



GEOCHEMICAL SOIL SAMPLING SURVEY

on

THE ED CLAIM GROUP  
AISHIHIK AREA  
Whitehorse Mining Division  
Yukon Territory

Lat. 61° 20' N.

Long. 136° 25' W.

AUGUST 16-26, 1970

by

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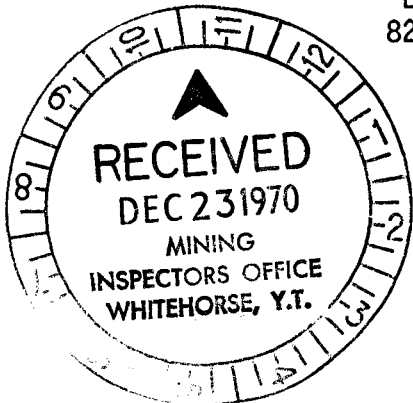
This report has been examined by the Geological Information Unit and is recommended for the claim holders to be considered as valid for the purpose of

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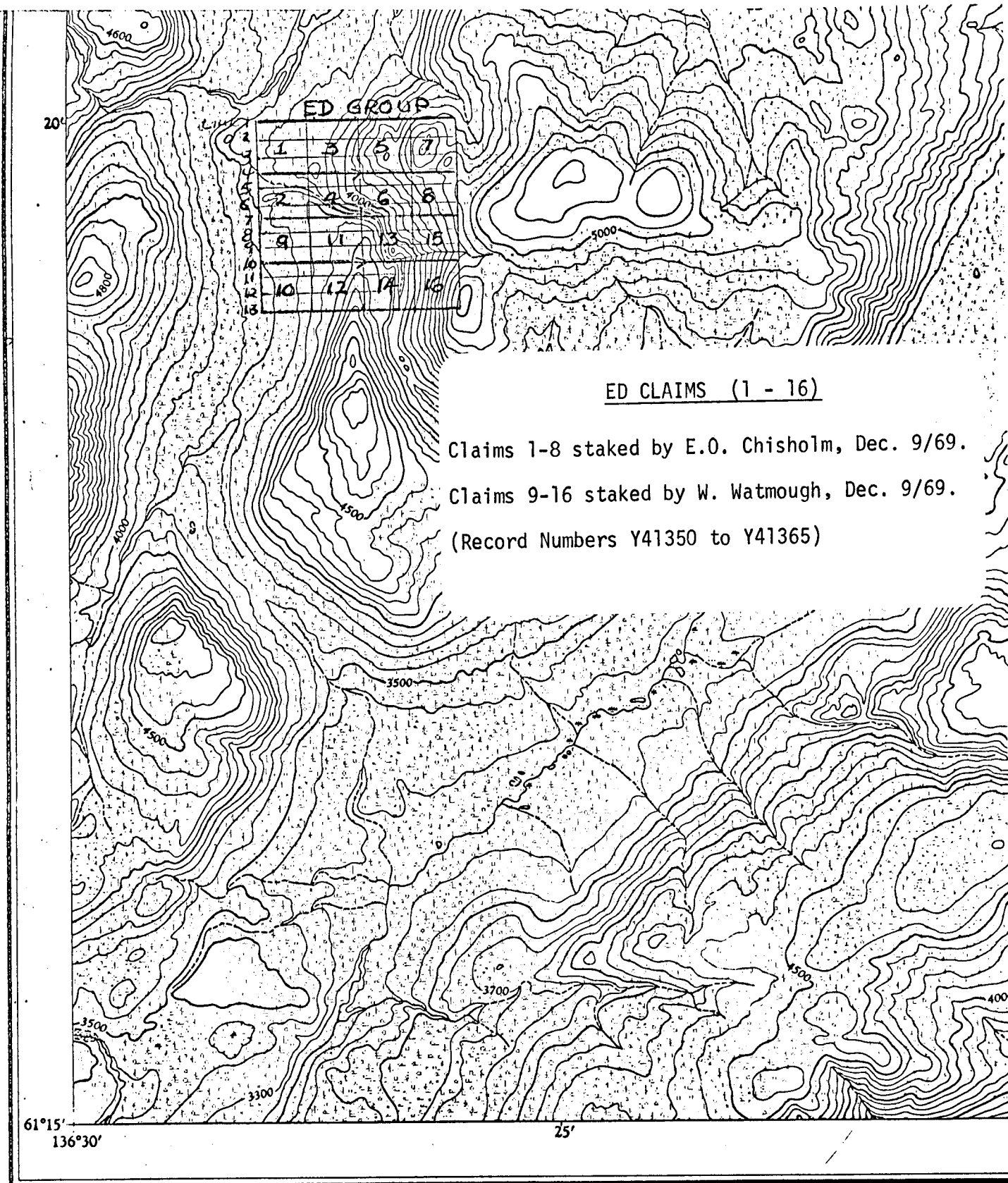
*J. J. Craig*

Comptroller of Yukon Territory  
Consolidated Mining Act

*[Signature]*  
Comptroller of Yukon Territory



KEY MAP - ED CLAIMS



ED CLAIMS (1 - 16)

Claims 1-8 staked by E.O. Chisholm, Dec. 9/69.

Claims 9-16 staked by W. Watmough, Dec. 9/69.

(Record Numbers Y41350 to Y41365)

LIST OF CLAIMS

CLAIM NUMBERS

GRANT NUMBERS

DATE RECORDED

ED 1 to 16

Y41350 to Y41365

December 10, 1969

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### MAP

Geochemical Soil Survey

Pocket

INTRODUCTION

A group of sixteen claims was staked by E. O. Chisholm in December 1969, approximately 20 miles east of Aishihik Lake, Yukon Territory, to cover a potential porphyry type copper occurrence indicated by a copper geochemical anomaly over a gossan area in a silicified shatter zone in a Coast Range granite stock. The claims are located approximately one mile east of Lat. 61° 20', Long. 136° 25'.

LOCATION AND ACCESS

The group consists of sixteen unpatented mineral claims staked in December of 1969 in the Whitehorse Mining Division as follows:

ED 1 to 16 inclusive, Record Numbers Y41350 to Y41365 inclusive.

The claims are located on the east side of a small lake locally called Bun Lake which lies some 16 miles east of Hopkins Lake on the Aishihik road at a point approximately 32 miles north of the Alaska Highway. The area is relatively accessible by land trail from the Aishihik road and float plane to Bun Lake. It is some 20 miles northwest of Whitehorse, Yukon Territory.

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## GEOLOGY

The general geology of the area is reported by W. E. Cockfield in "Summary Report 1926, Part A, AISHIHIK LAKE DISTRICT, YUKON". In summary, the rocks of the Aishihik Area include both igneous and metamorphic types. The igneous include volcanics and intrusives of the Coast Range Batholith. Rocks encountered in the vicinity of the claim group are Tertiary volcanics (rhyolite flows and associated breccias), Coast Range intrusives (granite and granodiorite) and Mesozoic volcanics (andesite, welded tuffs and associated breccias).

## TOPOGRAPHY

The topography is mainly gently rolling and ranges from 3500 feet in the valley floor to 4000 feet near the showing area. The hillside slope is heavily wooded and the claims are covered by a shallow mantle of Pleistocene glaciation with isolated outcropping along the stream beds.

## SHOWING

The principal feature of the claim group is a mineralized gossan area in the central part of the property in granitic host rock that covers a half mile in extent. It lies at the contact between the Coast Range granite and Tertiary volcanics. Cockfield draws attention to the fact that contact

metamorphic deposits may be expected to exist along the contacts of the Coast Range intrusives in the area.

Originally three molybdenum highs were obtained in a reconnaissance survey in the area and later, contour soil samples were run above and below the area of gossan. The samples were assayed geochemically for copper and showed a large anomalous area in copper downstream from the main gossan area, as shown on the attached 1000 ft. scale geoghemical sketch map. The main anomalous area measures some 5000 feet along the stream and about 500 feet in width, where values range from 2 times to 30 times background. There are smaller areas of 2 times background count on the sides of the stream anomaly up to 1500 feet away that indicate a widespread occurrence of copper in the soil.

The attached geological sketch at 1/2 mile to the inch shows the distribution of rock types in the location of the gossan with respect to the granite margins. The granitic host rock to the mineralization is well silicified and contains numerous quartz veins varying in size from a fraction of an inch to several inches. Some of the veins contain small amounts of pyrite, galena and molybdenite.

In the light of recent developments in the Casino area which lies some 130 miles to the northeast along the same general trend and in similar host rocks, it was decided to stake the ED Claims covering the above occurrence and carry out a more detailed geochemical investigation this season. The presence of copper and molybdenum mineralization in a well fractured and

silicified granitic host rock indicates that conditions for a porphyry copper type of deposit exist. The widespread glacial mantle in the Aishihik Area has generally hampered prospecting to date, but the geochemical method has been used extensively with success in the area.

The location of the area is midway between the producing belt of the Yukon copper property at New Imperial Mines and the developing copper deposit of Casino Mines Ltd. A geological belt of Coast Range intrusive rocks regionally crosses the three areas in a northwest/southeast direction.

#### SURVEY TECHNIQUES

Soil sampling surveys were conducted on a grid made up of two base lines (Numbers 4 and 10) which trend east/west. Cross-lines over most of the grid are at 500 foot intervals and run from 0 to 60E; all sample locations taken at 100 foot intervals were flagged.

#### Soil Sampling

The soil sampling survey was carried out in conjunction with a geological survey. Two soil samplers were employed for the entire survey.

The samples were obtained by use of a prospector's grub hoe which was found adequate as a tool for cutting through layers of organic material overlying the soil. Samples were taken at 100 foot stations over the same grid area as geological data was obtained from.

Due to the inconsistency of specific soil horizons as well as variable depths to favourable horizons, samples were taken from an average depth of approximately one and one-half feet. Soils of the upper "B" horizon were usually encountered. Soils of large organic content were not sampled. In areas of immature soils, the "C" horizon was sampled. Approximately 100 grams of soil from each sample site were placed in Kraft bags which were then periodically shipped to the soil testing laboratory at Vancouver.

#### Method of Analysis

All samples were analyzed at the laboratories of Bondar, Clegg and Co. Ltd., 1500 Pemberton Avenue, North Vancouver, B. C. When the samples were received, each was dried while in its Kraft bag, then screened to 80 mesh, weighed out to 0.5 grams and digested in hot aqua regia. Samples were then diluted, clarified for 20 hours and then tested for copper content on an atomic absorption spectrophotometer. The "AA" Unit was a Perkins Elmer Model 320 and accuracy of the instrument ideally is 1% of the amount of metal present. Individual cathode lamps were used for each element determination; a direct readout is given of the element being tested and two determinations per minute can be made with ease.

#### Treatment of Data

Results in parts per million (ppm) were plotted on field data sheets kept by the field soil sampler. The field data sheets were kept as a record of each sample taken, noting particulars concerning drainage, topography, physiography, soil type and depth of sample. This information was compiled

for use in further detailed geochemical studies.

Maps were prepared using a scale of 1" = 500' showing values obtained for copper.

#### Geochemical Environment, Soil Types, Nature of Dispersion

Topography in the area of the ED geochemical anomaly is gently rolling and slopes southward. Local relief is up to 50 feet between northwesterly trending elongate depressions and irregular elongate ridges. Drainage is sluggish and stream flow is minimal except in a major westerly flowing stream. Ground water level is high and emerges in abundant seepages, swamps and small creeks. Permafrost is absent. Vegetation consists mainly of dwarf birch with stands of spruce, poplar and tamarack.

Glacial striations are clearly recognizable in the field and on air photos: the direction of glacial movement was north/south. It is believed that a piedmont glacier moved westerly through the Kirkland Creek valley and was fed by tributary glaciers entering from the southeast and north. Glacial erratics may be found on the highest mountain peaks and remnants of lateral moraine occur up to elevations of 5,000 feet.

#### Description of Anomalies

Important geochemical zones in the ED area consist mainly of elongate copper anomalies with minor related highs. A frequency distribution histogram of copper values shows that background over the ED grid averages about 10 ppm. with a distinct threshold value of about 20 ppm.

### INTERPRETATION OF GEOCHEMICAL RESULTS

Based on the assay results, four distinct copper anomalies occur on the claim group. The largest and most significant lies centrally on Claims Y41353 and Y41355. It measures 2500 feet in length and 1000 feet in width. Copper assays vary from 20 to 50 ppm. The anomaly lies partly within a gossan area mapped as Coast Range intrusive, at the contact of a series of Tertiary volcanic flows. It does not appear to be associated with the major stream valley crossing the claim group and is mostly up-slope to the north of the creek valley. Pyritized Mesozoic intrusives were noted in the area and the anomaly is believed to represent underlying mineralization.

A smaller anomalous zone measuring 800 feet by 500 feet lies 1000 feet to the southeast and may represent an extension of the main anomaly. It is also associated with a rusty zone in the granitic intrusive rocks. The granite rock on the sides of the creek is well fractured and locally contains disseminated pyrite.

A third anomaly strikes in a northeast direction across Claim Y41354. It measures 1000 feet in length by 400 feet in width and lies within the boundaries of an area mapped as latered volcanic flows. No outcrops were observed there.

The above anomalies indicate that a copper bearing zone of considerable size occurs in the Coast Range intrusive granitic host rock at the contact of Tertiary lavas.

Detailed investigation by trenching, geophysical methods and possible diamond drilling is warranted on the claim group on the zones of geochemical values.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "E. O. Chisholm". The signature is stylized and somewhat cursive.

Edward O. Chisholm, P. Eng.

## APPENDIX (i)

SUMMARY OF COSTSED GEOCHEM

(August 16 - 26, 1970)

Wages:	B. Patnode	\$ 330.00	
	J. Etzel	<u>300.00</u>	\$ 630.00
Food & Camp - 2 men 10 days @ \$12/day each			240.00
Transportation:			
	Great Northern Air	\$ 357.00	
	Great Northern Air	119.00	
	Canadian Pacific Air Lines	166.00	
	Taxis	<u>30.00</u>	672.00
Assays - Bondar - Clegg & Co. Ltd.			383.33
Geological Mapping - E. O. Chisholm			600.00
Miscellaneous Expenses:			
	Accommodation	\$ 42.00	
	Meals	20.00	
	Maps & Reports	<u>30.00</u>	92.00
			<hr/>
TOTAL COST OF GEOCHEM SAMPLING AND PROCESSING			<u><u>\$ 2,617.33</u></u>

E. O. CHISHOLM, M.A., P.ENG.

CONSULTING GEOLOGIST

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AFFIDAVIT SUPPORTING SUMMARY OF COSTS:

I, Edward O. Chisholm, do hereby state that, to the best of my knowledge and belief, the statement of costs as presented in this Report, "Geochemical Soil Sampling Survey on The Ed Claim Group", is both true and correct.

DATED at Vancouver, B. C. this 9th day of December, 1970.



Edward O. Chisholm



Notary Public for the Yukon Territory

PERSONNEL

Bruce Patnode

Soil Sampler

Whitehorse, Y. T.

Joe Etzel

Soil Sampler

Whitehorse, Y.T.

LINE 1.

LINE 2

LINE 3

LINE 4

LINE 5

LINE 6

LINE 7

LINE 8

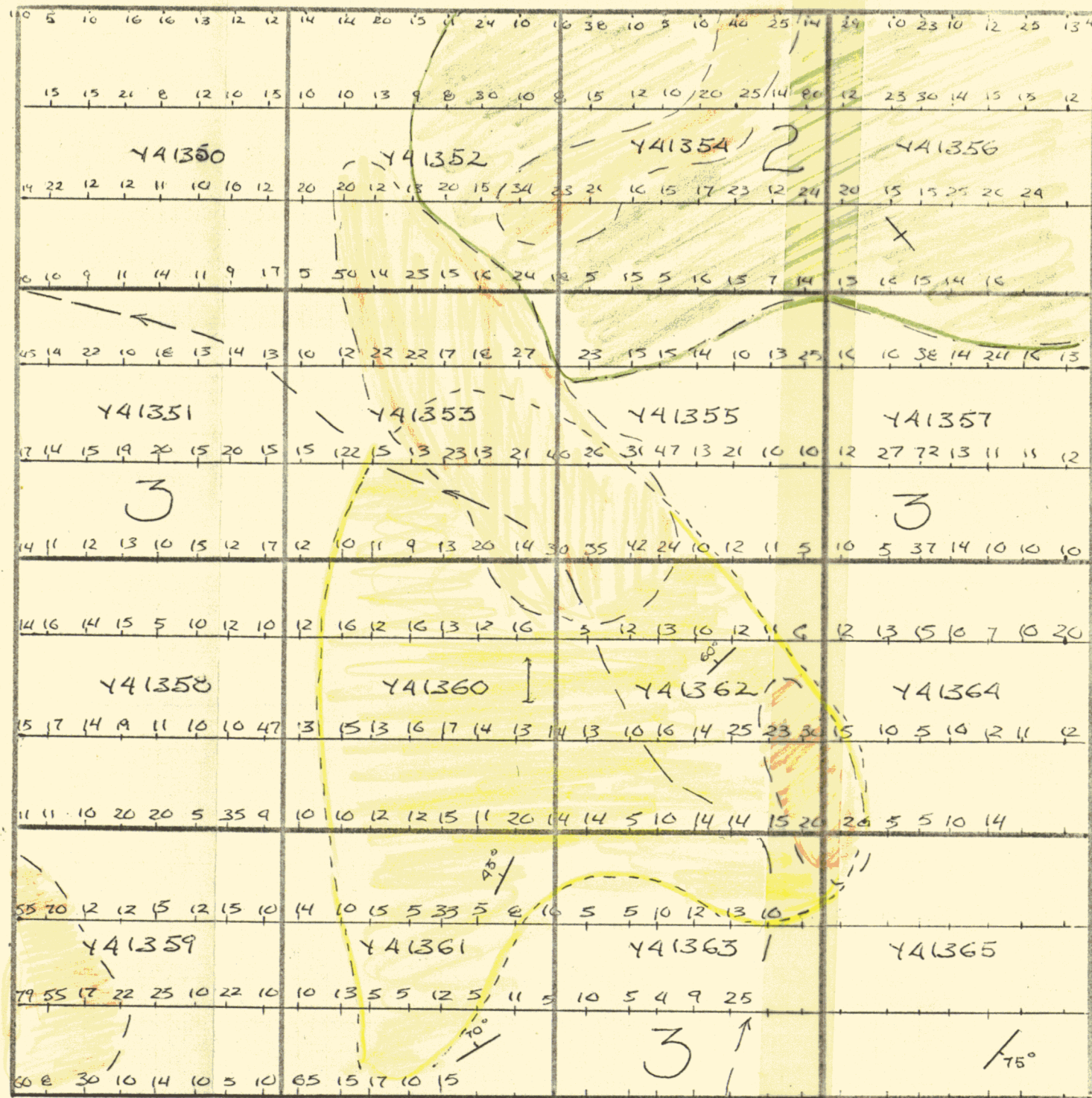
LINE 9

LINE 10

LINE 11

LINE 12

LINE 13



61° 15' N

136° 26' W



**LEGEND**

- 20 PPM. COPPER. SOIL SAMPLE.
- 1. - COSSAH ZONE
- 2. - TERTIARY VOLCANIC FLOWS: RHYOLITE AND GRANITIZED AGGLOMERATE.
- 3. - COAST RANGE INTRUSIVE ROCKS INCLUDING APLITE AND ANDESITE DIKES.
- - - - - GEOLOGICAL BOUNDARY INFERRED
- / JOINTING AND FAULTING.
- ↗ STREAMS.

GEOCHEMICAL SOIL SURVEY  
ED 1-16 CLAIM GROUP  
AISHIAK AREA  
YUKON.

SCALE 1" = 800 FEET  
 (Aug. 1971.)

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