COMBINED GEOLOGICAL AND GEOCHEMICAL REPORT

TREE CLAIM GROUP

61°38'N 131°25'W

WATSON LAKE MINING DIVISION

NTS 105 F/9

By

J. Wilson

C.J. Westerman

UTAH MINES LTD.

EXPLORATION DEPARTMENT

VANCOUVER, B.C.

July 15th, 1977 - March 1st, 1978

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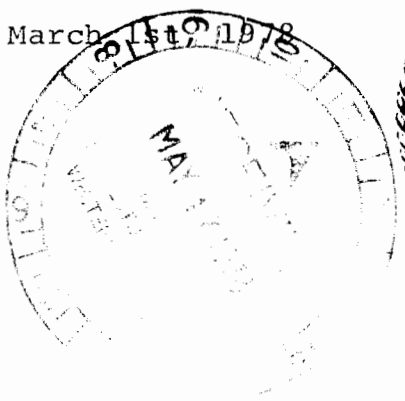

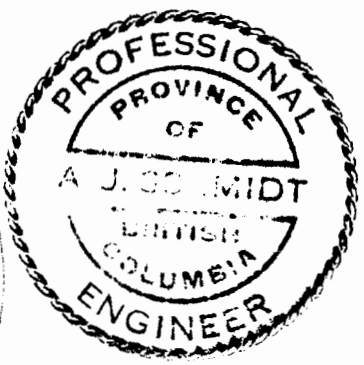

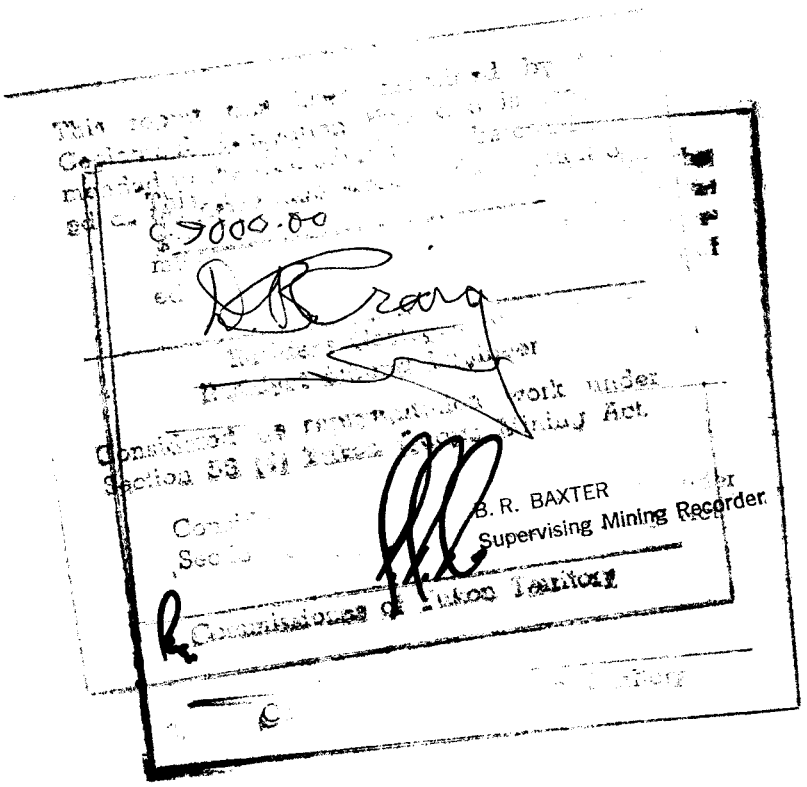
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B. R. BAXTER
Supervising Mining Recorder

TABLE OF CONTENTS

TABLES

FIGURES

SUMMARY

The TREE claim group consists of 32 contiguous mineral claims located in alpine terrain in the Pelly Mountains, Yukon Territory, approximately 40 kilometers south of the town of Ross River. The claims were staked on June 15th, 1977 and recorded July 14th, 1977 in the Watson Lake Mining District. The claims were staked to cover anomalous geochemical values in zinc and copper in stream sediment samples collected during a reconnaissance survey in 1976. The 1977 work program included prospecting, geological mapping at 1:5000 scale and geochemical sampling of soils, stream sediments and rocks.

The TREE claims are underlain by a lower package of black shales and an upper package of intermediate to felsic volcanic flows and tuffs of Mississippian age. The strata dip at moderate angles to the south or southeast and the structure is dominated by an open synform plunging to the southeast. The volcanic rocks display complex lateral facies changes. Breccias in rhyodacitic flows in the lower part of the volcanic package are locally heavily pyritized and some are geochemically anomalous in zinc. Rhyodacitic breccias in the northeast of the property also contain barium in highly anomalous quantities. Spectacular gossans on the main ridge of the property are related to pyritiferous trachyte sills which are not considered to have any economic significance.

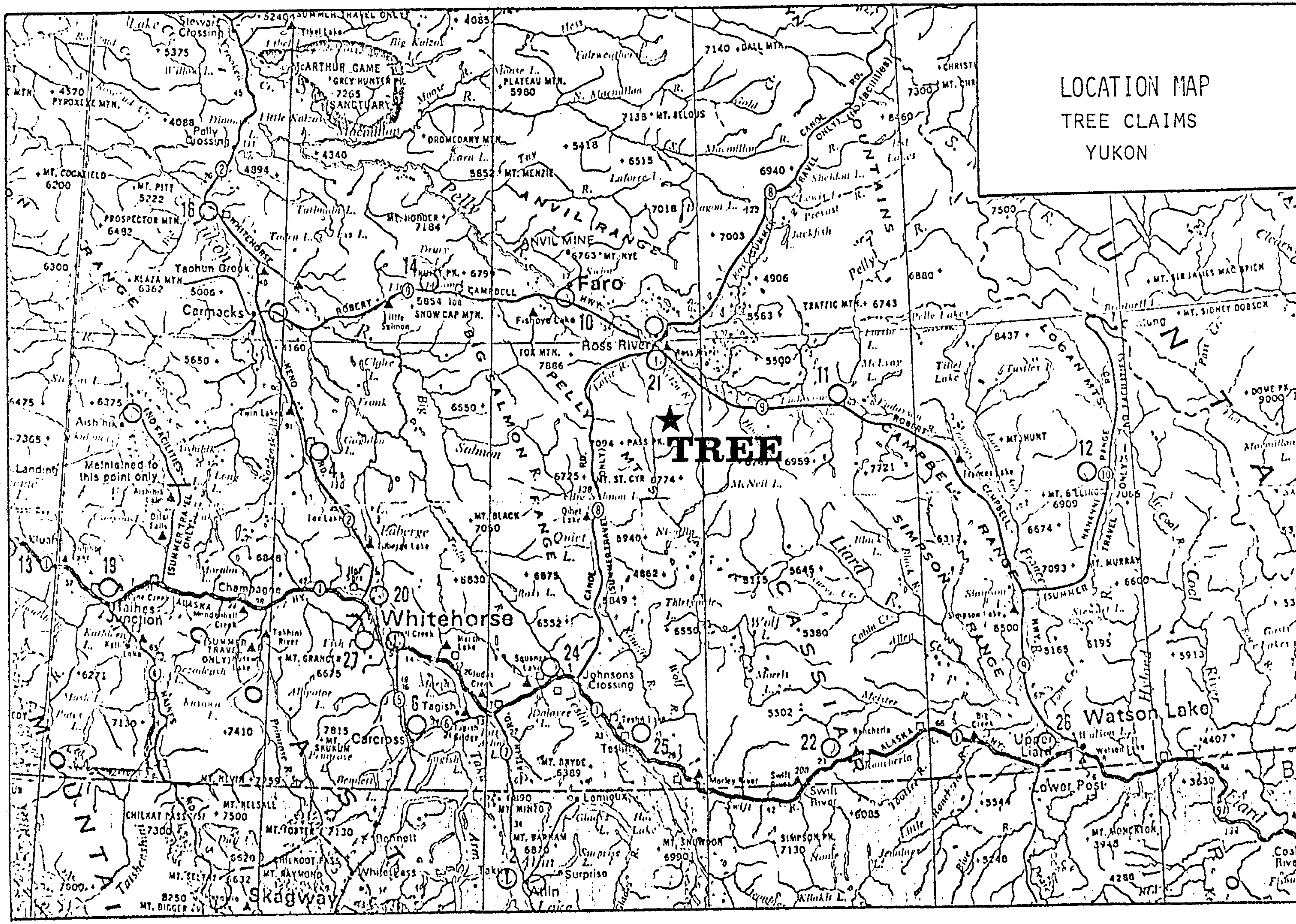
INTRODUCTION

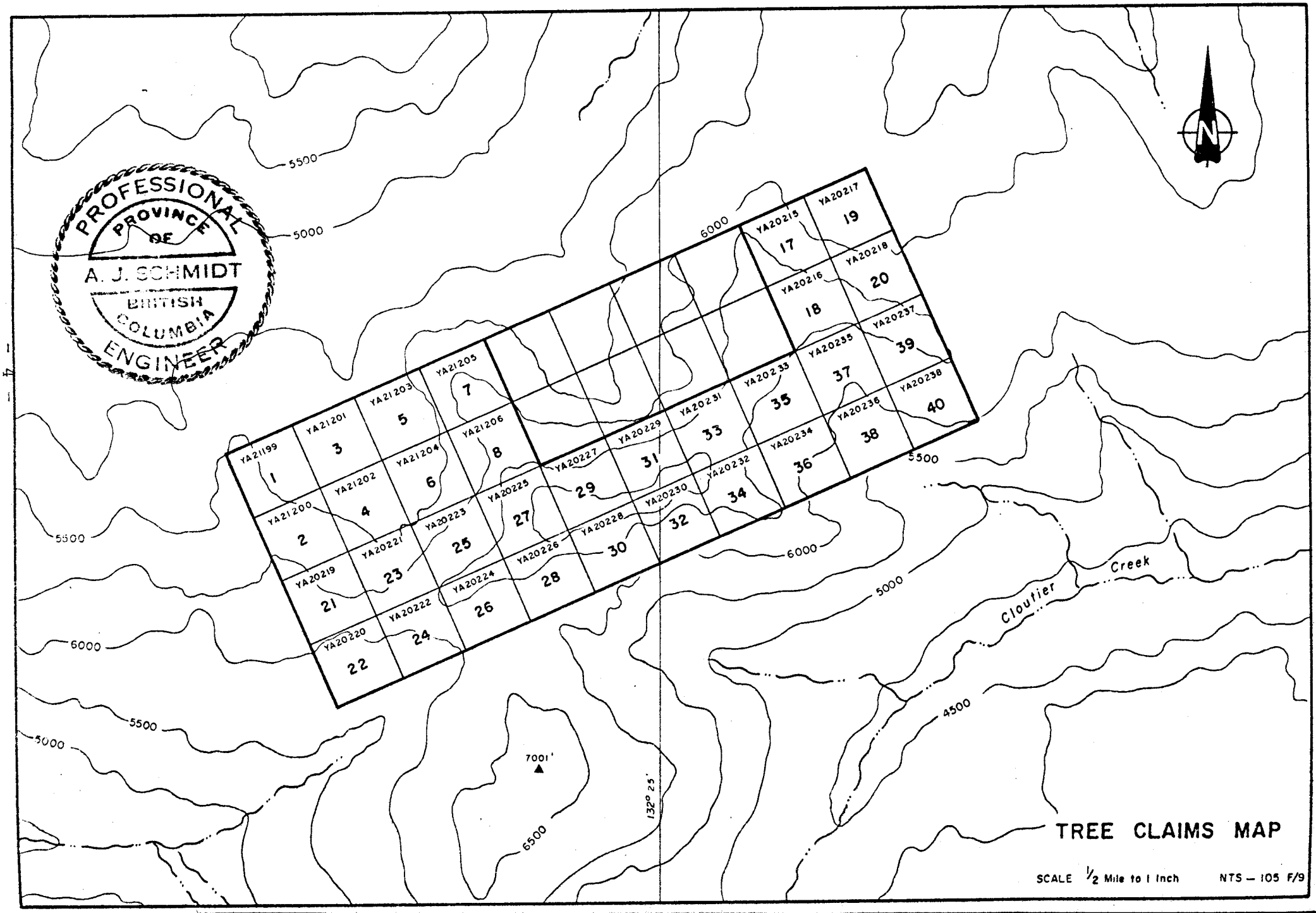
The TREE group is located in the Pelly Mountains, Yukon Territory, approximately 39 kilometres south of the town of Ross River. The claims lie within map sheet NTS 105-F/9 at latitude 61°38'N and longitude 131°25'W. Access to the claims is by helicopter from Ross River.

Elevations on the claim group range from 4500 feet to 6800 feet. Topography is steep with many cliff sections on the north facing slopes. The majority of the property is above treeline with a high percentage of rock exposure.

CLAIMS

The TREE 1-40 claims were staked on June 15th, 1977 in the name of J. Vyselaar, G. Holland, D. Rennie and S. Holland. Applications to record the TREE 9-16 claims were refused by the Watson Lake mining recorder pursuant to section 12(2) of the Yukon Quartz Mining Act because G. Holland staked the DROC 17-20 claims on August 8, 1976 which are only four miles from the TREE claims. The remaining TREE claims were recorded on July 14, 1977 and ownership of


LOCATION MAP
TREE CLAIMS
YUKON
TREE
Faro
ANVIL MINE
ANVIL RANGE
Ross River
Carmacks
Whitehorse
Watson Lake
Johnsons Crossing
Carcross
Tagish
Teslin
Skagway
Atlin
Champagne
Haines Junction
Upper Liard
Lower Post
Swift River
Pelly Crossing
Stewart Crossing
LOGAN MTS
CAMPBELL RANGE
SIMPSON RANGE
BIG SALMON RANGE
PELLY MTS
CASSIAR
Maintained to this point only


PROFESSIONAL
PROVINCE OF
A. J. SCHMIDT
BRITISH COLUMBIA
ENGINEER
N
5500
5000
6000
6000
5500
5000
6000
5500
5000
6500
7001'
132° 25'
4500
Cloutier Creek
YA21199 1
YA21201 3
YA21203 5
YA21205 7
YA21200 2
YA21202 4
YA21204 6
YA21206 8
YA20219 21
YA20221 23
YA20223 25
YA20225 27
YA20220 22
YA20222 24
YA20224 26
YA20226 28
YA20227 29
YA20229 31
YA20231 33
YA20233 35
YA20228 30
YA20230 32
YA20232 34
YA20234 36
YA20215 17
YA20217 19
YA20216 18
YA20218 20
YA20235 37
YA20237 39
YA20236 38
YA20238 40
TREE CLAIMS MAP
SCALE 1/2 Mile to 1 Inch
NTS — 105 F/9

the claims transferred to Utah Mines Ltd. on October 26, 1977. The original claims comprised a block four claims wide and ten claims long, staked on a bearing of 070° true.

Claim Name	Record (Claim Tag) Numbers
TREE 1-8 inclusive	YA21199-YA21206 inclusive
TREE 17-40 inclusive	YA21215-YA21238 inclusive

WORK PROGRAM 1977

The work program carried out in 1977 included prospecting, geological mapping at 1:5000 scale, reconnaissance geochemical soil sampling and rock chip geochemical sampling. Personnel involved in the program were transported to the property daily from a base camp at Fox Creek.

GEOLOGICAL SURVEY

Regional Geology

The regional setting of the Pelly Mountains area has been summarized by Templeman-Kluit (1976, 1977). The core of the Pelly Mountains is underlain by a miogeoclinal assemblage of clastic sediments, platform carbonates and volcanics ranging in age from Upper Proterozoic to Triassic. These rocks are part of the Pelly-Cassiar Platform. A belt of time-equivalent shales and associated clastic sediments, lying to the northeast of the platform, are facies

equivalents of rocks found within the Selwyn Basin. Southwest of the platform are metamorphosed shales, quartzites and volcanic rocks of the Yukon-Omineca Crystalline Terrain which are believed to be of Paleozoic age. The metamorphic rocks are locally covered by an overthrust assembly of late Paleozoic basalts, serpentinized peridotite and chert which are part of the Anvil-Campbell Allochthon.

In southern Quiet Lake map area (NTS 105-F) the metamorphic rocks and overlying basic and ultrabasic assemblage have been thrust northeastwards over Upper Triassic rocks of the Pelly-Cassiar Platform. The Platform assemblage has also been affected by complex internal folding and faulting of post Triassic age. The entire region has been extensively invaded by mid-Cretaceous granodiorite intrusions.

The TREE claim group is located within the central Pelly Cassiar Platform.

Local Geology

Regional stratigraphic relationships indicate that the rocks underlying the TREE claim group are of Upper Devonian and Mississippian age. Intermediate to felsic volcanic rocks overlie a lower sequence of black phyllitic shales. The strata dip at moderate angles to the south or southeast and the structure is dominated by an open synform plunging to the southeast. Mapping is complicated by rapid lateral facies changes within the succession.

Sedimentary rocks form the lowest member of the stratigraphic succession and constitute a thick unit of thin bedded, black, phyllitic shale with thin siltstone horizons and narrow lenses of black laminated chert (unit 1).

Intermediate to felsic volcanic flows and tuffs, above the black shales, produce a succession in excess of 950 metres total thickness. The lowermost volcanic unit is composed of fine grained, light to dark green, vesicular, massive andesite flows (unit 2). Towards the top of this unit and to some extent along strike, the andesite flows are interbedded with dacitic flows (unit 3). The latter are fine grained, light green coloured massive flows which are locally sheared, silicified and pyritized. This lowermost volcanic unit is present only in the western part of the claim block and thins rapidly or changes facies to a partially overlying tuff horizon (unit 4) when traced eastwards.

Unit 4 consists of approximately 150 metres of light grey to buff coloured, schistose, andesitic lapilli tuff. Lapilli fragments with dimensions up to 1.5 centimetres are of similar composition as the matrix and are conspicuous only on weathered surfaces.

The grey lapilli tuffs are overlain by light green to cream coloured, fine grained, rhyolitic and dacitic flows (unit 5). Individual flows vary from less than two centimetres up to one metre in thickness. The flows are locally

porphyritic with quartz phenocrysts. Localized shear zones up to ten metres in width are pyritized and silicified. Chloritic alteration, ubiquitous in this unit, intensifies in the vicinity of the shear zones. A thin andesitic lapilli tuff horizon (unit 6) is present within the rhyodacite flows of unit 5 in the western part of the property. Pale green rhyodacitic tuffs of the overlying unit 7 pinch out rapidly to the southwest and east. In the central part of the property, rhyolitic flows of unit 8 are clearly separated from similar flows of unit 5 by a thin horizon of brown weathering tuffs correlated with unit 7. In the northeast, however, rhyolite flows of units 5 and 8 are indistinguishable. One occurrence of rhyolitic agglomerate in a thin lens was observed near the top of rhyolitic flow unit 8.

Thinly bedded, weakly pyritiferous shales occur at the upper contact of the rhyodacite flows in the central, eastern and western parts of the claim block. The shale horizon does not exceed twenty metres in thickness and is laterally discontinuous. These shale lenses may reflect accumulation in shallow basin depressions during a period of volcanic quiescence.

The shale horizon is overlain by a package of acid to intermediate tuffs exhibiting rapid lateral facies changes. In the central part of the area this package consists entirely of about 240 metres of light green, weakly chloritic, schistose, rhyodacitic lapilli tuffs (units 11 and 16). In the western parts of the claim

block the rhyodacitic tuffs are thinner and underlain by pale brown andesitic tuff (unit 10) and a thin rhyodacitic flow unit (12). A thin, light green andesitic tuff horizon (unit 11) also occurs below the rhyodacitic flows of unit 12 but this pinches out rapidly to the southwest. Towards the east, upper and lower rhyodacitic tuff horizons are separated by a thick succession (approximately 150 metres) of fine grained, brown and maroon laminated tuffs (unit 14) capped by discontinuous lenses of black argillite (unit 15).

The rhyodacitic tuff package is overlain consistently by a thick andesitic tuff package consisting of a lower 110 metres of brown weathering lapilli tuff (unit 17), a central 70 metres of grey weathering lapilli tuff (unit 18), and a 50 metre thick upper horizon of brown weathering lapilli tuffs (unit 19). Massive andesitic agglomerate (unit 21), the youngest unit present, is separated from the andesitic tuff package by a thin, fine grained, maroon, andesitic flow (unit 20).

Igneous intrusive rocks are not volumetrically important within the claim group. A fine grained, porphyritic, cream coloured trachytic sill (unit 23) containing alkali feldspar phenocrysts occurs near the top of the sequence, above the brown weathering andesitic lapilli tuff. Dark green, medium grained chloritic diorite (unit 22) intrudes the upper andesitic tuff package in the central and western parts of the claim block. The age relationship between these two intrusive rock types is not known.

Mineralization

Weakly disseminated pyrite is present within virtually all of the rock types occurring on the claim group. Concentrations of dissemination pyrite, which in places approach massive, fine-grained aggregates, are localized by silicified breccia zones in rhyodacitic flows of the lower package. Geochemical soil and rock chip analyses indicate that these brecciated zones contain anomalous amounts of zinc and/or lead but no sulphide minerals associated with these metals have been identified in outcrop. The breccia zones do not react to zinc test solution, probably because of the high pyrite content. A rare, black, surface coating at one locality has been tentatively identified as a copper oxide stain. Trace quantities of galena were found in float below a rhyodacitic breccia zone in the central part of the property. Minor barite is present in brecciated rhyolite flows of unit 5 in the eastern part of the property.

The breccia zones are grossly concordant. They are highly discontinuous in detail but in aggregate may extend for up to 100 metres along strike and total up to 25 or 30 metres in thickness. In the vicinity of the breccia zones, the host rocks are intensely chloritized and somewhat silicified. The zones also contain concentrations of thin (1-6 cm), steeply dipping quartz veins which have a north-south orientation.

The trachytic sill which outcrops at the top of the ridge in the central part of the claim block contains heavily disseminated pyrite. Weathering of the sill produces

spectacular orange and yellow gossans. Soil samples taken from the gossans contain anomalous values in lead and zinc but no economic minerals have been identified.

GEOCHEMICAL SURVEY

A total of 91 soil samples were collected from random locations along traverses undertaken for geological mapping. No attempt was made to follow a regular grid survey and the samples were taken in order to characterize the geochemical response of the various rock units present.

The samples were taken, where possible, from the "C" soil horizon and placed in Kraft sample envelopes marked with the sample location. At locations where a soil horizon was not present, samples were taken from fine grained talus material. All samples were forwarded to Bondar Clegg and Co. Ltd., 136B Industrial Road, Whitehorse, Yukon Territory, for analysis.

After drying in an electric oven, the samples were screened and the minus 80 mesh fraction was digested in a perchloric-nitric acid solution. Quantitative analysis of silver, copper, lead and zinc was performed by the atomic absorption technique and results recorded in parts per million (ppm). Background corrections were applied to all silver and lead analyses.

Statistical analysis of geochemical soil sample results taken from surrounding areas of this Mississippian volcanic terrain indicates the following effective threshold values: copper 65ppm, lead 90ppm, zinc 250ppm. From the total of 91 samples taken from the TREE claims twelve samples returned anomalous values in zinc, 25 samples were anomalous for lead and three samples anomalous for copper.

Anomalous soil samples related to pyritic rhyodacitic breccias in the eastern part of the property contain up to 950 ppm Zn and 360 ppm Pb. The breccias in the central area have associated soil samples with up to 440 ppm zinc and those of the western area contain up to 2650 ppm zinc.

Due to its high topographic location the trachytic sill produces widespread anomalous soils containing up to 1620 ppm Zn and 170 ppm Pb. A small pyritized zone in the upper brown andesitic tuff produces soils containing up to 1560 ppm Zn, 131 ppm Pb and 560 ppm Cu. Soils taken from the upper contact of the lowermost black shale unit contain up to 400 ppm Zn in the western part of the property.

Fourteen rock chip samples were taken from sections of outcrop containing significant concentrations of disseminated pyrite and located adjacent to geochemically anomalous soil samples. Locations of the samples are plotted on the accompanying map and results of geochemical analysis for Cu, Pb, Zn, Ag, Au and Ba are reported in Table 1.

Sample B is a vertical continuous chip sample taken over the lowermost four metres of an eight metre thick, pyritic rhyodacitic breccia zone in the western part of the property. The sample returned 1160 ppm Zn. Sample C is a composite area chip sample taken over a subhorizontal rock surface 35 metres square in the same horizon as sample B. The sample contains 580 ppm Zn.

Three samples (E) taken from the centrally located, lower rhyodacitic breccias did not contain any anomalous values. Two samples (H_1 and H_2) from the eastern exposures of this same horizon contain 975 ppm Zn over the lower 14 metres of a 20 metre thick brecciated rhyodacitic flow. Sample H_2 also assays 8.6% barium.

TABLE 1

Sample Number	Thickness (metres)	Cu (ppm)	Zn (ppm)	Pb (ppm)	Ag (oz/ton)	Au (ppb)	Ba (ppm)	Ba %
A1	5	30	160	20	0.4	10	5,600	N.A.
A2	2	10	95	34	0.5	15	5,700	N.A.
B	4	26	1160	54	0.7	10	1,850	N.A.
C	Area 35m Square	13	580	190	0.9	L.T. 5	1,500	N.A.
D	8	12	34	28	N.D.	L.T. 5	1,550	N.A.
E1	35	12	36	62	0.2	L.T. 5	2,500	N.A.
E2	17	4	10	30	N.D.	L.T. 5	5,300	N.A.
E3	25	8	6	20	N.D.	L.T. 5	4,450	N.A.
F1	13	6	18	22	0.1	10	4,800	N.A.
F2	13	6	30	40	0.8	L.T.10	4,180	N.A.
F3	17	12	8	24	0.5	L.T.10	>10,000	0.62
G	13	5	12	18	N.D.	L.T.10	3,350	N.A.
H1	7	18	800	44	0.6	L.T.10	>10,000	0.66
H2	7	18	1150	28	0.7	L.T.10	>10,000	8.60

L.T. Less Than

N.D. Not Detected

N.A. Not Analyzed

CONCLUSIONS

1. The TREE claim group is underlain by Mississippian acid and intermediate volcanic rocks which reflect a regional environment generally favourable to the location of a massive sulphide deposit.

2. Breccia in rhyodacite flows of the lower stratigraphic interval are locally heavily pyritized and some are highly geochemically anomalous in zinc.

3. Pyritized trachyte sills produce spectacular gossan zones which are geochemically anomalous in lead and zinc. The sills do not represent a geologically favourable target for location of a massive sulphide mineral deposit.

4. Pyrite is the only sulphide mineral identified within the claim group.

5. Barite is only present in the extreme northeastern part of the claims.

RECOMMENDATIONS

The surface geological expression of rocks underlying the TREE claims indicates a volcanic environment that is too proximal to be truly favourable for the location of a massive sulphide mineral deposit.

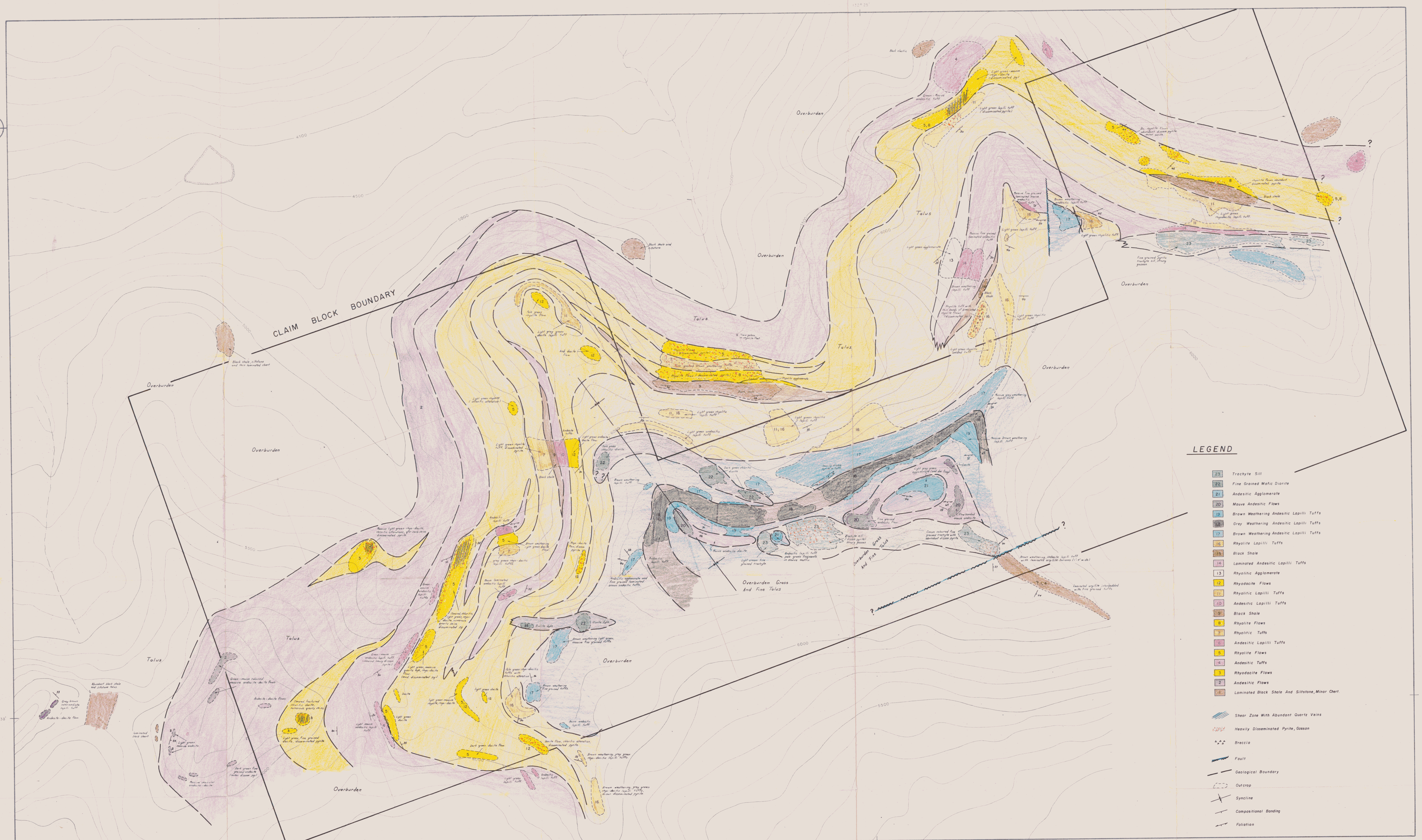
Further work is not recommended on the claim group.

REFERENCES

1. Templeman-Kluit, D.J., Gordey, S.P. and Read, B.C. (1976); Stratigraphic and structural studies in the Pelly Mountains, Yukon Territory; Geol. Surv. Can., Paper 76-1A, pp 97-106.

2. Templeman-Kluit, D.J. (1977); Stratigraphic and structural relations between the Selwyn Basin, Pelly-Cassiar Platform and Yukon Crystalline Terrain in the Pelly Mountains, Yukon Territory; Geol. Surv. Can., Paper 77-1A, pp 223-227.

3. Morin, J.A. (1977); Ag-Pb-Zn Mineralization in the MM deposit and associated Mississippian felsic volcanic rocks in the St. Cyr Range, Pelly Mountains; in "1976 Yukon Mineral Industry Report", open file edition, May 2, 1977.



Topographic Contour Interval = 100 Feet

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VANCOUVER BRITISH COLUMBIA

PELLY MOUNTAINS — YUKON
TREE CLAIMS
GEOLOGY

Work by J. Wilson	Date: February 1978	NTS Ref 105 F/9
Drawn by T. Drews	Revised	Scale – 1: 5000

0 100 200 300 400 Metres
SCALE IN METRES

CLAIM BLOCK BOUNDARY

ROCK CHIP SAMPLES

	Au (ppb)	Ba (ppm)	Ba %
A1	— 10	5600	Not Assayed
A2	— 15	5700	N.A.
B	— 10	1850	N.A.
C	— L.T. 5	1500	N.A.
D	— L.T. 5	1550	N.A.
E1	— L.T. 5	2500	N.A.
E2	— L.T. 5	5300	N.A.
E3	— L.T. 5	4450	N.A.
F1	— 10	4800	N.A.
F2	— L.T. 10	4180	N.A.
F3	— L.T. 10	>10,000	0.62
G	— L.T. 10	3350	N.A.
H1	— L.T. 10	>10,000	0.66
H2	— L.T. 10	>10,000	8.60

L.T. – Denotes Less Than.

LEGEND

- Soil Sample
- Silt Sample
- Rock Sample

Cu / Ag / Pb

Topographic Contour Interval = 100 Feet

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UTAH MINES LTD.
EXPLORATION DEPARTMENT
VANCOUVER BRITISH COLUMBIA

PELLY MOUNTAINS — YUKON
TREE CLAIMS
GEOCHEMICAL SURVEY

Work by	Date: February 1978	NTS Ref. 105 F/9
Drawn by T. Drews	Revised	Scale — 1: 5000

0 100 200 300 400 Metres
SCALE IN METRES