other geochemical anomalies occur elsewhere on the grid area:

- 1) Anomaly B. occurs near trench B. in the Western Section of the property. This zone is about 120 m. wide containing values in the range of 109-520 ppm Zn and 90 - 307 ppm Pb.
- 2) Two or three other small anomalies (zone C) which occur at the west end of the grid area are weakly anomalous in Pb/Zn.
- 3) A few isolated areas (zone D) near the east end of the grid are also weakly anomalous in Pb/Zn.

Silt geochemistry has been done previously. Results indicate that the creeks draining the grid area are all anomalous ranging from 117 - 223 ppm Zn and 27 - 46 ppm Pb, compared to other creeks off the grid area which contain values in the range of 63 - 92 ppm Zn and 6 - 13 ppm. Pb.

MINERALIZATION See Plate #3

A number of thin mineralized horizons occur within the stratigraphic sequence of carbonaceous quartzites and phyllites. Mineralization generally consists of thin bands (.5 - 2 cm. thick) of dark brown sphalerite hosted within a buff micaceous quartzite. Occasionally disseminated galena, pyrite and sometimes pyrrhotite are also associated with the sphalerite. The most significant mineralization has been found to occur near the West end of the grid area, where numerous mineralized float boulders were found along the creek bed. Some of the float samples contained up to 5% Zn. A few samples of Pb/Zn sulphide float have been found on the central and eastern sections of the grid area but these occurrences appear to be small and isolated with relatively weaker grades of mineralization. The above areas will be discussed with reference to specific trenches.

1) Trench A

A section of mineralized buff quartzites up to 7 - 8 m. thick is exposed in this trench. Mineralization consists of disseminations and thin bands of sphalerite and trace amounts of galena. Although individual samples contain up to 3-4% Zn, representative chip sampling across a 5 m. section contained only 0.75% Zn, 0.06% Pb, .04 oz/t. Ag. This mineralized unit appears to trend west but was not intersected in a trench dug 70 meters away in that direction. A sample of buff quartzite found at a sample location still further to the west was anomalous in Pb/Zn and contained 1.7% barite. Attempts to trace this same unit to the east across the creek have been unsuccessful. The mineralized float boulders in the creek bed occur downstream from this trench location and are believed to have been eroded from this sulphide horizon.

2) Trench C

A section of buff mineralized quartzites up to 5 m. thick has been found to continue over a strike-length of approx. 100 meters. A few individual samples taken from the surface showing contained up to 4-5% Zn but a representative chip sample across 2.5 m. in the trench returned 0.02% Pb, 0.58% Zn, and 0.08 oz/t. Ag. The mineralized horizon appears to weaken further to the N.E. and is obscured by creek float to the S.W.

3) Trench D,E,F

A few float samples of buff quartzites containing disseminated galena were found at trench D. No visible sulphides were found in either trenches E or F: only a few rusty weathered laminations in micaceous quartzites and quartz-mica schist. To the south of the above trenches a few float samples of buff quartzite containing minor sphalerite/galena mineralization were found along the cat-trail. The best sample assayed 1.35% Zn, 0.19% Pb. and 0.08 oz/t. Ag. approx. 800 m. north of trench F a rock geochemical sample of buff quartzite was highly anomalous in Pb (251 ppm) and Zn (505 ppm).

4) Trench G, H

Only minor sphalerite mineralization was found in dark quartzite at one locality on this trench. Some rock geochemical samples taken from the North end of this trench were anomalous in Pb, Zn. These samples consisted of dark micaceous quartzite, and quartz mica schists with buff laminations.

5) Trench I

Although no fresh sulphides were found, some of the dark grey quartzites in this trench contain minor leached vugs.

6) Trench J

The southwest section of this trench is underlain by buff-quartzites and schists that contain some leached vugs. Some disseminated Pb mineralization in buff quartzites was found 800 meters to the north up the creek from this trench.

7) Trench B

No evidence of any mineralization was found in this trench. Rock geochemistry indicates that the grey phyllites that underlie this trench are anomalous in Pb and Zn.

Elsewhere off the grid area minor occurrences of galena and sometimes sphalerite are found associated with quartz-veinlets.

INTERPRETATION OF RESULTS AND CONCLUSIONS

The western section of the grid area, which contains most of the known sulphide occurrences, does not respond well to soil geochemistry. This area of the grid is relatively flat topographically; thus erosion is less active and leaching has been more persuasive in a non-glacial environment. Even subtle geochemical anomalies in this area such as the one west of trench A may be significant in that it represents a continuation of the sulphide horizon in trench A. The geochemical anomaly at trench B. appears to reflect anomalous Pb/Zn values derived from the underlying dark argillaceous phyllites.

The central/eastern section of the grid area contains the best geochemical anomaly but only very minor amounts of sulphide have been found in this area. The source for these anomalies appears to be thin weakly mineralized units of buff quartzites and quartz-mica schist containing rusty laminations and some leached vugs. Some of the anomalous soil samples along the creeks in this area may be enriched by ground water precipitating metals along the break in slope. This general area is steeper, where erosion is more active and thus the geochemical anomalies are more likely to be preserved.

The eastern section of the grid area contains a number of subtle geochemical anomalies. These anomalies are possibly derived from buff quartzites containing trace amounts of Pb/Zn sulphide.


RECOMMENDATIONS

- 1) More trenching is recommended in the vicinity of trench A to extend the strike-length of this mineralized horizon and to test a subtle geochemical anomaly along the trend to the west.
- 2) Trenching is recommended along the creek North of trench J to test the east end of the main Pb/Zn geochemical anomaly. Some Pb mineralization has been found at the upper end of this creek.

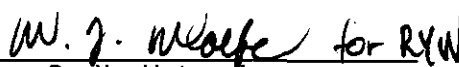
MAPS

1. Location Map
2. Claim Map 1"-1/2 mi.
3. Pb Geochemistry 1:5,000 Plate 1
4. Zn Geochemistry 1:5,000 Plate 2
5. Trenching 1:5,000 Plate 3

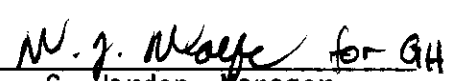
Reported by:


E.G. Olfert
Geologist

Endorsed by:

 for RYW
R. Y. Watanabe
Senior Geologist

Approved for
Release by:

 for GH
G. Harden, Manager
Exploration
Western District

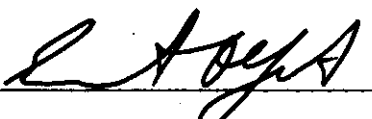
STATEMENT OF QUALIFICATIONS

I, Ernest Olfert, with business address at 409 Granville Street, 7th floor, Vancouver, British Columbia, do hereby certify that I have supervised the field work and have assessed and interpreted the data resulting from this trenching and geochemical program.

I also Certify that:


1. I am a graduate of the University of Calgary, Alberta, B.Sc. Honours Geology;
2. I have engaged in mineral exploration since graduation.

Respectfully Submitted:



E. G. Olfert, B.Sc. Honours

Ernest Olfert was responsible for supervising the trenching and geochemical program described herein. Mr. Olfert received his B.Sc. degree in Honours Geology from the University of Calgary in 1970. He has worked for Cominco for eleven summer field seasons and has been a permanent employee since December 1, 1971. I consider him a competent geologist.

Signed:  for G.H.
G. Harden, Manager
Exploration
Western District

C A N A D A
YUKON TERRITORY
TO WIT:

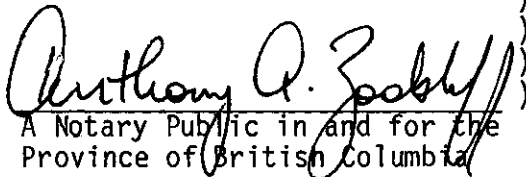
STATUTORY DECLARATION


I, ROBIN LAWSON WOODS, of the District of North Vancouver, in the Province of British Columbia, DO SOLEMNLY DECLARE THAT:

1. I am the Supervisor, Exploration and Foreign Accounting for Cominco Ltd., 2300 - 200 Granville Street, Vancouver, British Columbia, and, as such have knowledge of the facts deposed to herein.
2. Attached to this Statutory Declaration, as Schedule A, is a statement of expenditures indicating the expenditures charged by Cominco Ltd. to the Holly Group account for the period January 1, 1980 to September 30, 1980.
3. The statement of expenditures referred to in paragraph 2 is true and accurate to the best of my knowledge, information and belief.
4. This Statutory Declaration is made in support of an application for a Certificate of Work pursuant to the Yukon Quartz Mining Act.

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.

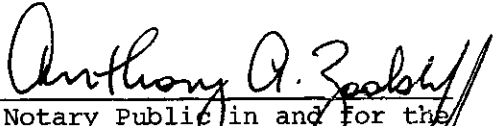
DECLARED before me at the City)
of Vancouver in the Province)
of British Columbia, this 17th)
day of October 1980)


A Notary Public in and for the
Province of British Columbia



Robin Lawson Woods

This is Schedule A referred to
in the Statutory Declaration
of ROBIN LAWSON WOODS
declared before me this 17th day
of October 1980


A Notary Public in and for the
Province of British Columbia

STATEMENT OF EXPENDITURES


HOLLY GROUP

DAWSON M.D., YUKON

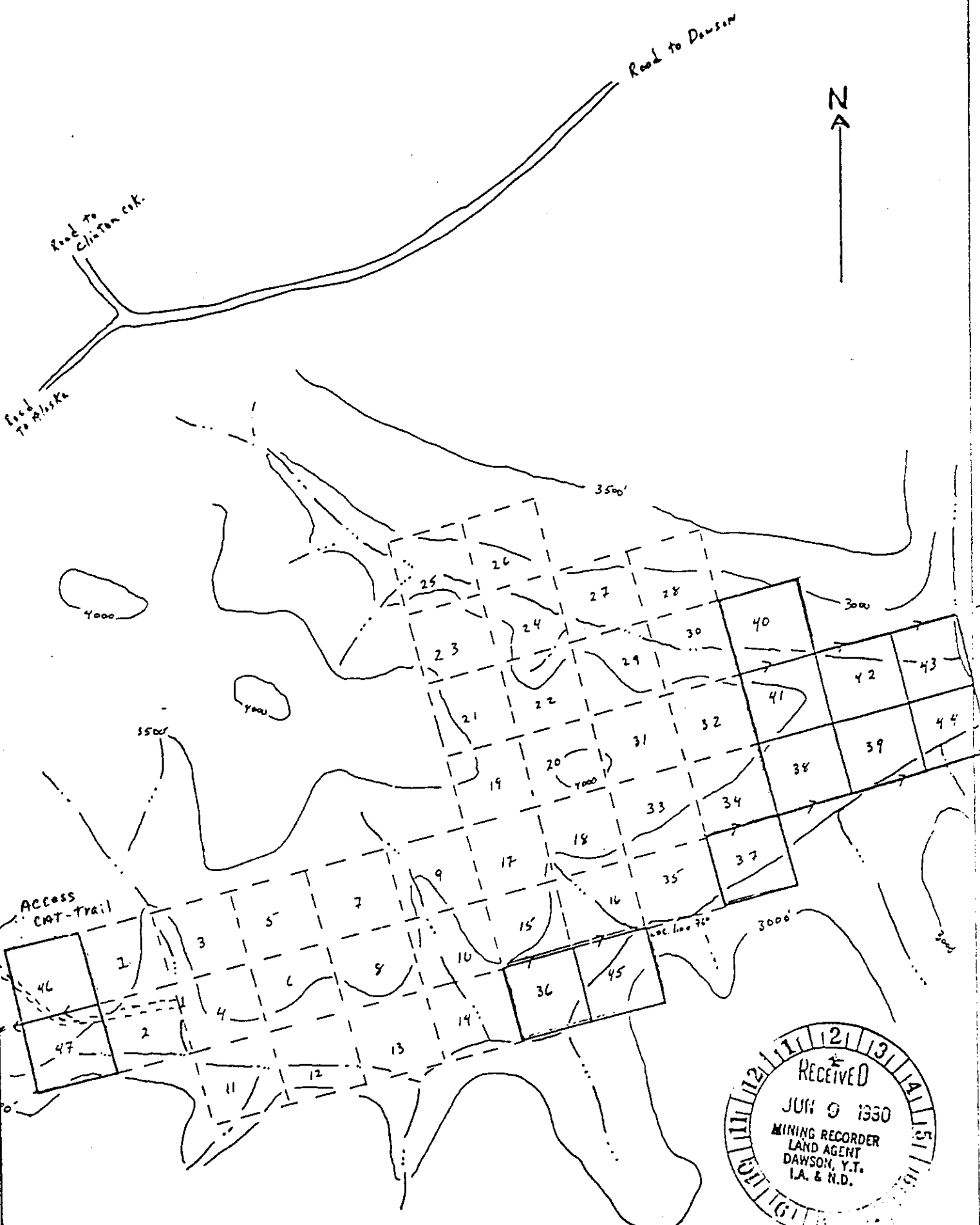
JANUARY 1, 1980 TO SEPTEMBER 30, 1980

Geology	\$ 8,546
Linecutting	3,000
Transportation	4,733
Geochemistry	2,671
Trenching	16,400
Camp costs	1,862
Tenure	1,088
Administrative services	3,830
	<hr/>
	\$42,130
	<hr/> <hr/>

Cominco Ltd.
Vancouver Office
October 17, 1980
Copies: Mining Recorder (2)
Senior Technician
File (2)



Robin Lawson Woods
Supervisor, Exploration
& Foreign Accounting
Anthony A. Zaboloff



140° 30'
+ 64° 10'

Tag #'s Holly 1-14
YA 47178 - YA 47191

Holly 15-35
YA 47579 - YA 47599

Holly 36, 45 June 2nd/30 E. Olfert
Holly 37-44 June 2nd/30 K. Veras
Holly 46, 47 June 3rd/30 D. Coolidge

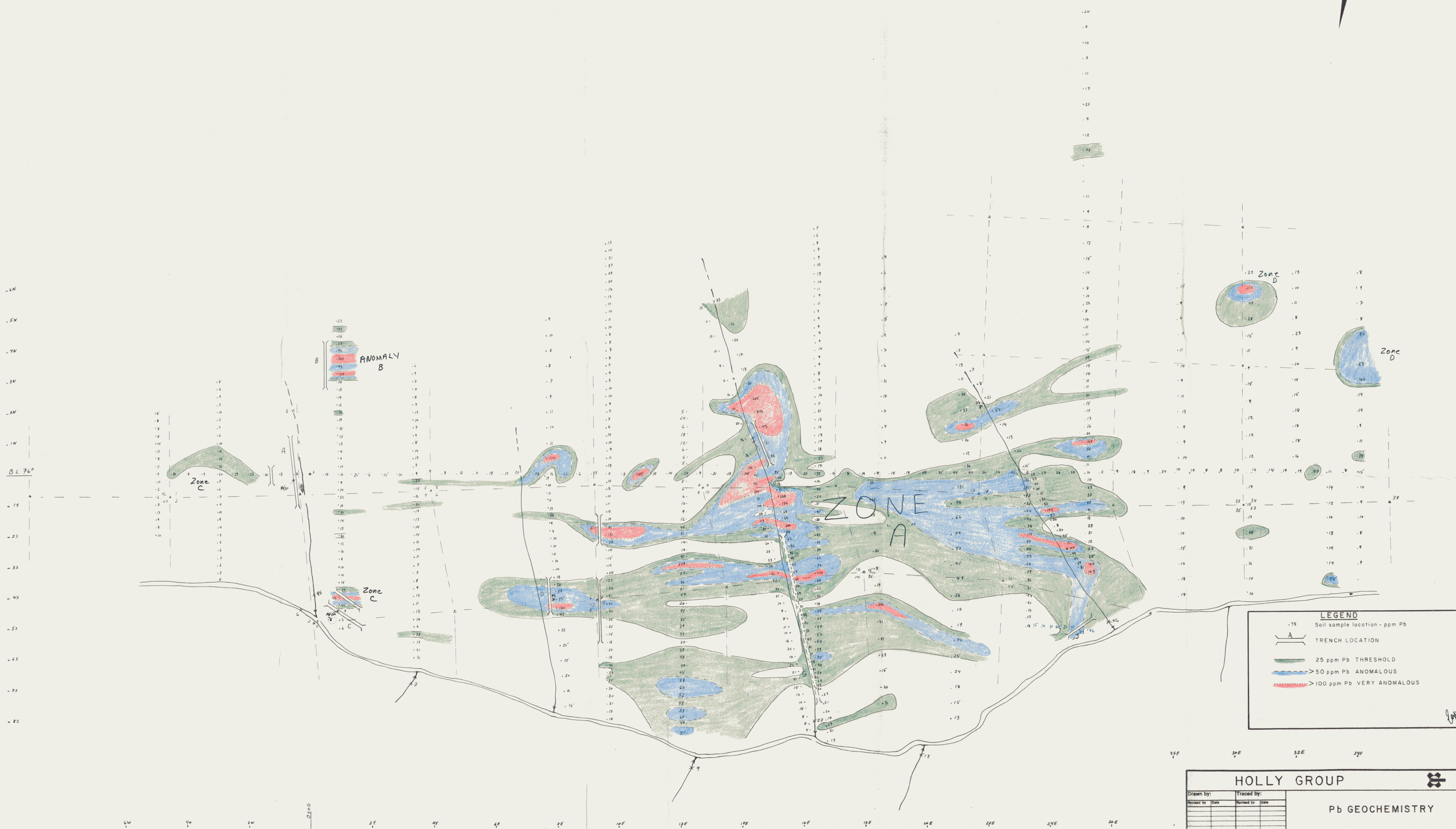
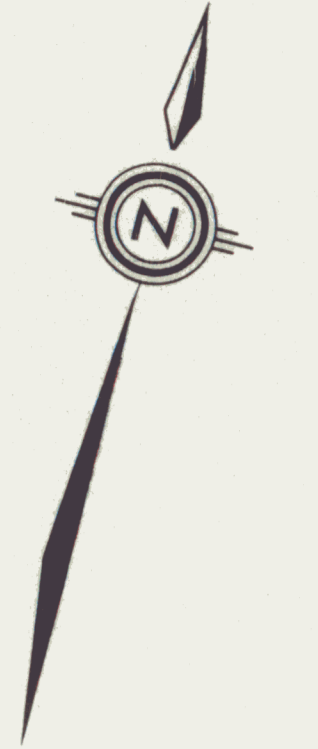
NTS 116-C-1



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

HOLLY CLAIMS

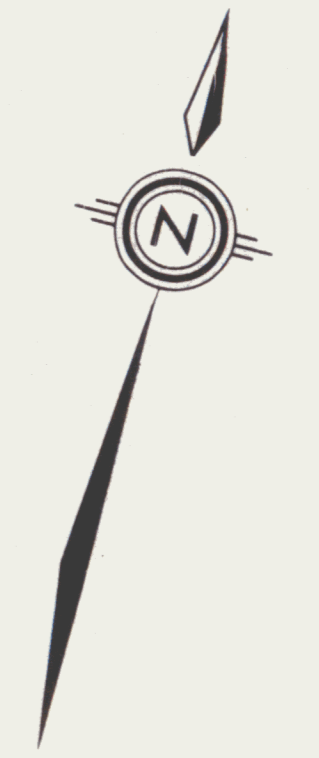
Scale: 1" = 2 mi Date: Plate:



LEGEND

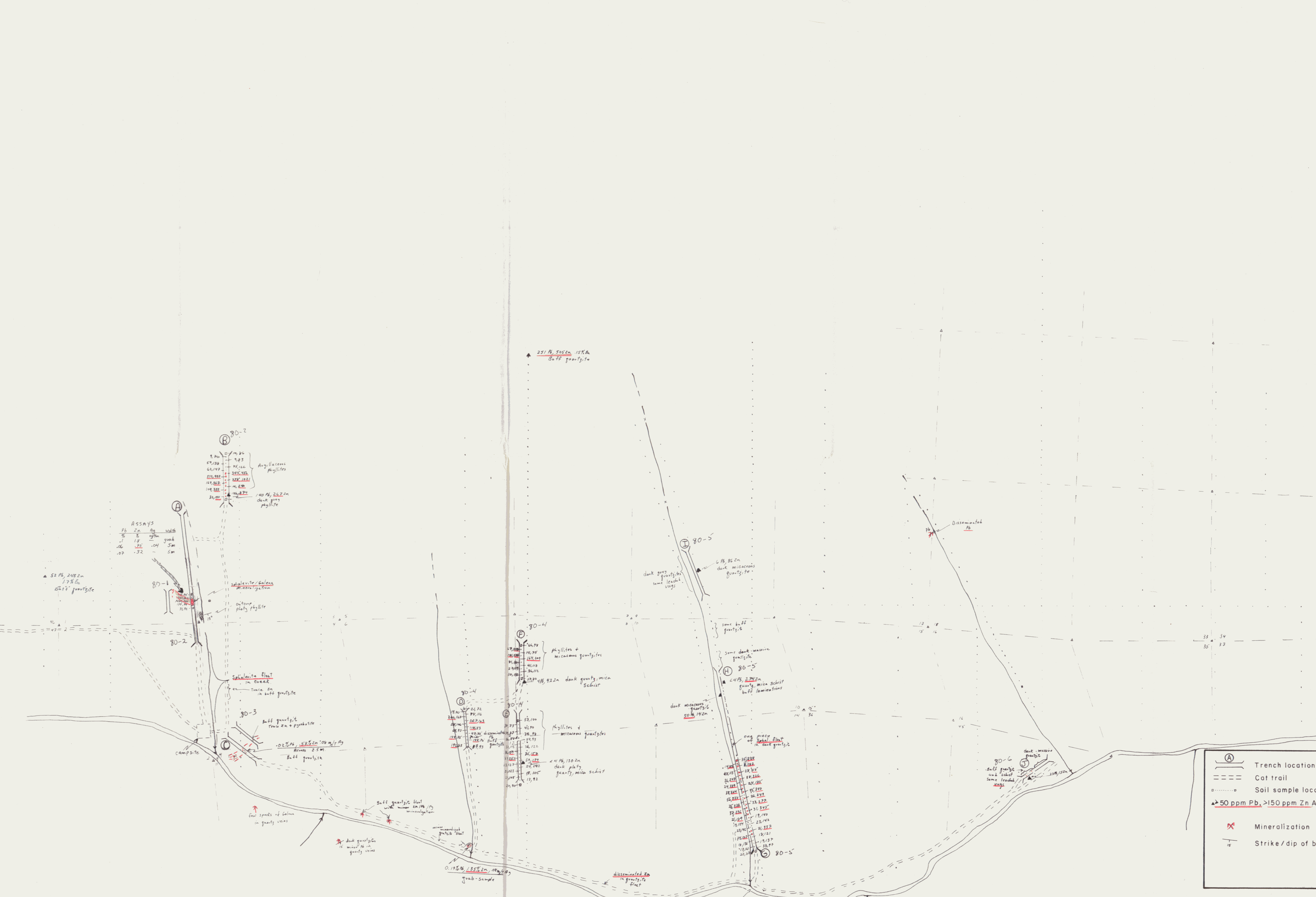
- Soil sample location - ppm Pb
- A TRENCH LOCATION
- 25 ppm Pb THRESHOLD
- >50 ppm Pb ANOMALOUS
- >100 ppm Pb VERY ANOMALOUS

HOLLY GROUP	
Drawn by:	Traced by:
Revised by:	Revised by:
Pb GEOCHEMISTRY	
Scale: 1:5,000	Date: 6-10-1980
Plate: 1	



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100E



(A) Trench location
 --- Cat trail
 (o) Soil sample locations
 (▲) 50 ppm Pb, >150 ppm Zn Anomalous rock geochemistry
 (X) Mineralization Pb, Zn (float or outcrop)
 / Strike / dip of bedrock

N.T.S. 116 C-1
HOLLY GROUP
TRENCH LOCATIONS
 Mineralization & Geology
 Scale: 1:5,000 Date: 7-10-1980 Plate: 3
 Form 210 9/75