

1977 GEOLOGICAL and GEOCHEMICAL REPORT
on the
CPA 1 - 12 and GAG 1 - 24 MINERAL CLAIMS
McCONNELL RIVER AREA
WATSON LAKE MINING DISTRICT

by

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and

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N.T.S. Sheet 105-F-8
Latitude: 61° 28' N
Longitude: 132° 27' W
Dates: June 11 to Sept. 2, 1977

Dated: December 7, 1977

690260

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Geological Survey of the State of
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No. 10,200

J. B. Craig

Considered correct by the
Section of () State Engineer's Office

B. R. Baxter
B. R. BAXTER
Supervising Mining Recorder

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INTRODUCTION:-

The CPA 1 - 12 Mineral Claims were staked by R. G. Hilker on September 26th, 1969 and recorded on October 20th, 1969. The claims were staked over pyritic gossans in a belt of Mississippian felsic volcanic rocks which contain several lead-zinc showings. Minor geological and geochemical work was carried out in the summer of 1969 and 1970. During the 1971 field season the claims were gridded at 400' x 100', geologically mapped, soil sampled and covered by ground magnetics.

United Keno Hill Mines Ltd. optioned the property from R. G. Hilker on June 1st, 1977 and a two man team began mapping the property and surrounding area on June 11. Twenty-four GAG Mineral Claims were staked adjacent to the CPA block on July 24th and included in the option agreement (figure 1). On August 26, 1977 the twelve CPA Claims were transferred from R. G. Hilker (in trust) to United Keno Hill Mines Ltd.

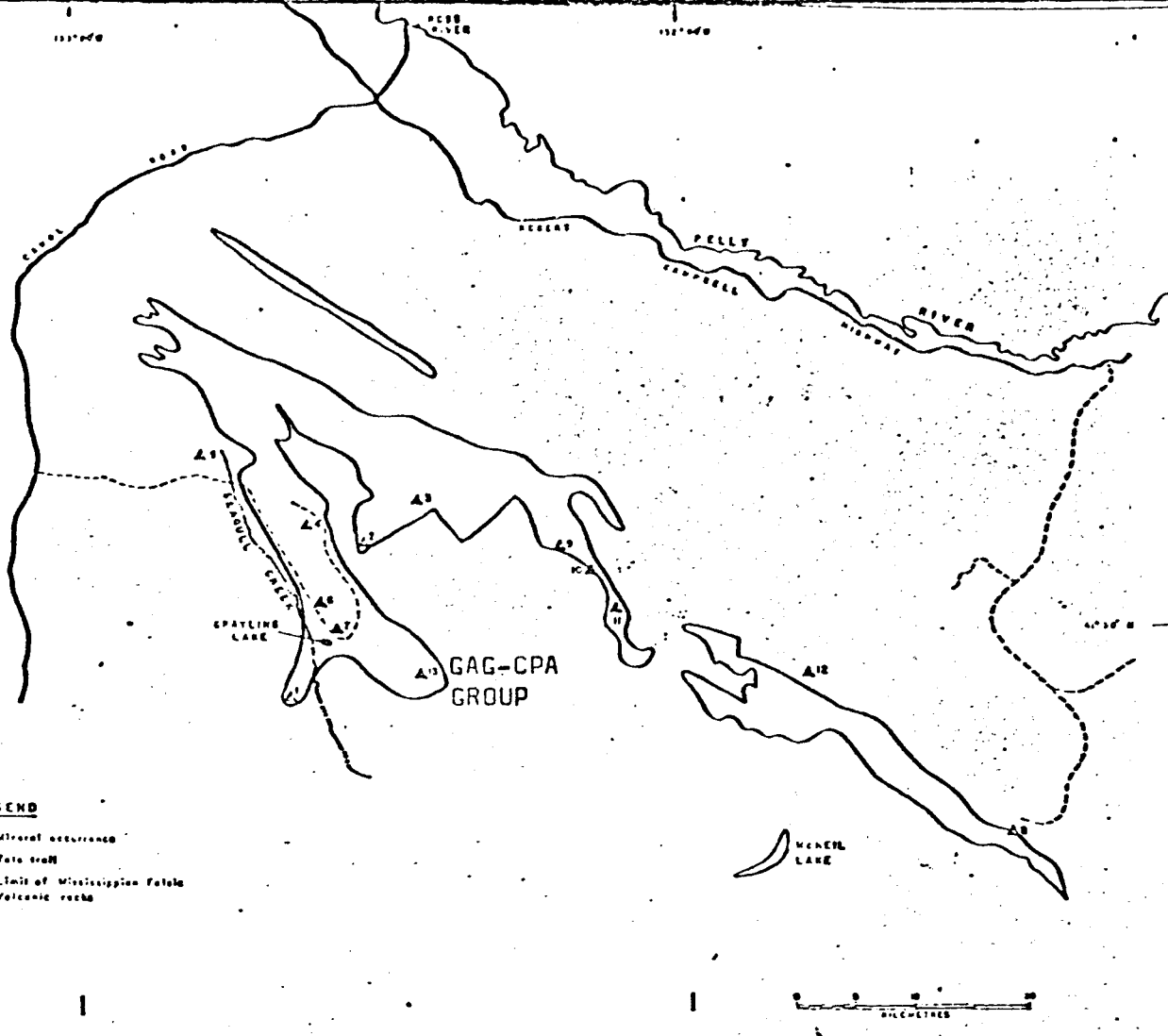
During the 1977 season two two-man sampling teams collected 1,007 soil samples from the CPA group and 1,961 from the GAG group for a total of 2,968 samples. All samples were analysed for copper, lead, zinc and silver.

Several small lead-zinc vein showings were located on and near the claim group and several small anomalies were located by the soil survey. Seven hand trenches were blasted on the GAG Claim Group to check coincident lead-zinc anomalies.

LOCATION and ACCESS:-

The CPA 1 - 12 and GAG 1 -24 Mineral Claims are located at 61°28' latitude and 132° 27' longitude, on N.T.S. Sheet 105F-8. The claims lie just east of the McConnell River, thirty-five miles due south of Ross River and twenty miles east of the South Canal Road (figure 1).

A tote trail from the South Canal Road along Groundhog Creek and Seagull Creek goes within three miles of the western claim boundary. All but the last three miles were upgraded by Dupont Exploration and Cyprus Anvil in mid-1977. The upgraded section of the road was accessible to four wheel drive vehicles for the remainder of the season. The trail however was not used by United Keno personnel. Access to the property was by Hiller 12E, Hughes 500, and Bell Jet Ranger helicopters, all based at Ross River.



DISTRIBUTION OF MISSISSIPPIAN FELSIC
VOLCANIC ROCKS AND ASSOCIATED MINERALIZATION
IN THE ST. CYR RANGE, PELLY MOUNTAINS 105 F, G
(Geology modified after D. Tompkinson-Klein, 1977)

UNITED KENO HILL MINES LTD. EXPLORATION DEPARTMENT WHITEHORSE — YUKON	
LOCATION MAP GAG-CPA CLAIM GROUP	
Mining District WATSON LAKE N.T.S. Sheet No. 105F-8 Scale	
Drawn by HFK	Date 14/12/77

PROPERTY:-

The CPA-GAG Claim Group (figure 2) consists of 36 contiguous full claims as follows:

<u>CLAIM NAME</u>	<u>GRANT NOS.</u>	<u>RECORDING DATE</u>	<u>EXPIRY DATE</u>
CPA 1-12	Y41569-80	20/10/69	20/10/80
GAG 1-24	YA21537-60	1/8/77	1/8/78

The CPA Claims were staked by R. G. Hilker and optioned by United Keno Hill Mines Limited on June 1, 1977. The GAG Claims were staked by United Keno on July 24, 1977 and included in the Hilker agreement.

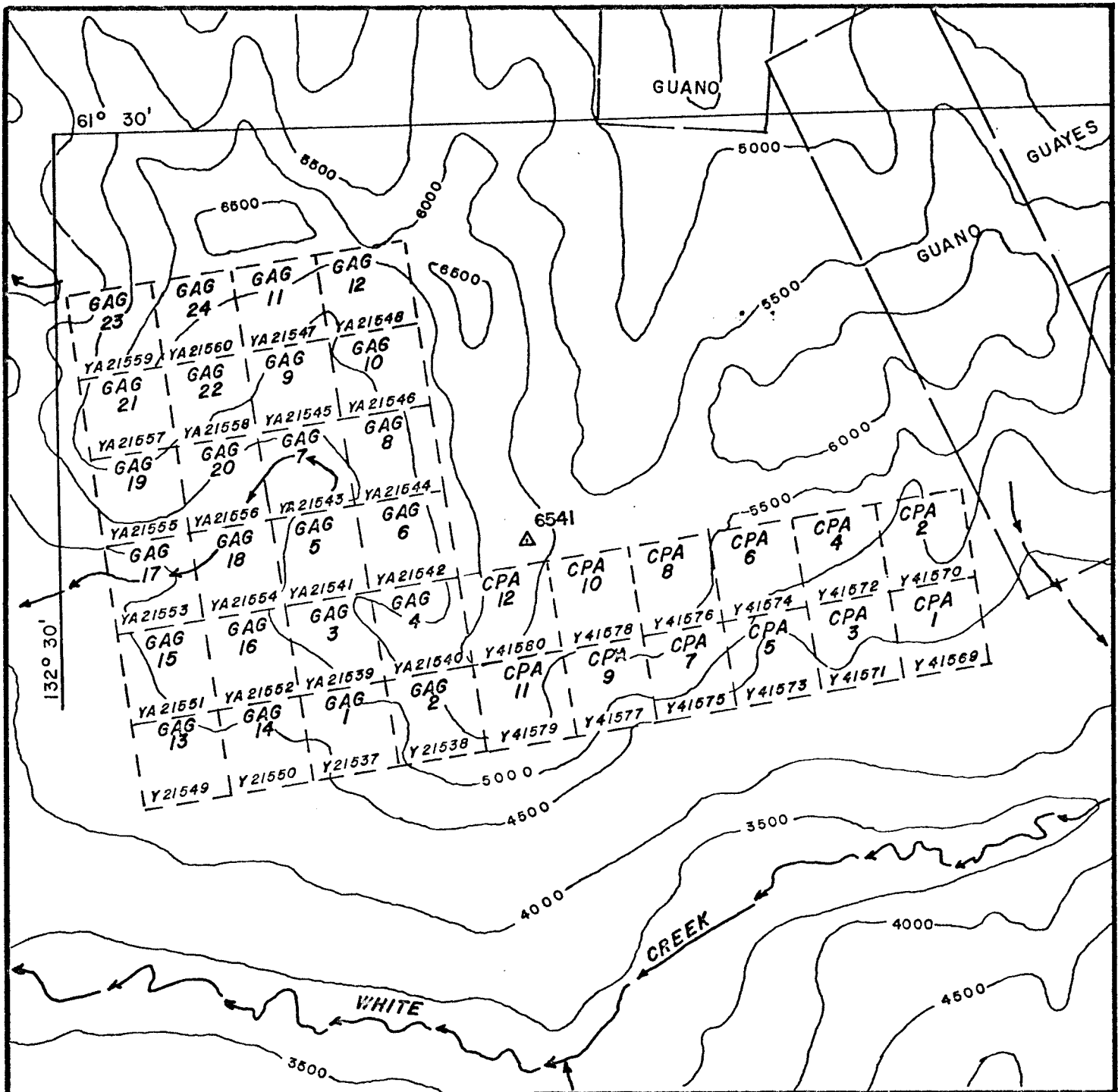
HISTORY:-

The general area was prospected in the 1950's and 1960's for silver-lead vein mineralization and the 1960's for copper-zinc massive sulphides. Many vein showings were found but the silver content and the silver to lead ratios were too low and the deposits too small to support a mining operation. The exploration for copper-zinc massive sulphides was largely carried out using qualitative copper and total metal geochemistry. No copper-zinc deposits were found.

In 1969, 1970 and 1971 R. G. Hilker explored the CPA 1-12 Claim Group and the surrounding area for silver-lead vein mineralization and for porphyry copper mineralization. In 1971 the claim group was gridded, geologically mapped, soil sampled and covered by ground magnetics. Soil samples were taken on 400' x 100' centers and analysed for copper and lead.

Since 1973 Cyprus Anvil Corporation has been working on a stratiform, volcanogenic, lead-zinc-silver, massive sulphide deposit on the MM property, six miles west of the CPA-GAG group. This discovery has created interest in the Mississippian felsic volcanic belt for similar deposits. The intense activity in the area, and the known gossans and favorable geology of the CPA group led to United Keno's option agreement with R. G. Hilker.

The Quiet Lake map sheet (105-F) was mapped by Wheeler et al, of the Geological Survey of Canada, in the late 1950's. A 1 inch = 4 mile preliminary geological map with marginal notes was published in 1960 (G.S.C. Map 7-1960). Between 1973 and 1976, D. J. Tempelman-Kluit of the Geological Survey of Canada mapped the area on a scale of 1:250,000. A preliminary map with marginal notes was published in late August, 1977.



UNITED KENO HILL MINES LTD. EXPLORATION DEPARTMENT WHITEHORSE — YUKON	
<h2>CPA and GAG Claims</h2>	
<i>Mining District</i>	WATSON LAKE
<i>N.T.S. Sheet No.</i>	105 - F - 8
<i>Scale</i>	1 inch to 1/2 mile
<i>Drawn by</i>	R.E.V.
<i>Date</i>	11 Aug 1977

FIGURE 2

PHYSIOGRAPHY:-

The claims lie in very rugged terrain in the St. Cyr Range of the Pelly Mountains. Elevations range from 3,500 feet in McConnell River and White Creek valleys to over 6,500 feet on peaks within the claim block. About seventy-five percent of the claim block lies above treeline at approximately 5,000 feet.

Outcrop is most abundant on ridge tops and the steeper slopes while the shallower slopes are commonly covered by talus. Much of the outcrop on the steeper slopes is inaccessible but the talus slopes below have been prospected thoroughly.

GENERAL GEOLOGY:-

The CPA-GAG Claim Group lies in a Mississippian felsic volcanic pile consisting of volcanoclastics, flows, graphitic shale, pyritic chert, pyritic iron formation and bedded barite. Associated with the volcanic pile are syenitic sub-volcanic intrusions.

The area is complexly folded by at least two periods of deformation. The first period of deformation is evidenced by a well developed cleavage (S_1), parallel to bedding, in the black clastics and incompetent volcanoclastics. S_1 is only crudely developed in the more competent volcanoclastics and flows.

The second period of deformation is expressed by fairly open, similar folds (F_2) and a well developed axial plane cleavage (S_2), in the black clastics and other incompetent units. In the more competent volcanic units S_2 is only crudely developed and minor F_2 folds are completely absent. Major F_2 folds are difficult to map in the competent units because of rapid facies changes, the absence of primary bedding and minor folds and the overall lack of exposure. The major F_2 folds mapped in the black clastic units have a northwest orientation.

LOCAL GEOLOGY:-

GENERAL -

The main volcanic unit in the map area consists of poorly folded, felsic fragmentals and minor felsic flows (Map 2). Cleavage is well developed in the fragmentals but not in the flows. Next in abundance are highly deformed phyllites which outcrop in the southeast and southwest portions of the map area. Dark green, chloritic

volcanic rocks, with associated small dioritic intrusions, outcrop in several areas. Restricted to the eastern portion of the area are somewhat fresh, undeformed, banded cherts. One large and several small syenitic bodies intrude the volcanic sequence. Red, orange and yellow pyritic gossans are developed in the main volcanic unit, in the phyllitic unit and occasionally in the syenite.

FELSIC FRAGMENTALS and FLOWS -

The felsic volcanic unit is made up predominantly of grey, brown, maroon, and light green lapilli tuffs and breccias with fragment sizes as large as one foot in diameter. Interbedded with the fragmentals are minor grey and buff felsic flows. Most of the red, orange and yellow pyritic gossans in the claim area are developed in this unit. In some portions of the fragmentals, where well developed gossans do not occur, iron oxide rims surround the fragments giving the rocks a spotted brown appearance.

PHYLLITES -

The most highly deformed rocks in the map area are brown, maroon and green phyllites with minor grey, fine grained felsic tuffs and flows. The phyllites in fact may be highly deformed, fine grained felsic tuffs. Limonite and disseminated pyrite are common in this unit. Well developed red, orange and yellow, pyritic gossans occur in these rocks in the southeast portion of the map area, northeast and east of Camp #4.

INTERMEDIATE - BASIC VOLCANICS and INTRUSIVES -

This highly chloritized unit contains well cleaved intermediate to basic tuffs and fine grained dioritic rocks. Iron oxide is rare but pyrite is often found in both the tuffs and intrusives.

CHERTS -

This unit contains light grey and cream, well banded cherts. The rocks are relatively undeformed and unoxidized and pyrite is virtually absent.

SYENITE -

One large and several small syenite bodies intrude the volcanic sequence. About sixty percent of the syenite is light grey in colour and contains little or no quartz and very few mafic minerals. Grain size varies from medium to coarse. The remaining forty percent of the syenite is fine to coarse grained and is relatively mafic rich. The mafic content, however, is extremely variable with some rocks made up almost entirely of mafic minerals.

The syenite is virtually unaltered. Iron oxide is rare but pyrite is quite common in both the mafic poor and mafic rich varieties. Apart from small fault and shear zones the syenite is undeformed. Fine grained, late stage dykes of syenitic composition cut the coarser grained intrusives. A pyrite rich chilled margin occurs in several localities.

STRUCTURE and METAMORPHISM:-

The structural geology of the claim area is imperfectly understood. Bedding is rare except in the banded cherts. An early cleavage (S_1), assumed to be sub-parallel to bedding, is well developed in all units except the felsic flows, the syenites and the banded cherts. Measured attitudes of S_1 are totally random which leads one to suspect that many measurements were taken on large, partially burried talus blocks rather than outcrop. An S_2 cleavage was observed in several localities. Measured strikes of S_2 range from northwest to west and dips range from $60^\circ N$ to $85^\circ S$. Unless there is a later period of folding it would appear that some of these attitudes were also measured on rotated blocks.

The banded cherts in the eastern portion of the map area have a general $N20^\circ W$ trend. Measured bedding strikes vary from $N65^\circ W$ to $N15^\circ E$, and dips vary from $45^\circ E$ to $55^\circ W$.

No F_1 folds have been observed and minor F_2 folds have only been noted in the phyllitic unit. Major F_2 folds have not been outlined in the map area. This is the result of rapid facies changes, a lack of primary bedding and minor F_2 folds, unreliable strikes and dips and a low percentage of outcrop.

The felsic volcanics are highly sericitized and the intermediate to basic volcanics are highly chloritized, suggesting low grade metamorphism.

MINERALIZATION:-

Disseminated pyrite is abundant in all rock types in the map area except the well banded cherts. Red, orange and yellow gossans are well developed in the felsic volcanoclastics and flows of the main volcanic unit, in the phyllitic unit and occasionally in the syenite. Pyrite is abundant in some of these gossans but in others it is completely oxidized.

Sphalerite, galena and rarely chalcopyrite occurs in numerous small carbonate veins which cut the main volcanic unit and the syenite. These carbonate veins both crosscut and parallel the schistosity in the volcanics. Also cutting the syenite and main volcanic unit are small quartz veins which contain minor galena and sphalerite, well developed hematite crystals and minor fluorite.

Eight samples were collected for assay with the following results:

<u>NUMBER</u>	<u>DESCRIPTION</u>	<u>Ag oz/ ton</u>	<u>Pb%</u>	<u>Zn%</u>	<u>Cu%</u>
2500	Disseminated pyrite in syenite	0.03	0.01	0.01	0.01
5083	Disseminated pyrite in syenite	0.01	0.01	0.01	0.01
5084	Galena and malachite in felsic volcanics	3.97	5.00	0.36	0.35
5085	Galena in quartz vein in felsic volcanics	0.01	0.08	0.05	0.01
5086	Galena, sphalerite and pyrite in carbonate vein in syenite	0.06	0.18	0.80	0.01
5087	Galena, sphalerite and pyrite in felsic volcanics	0.47	1.13	4.48	0.01
5088	Galena, sphalerite and pyrite in quartz vein in felsic volcanic boulder.	0.03	0.07	1.50	0.01
5089	Sphalerite in felsic volcanic boulder.	Tr	0.01	10.20	0.01

GEOCHEMISTRY

GENERAL:-

32 sup/ran/line

Two two-man soil sample crews spent twenty-three days collecting some 2,968 soil samples at 100 foot intervals along 300 foot spaced east-west lines. Samples were taken at depths of one to eight inches from the B residual soil horizon. All samples were analysed for copper, lead, zinc and silver. Contoured results for all four metals are presented on maps 3, 4, 5, and 6.

Mean values for copper, lead, zinc and silver are 15 ppm, 50 ppm, 164 ppm and 0.3 ppm respectively. The distribution of the four metals is presented in the histograms of figure 3. Using approximately three times the mean for calculation, threshold values have been set at 40 ppm, 150 ppm, 500 ppm and 1.0 ppm for copper, lead, zinc and silver, respectively. Values above the threshold have been divided into possibly anomalous and probably anomalous as shown in figure 3.

ANALYSIS:-

All samples were analysed by Bondar-Clegg and Company Limited, 1363 Industrial Road, Whitehorse, using a hot acid extraction and atomic absorption spectrometry.

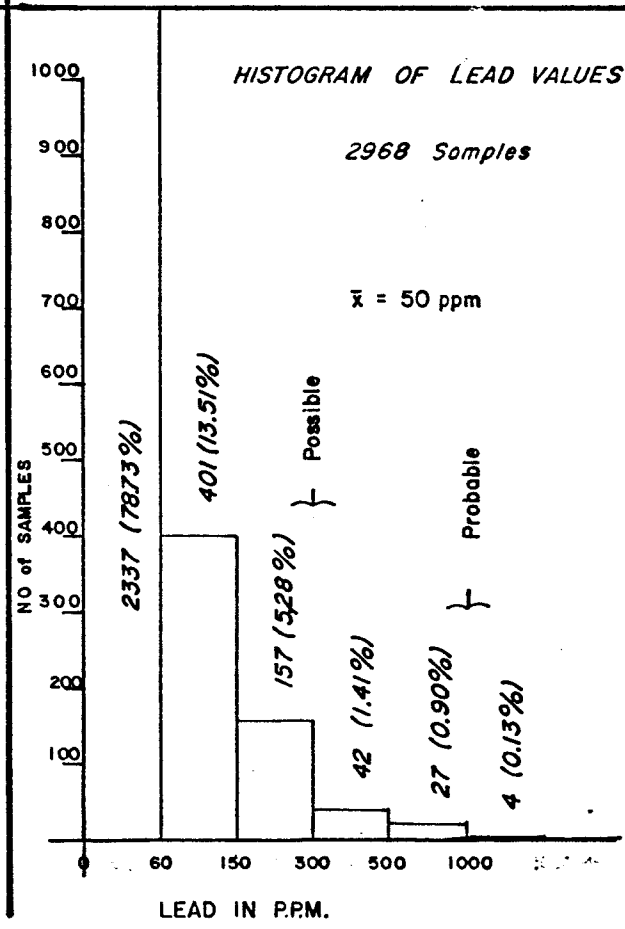
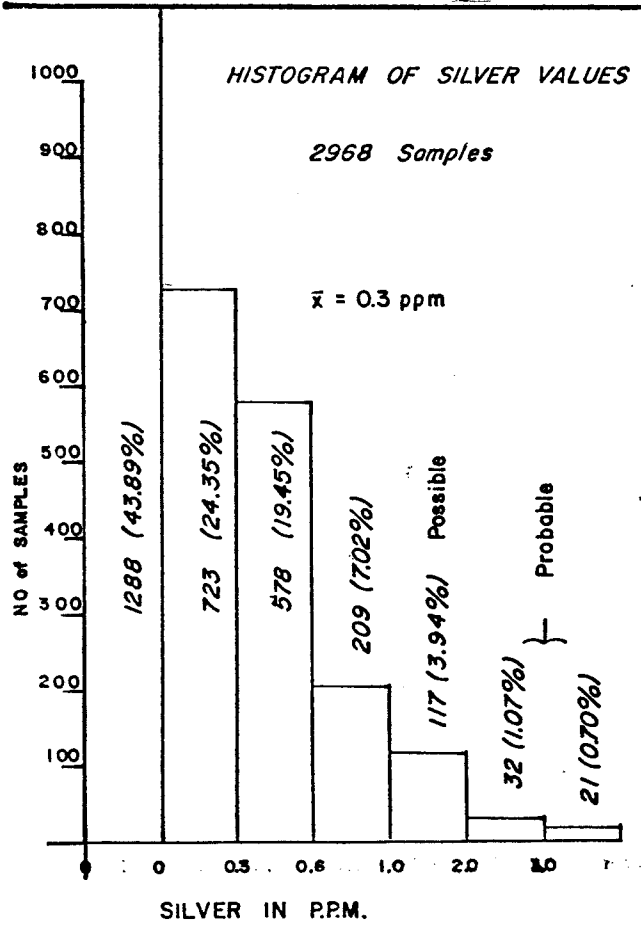
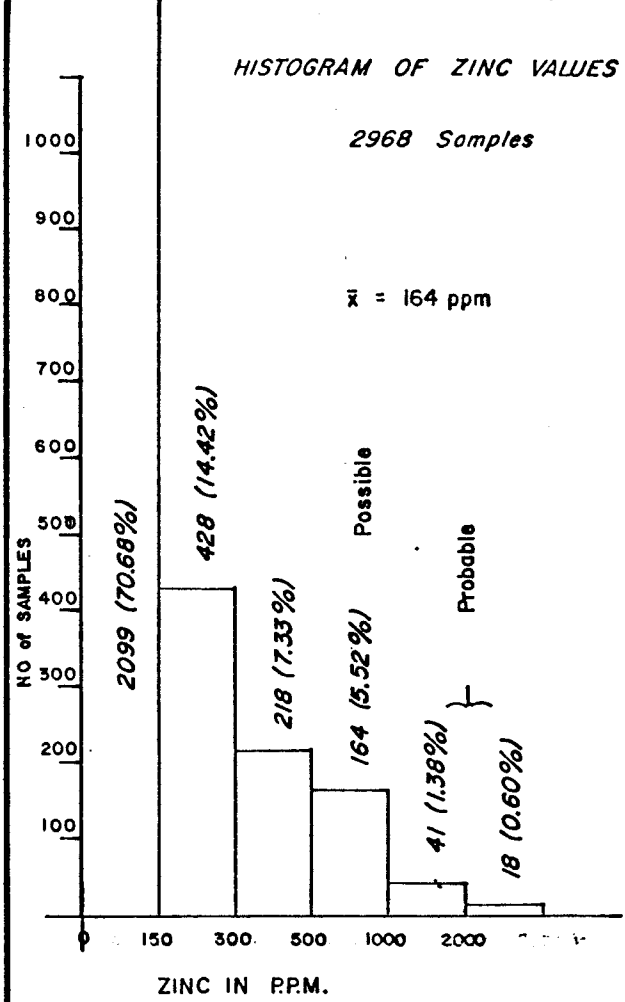
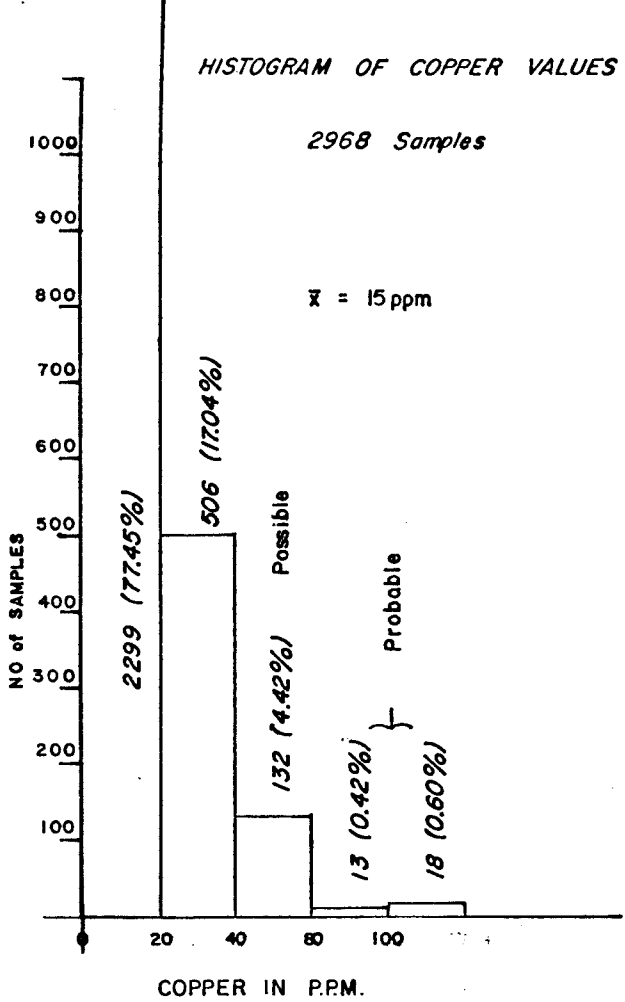


Figure # 3

The samples are dried and seived, and the minus eighty mesh fraction retained for analysis. To a test tube containing a 0.5 gram sample is added 1.5 mls. of concentrated HNO_3 . The sample is digested for a half hour on a hot water bath after which $\frac{1}{2}$ ml. of concentrated HCl is added and the sample further digested for one and a half hours. After digestion the acid solution is made up to 10 mls volume and analysed for copper, lead, zinc and silver.

INTERPRETATION:-

Several small probable copper anomalies with rather large dispersion haloes occur on the claim group (Map 3). Downhill dispersion appears to be important in some localities. There is no correlation between copper anomalies and rock units. No copper mineralization is known on the claim group but it is believed that the small copper anomalies reflect small copper bearing veins similar to those observed outside the claim block (Map 2).

Small coincident lead and zinc anomalies have no correlation with rock units. Generally both lead and zinc have small dispersion haloes although zinc is more mobile than lead. Downhill dispersion of lead and zinc is apparent in some areas. Several anomalies reflect known lead-zinc vein showings. Hand trenching indicates that anomalies in covered areas reflect similar deposits (maps 2, 4, and 5).

There is reasonably good correlation between copper and zinc probable anomalies. In most areas copper dispersion haloes are larger than those for zinc, whereas in some areas of the GAG Claim Group the zinc haloes are larger than the copper haloes. There are several copper anomalies with no coincident zinc anomalies. Except for a few sample sites there is little coincidence of probable copper and lead anomalies.

The small probable silver anomalies outlined by the soil survey have rather large dispersion haloes (Map 6). The anomalies are not coincident with any particular rock type or with known showings. Occassionally the silver dispersion haloes coincide with those of lead and zinc but generally the silver anomalies are completely independant of lead-zinc.

With the exception of the coincident copper-silver anomaly on the CPA - 8 claim, probable copper and silver anomalies have no correlation. Furthermore the dispersion haloes of the two metals are seldom coincident.

Geochemical Follow-up and Hand Trenching:-

Many of the lead-zinc geochemical anomalies are closely associated with previously known, small lead-zinc, vein showings. Follow-up work located other small exposures of similar mineralization related to soil anomalies.

To further check lead-zinc soil anomalies and one lead-zinc showing, hand trenching was carried out using a Cobra gas drill and explosives. This work was done by R. Eastman of Exploration Services of Whitehorse. Some 123.6 cubic yards of material were removed from seven (7) trenches on GAG 5, 6, and 7 (Maps 1 & 2; figure 4).

In most cases the trenching located minor lead-zinc mineralization which explained the anomaly. The known lead-zinc showing (T-6) was shown by trenching to be insignificant.

The hand trenching was filed as assessment work on the CPA Claim Group keeping the claims in good standing until October 20, 1980.

SUMMARY and CONCLUSIONS:-

The CPA - GAG Mineral claims lie in a belt of Mississippian felsic volcanics intruded by subvolcanic syenites. Several pyritic gossans and several lead-zinc showings are found on the claims.

During the 1977 field season the claims and surrounding area were geologically mapped on a scale of 1 inch = 400 feet. In addition the claims were soil sampled on a 300' x 100' chain and compass grid and the samples were analysed for copper, lead, zinc and silver. Seven hand trenches were blasted to check soil anomalies and one known lead-zinc showing. The hand trenching was filed as assessment work on the CPA Claim Group.

Several small coincident lead-zinc soil anomalies, reflecting small lead-zinc vein showings, were outlined by the soil survey. Small copper anomalies are thought to reflect small copper vein showings similar to those seen outside the claim group. Silver anomalies are unrelated to those of lead and zinc and to lead-zinc showings. These silver anomalies, while statistically and probably geologically valid, are not thought to be economically important.

TRENCHING DATA for the GAG-CPA CLAIM GROUP

<u>TRENCH</u>	<u>LOCATION</u>	<u>SIZE</u>
T1	450' on bearing 060° from Post No. 1 of GAG 8	30.0' x 3.8' x 3.7'= 421.8 cu. ft.
T2	630' on bearing 070° from Post No. 1 of GAG 8	30.0' x 4.1' x 3.7'= 455.1 cu. ft.
T3	270' on bearing 180° from Post No. 2 of GAG 5	32.0' x 4.1' x 3.9'= 511.7 cu. ft.
T4	600' on bearing 167° from Post No. 2 of GAG 6	30.0' x 4.0' x 4.0'= 480.0 cu. ft.
T5	460' on bearing 180° from Post No. 2 of GAG 5	30.0' x 4.2' x 4.0'= 504.0 cu. ft.
T6	20' on bearing 270° from Post No. 1 of GAG 5	31.0' x 4.2' x 3.7'= 466.2 cu. ft.
T7	200' on bearing 270° from Post No. 2 of GAG 5	32.0' x 4.1' x 3.8'= 498.6 cu. ft.

Total volume removed in 7 trenches - 3,337.4 cu. ft. = 123.6 cu. yds.

FIGURE 4

RECOMMENDATIONS:-

No further work is recommended on the claim group. This report should be filed as assessment work on the GAG Claim Group to keep them in good standing until October 20, 1982. Furthermore, the option agreement should be terminated and the CPA - GAG Claims transferred to R. G. Hilker (in trust).

REFERENCES:-

- Apps, J. A., 1963 - Report on Geochemical Investigations carried out by Giant Yellowknife Ltd. during the 1962 Summer Exploration Program in McNeill Lake and Frances Lake Areas of the South Yukon Territory: Company Files.
- Archer, Cathro and Associates, Northern Cordillera Mineral Inventory, last revised, 1977.
- Squair, H., 1962 - Report on the (Giant Yellowknife) Helicopter Survey, S.E. Yukon Territory: Company Files.
- Tempelman-Kluit, D. J., 1977 - Quiet Lake (105-F) and Finlayson Lake (105-G) Map Areas, Yukon Territory: G.S.C. Open File 486.
- Wheeler, J. O., 1960 - Quiet Lake Map Sheet (105-F), Yukon Territory: G.S.C. Map7- 1960.

APPENDIX A

LOGISTICS

PROJECT: Project 36: CPA 1 - 12 and
GAG 1 - 24 Claim Group

DATE: June 11 to September 2, 1977

TERRAIN: Mountainous

BASE: Ross River, Y.T.

OPERATING CAMPS: Six in three localities

PERSONNEL:

Supervisor	H. F. Keats
Party Chief	B. Baird
Assistants	M. Ribí
	D. Taylor
	K. Dieckmann

SUPPLY: Ross River Store, Ross River, Y.T.

ACCESS: Hiller 12E, Hughes 500,
Jet Ranger 206A and 206B

HELICOPTER TIME DISTRIBUTION:

Camp moves	12.9 hours
Claim staking	1.4 hours
Supply and supervision	<u>4.9 hours</u>
TOTAL	19.2 hours

Logistics (continued)

PERSONNEL TIME DISTRIBUTION:

	<u>Days</u>	<u>Man days</u>
Geology (2 man)		
Geological mapping	23	46
Camp move and visits	5	10
Claim post location	1	2
Drafting	1	2
R & R	7	14
Geochemistry (4 man)		
Sampling	19	76
Camp moves	3	12
Chaining	1	4
Rain	2	8
R & R	5	20
Trenching (2 man)	<u>11</u>	<u>22</u>
	<u>78</u>	<u>216</u>

Possible Man Days	216	100%
Operating Man Days	152	70%
Days Lost		
Camp Moves	22	10%
R & R	34	16%
Rain	8	4%

CONTRACTORS:

Assay Determinations
 Whitehorse Assay Office
 P.O. Box 346
 Whitehorse, Y.T.

Geochemical Analysis
 Bondar - Clegg and Co., Ltd.
 136 B Industrial Road
 Whitehorse, Y.T.

Hand Trenching
 Exploration Services
 P.O. Box 4411
 Whitehorse, Y.T.

Logistics (continued)

AIRCRAFT CHARTERS:

Yukon Airways, Ltd.
Whitehorse Airport
Whitehorse, Y.T.

Trans North Turbo Air, Ltd.
Whitehorse Airport
Whitehorse, Y.T.

Terr-Air, Ltd.
Ross River, Y.T.

Trans West Helicopters, Ltd.
Whitehorse Airport
Whitehorse, Y. T.

APPENDIX B

PROJECT COSTS -- CPA and GAG CLAIMS

GENERAL:

Salaries and wages	\$ 1,506.00
Hiring expenses	242.00
Travel - staff	441.00
	<u>2,189.00</u>

\$ 2,189.00

PROPERTY ACQUISITION:

Option Payments	8,000.00
Recording Fees, etc.	737.00
Aircraft Charter	419.00
	<u>9,156.00</u>

9,156.00

GEOLOGICAL:

Company Labour	5,244.00
Equipment and Supplies	74.00
Transportation and Freight	56.00
	<u>5,374.00</u>

5,374.00

GEOCHEMICAL:

Sampling, Equipment & Supplies	192.00
Company Labour	2,604.00
Contract Analysis	9,470.00
Transportation and Freight	43.00
Equipment Repair	10.00
	<u>12,319.00</u>

12,319.00

ASSAYING AND RESEARCH:

130.00

130.00

TRENCHING AND STRIPPING:

Contract Costs	1,500.00
Mobilization & Demobilization	110.00
Equipment and supplies	1,186.00
Fuel	11.00
	<u>2,807.00</u>

2,807.00

Project Costs (continued)

CAMP OPERATION:

Company Equipment & Supplies	\$ 57.00
Food	1,229.00
Fuel	61.00
Equipment Repair	65.00
	<u>1,412.00</u>

\$ 1,412.00

AIRCRAFT CHARTER:

Helicopter Charter	4,786.00
Fixed-wing Charter	382.00
Operating Supplies	568.00
	<u>5,736.00</u>

5,736.00

VEHICLES:

Equipment Rental	700.00
Operating Supplies	236.00
	<u>936.00</u>

936.00

\$40,059.00

15 per cent office overhead,
including supplies, typing,
supervision, expediting, etc.

6,008.85

TOTAL

\$46,067.85

APPENDIX C

PROJECT COSTS -- GAG 1 to 24 Inclusive

GENERAL:

Salary Supervision	\$ 506.00	\$ 506.00
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GEOLOGICAL:

Labour	2,200.00	2,200.00
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GEOCHEMICAL:

Labour	1,600.00	
Analysis 1,961 samples @ 3.68	7,216.00	
	<u>8,816.00</u>	8,816.00

ASSAYING:

	65.00	65.00
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CAMP OPERATION:

Food	429.00	
Fuel	20.00	
Equipment Repair	30.00	
	<u>479.00</u>	479.00

AIRCRAFT:

Helicopter, 10 hours @ 275.00	2,750.00	
Fuel	251.00	
	<u>3,001.00</u>	3,001.00

VEHICLES:

Equipment rental	225.00	
Supplies	50.00	
	<u>275.00</u>	<u>275.00</u>

TOTAL		<u><u>\$15,342.00</u></u>
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A F F I D A V I T

I, Robert E. Van Tassell, of Whitehorse, in the Yukon Territory,
Exploration Superintendent, do solemnly declare:

1.

That I am duly appointed agent of United Keno Hill Mines Limited,
and except where otherwise stated have a personal knowledge of the
facts and matters herein, and swear to the value of work contained
in Appendix B & C

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

Whitehorse, in

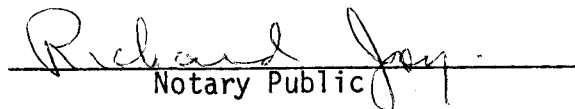
The Yukon Territory,

this 8th day of

December 1977.



Robert E. Van Tassell



Richard Jay
Notary Public



- Claimposts
- - - Claim boundary
- ~ Creek with flow direction
- T Hand Trench

UNITED KENO HILL MINES LTD.
 EXPLORATION DEPARTMENT WHITEHORSE, Y. T.
CPA & GAG CLAIM - GROUPS
 N.T.S. SHEET 105-F-8

SURFACE PLAN

Scale 1 inch = 400 feet

NO.	Revision date	BY	NO.	Revision date	BY	Drawn by	DWG.
						JP	

Date Oct. 18/1977 NO. 1



L
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G
E
N
D

- | | | | | | | |
|---|--|--|---|---|--|--|
| <p>Mississippi</p> <p>2</p> <p>3</p> <p>4</p> | <p>S</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> | <p>Syenitic intrusions, fine to coarse grained, variable mafic content.</p> <p>Felsic Fragmentals and Flows - grey, brown, maroon and light green lapilli tuffs and breccias minor grey and buff felsic flows</p> <p>Highly deformed, brown, maroon and green phyllites with minor grey, fine grained - felsic tuffs and flows</p> <p>Highly chloritized intermediate to basic tuffs and fine grained dioritic rocks</p> <p>Light grey and cream, well banded cherts</p> <p>Note: Not in stratigraphic order</p> | <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> | <p>Lamination</p> <p>Bedding</p> <p>Joints</p> <p>S₁ Cleavage</p> <p>S₂ Cleavage</p> <p>Mineralization</p> <p>Outcrop</p> <p>Pyritic Gossan</p> <p>Geological Contact</p> | <p>□</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> | <p>Claimposts</p> <p>Claim boundary</p> <p>Creek with flow direction</p> <p>Hand Trench</p> <p>Assay Sample Location with number Assays follow Order: Cu, Pb, Zn in %, Ag in 100/Ton</p> <p>Campsite</p> |
|---|--|--|---|---|--|--|

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N.T.S. SHEET 105-F-8

GENERAL GEOLOGY

Scale 1 inch = 400 feet

REV	REVISION	DATE	BY	NO.	REVISION	DATE	BY	NO.	DRAWN BY	DWG.
1		15/9/77	J.H.P.						J.P.	DWG.



32 Soil sample Location with results in ppm

Contour Interval
20 ppm
40 ppm
80 ppm
100 ppm

\bar{x} = 15 ppm

Threshold = $3 \times \bar{x}$ (approx) = 45 ppm

Possible anomalous - 40 ppm +) Top 5.4% of values
Probably anomalous - 80 ppm +)

□ Claimposts

--- Claim boundary

~ Creek with flow direction

UNITED KENO HILL MINES LTD.

EXPLORATION DEPARTMENT WHITEHORSE, Y.T.

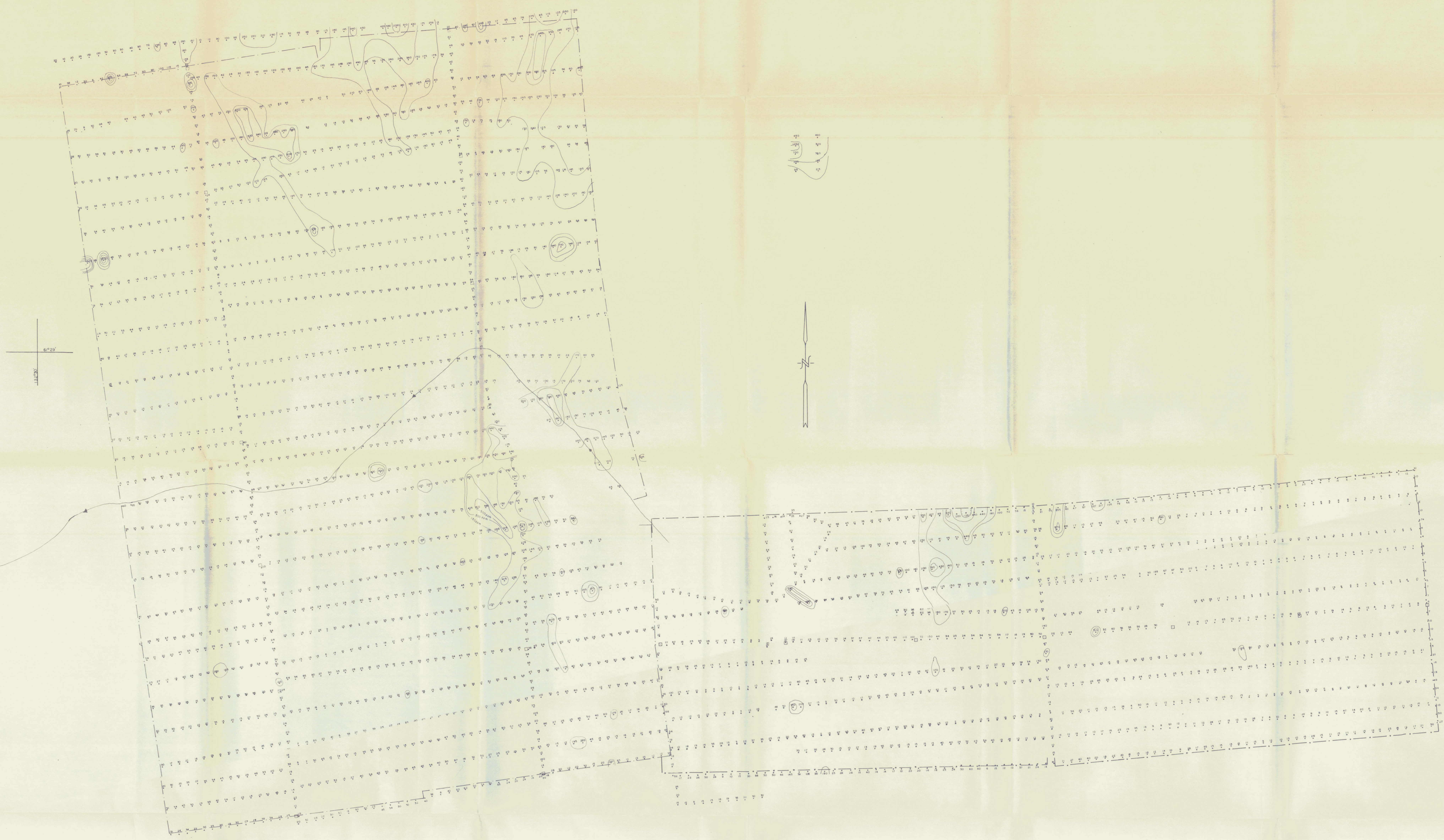
CPA & GAG CLAIM - GROUPS

N.T.S. SHEET 105-F-8

COPPER PLOT

Scale 1 inch = 400 feet

Rev.	Revision Date	By	NO.	Revision Date	By	Drawn by: J.P.	DWG.
1	Dec. 16/1977	J.M.P.				Date Oct. 18/1977	NO. 3



123
 ● Soil sample location with results in ppm

Contour Intervals
 150 ppm
 300 ppm
 500 ppm
 1000 ppm

\bar{x} = 50 ppm
 Threshold = $3 \times \bar{x}$ (approx.) = 150 ppm
 Possible anomalous - 150 ppm +)
 Probably anomalous - 500 ppm +) Top 77% of values

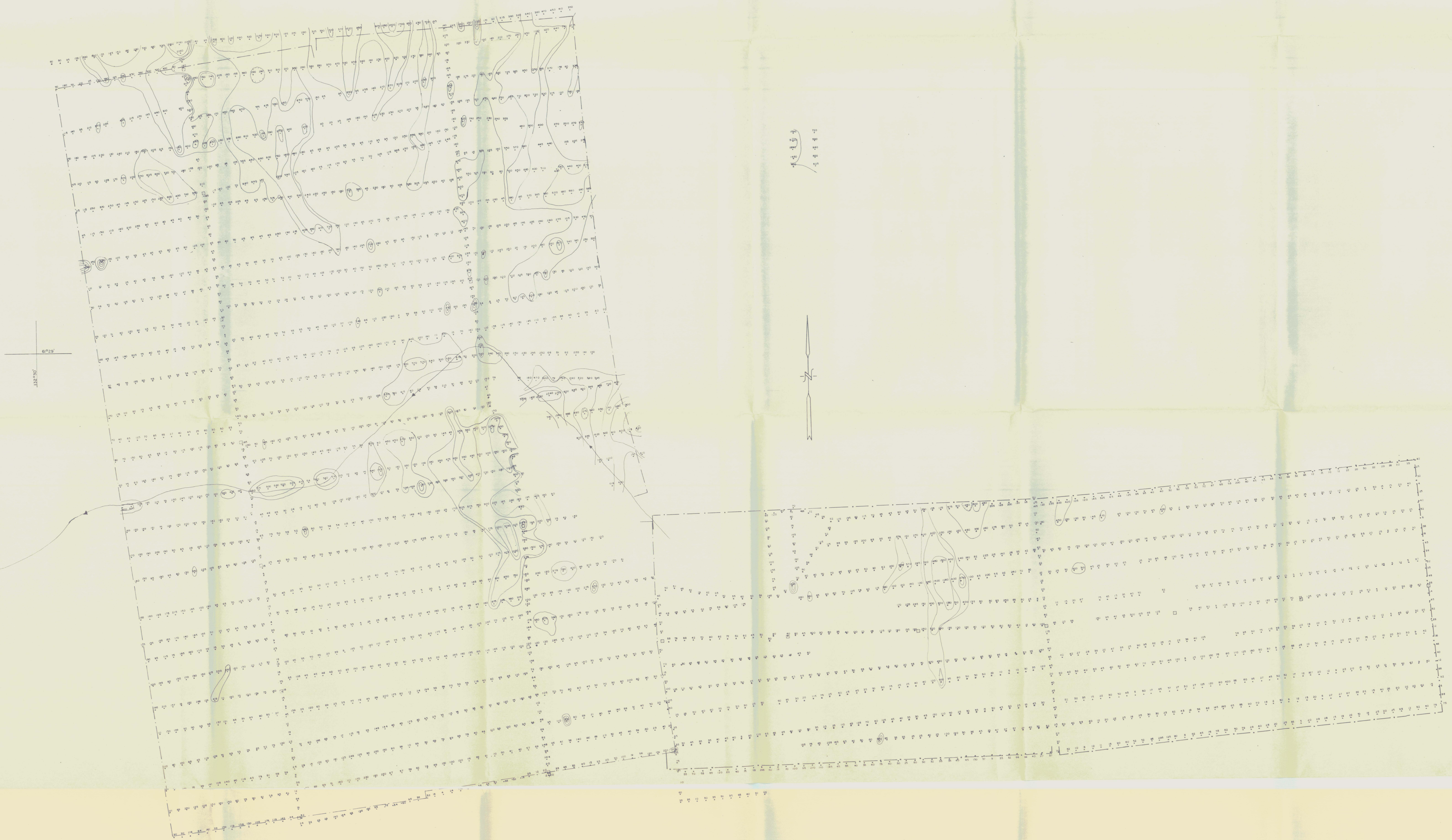
□ Claimposts
 --- Claim boundary
 ~~~ Creek with flow direction

UNITED KENO HILL MINES LTD.  
 EXPLORATION DEPARTMENT WHITEHORSE, Y.T.  
 CPA & GAG CLAIM - GROUPS  
 N.T.S. SHEET 105-F-8

**LEAD PLOT**

Scale 1 inch = 400 feet

| NO. | REVISION | DATE         | BY   | NO. | REVISION | DATE | BY | DRAWN BY          | DWG.  |
|-----|----------|--------------|------|-----|----------|------|----|-------------------|-------|
| 1   |          | Oct. 18/1977 | J.P. |     |          |      |    | J.P.              | DWG.  |
|     |          |              |      |     |          |      |    | Date Oct. 18/1977 | NO. 4 |



● Soil sample location with results in ppm  
 Contour interval  
 300 ppm  
 500 ppm  
 1000 ppm  
 2000 ppm  
 X = 164 ppm  
 Threshold = 3 x X (approx.) = 500 ppm  
 Possible anomalous - 500 ppm + ) - Top 75% of values  
 Probably anomalous - 1000 ppm + )

□ Claimposts  
 --- Claim boundary  
 ~~~~~ Creek with flow direction

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CPA & GAG CLAIM - GROUPS
 N.T.S. SHEET 105-F-8

ZINC PLOT

Scale 1 inch = 400 feet

| | | | | | | | | | |
|-----|---------------|------|-----|-----|----------|------|----|----------|----------|
| NO. | Revision | Date | By | NO. | Revision | Date | By | Drawn by | DWG. |
| 1 | Rev. 10/18/77 | | JAK | | | | | John | NO. 5 |
| | | | | | | | | Date | 10/18/77 |

