

In fulfillment for requirements  
for representation work, we the  
undersigned respectfully submit:



A GEOLOGIC AND GEOCHEMICAL EVALUATION  
OF THE CATHY 1-5, 7-10, LORRAINE 1-6,  
CHAS 1-5, KAM 1-6, FAT AND CITY CLAIMS,  
YUKON TERRITORY, CANADA

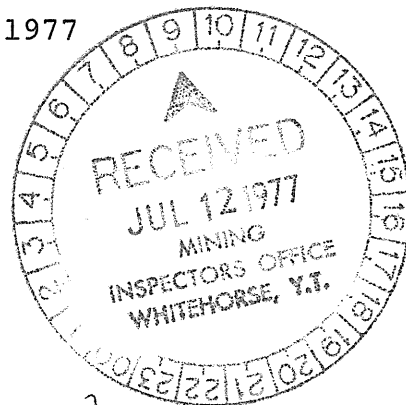
Claim Sheet Number: 105-0-7

Latitude : 63<sup>0</sup> 16' N


Longitude : 134<sup>0</sup> 34' <sup>N</sup> - 130<sup>0</sup> 39' W  
<sub>W</sub>


being a result of work performed between

August 1, 1976 and May 20, 1977



BAROID OF CANADA, LTD.  
NL BAROID PETROLEUM SERVICES  
NL INDUSTRIES, INC.  
HOUSTON, TEXAS

  
D. B. Simon  
Geologist

  
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090206

TABLE OF CONTENTS

<u>SUBJECT</u>	<u>PAGE</u>
INTRODUCTION AND SUMMARY	1
OWNERSHIP, CLAIMS, AND HISTORY	3
PROCEDURES AND METHODS	5
PERSONNEL AND QUALIFICATIONS SUMMARY	7
GEOLOGICAL DATA	9
GEOCHEMICAL DATA	15
APPENDIX I - Summary of Costs	30
APPENDIX II - Itemization of Costs per Claim Group	32
AFFIDAVIT	33
RECEIPTS	34

## Introduction and Summary

The 1975 Exploration Program in the Yukon carried out by Baroid personnel resulted in the acquisition of 19 claims and an evaluation of the potential of the Macmillan Pass region for additional discoveries of barite. Work done in 1976 was aimed at assessing the feasibility of future development and mining on two areas staked during 1975. These areas are the Cathy claims and the Lorraine/Kam claims. During the course of the work, it became apparent that additional barite occurred on ground not yet staked. Twelve claims were located to cover this barite, and a brief survey was done on these claims to assess their reserve potential.

In 1975, all samples collected were assayed for lead, zinc, and copper. Results in some areas were very encouraging and a geochemical survey was initiated during 1976 to assess the response of these elements plus barium and silver to a soil and stream sediment sampling program. Also, a gossan on the City claim was sampled and analyzed.

Results from the 1976 geologic program indicate that reserves on the Cathy claims are not as large as previously reported. The reduction in reserves is due to the ore bodies being lens-shaped, pinching out laterally, rather than being continuous beds, well-defined along strike for large distances. Mapping on the Lorraine/Kam claims gives similar results. The calculated reserves for both of these claim groups should be reduced by 50 percent.

Sampling performed in 1976 on the Cathy claims does not show results significantly different from the 1975 work. However, the sampling program on the Kam 1-2 claims indicates that specific gravities of the barite vary considerably along strike. One bed was sampled in two places along strike in 10 foot intervals and was compared with 1975 results. The corresponding specific gravity of each interval ranged from 3.95 to 4.35.

Geologic mapping done in 1975 was collated with some additional mapping in 1976 and a map covering all the claims was prepared. The geologic map is incomplete in several areas, but two interesting features are evident.

- . The baritic sedimentary rocks were probably deposited in a local basin having a width of at least 7 miles and a depth of 1200 feet.
- . Post-depositional deformation complexly folded and faulted the baritic sequence but the sequence, as exposed on our claims, is probably a single stratigraphic unit.

Results from the 1976 geochemical work indicate that in almost all cases the geochemical response of silver, copper, zinc, and barium exceeded the background values. Lead, however, did not exhibit a significant response which confirms the results of the rock assays done in 1975. Conversely, copper which gave very low results in the 1975 work was completely anomalous in the stream sediment sampling program. The soil sampling program over the gossan exposed on the City claim gave results consistent with a steeply dipping vein-type occurrence. The minerals responsible for the geochemical anomaly are not presently known although minor calcocite and malachite were noted in hand samples.

Ownership, Claims and History

In February 1975, S. Wise and J. E. Lunn staked, recorded and transferred to Baroid of Canada Ltd., 12 claims, Cathy 1-6 and Lorraine 1-6. During July 1975, an exploration program was conducted on these claims and the surrounding area. The work resulted in the staking of 7 additional claims by L. M. Tyralla and D. B. Simon. These claims were recorded in August and transferred in December, 1975 to Baroid of Canada.

Further work done in August, 1976 showed that the barite exposures on the original Cathy claims overlapped the existing claim boundaries in several areas. Four contiguous claims adjoining Cathy 1-4 were staked to cover the barite on this open ground. In addition, reconnaissance work along strike from barite outcrops on the Chas claim found nine barite and 4 claims, Chas 2-5, were staked to cover the extension. In the area of the Lorraine and Kam claims, two traverses were run along the hillside and valley to the east and west of the Kam 1-2 Fractions. Rocks exposed on the eastern side of the ridge were predominantly red shales and siltstones similar to rocks overlying the barite-limestone-black shale zone at the extreme northern end of the Lorraine 3 and 4 claims. No barite was encountered. On the western side, black shale with minor limestone was exposed on the hillsides and valley bottom. Although no barite was found, much of the traverse crossed areas of extensive soil and vegetation cover. The area looked favorable for possible extension of barite from the Lorraine and Kam claims. Four claims were staked adjoining the Lorraine and Kam group and partially overlapping Lorraine 1 and 2.

In summary, Baroid of Canada Ltd., presently controls 31 claims in the Macmillan Pass region, Yukon Territory. The following table lists the claims by name and grant number and gives the pertinent recordation data.

<u>Name of Claim</u>	<u>Grant No.</u>	<u>Date Staked</u>	<u>Date Recorded</u>	<u>Date Transferred</u>	<u>Expiration Date *</u>
Cathy 1	Y97235	2/8/75	2/10/75	2/10/75	2/10/81
Cathy 2	Y97236	2/8/75	2/10/75	2/10/75	2/10/81
Cathy 3	Y97237	2/8/75	2/10/75	2/10/75	2/10/81
Cathy 4	Y97238	2/8/75	2/10/75	2/10/75	2/10/81
Cathy 5	Y97239	2/8/75	2/10/75	2/10/75	2/10/81
Cathy 6	Y97240	2/8/75	2/10/75	2/10/75	2/10/81
Cathy 7	YA6475	8/4/76	8/25/76	1/25/77	8/25/77
Cathy 8	YA 6476	8/4/76	8/25/76	1/25/77	8/25/77
Cathy 9	YA6477	8/4/76	8/25/76	1/25/77	8/25/77
Cathy 10	YA6478	8/4/76	8/25/76	1/25/77	8/25/77

<u>Name of Claim</u>	<u>Grant No.</u>	<u>Date Staked</u>	<u>Date Recorded</u>	<u>Date Transferred</u>	<u>Expiration Date *</u>
Chas	Y98235	7/17/75	8/ 7/75	1/25/77	2/10/81
Chas 2	YA6348	8/ 6/76	8/10/76	1/25/77	8/10/77
Chas 3	YA6349	8/ 9/76	8/10/76	1/25/77	8/10/77
Chas 4	YA6350	8/ 9/76	8/10/76	1/25/77	8/10/77
Chas 5	YA6351	8/ 9/76	8/10/76	1/25/77	8/10/77
Fat	Y98236	7/18/75	8/ 7/75	12/ 1/75	2/10/79
City	Y98237	7/18/75	8/ 7/75	12/ 1/75	2/10/79
Kam 1 Fr.*	Y98345	7/16/75	8/14/75	12/ 1/75	2/10/81
Kam 2 Fr.	Y98346	7/16/75	8/14/75	12/ 1/75	2/10/81
Kam 3	YA6471	8/ 6/76	8/25/76	1/25/77	8/25/77
Kam 4	YA6472	8/ 6/76	8/25/76	1/25/77	8/25/77
Kam 5	YA6473	8/ 6/76	8/25/76	1/25/77	8/25/77
Kam 6	YA6474	8/ 6/76	8/25/76	1/25/77	8/25/77
Lorraine 1	Y97229	2/ 8/75	2/10/75	2/10/75	2/10/81
Lorraine 2	Y97230	2/ 8/75	2/10/75	2/10/75	2/10/81
Lorraine 3	Y97231	2/ 8/75	2/10/75	2/10/75	2/10/81
Lorraine 4	Y97232	2/ 8/75	2/10/75	2/10/75	2/10/81
Lorraine 5	Y97233	2/ 8/75	2/10/75	2/10/75	2/10/81
Lorraine 6	Y97234	2/ 8/75	2/10/75	2/10/75	2/10/81
Walt	Y98238	7/16/75	8/ 7/75	12/ 1/75	2/10/79
Les	Y98239	7/16/75	8/ 7/75	12/ 1/75	2/10/79

\* Current date (as of May, 1977) of expiration of claims.  
These dates are subject to change pending approval of  
representation work filed June 1, 1977.

This report and the application for Certificates of Work concern only 28 of the 31 claims controlled by Baroid of Canada. No work was done during August, 1976 on the Cathy 6 claim or the Les and Walt claims. These claims are not contiguous to either the Lorraine-Kam Group or the Cathy-Chas Group and did not warrant additional work.

## Procedures and Methods

Geologic and geochemical work was carried out from a base camp situated on an unnamed lake on the southeastern flank of Keele Peak. Access to the individual claims, 12 air miles from the base camp, was provided by a Bell 260-B Jet Ranger helicopter. The helicopter was chartered from Trans North Turbo Air (1971) Ltd. in Whitehorse at an hourly rate of \$295.00 Canadian, exclusive of fuel. Camp supplies used during the 1975 Exploration Program were removed from storage in Onoway and shipped to Whitehorse. Additional supplies and groceries were purchased in Whitehorse and flown into base camp by float plane; Trans North served as expeditor. Fuel for the helicopter was flown into base camp by float plane from Ross River.

The geological and geochemical field work was accomplished by company personnel, D. B. Simon and Dr. J. B. Johnson, from August 1, 1976 to August 10, 1976. The personnel were flown out to the claims each morning and returned to base camp each evening. Field work this year consisted of more detailed regional mapping with emphasis on correlating the baritic horizons between the individual claims. Additional mapping and sampling was conducted on these claims showing the best potential for mining. Mapping was accomplished on claim reference map sheet 105-0-7. Each rock chip sample collected weighed approximately 1 pound and consisted of a continuous chip sample from the base of the baritic zone to the top. Each sample was marked and the location was plotted on the geologic field map. At the end of field work, the samples were bagged and transported by air freight to Baroid's Metallurgical Laboratory in Malvern, Arkansas for analysis. Soil and silt samples collected weighed about 1/4 pound and were taken downstream along intermittent creeks which drain the claim group. The samples were coded, located on the field map and taken back to Golden, Colorado for analysis. The geochemical program was initiated to determine the feasibility of future geochemical work and to determine the magnitude of response for barium, silver, copper, lead and zinc on our claim groups.

Six working days from August 29, 1976 to September 8, 1976 were utilized to prepare the report which was a collective effort of the personnel who did the field work. Maps accompanying the report were drafted in the Houston office.

Geochemical evaluation of samples is a part of the geological investigation of these claims. Geochemical services were performed by qualified metallurgists and geochemists at Baroid's Metallurgical Laboratory, P. O. Box 10, Malvern, Arkansas and Skyline Laboratory Wheat Ridge, Colorado, an independent company. The specific analytical procedures utilized are outlined in the following paragraphs.

Testing of the Yukon prospect samples included sample preparation, specific gravity analyses and chemical analyses and assays. Specific gravity and chemical analyses were conducted on individual rock chip and soil/silt samples.

#### Sample Preparation

Rock chip samples, as received, generally ranged in size  $\frac{1}{2}$  to 1 inch in diameter, 1 to 2 inches wide and 1 to 3 inches in length. Each sample for specific gravity and chemical analyses was crushed to minus 100-mesh. Samples of soil and silt were dried and ground to minus 200-mesh.

#### Specific Gravity Analysis

Standard Le Chatelier specific gravity tests were conducted. This involves placing a measured weight of the sample into a Le Chatelier flask with a measured amount of kerosene. The pulp is mixed to remove air bubbles and allowed to stand in a constant temperature bath for two hours. The change in volume is then used to calculate the specific gravity.

#### Chemical Analyses

Standard wet-chemical analyses were conducted to determine the lead, copper and zinc content of each soil and silt sample. This involves several dissolution, precipitation, filtration and titration steps. Atomic absorption spectrometry was used to analyze for silver content.

Personnel and Qualifications Summary

The geologic work outlined in this report was performed by one geologist employed by NL Baroid Petroleum Services, P. O. Box 1675, Houston, Texas 77001 and one geochemist from Mineral Resources Department, NL Industries, Inc., Golden, Colorado. The qualifications and relevant training and experience of each individual is summarized below:

Donald B. Simon, Geologist  
P. O. Box 1675, Houston, Texas

Mr. Simon graduated from Western Washington State College in 1970 with a B.A. degree in geology and biology. He worked as a field geologist with AMAX Exploration Inc., in Kamloops, B.C. for 1½ years and then returned to school where he received a M.S. degree in geology from New Mexico Institute of Mining and Technology. In December, 1973, Mr. Simon joined Baroid as an exploration geologist.

Dr. J. B. Johnson  
5926 McIntyre Street, Golden, Colorado

Dr. Johnson graduated from Whitworth College in June, 1969 with a B.S. degree in geology and a M.S. degree in chemistry. In 1972, Dr. Johnson received his Ph.D. from the University of Idaho in geochemistry. He joined NL Industries in March, 1973.

During the 1976 geologic and geochemical investigation of the Baroid claims in the Yukon Territory, the services of Trans North Turbo Air (1971), Ltd. were utilized.

Trans North Turbo Air (1971), Ltd.  
Box 4338  
Whitehorse, Yukon Territory

Mr. Doug Makkonen, Pilot  
Mr. Nick Aseltine, Engineer

The geologic report was prepared by D. B. Simon; the geochemical report was written by Dr. J. B. Johnson.

The geochemical services and specific gravity analyses were conducted by two metallurgists employed by NL Baroid Petroleum Services.

David B. Suliin, Chief Metallurgist  
P. O. Box 10, Malvern, Arkansas 72104

Mr. Suliin graduated from Michigan Technological University with a B.S. degree in metallurgical engineering in 1962 and from South

Dakota School of Mines with a M.S. degree in metallurgical engineering in 1965. Prior to joining Baroid in 1970, Mr. Suliin worked as a project engineer for Colorado School of Mines Research Laboratory and for U.S. Steel Applied Research Laboratory.

James E. Kaiser, Metallurgist  
P. O. Box 10, Malvern, Arkansas 72104

Mr. Kaiser received a B.S. degree in metallurgical engineering from Michigan Technological University in 1972. He was employed by Valenite Metals in Madison, Michigan for 8 months before he came to Baroid in July, 1973.

The metal assays were conducted by:

Skyline Laboratories, Inc.  
12090 W. 50th Place  
Wheat Ridge, Colorado 80033

## Geological Data

The geology and mineralization of each of Baroid's claims was initially described during the 1975 Exploration Program. Barite exposures on all claims were sampled and two bulk samples were collected for beneficiation tests. At the end of the Exploration Program, the data from geologic field work and metallurgical analyses were collated and a report was issued. Based on this report, further work was recommended in two areas that showed the best potential for future development and mining.

To substantiate the results of the preliminary work, a more detailed mapping and sampling program was initiated in August 1976 on the Cathy and Chas, and the Lorraine and Kam claims. As a result of this field work, additional barite was discovered adjacent to our claims on open ground. Eight claims were staked contiguous to our existing claims to cover this new discovery. Mapping on the Kam claims indicated a good potential for ore extensions along strike to the west. Four claims were staked in this area between the Lorraine 1-2 claims and the Lorraine-Kam Group.

Cathy-Chas Group - With the addition of the 8 claims staked in 1976, this group is comprised of Cathy 1-5 and 7-10, Chas and Chas 2-5, 14 claims total. From preliminary work in 1975, the Cathy 3 and 4 claims have the best potential for future development, and mapping was concentrated on these claims to better delineate the orebody.

The 1975 work indicated continuous barite outcrops in a series of beds for 1,550 feet along the location line of the Cathy 3 and 4 claims. Recent mapping suggests that the geology of this area is not that simple. Minor folding has repeated one baritic-shale bed several times; faults have displaced the rock units from a few to several hundred feet. The effect of folding and faulting is a reduction in the strike length and thickness of the baritic units and as a consequence, reserves are not as large as previously calculated. The barite orebodies appear to be lensoid in shape and either pinch out along strike or are truncated by faults. Measured strike length for the baritic-shale unit on the Cathy 3 claim is 900 feet; thickness is 125 feet maximum narrowing to 50-60 feet near post 1 of Cathy 3. Barite on Cathy 4 is exposed in two beds for 400 feet along strike. Thicknesses range from 40-80 feet. One unit pinches out to the east and west.

The other barite bed is truncated by a fault on the west. Two barite zones on Cathy 3 and 4 were sampled in more detail during 1976. The following specific gravities were obtained.

<u>CATHY 3</u>	<u>Interval</u>	<u>Sp.Gr.</u>
76-1	0- 10'	3.84
76-2	10- 20'	3.90
76-3	20- 30'	4.29
76-4	30- 40'	4.35
76-5	40- 50'	4.33
76-6	50- 60'	4.36
76-7	60- 70'	4.36
76-8	70- 80'	4.36
76-9	80- 90'	4.02
76-10	90-100'	4.20
76-11	100-110'	4.14
76-12	110-125'	<u>4.40</u>
Average Specific Gravity		4.21

<u>CATHY 4</u>	<u>Interval</u>	<u>Sp.Gr.</u>
76-1	0- 10'	4.32
76-2	10- 20'	4.26
76-3	20- 30'	4.12
76-4	30- 40'	<u>4.25</u>
Average Specific Gravity		4.24

The ore in both zones averages grinding grade although there are several intervals which are below the 4.20 minimum. Based on the complex nature of these orebodies it is doubtful whether these intervals could be selectively excluded during any future mining phase.

On the Cathy 1 and Chas claims, barite was shown as three separate beds in the 1975 report. Geologic mapping in 1976 indicates that only 1 bed occurs, deformed by folding into a series of minor anticlines and synclines. The amplitude of the folds is less than 40 feet in most places. The barite is continuously exposed for 1,000 feet along strike on the Cathy claim and 800 feet on Chas claim with a thickness ranging from 20 to 40 feet. Near the eastern boundary of the Cathy 1 claim, the barite disappears beneath an extensive talus slope. On Cathy 2 the barite is intensely folded and may or may not be the same bed exposed on Cathy 1.

Sampled intervals on the Cathy 1 and Chas claims gave the following results:

<u>CATHY 1</u>	<u>Interval</u>	<u>Sp.Gr.</u>
76-1	0 - 10'	4.37
76-2	10 - 20'	<u>4.34</u>
Average Specific Gravity		4.355

<u>CHAS</u>	<u>Interval</u>	<u>Sp.Gr.</u>
76-1	0 - 10'	4.26
76-2	10 - 20'	4.33
76-3	20 - 30'	4.40
76-4	30 - 40'	<u>4.36</u>
Average Specific Gravity		4.34

During work on the Chas claim, the barite was traced along strike off the claim onto open ground. Chas 2, 3, 4 and 5 were staked to cover this extension. On these new claims, the barite is intermittent along strike but believed to be a single bed. Thickness ranges from 15 to 20 feet. Barite on Chas 3-5 are small lensoid bodies and do not represent a significant reserve. Sampling on Chas 2 gave the following specific gravities:

<u>CHAS 2</u>	<u>Interval</u>	<u>Sp.Gr.</u>
76-1	0 - 4'	2.88
76-2	4 - 10'	4.04
76-3	10 - 15'	4.32
76-4	15 - 20'	<u>4.23</u>
Average Specific Gravity		3.87

By deleting the first four feet of low quality material, the average specific gravity would be 4.20. Barite on the Chas 3, 4 and 5 was not sampled due to limited time.

#### Lorraine - Kam Group

Four new claims were staked adjacent to and contiguous with the Lorraine 3-6 and Kam 1-2 fractional claims. The number of claims in this group now total 14. With the amended location filed August 25, 1976 with Mining Recorder for the Lorraine 1-2, the Fat and City claims are included with this group.

Efforts during 1976 on Lorraine-Kam group were concentrated on the area shown from the 1975 work to contain a significant quantity of good quality barite. In order to determine if lateral variations in quality existed, two areas 100 and 150 feet along strike from samples taken during 1975 were sampled. These were labelled Lorraine/Kam and Kam lateral and the results are shown below.

<u>Lorraine/Kam</u>	<u>Interval</u>	<u>Sp.Gr.</u>
76-1	0-10'	4.29
76-2	10-20'	4.22
76-3	20-30'	4.29
76-4	30-40'	4.37
76-5	40-50'	4.35
76-6	50-60'	4.30
76-7	60-70'	4.28
76-8	70-80'	<u>4.31</u>
Average Specific Gravity		4.30

<u>Kam Lateral</u>	<u>Interval</u>	<u>Sp.Gr.</u>
76-1	0-10'	4.39
76-2	10-20'	4.34
76-3	20-30'	4.14
76-4	30-40'	4.14
76-5	40-50'	3.95
76-6	50-60'	4.23
76-7	60-70'	4.36
76-8	70-80'	<u>4.25</u>
Average Specific Gravity		4.225

Although the average specific gravities of the sampled intervals are above the 4.20 minimum (API specifications) and are more or less consistent with the 1975 results (4.27), there is considerable variation between individual corresponding intervals along each line. Note for instance the interval from 40 to 50 feet which has values of 3.95 and 4.35 within 250 feet along strike. This suggests that ore with depth may behave similarly. However as long as the overall grade of the material is above 4.20, there should be little problems in maintaining high grade mine-run ore in future mining operations.

More sampling was also accomplished on Kam 1-2 on the lowermost baritic zone. Sampling in 1975 indicated 50 feet of barite averaging 4.37 specific gravity. However, work in 1976 shows that this high grade zone is only 30 feet thick and is in contact with low grade

baritic limestone. The following table of specific gravities shows that the contact is sharp. The low grade baritic limestone averages 3.65 specific gravity (0-60').

<u>Kam 1-2</u>	<u>Interval</u>	<u>Sp.Gr.</u>	<u>Lithology</u>
76-1	0-10'	3.59	ls/b
76-2	10-20'	3.40	ls/b
76-3	20-30'	3.68	ls/b
76-4	30-40'	3.74	ls/b
76-5	40-50'	3.68	ls/b
76-6	50-60'	3.82	ls/b
76-7	60-70'	4.35	sh/b
76-8	70-80'	4.37	sh/b
76-9	80-90'	4.41	sh/b
76-10	90-100'	3.78	ls/b

ls=limestone

sh=shale

b=barite

Two traverses were made along the stream valleys on either side of the Lorraine 3-6/Kam 1-2 Group to ascertain whether barite exposed on the ridge continued off the claims. On the eastern side of the ridge there is a marked change in lithologies from those which crop out along the location line of the claims. In the stream valley, the rocks were predominantly reddish shales and sandy siltstones very similar to the sequence exposed north of Lorraine 3-4. A fault is implied although topographic differences at the time of sedimentation could also explain this feature. If a fault exists, it is probably minor as the basal conglomerate of the Besa River Formation in this area does not appear to be affected.

To the west of the Lorraine/Kam Group, the barite-black shale-limestone facies continues but appears to be pinching out. On the Lorraine 3-6/Kam 1-2 claims, the sequence is at least 1200 feet thick whereas on the Fat and City claims the baritic zone is only about 200 feet thick. A similar feature was noted in 1975 to the east near the Les and Walt claims.

At the time the geologic work was done, the ground between the Lorraine 1-2 claims and the Lorraine 3-6/Kam 1-2 claims was not staked. Because the barite-black shale-limestone facies showed continuity to the west, the Kam 3-6 claims were staked to cover this area. Although no barite was found along the western traverse, much of this area is covered with soil and vegetation. Based on lithology, the area covered by the Kam 3-6 claims looks favorable for additional barite discoveries.

Summary - Some observations can be made concerning the geologic work done during 1976.

- With the exception of the Chas, Chas 2 and Cathy 1 claims, the barite orebodies do not appear to be continuous along strike for long distances but are more lensoid in shape. Based on this observation, the Cathy claims and the Lorraine 3-6/Kam 1-2 claims do not have reserve potential previously calculated. A factor of 0.5 should be applied to the estimated reserves in the 1975 report.
- The baritic facies composed of barite, black shale and limestone appears to be thickest on the Chas, Cathy and Lorraine 3-6/Kam 1-2 claims, thinning considerably to both the east and west. This suggests that a small depositional basin was developed during Besa River time in this area and may in part explain the lack of barite to the east and west in similar-appearing facies of the Besa River Formation.

Plate 1 in the appendix of this report shows the geology of the Baroid claims and the immediate surrounding area.

GEOCHEMICAL DATA

Geochemical data from a simplified stream sediment orientation survey are presented on Figures 1 through 5. The objectives of this survey were to obtain some idea as to the magnitude of response relatable to Baroid controlled barite deposits and to determine if the potential for deposits of some commodity other than barite existed on Baroid controlled ground. The results of this survey are very highly positive with respect to both objectives.

For simplicity, each element will be discussed individually and the two study areas will be separated. For comparison, background values for the five elements studied were (two samples):

silver	(Ag)	0.2 & 0.4 ppm
copper	(Cu)	30 & 30 ppm
lead	(Pb)	35 & 30 ppm
zinc	(Zn)	120 & 600 ppm
barium	(Ba)	800 & 2,150 ppm

Based on these background values, anticipated threshold values might be:

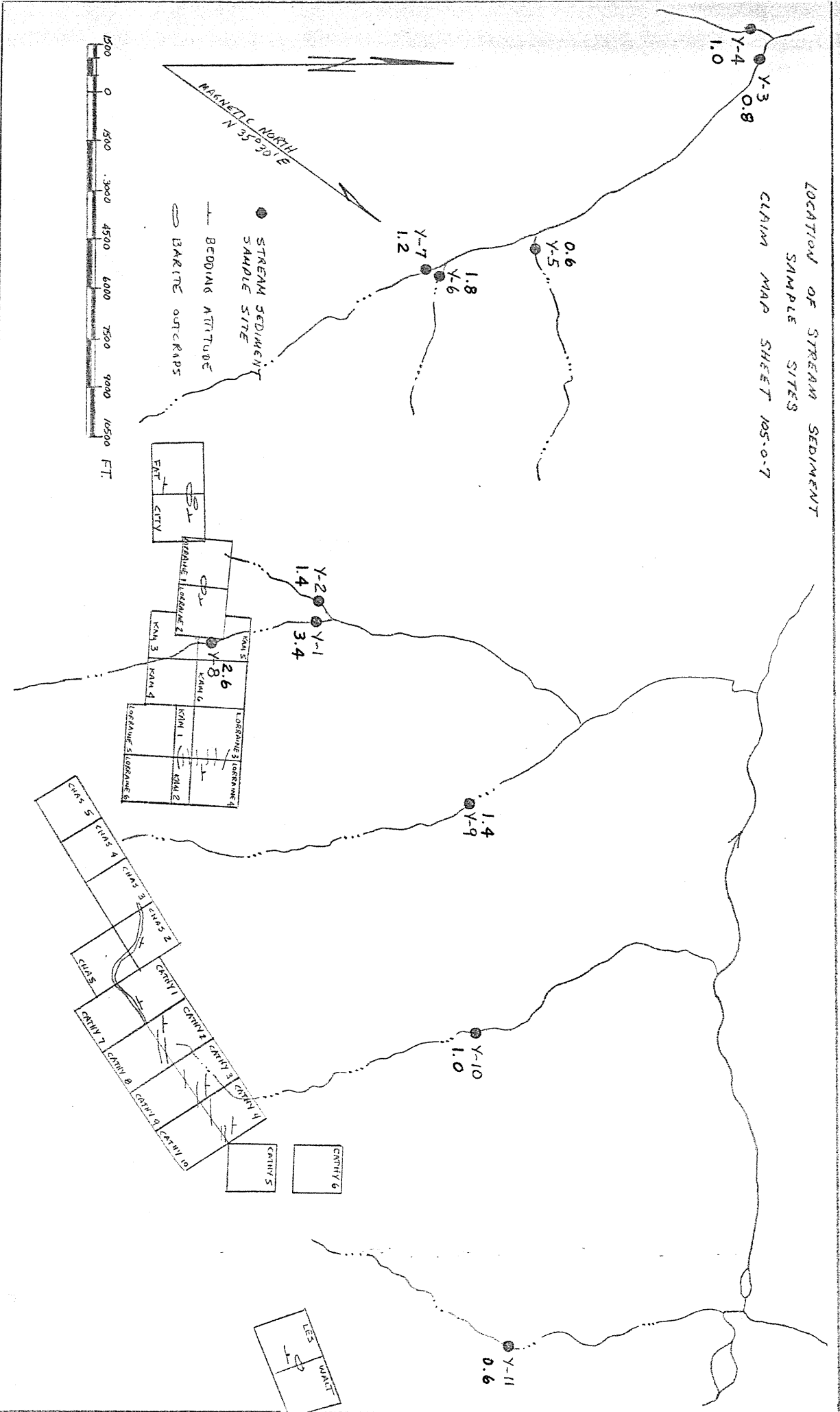
Ag	0.4 ppm
Cu	30 ppm
Pb	30 ppm
Zn	300 ppm
Ba	1,500 ppm

Stream Sediment - Figures 1 through 5 show the locations of mining claims in the Yukon Territory that are owned by Baroid of Canada Ltd., NL Industries, Inc., barite outcrops, stream sediment sample sites, and the geochemical values of the elements studied.

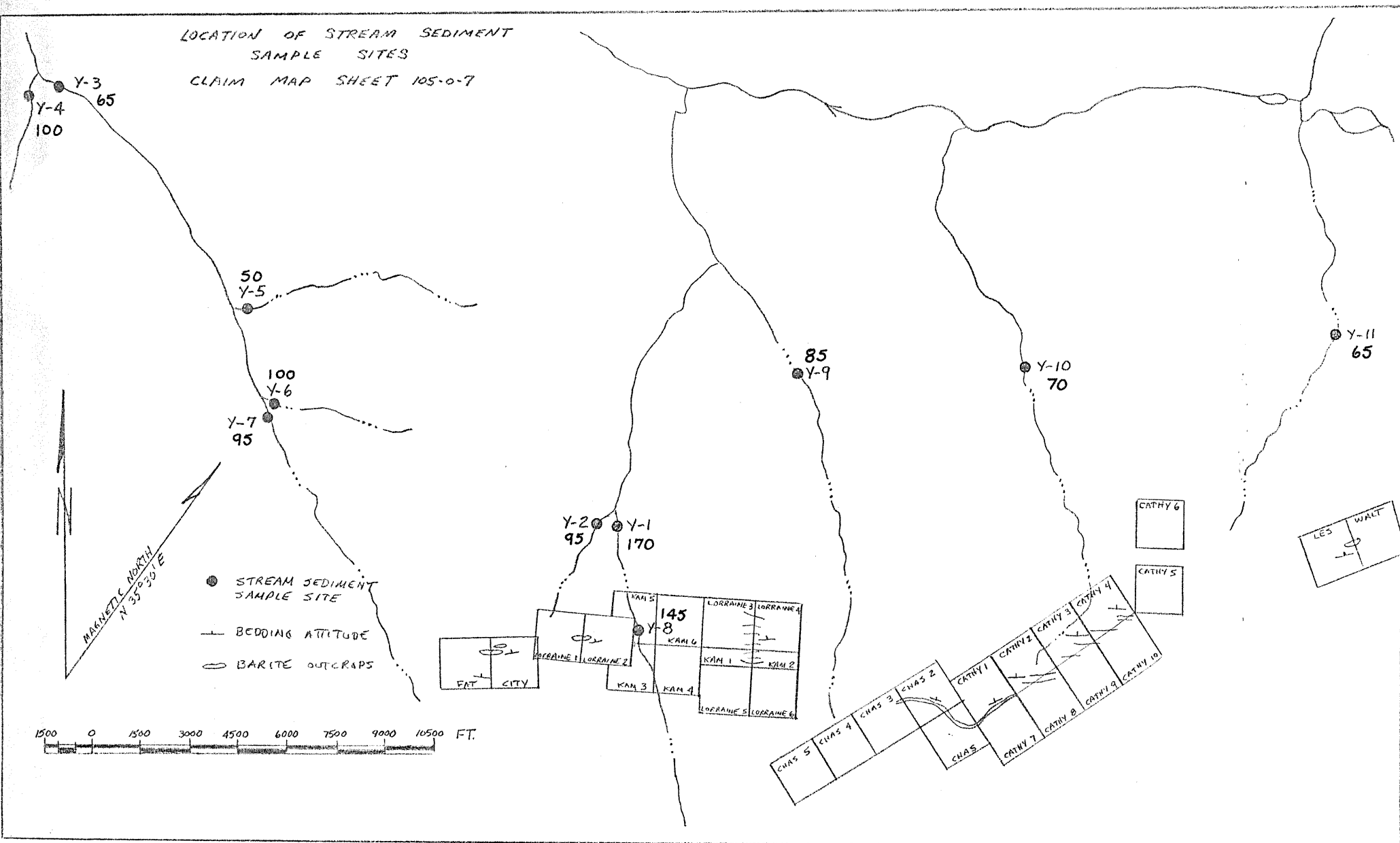
Ag - Assuming the threshold estimate to be correct, it is apparent that all samples are anomalous in silver. Of special interest are sites Y-1, Y-2, Y-4, Y-6, Y-7, Y-8, and Y-9.

Cu - Given the correctness of a 30 ppm threshold value, all samples are anomalous in copper. Note the values at sites Y-1, Y-2, Y-4, Y-6, Y-7, and Y-8.

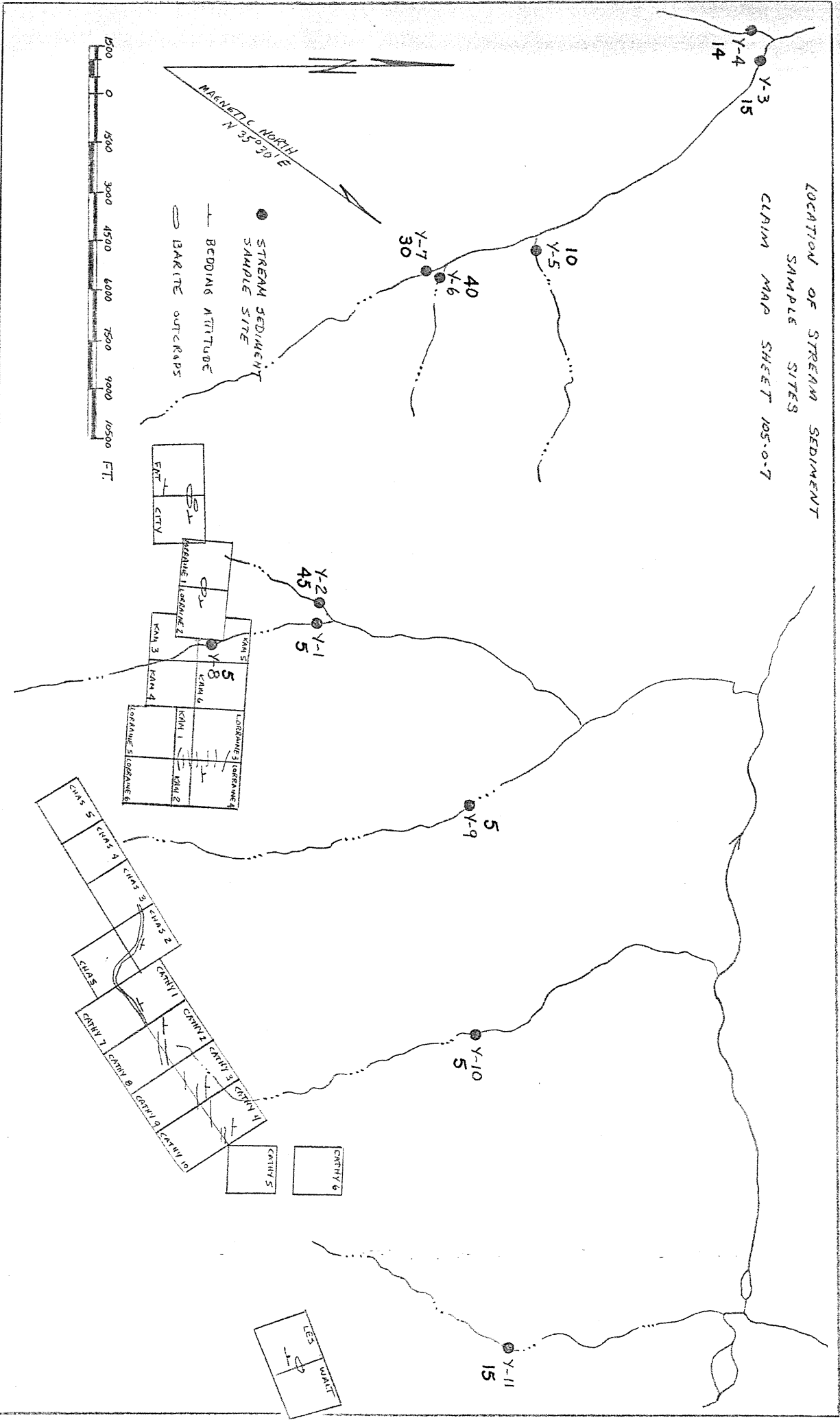
Pb - If a 30 ppm threshold value is correct, then only sites Y-2, Y-6, and Y-7 are anomalous in lead, although the behavior of lead appears to be very interesting. Note for example, the sharp reduction in values that occurs on either side of an imaginary north-south oriented line drawn between sites Y-1 and Y-2. The lead data appear to be pointing to some geochemical feature, perhaps in the general vicinity of the Fat and City claims.



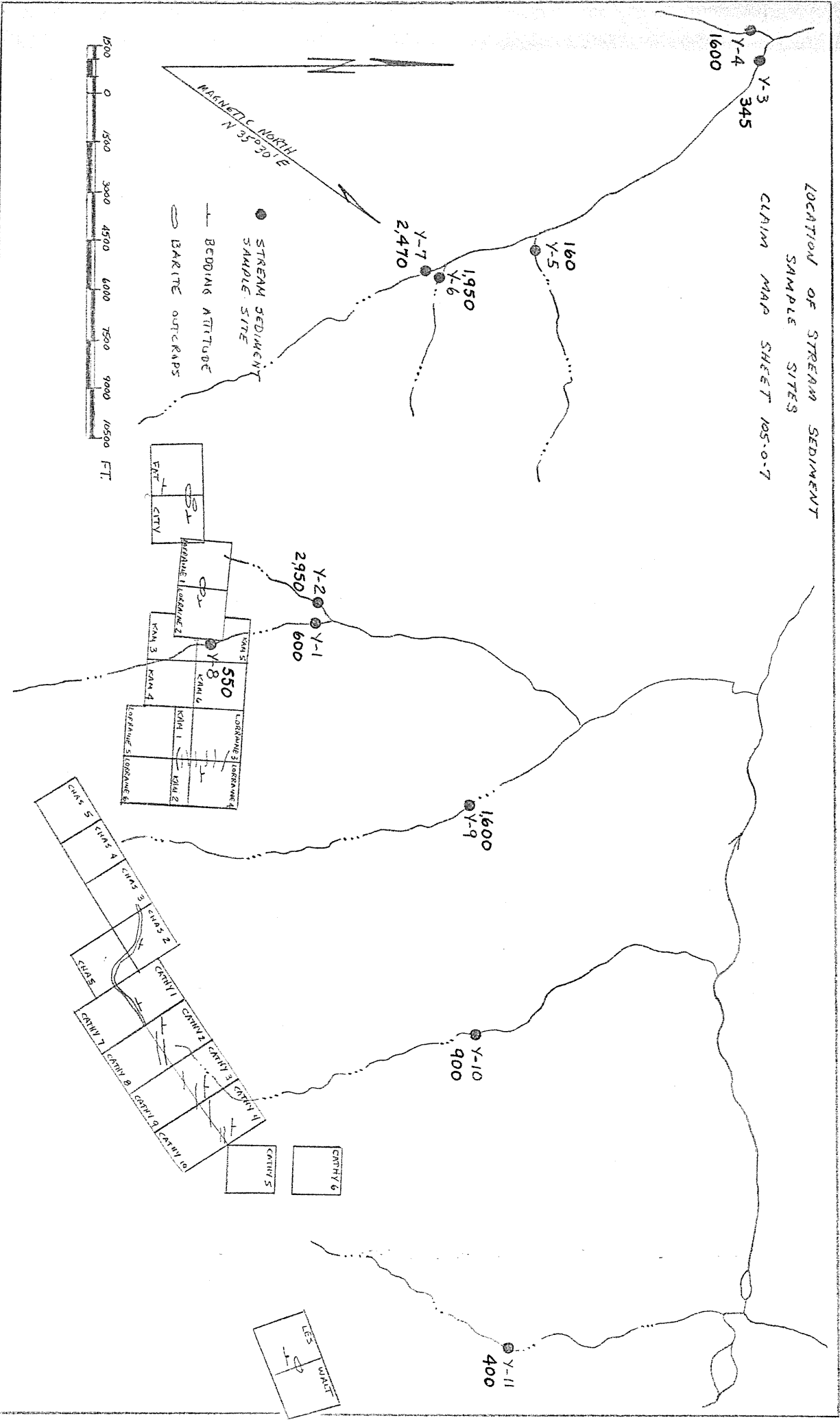
Silver Data (ppm)  
Figure 1



Copper Data (ppm)  
Figure 2



Lead Data (ppm)  
Figure 3



Zinc Data (ppm)  
Figure 4

LOCATION OF STREAM SEDIMENT  
SAMPLE SITES  
CLAIM MAP SHEET 105-0-7

Y-3  
Y-4 4,500  
6,000

1,900  
Y-5

3,500  
Y-6

Y-7  
3,800

Y-2  
11,000

Y-1  
75,000

52,000  
Y-9

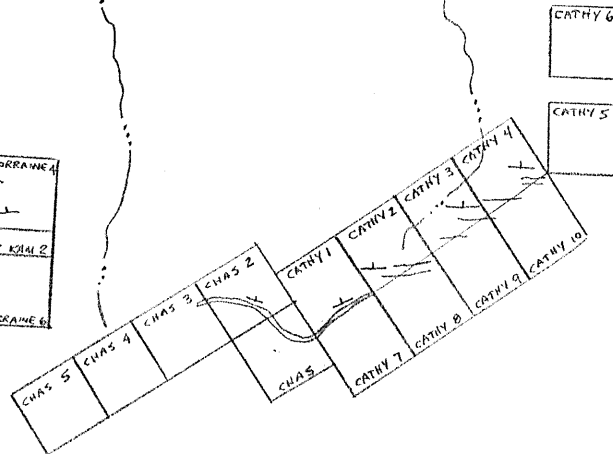
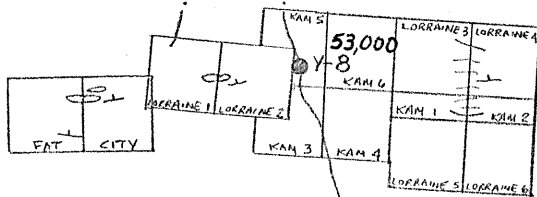
Y-10  
23,000

Y-11  
3,950

MAGNETIC NORTH  
N 35° 30' E

- STREAM SEDIMENT SAMPLE SITE
- BEDDING ATTITUDE
- BARITE OUTCROPS

1500 0 1500 3000 4500 6000 7500 9000 10500 FT.



Barium Data (ppm)  
Figure 5

Zn - If the threshold value is correct, then all sites except Y-5 are anomalous in zinc. Note particularly, sites Y-1, Y-2, Y-4, Y-6, Y-7, Y-8 and Y-9. From the 1975-1976 report prepared by Baroid personnel on a geochemical evaluation of claims, samples from the Lorraine 3 and 4 claims contained zinc values that ranged from 0.18 to 2.56 percent (average 1.41 percent), over a sampled interval of 160 feet. The following table points out the range of zinc values observed.

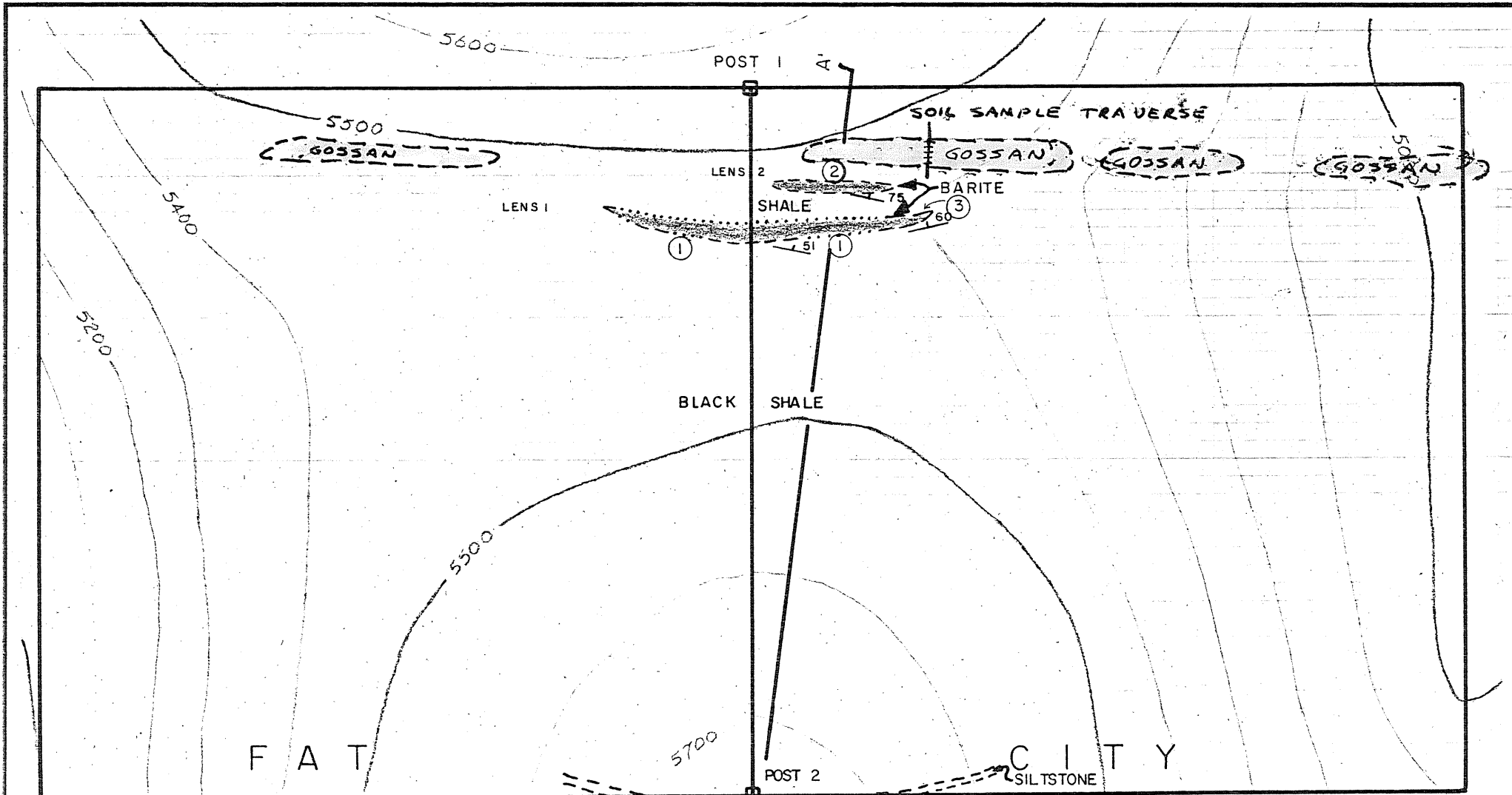
<u>Claim Name</u>	<u>Zinc (%)</u>
Chas	1.03 - 1.73
Cathy 1	0.62 - 2.83
Cathy 2	0.49 - 1.88
Cathy 3	0.49
Cathy 4	0.33 - 0.97
Lorraine 1 & 2	trace - 1.94
Lorraine 3 & 4	trace - 2.56
Fat and City	0.14 - 0.38
Les and Walt	trace - 0.09

It is believed that these data clearly demonstrate that zinc is present in amounts of more than just passing interest, and the area should be resampled.

Ba - Given that the threshold value is correct, all sites are clearly anomalous in barium. It would appear that a regional stream sediment program would have encountered no problems in locating the barite.

Soil Geochemistry - A narrow limonite gossan zone was noted on the City claim (see Figure 6 ). The gossan zone averages about 60 feet in width and can be observed discontinuously for distances of several hundred feet. A small amount of malachite staining is present and one sample containing visible chalcocite was collected. Although this sample is certainly not representative, the following assay information may give some indication of potential, particularly for silver;

Cu	- 12.5%
Zn	- 2.2%
Pb	- 0.8%
Ag	- 610.4 and 604 oz/ton (duplicate assay)
Au	- 0.005 oz/ton
BaSO <sub>4</sub>	- 25.4%



LEGEND

- GEOLGIC CONTACT
- DOTTED, COVERED BY TALUS
- SAMPLE LOCATION
- SOIL SAMPLE TRAVERSE

**BAROID DIVISION**  
  
 INDUSTRIES  
 P.O. BOX 1675 HOUSTON, TEXAS 77061

DRAWN DBS      DATE 8/12/75  
 CHKD. \_\_\_\_\_  
 APPR. \_\_\_\_\_

FAT/CITY CLAIMS  
 HESS MOUNTAINS,  
 YUKON TERRITORY, CANADA

REVISIONS	REFERENCES
18J 11/1976	

SCALE 1" = 300'  
 FIGURE 6  
 A

To better understand what might be under the gossan zone, one soil sample traverse was run. Geochemical data for this traverse are presented on Figures 7 through 11.

Ag - Silver data show a single peak anomaly at station 0+10N and a response typical of a steeply dipping vein-type occurrence. This is somewhat surprising, as the assayed, chalcocite bearing sample was collected approximately 50 feet southwest of station 0+20S, much closer to the barite outcrops. An 80 ppm Ag value converts to about 2.4 oz Ag/ton.

Pb - Lead data also show a single peak anomaly at station 0+10N and the magnitude of the response is very high (700 ppm).

Cu - Copper data show a single broad hump, centered between stations 0+10S and 0+00. This type of response is atypical for copper, although the magnitude of the response (1,650 ppm Cu) is certainly high. It is possible that in this environment, copper is geochemically more mobile than zinc.

Zn - The zinc profile is interesting for two reasons. First, it shows a single peak at station 0+00 (somewhat similar to copper) and second, it shows steadily increasing values in the direction of the barite outcrops. This may be taken as another positive indication of the association between zinc and barite in this portion of the Macmillan Pass area. The magnitudes of the zinc anomalies are also quite high.

Ba - The barium profile is about what you would expect, given the geology of the claim area, except for the single peak at station 0+10N. About all that can be said is that barite is evidently associated with whatever mineral(s) is responsible for the silver-lead peaks, also at station 0+10N.

It is not possible to state with any certainty, what mineralogies are responsible for the observed geochemical responses, but, because of the thick (perhaps plus 3 feet) development of iron (limonite) gossan, pyrite must surely be present. The zinc could be present as sphalerite, smithsonite, or hydrozincite; copper as chalcopyrite or secondary chalcocite; lead as galena, cerussite, or anglesite; and silver as a silver sulfide, a minor constituent of another sulfide, or native. In fact, all of these metals could be occurring together in a complex sulfo-salt mineral. The gossan area is without question, of geochemical interest, and should be sampled and mapped in detail.

Zinc Pathfinder - Reindeer (?) moss that grows almost everywhere in the Macmillan Pass area tends to concentrate zinc, is highly selective to zinc, and undergoes a dramatic color change when it has been poisoned by high concentrations of zinc. The moss in question is normally a very dark, forest green when growing in areas of low or

FIGURE 1 — SILVER SOIL GEOCHEMICAL DATA, 1971

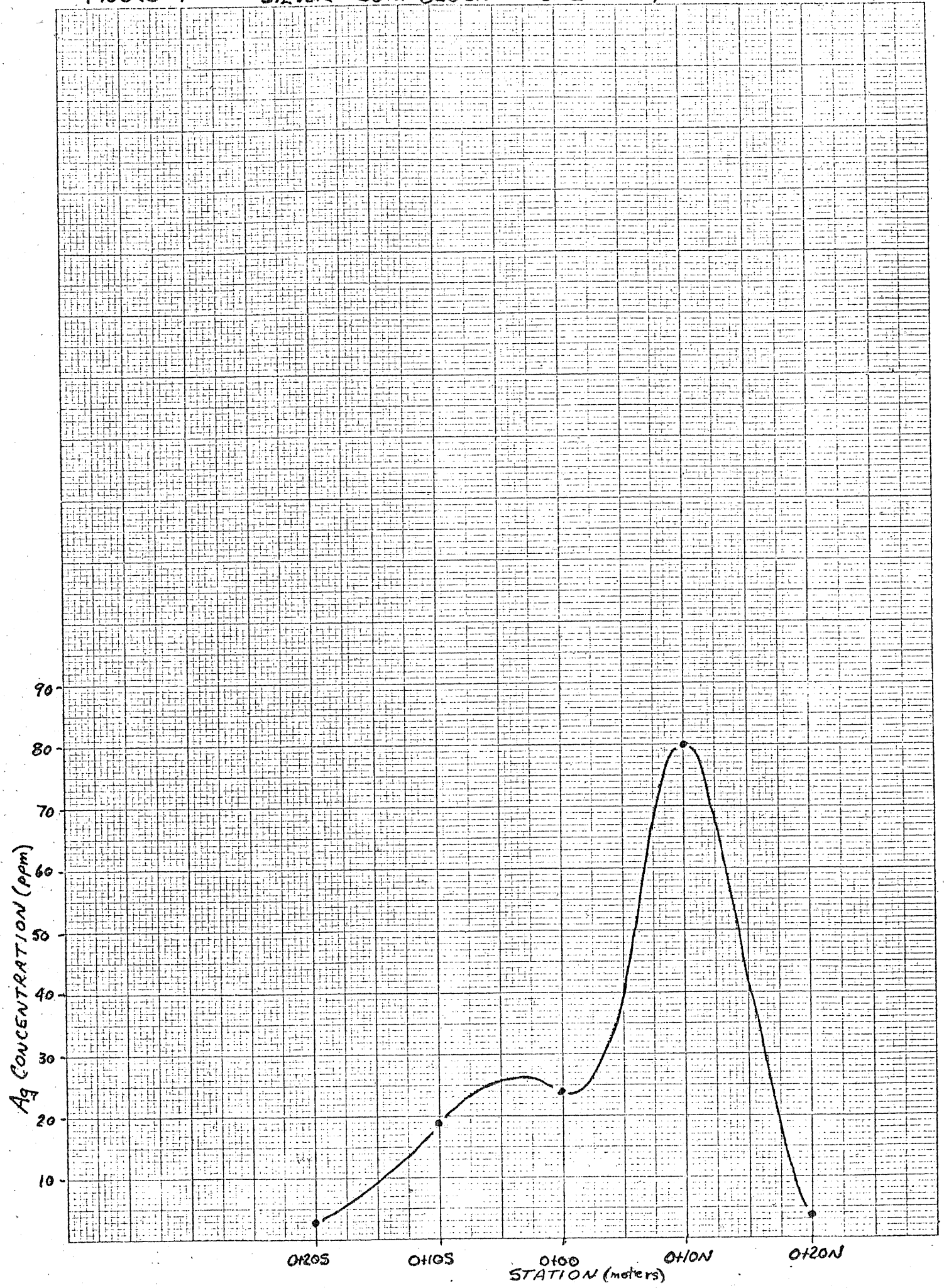


FIGURE 8 - COPPER SOIL GEOCHEMICAL DATA, CITY CLAIM

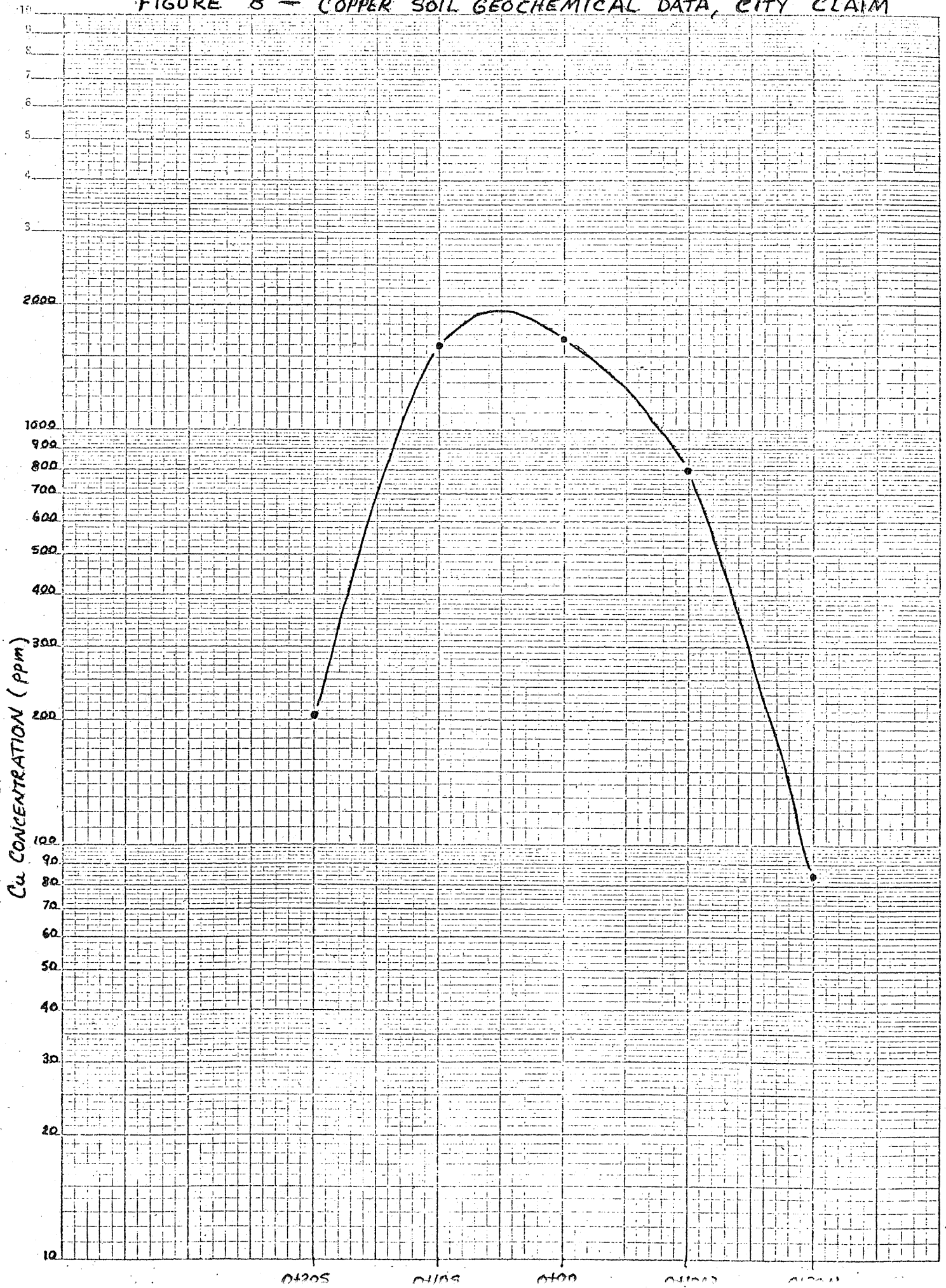


FIGURE 4 - LEAD SOIL GEOCHEMICAL DATA, CITY CLAIM

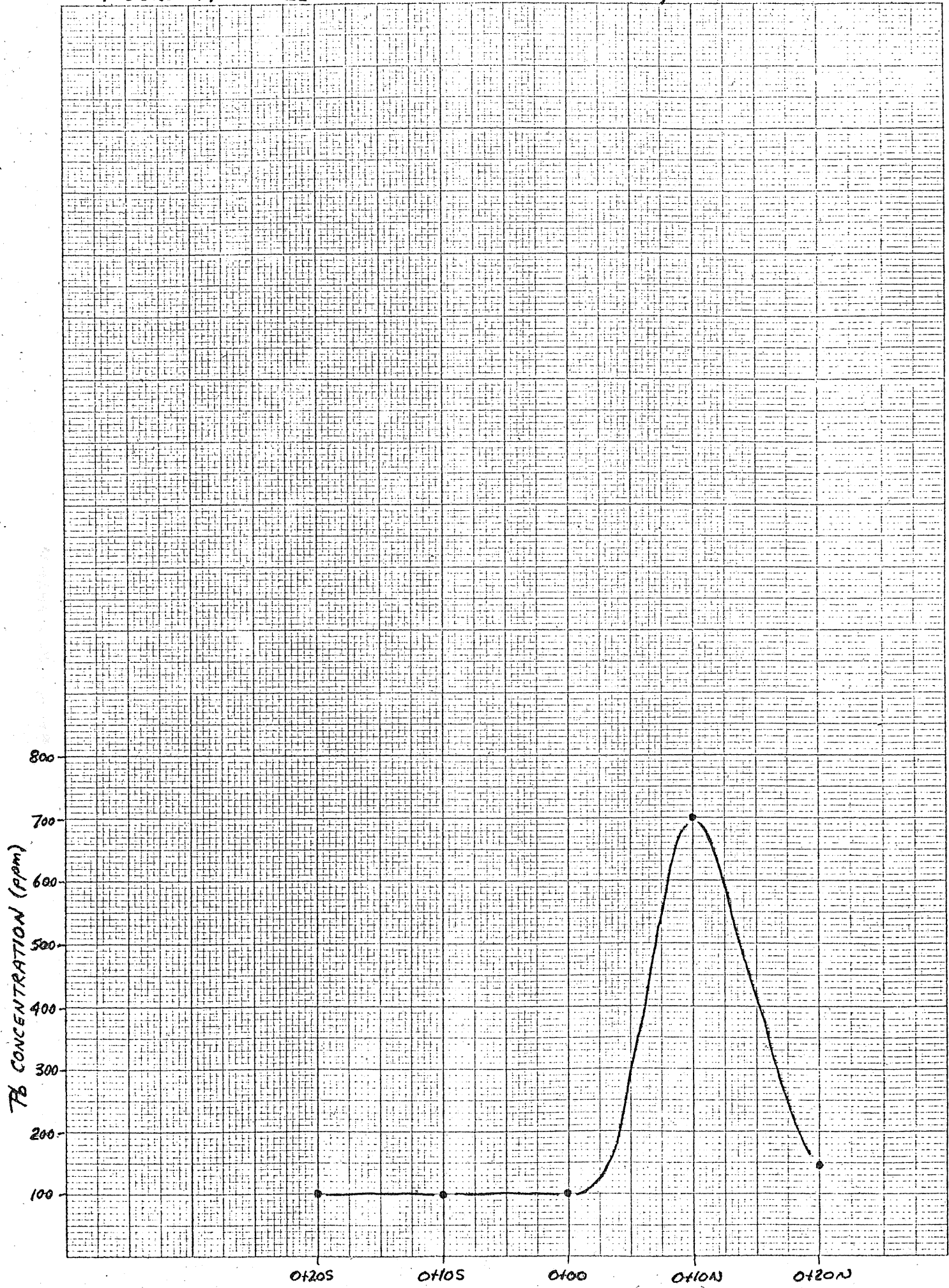


FIGURE 10 — ZINC SOIL GEOCHEMICAL DATA, CITY CLAIM

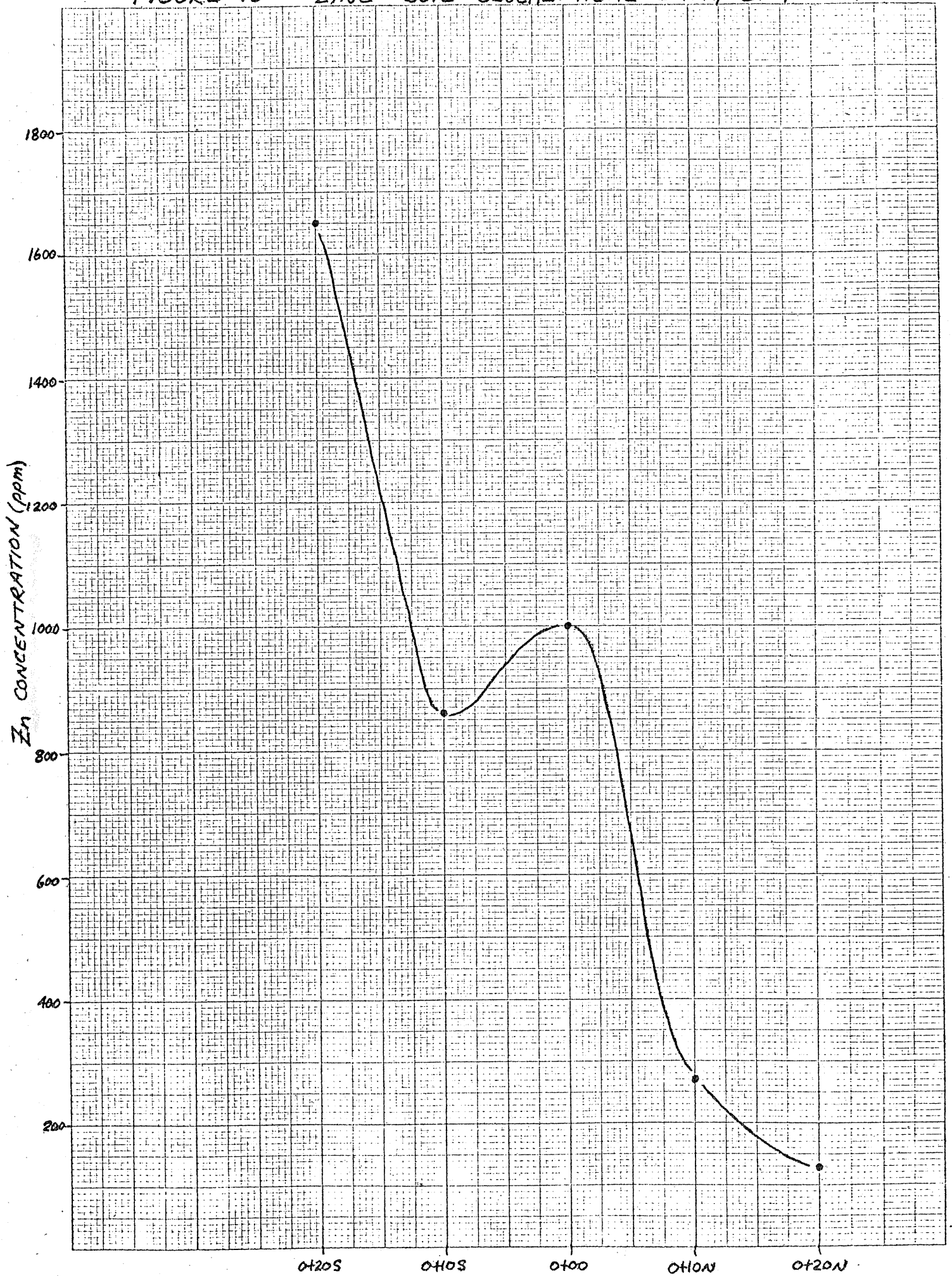
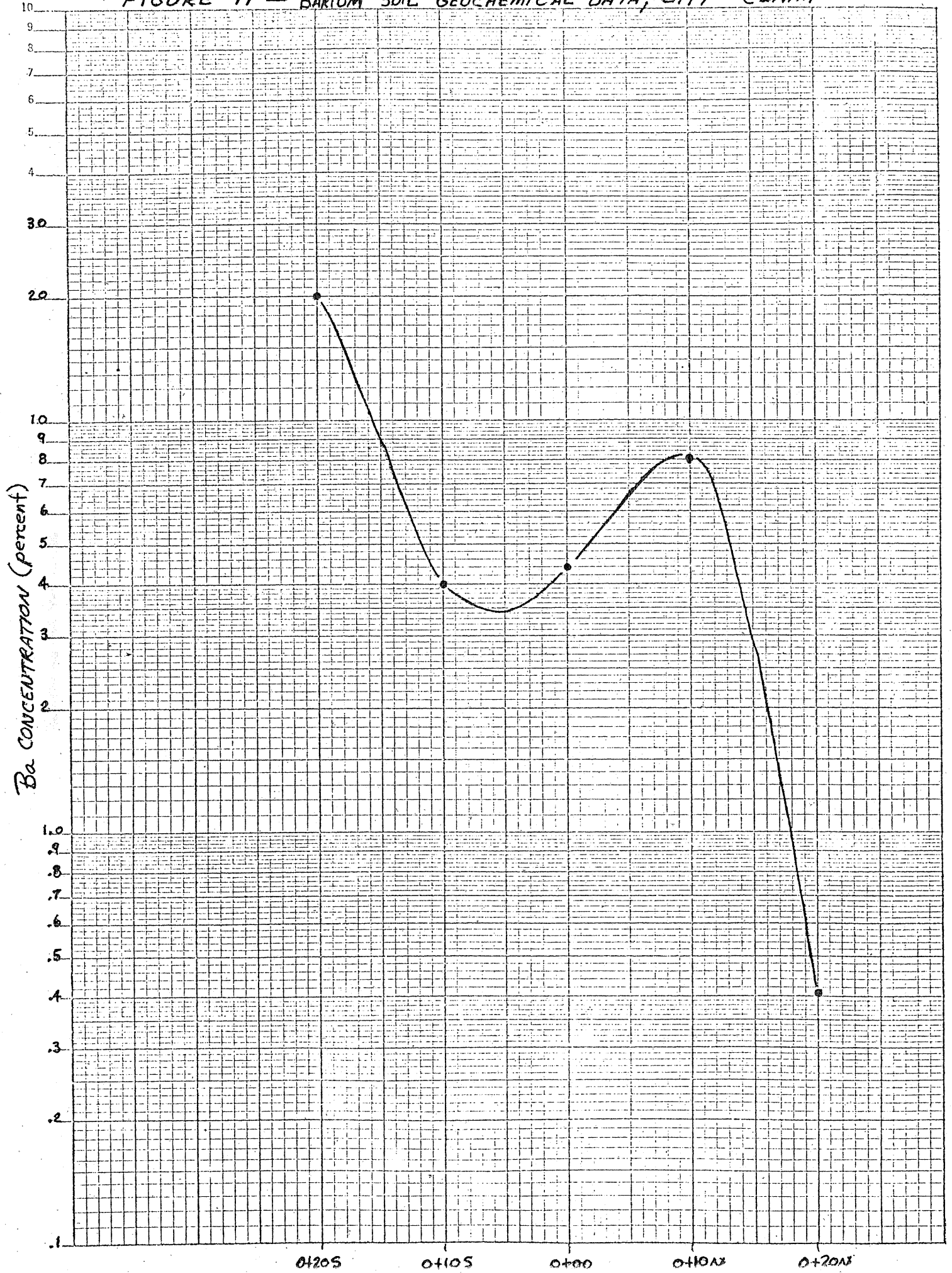


FIGURE 11 — BARIUM SOIL GEOCHEMICAL DATA, CITY CLAIM



background levels of zinc. However, when growing in areas of high zinc content, either soil or rock, the color of the moss becomes a lime green that takes on almost fluorescent properties. These color changes are very obvious from the air.

It was interesting to note the distribution of lime green colored moss at HBM&S's Tom property and the presence of lime green colored moss in the vicinity of NL's City, Cathy, Chas, and Lorraine claims. However, the significance of this is unknown, but probably worthy of some follow-up.

APPENDIX I  
SUMMARY OF COSTS

I. Salaries and Wages

A. Field Work

D. B. Simon, Geologist	9 days @ \$ 63/day	\$ 567.00	
J. B. Johnson, Geochemist	8 days @ \$ 75/day	600.00	
		<u>\$ 1,167.00</u>	\$ 1,167.00

B. Office Work

D. B. Simon	6 days @ \$ 63/day	\$ 378.00	
J. B. Johnson	4 days @ \$ 75/day	300.00	
D. B. Suliin, Chief Metallurgist	1 day @ \$ 85/day	85.00	
S. M. Baynham, Typist	1 day @ \$ 35/day	35.00	
		<u>\$ 798.00</u>	\$ 798.00

II. Field Supplies and Support Services

A. Operating Supplies (receipts enclosed)

Groceries	\$ 198.18	
Camp Supplies	164.58	
	<u>\$ 362.76</u>	\$ 362.76

B. Helicopter and Plane Charter (receipts enclosed)

Helicopter Charter	\$10,924.89	
Plane Charter	3,966.50	
Fuel	1,139.70	
	<u>\$16,031.09</u>	\$16,031.09

III. Geochemical Services

A. Specific Gravity Analyses @ \$6.02/Sample

Group I	(Lorraine, Kam, Fat, City), 26 samples	\$	156.52	
Group II	(Cathy, Chas), 26 samples		156.52	
		\$	<u>313.04</u>	\$ 313.04

B. Soil and Silt Sample Analyses @

Group I	(Lorraine, Kam, Fat, City)	\$	130.46	
Group II	(Cathy, Chas)		130.47	
		\$	<u>260.93</u>	\$ 260.93

GRAND TOTAL OF ALL EXPENSES

\$18,932.82

APPENDIX II

ITEMIZATION OF COSTS PER CLAIM GROUP

	<u>Group I</u> <u>Lorraine, Kam</u> <u>Fat, City</u>	<u>Group II</u> <u>Cathy,</u> <u>Chas</u>	<u>Total</u>
Salaries and Wages			
Field Work	\$ 583.50	\$ 583.50	\$ 1,167.00
Office Work	399.00	399.00	798.00
Field Supplies and Support Services			
Operating Supplies	181.38	181.38	362.76
Helicopter and Plane Charter	8,015.55	8,015.54	16,031.09
Geochemical Services			
Specific Gravity Analyses	156.52	156.52	313.04
Soil and Silt Sample Analyses	130.46	130.47	260.93
Total Amount of Representation Work Per Claim Group	<u>\$9,466.41</u>	<u>\$9,466.41</u>	<u>\$18,932.82</u>

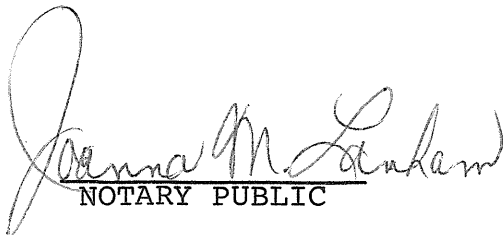
AFFIDAVIT

I, DONALD B. SIMON OF P. O. BOX 1675, HOUSTON, TEXAS USA, DO  
HEREBY CERTIFY THAT THE TIME AND EXPENDITURES AS SHOWN IN  
APPENDICES I AND II ARE TRUE AND ACCURATE TO THE BEST OF MY  
KNOWLEDGE.

  
DONALD B. SIMON

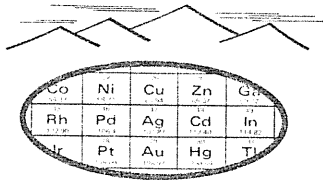
SWORN BEFORE ME AT HOUSTON, TEXAS

THIS 26<sup>th</sup> DAY OF May, 1977.

  
NOTARY PUBLIC

JOANNA M. LANHAM  
Notary Public in and for Harris County, Texas  
My Commission Expires June 1, 1977

RECEIPTS



# SKYLINE LABS, INC.

SPECIALISTS IN EXPLORATION GEOCHEMISTRY  
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033  
TEL.: (303) 424-7718

## INVOICE

INVOICE NO.: 11253  
JOB NO.: 102197  
P. O. NO.: MR-0111

DATE: September 28, 1976

TERMS: NET 30 DAYS

SOLD TO: NL Industries, Inc.  
Attention: Blake Johnson  
5926 McIntyre  
Golden, Colorado 80401

---

### Analysis of 24 Stream Sediment Samples and 5 Soil Samples

29 Silver (A.A.) @ \$1.50 .....	\$ 43.50
29 Barium @ \$4.50 .....	130.50
29 Copper, Lead, & Zinc (single digestion) @ \$2.62 .....	75.98
5 Samples pulverized @ \$0.75 .....	3.75
24 Samples sieved @ \$0.30 .....	<u>7.20</u>

TOTAL \$ 260.93

INVOICE COPY



**TRANS NORTH TURBO AIR (1971) LTD.**  
 BOX 4338, WHITEHORSE, YUKON

TELEPHONE (403) 668-5111 • TELEX 036-8-290

ACCOUNT NUMBER	268
12293	
INVOICE DATE	12/08/76
A/C TYPE	206-B FTND
FLIGHT DATE	10/08/76
PURCHASE ORDER NO. CONTRACT	

**BARRO PETROLEUM SERVICES**  
 CHARTERER  
 P.O. BOX 1675  
 BILLING ADDRESS  
 HOUSTON, TEXAS 77001

FUEL & OIL	TNTA FUEL USED	HRS.-GALS.	FROM
TNTA CUST.	1.7 cent	2.5 hrs	ALA.

FROM	MILES	HOURS	ZONE	REMARKS - NO. OF PASS.	FREIGHT LBS.
KEELE AK		1.7		3 pass.	
MAYO (LOCAL)		2.0			
29					
				Time Not Finished	.7

SUB	G.L.	AMOUNT
6/12	50/2	1298 00
3/12	25/1/1	36 52

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

D.B. SIMON  
 CHARTERER'S SIGNATURE  
 PILOT'S SIGNATURE

WAITING TIME	@	/HR.	
FUEL:	44 @ .83/GAL.		36 52
FUEL:	@ /GAL.		
MEALS & LODGING			
OTHER			
OTHER			

N. ASELTINE  
 ENGINEER'S NAME

TOTAL \$ 1334.52

FLIGHT REPORT  
 CUSTOMER COPY

JET RANGER HELICOPTER





**TRANS NORTH TURBO AIR (1971) LTD.**  
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P.O. BOX 1675  
 BILLING ADDRESS

HOUSTON, TEXAS 77001

FUEL & OIL		TNTA FUEL USED	HRS.-GALS.	FROM
TNTA	CUST.			
	<input checked="" type="checkbox"/>			

ACCOUNT NUMBER	268
12291	
INVOICE DATE	1/10/87
A/C TYPE	206-S FTND
FLIGHT DATE	080876
PURCHASE ORDER NO. CONTRACT	

FROM	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
KEELE PK.				
TO LOCAL		5.5		3 pass.

SUB	G.L.	AMOUNT
6/12	502	1622.50

5.5 @ 295 <sup>00</sup>	1622.50
@	
@	
@	

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

D. B. SIMON  
 DB Simon  
 CHARTERER'S SIGNATURE  
 PILOT'S SIGNATURE

WAITING TIME	@	/HR.
FUEL:	@	/GAL.
FUEL:	@	/GAL.
MEALS & LODGING		
OTHER		
OTHER		

N. ASSETINE  
 ENGINEER'S NAME

TOTAL \$ 1622.50

FLIGHT REPORT  
 CUSTOMER COPY

JET RANGER HELICOPTER

**T N T**  
**TRANS NORTH TURBO AIR (1971) LTD.**  
 BOX 4338, WHITEHORSE, YUKON  
 TELEPHONE (403) 668-5111 • TELEX 036-8-290

ACCOUNT NUMBER	268
INVOICE DATE	11/08/76
A/C TYPE	206-B FTND
FLIGHT DATE	07/08/76
PURCHASE ORDER NO.	CONTRACT

**BAROLD PETROLEUM SERVICES DIV**  
 CHARTERER  
 P.O. BOX 1675  
 BILLING ADDRESS  
 HOUSTON, TEXAS 77001

FUEL & OIL X	TNTA FUEL USED	HRS.-GALS.	FROM
TNTA	39 gal	Norman Wells @	

FROM	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
KEELE PK.		6.4		3 pass. 83# payload.
TO LOCAL				

SUB	G.L.	AMOUNT
6/125/02		1888 00
6/125/11		32 37

6.4 @ 295.00	1888 00
@	
@	
@	

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

D.B. SIMON  
 [Signature]  
 CHARTERER'S SIGNATURE  
 [Signature]  
 PILOT'S SIGNATURE

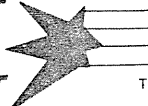
WAITING TIME	@	/HR.	
FUEL:	39 @ .83 /GAL.		32 37
FUEL:	@ /GAL.		
MEALS & LODGING			
OTHER			
OTHER			

N. ASELTINE  
 ENGINEER'S NAME

**TOTAL \$ 1920 37**

FLIGHT REPORT  
 CUSTOMER COPY

JET RANGER HELICOPTER

**T  
N  
T**  **TRANS NORTH TURBO AIR (1971) LTD.**  
 BOX 4338, WHITEHORSE, YUKON  
 TELEPHONE (403) 668-5111 • TELEX 036-8-290

ACCOUNT NUMBER	268
12289	
INVOICE DATE	11/03/76
A/C TYPE	206-G FTND
FLIGHT DATE	06/08/76
PURCHASE ORDER NO.	
CONTRACT	

**BAROUD PETROLEUM SERVICES**  
 CHARTERER  
 P.O. BOX 1675  
 BILLING ADDRESS  
 HOUSTON, TEXAS 77001

FUEL & OIL-X	TNTA	FUEL USED	HRS.-GALS.	FROM
TNTA	CUST.			



FROM	MILES	HOURS	ZONE	REMARKS - NO. OF PASS. - FREIGHT LBS.
KEELE PK.				
LOCAL.		5.0		3 Pass

5.0

SUB	G.L.	AMOUNT
6/125012		1475.00

5.0 @ 295 <sup>00</sup>	1475 00
@	
@	
@	

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

D.B. SIMON  
  
 CHARTERER'S SIGNATURE  
  
 PILOT'S SIGNATURE

WAITING TIME	@	/HR.
FUEL:	@	/GAL.
FUEL:	@	/GAL.
MEALS & LODGING		
OTHER		
OTHER		

N. ASELTINE   
 ENGINEER'S NAME


**TOTAL \$ 1475 00**

FLIGHT REPORT  
 CUSTOMER COPY

△

JET RAVIGER HELICOPTER



**T  
N  
T**  **TRANS NORTH TURBO AIR (1971) LTD.**  
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 TELEPHONE (403) 668-5111 • TELEX 036-8-290

ACCOUNT NUMBER	268
12287	

**BAROID PETROLEUM SERVICES**  
 CHARTERER  
 P.O. BOX 1675  
 BILLING ADDRESS  
 HOUSTON TEXAS 77001

INVOICE DATE	11/08/76	AREA B.C. <input type="checkbox"/> YUKON <input type="checkbox"/> NWT <input type="checkbox"/> ALTA. <input type="checkbox"/>
--------------	----------	---

A/C TYPE	206-B	AIRCRAFT REGISTRATION C	FTND
FLIGHT DATE	040876	DAY	MONTH

FUEL & OIL-X	TNTA FUEL USED	HRS.-GALS.	FROM
TNTA	CUST.		



PURCHASE ORDER NO.	CONTRACT
--------------------	----------

FROM	MILES	HOURS	ZONE	REMARKS - NO. OF PASS.	FREIGHT LBS.
KEELE PK.		4.1		4 pass	
LOCAL					

SUB	G.L.	AMOUNT
612502		1209 50

4.1 @	295.00	1209 50
@		
@		
@		

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

D.B. SIMON  
  
 CHARTERER'S SIGNATURE  
  
 PILOT'S SIGNATURE

WAITING TIME	@	/HR.
FUEL:	@	/GAL.
FUEL:	@	/GAL.
MEALS & LODGING		
OTHER		
OTHER		

A. SERTINE  
 ENGINEER'S NAME

**TOTAL \$ 1209 50**

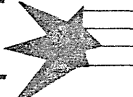
FLIGHT REPORT  
 CUSTOMER COPY

JET RANGER HELICOPTER







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T**  **TRANS NORTH TURBO AIR (1971) LTD.**  
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**BAROID PETROLEUM SERV.**  
 CHARTERER  
**D.O. Box 1675**  
 BILLING ADDRESS  
**HOUSTON, TEXAS 77001**

ACCOUNT NUMBER	268
16129	
INVOICE DATE	11/08/76
A/C TYPE	DHC-2T FVPV
FLIGHT DATE	070876
PURCHASE ORDER NO.	


FUEL & OIL - TNTA	TNTA FUEL USED	HRS.-GALS.	FROM
✓	204	4.0	RR

FROM	MILES	HOURS	ZONE	REMARKS - NO. OF PASS. - FREIGHT LBS.
ROSS RIVER				
JACQUELINE LK.	140			4/JP-4
ROSS RIVER	140			8 MTS
JACQUELINE LK.	140			4/JP-4
ROSS RIVER	140			3 MTS & samples

SUB	G.L.	AMOUNT
634	652	784.00

560	@ 1.40	784.00
-----	--------	--------

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

**D.B. SIMON**  
  
 CHARTERER'S SIGNATURE


WAITING TIME	@	/HR.
FUEL:	@	/GAL.
FUEL:	@	/GAL.
MEALS & LODGING		
OTHER		
OTHER		

**TOTAL \$ 784.00**

ENGINEER'S NAME

FLIGHT REPORT  
 CUSTOMER COPY

TRBO COVER

**T**  
**N**  **T**  
**TRANS NORTH TURBO AIR (1971) LTD.**  
 BOX 4338, WHITEHORSE, YUKON  
 TELEPHONE (403) 668-2177 • TELEX 036-8-290

**BAROID PETROLEUM SERVICES**  
 CHARTERER  
 P.O. Box 1675  
 BILLING ADDRESS  
 HOUSTON, TEXAS 77001

ACCOUNT NUMBER	268
8974	
INVOICE DATE	01/18/76
AREA D.C. <input type="checkbox"/> YUKON <input checked="" type="checkbox"/> NWT <input type="checkbox"/> ALTA <input type="checkbox"/>	
A/C TYPE	AIRCRAFT REGISTRATION C-
BEAVER	FJPM
FLIGHT DATE	DAY MONTH YEAR 04 08 76
PURCHASE ORDER NO.	



FUEL	OIL-X	TNTA FUEL USED	HRS.-GALS.	FROM
✓		720 20	gal gal	xy PK

FROM	TO	MILES	HOURS	ZONE	FREIGHT LBS.	NO. OF PASS. -REMARKS
WHITEHORSE	KEEPE LK.	250		L		
	ROSS R.	130		L		
	WHITEHORSE	130		L		
(CESSNA 185 substitute)						
(charge @ .95/mile)						

SUB	G.L.	AMOUNT
11313	6012	484.50

	@		
	@		
510	@	.95	484.50
	@		

TERMS: ONE PERCENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

D. B. SIMON  
  
 CHARTERER'S SIGNATURE  
  
 PILOT'S SIGNATURE

WAITING TIME	@	/HR.	
FUEL:	@	/GAL.	
FUEL:	@	/GAL.	
MEALS & LODGING			
OTHER			
OTHER			

SILVER  
 ENGINEER'S NAME

**TOTAL \$ 484.50**

FLIGHT REPORT  
 CUSTOMER COPY

BEAVER







TRANS NORTH TURBO AIR (1971) LTD.  
BOX 4938, WHITEHORSE, YUKON

TELEPHONE (403) 668-5111 • TELEX 036-8-290

CHARTERER  
**Bancoid Petroleum Services**

P.O. Box 1675

BILLING ADDRESS  
**HOUSTON, TEXAS 77001**

ACCOUNT NUMBER	268
16112	
INVOICE DATE	11/08/76
A/C TYPE	DHC-2T FV PV
FLIGHT DATE	300776
PURCHASE ORDER NO.	

FUEL & OIL-TNTA	OIL-CUST.	TNTA FUEL USED	HRS.-GALS.	FROM
✓		JP-4	2.5	RR

FROM	TO	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
Ross River	EAST KEELE LK.		1.5		Reece Location
	Ross River	140			

SUB	G.L.	AMOUNT			
61314	6012	473 50	1.5 @	185 <sup>00</sup>	277 50
			140 @	1.40	196 00

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

**D. B. SIMON**  
*[Signature]*  
CHARTERER'S SIGNATURE

*[Signature]*  
PILOT'S SIGNATURE

WAITING TIME	@	/HR.
FUEL:	@	/GAL.
FUEL:	@	/GAL.
MEALS & LODGING		
OTHER		
OTHER		

**TOTAL \$ 473 50**

ENGINEER'S NAME

FLIGHT REPORT  
CUSTOMER COPY

△ TURBO BOAVER



TRANS NORTH TURBO AIR (1971) LTD.

BOX 4338, WHITEHORSE, YUKON

TELEPHONE (403) 668-5111 • TELEX 036-8-290

CHARTERER

BAROID PETROLEUM SERVICES

P.O. Box 1675

BILLING ADDRESS

HOUSTON, TX 77001

FUEL & OIL-X	TNTA FUEL USED	HRS.-GALS.	FROM
TNTA CUST.			
✓	1.5 HRS.		

ACCOUNT NUMBER	268
15970	
INVOICE DATE	11/08/76
A/C TYPE	C-402
AIRCRAFT REGISTRATION C	GWLE
FLIGHT DATE	10/08/76
PURCHASE ORDER NO.	

FROM	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
TO WHITEHORSE				
FARO Ross Riv.	130			-
WHITEHORSE	130			FRT.

SUS	G.L.	AMOUNT
141361012		338.00

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

*[Signature]*  
CHARTERER'S SIGNATURE

*[Signature]*  
PILOT'S SIGNATURE

ENGINEER'S NAME

WAITING TIME	@	/HR.	
FUEL:	@	/GAL.	
FUEL:	@	/GAL.	
MEALS & LODGING			
OTHER			
OTHER			

TOTAL \$ 338.00

FLIGHT REPORT CUSTOMER COPY

CESSNA 402





**WHITE PASS**  
**PETROLEUM SERVICES**  
 BRITISH YUKON CORPORATION CO. LTD.

Box 407  
 510 W. Hastings St.  
 Vancouver, B.C.  
 V6B 1M5

TRIP NO. \_\_\_\_\_  
 TRAILER \_\_\_\_\_  
 SHIP TO \_\_\_\_\_  
 FROM \_\_\_\_\_

DATE: June 25, 76  
 ACCT. NUMBER: 473914

ORDER NO. \_\_\_\_\_  
 STN. CODE \_\_\_\_\_  
 PRICE \_\_\_\_\_

TRIP NO.	TRAILER	SHIP TO	FROM	CODE	GALLONS	PRICE	AMOUNT
				DK	12	888	10,656
				DELIVER TO	10	3	30
				DRUM	12 HV	30	360.00

TAX (SPECIFY) \_\_\_\_\_  
 DELIVERED BY \_\_\_\_\_  
 RECEIVED BY \_\_\_\_\_

PAYMENTS RECEIVED  
 CASH \_\_\_\_\_  
 CHEQUES \_\_\_\_\_  
 OTHER \_\_\_\_\_

88632



Chevron logo and account information

*DK for pay card - 4/26*



THE BRITISH YUKON NAVIGATION CO. LTD.  
 P.O. Box 4070 510 W. Hastings St.  
 Whitehorse, Yukon Vancouver 2, B.C.

DELIVERY INVOICE NO.

STATION <b>Ross River</b>	DATE <b>Aug 7 1976</b>
SHIPPED TO	TRUCK NO.
	TRIP NO.

SOLD TO (PRINT) <b>Barrod of Canada</b>	16152	CUSTOMER'S ORDER OR REQ. NO.
ADDRESS <b>Red River</b>	WP. NO.	LOC.
		DELIVERED BY <i>[Signature]</i>

FORM PET 655 65M 73

PRODUCTS DELIVERED	SIZE OF PACKAGE	QUANTITY	PRICE	AMOUNT
<b>JP4</b>		<b>360</b>	<b>588</b>	<b>319 68</b>
<b>Barrett fittings</b>		<b>360</b>		
<b>Shipped via Stirling</b>				
<i>OK for payment + 4/100</i>				
<i>atn # 28415 cancelled + Admin. credited here.</i>				

SPECIFY)		GALS. @ <b>0.25 7/26</b>	
PRODUCTS RECEIVED	RECEIVED PAYMENT	DRUM CHARGES	<b>8 H.U.</b>
<i>M. Gilbert</i>	CASH	DRUM	<b>11</b>
APPROVED	CHEQUES	TERMS - NET CASH (NO DISCOUNT)	
CHECKED	EXCH.		
	TOTAL		

**253.38**

*JK*

AHS \*\*00.75  
 AHS \*\*00.75  
 AHS \*\*00.75  
 AHS \*\*00.75  
 AHS \*\*00.63  
 AHS \*\*00.63  
 AGR \*\*00.95  
 AGR \*\*00.95  
 APR \*\*00.99  
 APR \*\*00.99  
 AHS \*\*00.99  
 A II \*\*01.61  
 A II \*\*01.61  
 APR \*\*02.20  
 APR \*\*00.37  
 APR \*\*00.39  
 A II \*\*00.65  
 A II \*\*01.79  
 AHT \*\*03.61  
 A II \*\*01.13  
 A II \*\*01.13  
 A II \*\*01.13  
 A II \*\*01.13  
 A II \*\*01.13  
 A II \*\*01.13  
 A II \*\*01.13  
 A II \*\*01.13  
 A II \*\*01.13  
 S A \*\*32.18  
 TL A \*\*32.18

SUPER-VALU  
 #80

AGR \*\*00.67  
 AGR \*\*00.67  
 AGR \*\*00.67  
 AGR \*\*00.67  
 AGR \*\*00.67  
 AGR \*\*00.67  
 AGR \*\*00.67  
 AGR \*\*00.67  
 AGR \*\*00.31  
 AGR \*\*00.31  
 AGR \*\*00.39  
 AGR \*\*00.39  
 AGR \*\*01.49  
 AGR \*\*00.50  
 AGR \*\*00.50  
 AGR \*\*00.50  
 AGR \*\*00.49  
 AGR \*\*00.49  
 AGR \*\*00.49  
 AGR \*\*02.27  
 AGR \*\*02.27  
 AGR \*\*02.27  
 AGR \*\*00.24  
 AGR \*\*01.23  
 AGR \*\*01.23  
 AGR \*\*01.09  
 AGR \*\*01.09  
 AGR \*\*00.59  
 AGR \*\*00.96  
 AGR \*\*01.49  
 AGR \*\*00.73  
 AGR \*\*00.48  
 AGR \*\*00.99  
 AGR \*\*00.73  
 AGR \*\*00.62  
 AGR \*\*00.42

AGR \*\*00.99  
 AGR \*\*20.71  
 AGR \*\*00.85  
 AGR \*\*00.48  
 AGR \*\*00.88  
 AGR \*\*00.48  
 AGR \*\*00.89  
 AGR \*\*03.75  
 AGR \*\*03.75  
 AGR \*\*00.65  
 AGR \*\*00.65  
 AGR \*\*01.59  
 AGR \*\*00.73  
 AGR \*\*00.55  
 AGR \*\*01.21  
 AGR \*\*00.24  
 AGR \*\*00.19  
 AGR \*\*01.09  
 AGR \*\*00.9  
 AGR \*\*00.5  
 AGR \*\*00.5  
 AGR \*\*01.2  
 AGR \*\*01.2  
 AGR \*\*01.2  
 AGR \*\*01.2  
 AGR \*\*00.77  
 AGR \*\*00.39  
 AGR \*\*00.39  
 AGR \*\*01.06  
 AGR \*\*01.23  
 AGR \*\*00.66  
 AGR \*\*00.66  
 AGR \*\*01.68  
 AGR \*\*00.36  
 AGR \*\*00.75  
 AGR \*\*00.75

AGR \*\*00.75  
 AGR \*\*00.95  
 AGR \*\*00.95  
 APR \*\*01.29  
 APR \*\*02.69  
 AGR \*\*02.25  
 AGR \*\*00.79  
 AGR \*\*00.53  
 APR \*\*01.29  
 APR \*\*01.29  
 APR \*\*01.03  
 AGR \*\*01.29  
 AGR \*\*00.45  
 AGR \*\*00.23  
 AGR \*\*00.67  
 AGR \*\*00.87  
 AGR \*\*00.87  
 AGR \*\*00.87  
 AGR \*\*00.87  
 AGR \*\*01.67  
 AGR \*\*00.44  
 AGR \*\*00.33  
 AGR \*\*01.07  
 AGR \*\*07.22  
 AGR \*\*07.22  
 S A \*123.32  
 TL A \*123.32

SUPER-VALU  
 #80

THANK YOU  
PLEASE  
CALL AGAIN

\*\*14.95 ~+

\*\*14.95 T 6983

THANK YOU  
PLEASE  
CALL AGAIN

\*\*19.95 ~+

\*\*19.95 T 6983



29 JUL 76

0000.45 — B

2521 0000.45 TOTL

THANK YOU

A • 0003.29 T

• Gr 0003.29

5285 30 Jul 76

SUPER MARKET  
TOURISTS'  
SERVICES LTD.

ANS \*\*01.21  
ANS \*\*01.93

TL A \*\*03.14

SUPER-VALU  
#30

WOOLWORTH'S  
(5770)

CA 201 05.50

TLCA 00 05.50 :

AT 00 10.00 :

ESDA 00 04.50 :

ACR \*\*00.30

ACR \*\*00.30

S A \*\*00.60

TL A \*\*00.60

HOUGENS

117 18.00 MB

SUPER-VALU  
#30

114 13.00

ANS \*\*00.75

S A \*\*00.75

TL A \*\*00.75

SUPER-VALU  
#30

RAMSCLYN  
DRVG

1150 —

1150 TOTL

0001.97 — DRG

0002.39 — DRG

0001.39 — DRG

0002.74 — DRG

0000.89 — DRG

0000.84 — TUB

0000.84 — TUB

0011.06 SUB  
TOTL

78 0011.06 TOTL

# hougen's s 13249 Ltd.

BRANCHES:  
FARO, YUKON  
WATSON LAKE, YUKON

PHONE: 667-4222 • 305 MAIN STREET • WHITEHORSE, YUKON Y1A 2B4

ACCOUNT NAME ADDRESS

*Coal*

YOUR P.O. NO.

DEL. INST.

DATE

*29/7/76*

WHERE BUDGET OR CONTRACT IS CHECKED  
MY PURCHASE IS MADE UNDER MY MASTER  
AGREEMENT OF THAT TYPE.

DEPT. NO. CLERK CASH CHARGE BUDGET CONTRACT C.O.D.

EACH	MOSE CODE	AMOUNT
4728 MATTERESS		47.88
9250 FUEL		9.56
1667 COOKERS		11.67
495 CANTEEN		4.95
1451 MATCHES		1.49
198 CORD		1.98
240 GAME BAG		2.40
698 ANMO		6.88
599 GRILL		5.98
323 COOLER		5.26
		98.05

CUSTOMER'S SIGNATURE AMOUNT

*HC*

ACCOUNT DUE 15TH OF FOLLOWING MONTH  
1 1/2% PER MONTH (18% P.A.)  
ON PAST DUE BALANCE.

Tamblyn drugmart  
Reg No. 521

*STORAGE CONTAINER  
FOR FIELD ITEMS  
SHIPPED*

\$007.50 —

3118 \$007.50 TOTL

*the [unclear]*

THANK YOU

*1300/*  
*2509*  
*269*  
*077*

- D 0.001.59
- D 0.001.59
- L • 0.000.55
- L • 0.002.19
- • 0.005.92 T

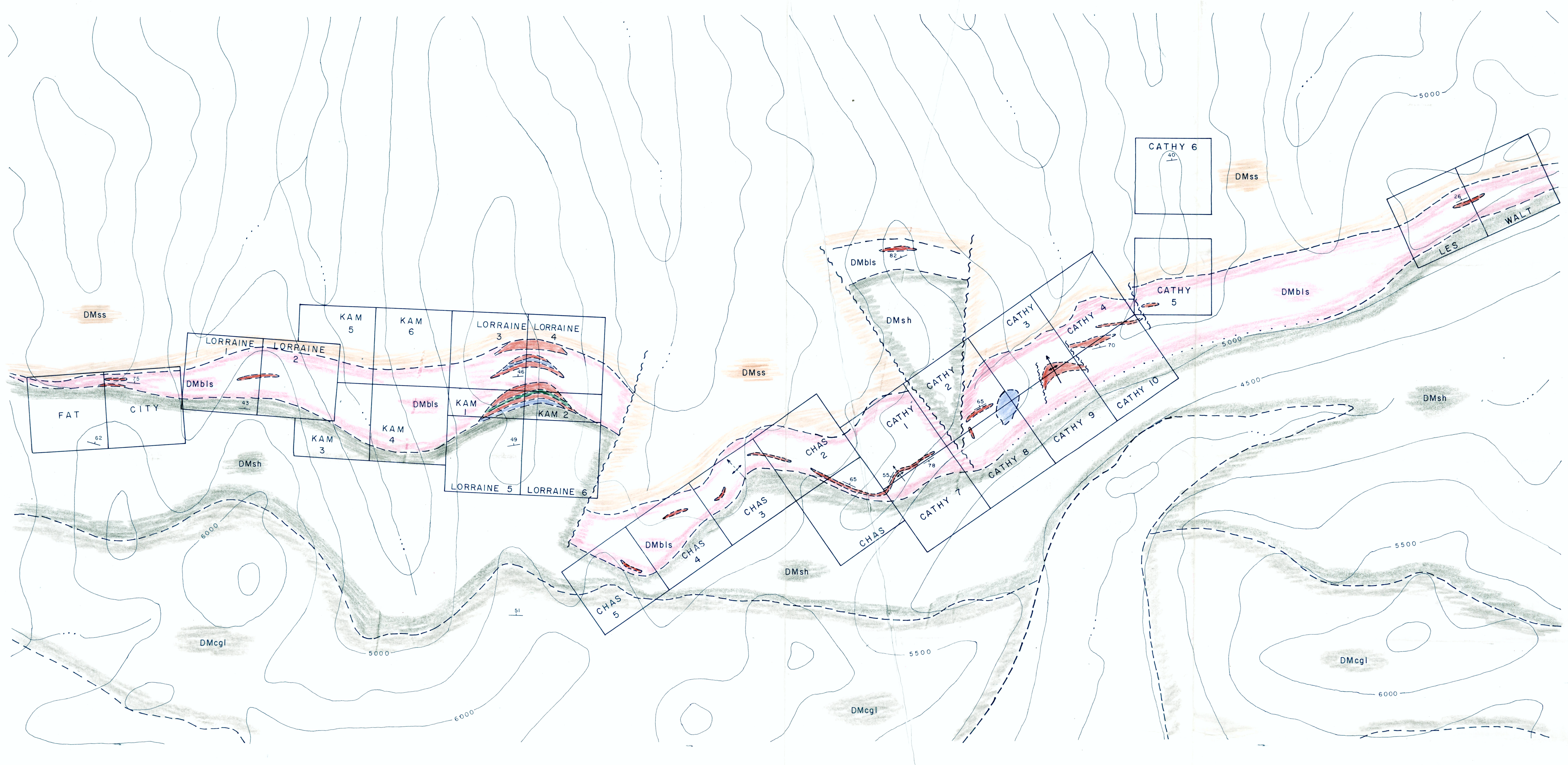
JUL 29 3488

*the [unclear]*

THANK YOU

- A 0.001.35
- L • 0.001.98
- T • 0.002.19
- A 0.000.89
- T • 0.001.19
- • 0.007.60 T

JUL 29 3487

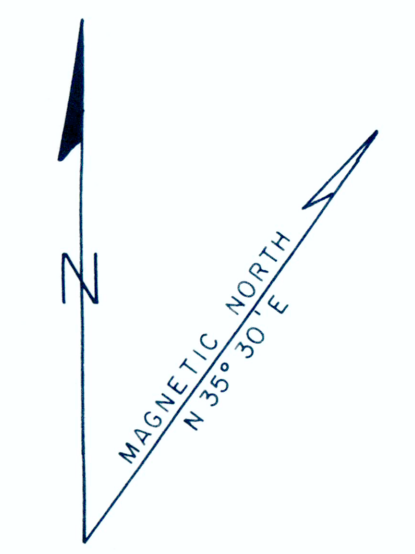
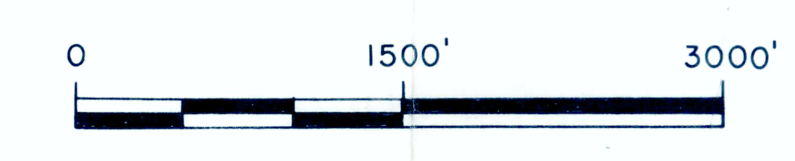


LEGEND

- DMss PRIMARILY REDDISH SHALES AND SILTSTONES
- DMbls BARITIC SEQUENCE UNDIVIDED;  BARITE,  LIMESTONE
- BLACK SHALE
- DMsh PRIMARILY MASSIVE BLACK SHALE
- DMcgl CHERT PEBBLE CONGLOMERATE

SYMBOLS

- GEOLGIC CONTACT (APPROXIMATE)
- ~ FAULT
- ⊕ ANTICLINE



**Baroid Petroleum Services**  
 Baroid Petroleum Services Division/NL Industries, Inc.  
 Houston, Texas

**GEOLOGIC MAP**  
 BAROID OF CANADA CLAIMS  
 YUKON TERRITORY, CANADA

SCALE	DRAWING NO. PLATE I	REV. C
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REVISIONS	REFERENCES	DRAWN	DATE
1.		DBS	MAY 20, 1976
2.		CHECKED	
3.		APPROVED	
4.		PLANT	