

2674

CHU Cu-Mo PROSPECT

REPORT ON

GEOCHEMICAL SURVEY, MAGNETOMETER SURVEY
and
I.P. SURVEY

owner

AMERICAN SMELTING AND REFINING COMPANY

Located five miles west of Chutanli Lake

Omineca Mining Division

53°-124° SW

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2674 MAP.....

D.H. Olson, P.Eng., B.C.

16 September 1970

Mining Recorder's Office
RECORDED
SEP 21 1970
AT.....
SMITHERS, B.C.

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GEOCHEMICAL, MAGNETIC AND INDUCED POTENTIAL SURVEYS

on the

CHU WEST "A" & CHU WEST "B" CLAIM GROUPS

INTRODUCTION

The Chu West "A" and Chu West "B" claim groups discussed in this report are contiguous claim groups located five miles west of Chutanli Lake and approximately eighty miles southeast of Burns Lake Village.

In conjunction with the geochemical soil survey, geological mapping was carried out. Following the geochemical and geological surveys, ground magnetic and induced polarization surveys were completed. The geologic mapping, the geochemical soil survey, and the ground magnetic survey, were performed by American Smelting and Refining Company under the direction and supervision of D.H. Olson, Professional Engineer for the Province of British Columbia. Geo-X Surveys Limited, with operator Warren Bellamy, performed the Induced Polarization survey.

LOCATION AND ACCESS

Mineral claims covering the Cu-Mo prospect are situated on a south facing timbered slope approximately 800 feet above the valley floor, and five miles west of the west end of Chutanli Lake. Elevations within the claim groups range from 3500 feet to 4500 feet above sea level, approximately.

Equipment, supplies, and personnel were transported from Kenney Dam to Chutanli Lake by float plane, then by helicopter from Chutanli Lake to the Chu claims.

FIELD PROCEDURES

A survey grid measuring approximately 7500 feet by 11,000 feet was established on the 44 contiguous Chu mineral claims. On the flagged north-south grid lines, which are spaced 700 feet apart, station intervals of 200 feet are well marked with orange flagging tape.

GEOCHEMICAL SURVEY

Soil samples were carefully collected from the "B" soil horizon at intervals of 400 feet for reconnaissance purposes, and at 200 feet intervals where detail sample data were required.

Detailed chemical analysis of the soil samples were made by Vancouver Geochemical Laboratories of North Vancouver, B.C. Hot HNO_3 and HClO_4 extraction techniques were used for Cu and Mo, respectively. The method of analysis was by atomic absorption spectrometer (Tectron AA4 and AA5) using acetylene and air for Cu detection and nitrous with acetylene for the detection of Mo. The analytical data are shown on the accompanying Geochemical Survey Map (Plate 1).

INTERPRETATION

The grid area is extensively covered with glacial till which does not appear to be excessive in depth, say ten to fifteen feet thick. Except for some small swamps, the grid area is heavily forested with Lodgepole pine, Alpine fir, and Engleman spruce. Good soil samples representative of the "B" soil horizon were obtained from all, but a small swamp-covered section of the grid area.

Information gained from the few rock outcrops observed indicates that the Chu claims, except those claims in the northeast corner, are underlain by unaltered granodiorite. Chu 31, 33, 34, 35, and 36 mineral claims, or parts thereof, are underlain by an altered sedimentary volcanic assemblage of the Hazelton Group. The contact between the intrusive and the sedimentary-volcanic assemblage has a well defined northwesterly strike. Anomalous Cu-Mo values were obtained from soils which are underlain by the Hazelton Group of rocks, and the contact area.

Ground magnetic and Induced Polarization surveys conducted over the area of the geochemical soil anomaly also produced anomalous data which outline target areas that require further investigation. Diamond drilling to test the anomalies has been recommended and is to begin in mid September.

GROUND MAGNETIC SURVEY

A ground magnetic survey requiring two days was conducted over the area of the soil anomaly. W. Gilmour as operator, and B. Peters as assistant, carried out the survey using a Scintrex MF2 Fluxgate Magnetometer. Normally, readings were taken at 200' intervals on the north-south grid lines spaced 300-350 feet apart. Where better definition of the anomalous data was necessary, readings were taken at 50 feet and 100 feet intervals. Data readings are shown on the accompanying magnetic survey maps (Plate 2).

INTERPRETATION

The extreme magnetic high and magnetic low readings obtained near the boundary between Chu 33 and Chu 34 mineral claims, probably marks a fault contact between the intrusive granodiorite on the south and the Hazelton Group volcanic-sedimentary assemblage on the north. To the east of the above features, a magnetic low is indicated. This magnetic low coincides with the highest values of the geochemical soil anomaly.

The superpositioning of the magnetic low, the geochemical Mo-Cu soil anomaly, and the induced potential anomaly does offer a prime target for testing by diamond drilling.

INDUCED POTENTIAL SURVEY

Reference is made to the accompanying report and map prepared by Geo-X Surveys Limited of Vancouver, B.C.

EXPENDITURES

A summary of costs incurred and personnel involved in completing the geochemical, ground magnetic and induced potential surveys on the Chu West "A" and Chu West "B" Groups of mineral claims is outlined as follows:

GEOCHEMICAL SURVEY

(1) Rotary Wing Charter - Bell G3B1 - Alpine Helicopters Limited, Burns Lake, B.C.

2 June/70	Fly in supplies & 2 personnel	2 hrs 30 min.
6 June/70	Fly in supplies from Burns Lake	2 hrs 30 min.
11 June/70	Fly in supplies & 1 crew member	2 hrs 30 min.
14 June/70	Fly in supplies & demobilization of camp, plus ferry time	4 hrs 0 min.
15 June/70	Demobilization of camp with transport of equipment & personnel to Kenney Dam	3 hrs 30 min.
4,5,26,29 & 30 July & 2,4,15 & 16 Aug/70	Transport personnel to Chu Claims and return to Kenney Dam	<u>14 hrs 50 min.</u> <u>29 hrs 50 min.</u>
	29 hrs. 50 min. @ \$150/hr=	<u>\$ 4,475.27</u>

(2) Fixed Wing Charter - Otter Aircraft - Transprovincial Airlines Limited, Burns Lake, B.C.

15 June/70	3 round trips Chutanli Lake to Kenney Dam plus ferry charges from & to Burns Lake 270 miles @ \$1.20/mile	<u>\$ 324.00</u>
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(3) Wages - Grid Survey, Sample Collection & Geologic Mapping

<u>GILMOUR, W.</u>	31 May; 1-13 June; 29,30 July; 2,4,15 & 16 Aug/70. 20 days at \$27	540.00
<u>OLSON, D.H.</u>	11,13 June; 4,16,24 Aug; 8 Sept/70 6 days @ \$50	300.00
<u>KUO, S.L.</u>	31 May; 1-13 June; 24 Aug/70 15 days @ \$27	405.00
<u>PETERS, B.</u>	31 May; 1-13 June; 24 Aug/70 15 days @ \$18	270.00

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *17th*
day of *Sept.* 1970, A.D.

D. H. Olson

L. Phillips

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

<u>MARTELL, H.</u>	31 May; 1-13 June; 4,5, & 26 July/70 17 days @ \$22	\$ 374.00
<u>BLECHINGBERG, S.</u>	31 May; 1-13 June; 4,5, & 26 July/70 17 days @ \$18	306.00
<u>LUMSDEN, A.L.</u>	2-13 June; 4,5 July/70 14 days @ \$21	294.00
<u>LAPRAIRIE, R.</u>	2-11 June, 13 June; 2,4 July/70 13 days @ \$22	286.00
<u>CASEY, A.</u>	31 May; 1-13 June; 15 Aug/70 15 days @ \$21.81	327.15
<u>WELLINGHAM, J.</u>	31 May; 1-11 June; 13 June; 29,30 July; 2 & 4 Aug/70 17 days @ \$18	306.00

TOTAL DAYS: 149 TOTAL WAGES: \$ 3,408.15

(4) ACCOMMODATION

10 men for a total of 149 days
@ \$8/day \$ 1,192.00

(5) LABORATORY ANALYSIS

Vancouver Geochemical Laboratories
Limited, North Vancouver, B.C.

327 soil & silt samples analyzed for Cu & Mo,
plus sample preparation @ \$1.70= \$ 606.90
Shipping charges 11.80 \$ 618.70

(6) REPORT AND MAP PREPARATION

Olson, D.H., 3 days @\$50 \$ 150.00

TOTAL (1-6, inclusive) \$10,168.12

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J. Phillips

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Not a binding document

GROUND MAGNETIC SURVEY

- (1) Rotary Wing - Bell G3B1 - Alpine Helicopters Limited, Burns Lake, B.C.
26 & 27 Aug/70 - Kenney Dam to Chu Claims to Kenney Dam - Transport personnel
2 hrs. @ \$150/hr \$ 300.00
- (2) Wages - Magnetic Survey with Scintrex MF2 magnetometer
Gilmour, W. - operator - 26 & 27 Aug/70
2 days @ \$27 \$ 54.00
Peters, B. - assistant - 26 & 27 Aug/70
2 days @ \$18 36.00
TOTAL WAGES: \$ 90.00
- (3) Subsistence
2 men for a total of 4 days @ \$8.00 \$ 32.00
- (4) Preparation of Maps and Reports
2 days @ \$50 \$ 100.00
TOTAL (1-4, inclusive) \$ 522.00

GEOPHYSICAL SURVEY - INDUCED POLARIZATION

- (1) Rotary Wing - Bell G3B1 - Alpine Helicopters Limited, Burns Lake, B.C.
23 Aug/70 - Transport 2 men & geophysical equipment - Kenney Dam to Chu Claims 1 hr 55 min.
24 Aug/70 - Same as above 1 hr 50 min.
27 Aug/70 - Transport company geophysicist Kenney Dam to Chu claims 0 hr 50 min.

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Substituting Recorder

30 Aug/70 - Move out camp & personnel Chu claims to Kenney Dam	3 hrs 0 mins.
TOTAL	<u>7 hrs 35 mins.</u>
7 hrs 35 mins @ \$150/hr	<u>\$ 1,137.50</u>
(2) <u>Wages</u>	
<u>Nicholls, E.B.</u> - Asarco Geophysicist 2 days @ \$50	<u>\$ 100.00</u>
(3) <u>Contracted I.P. Survey - Geo-X Surveys Limited, Vancouver, B.C.</u>	
23-30 Aug/70 - 4 men & approximately 5 line miles surveyed (See attached report)	<u>\$ 2,480.00</u>
TOTAL 1-3, inclusive	<u>\$ 3,717.50</u>
<u>TOTAL GEOCHEMICAL, MAGNETIC, & I.P. SURVEYS</u>	<u>\$ 14,407.62</u>

DHO:sm



D.H. Olson,
Professional Engineer.



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Province of British Columbia, this *17th*
day of *Sept.* *1970*, A.D.

D. R. Olson

J. Phillips

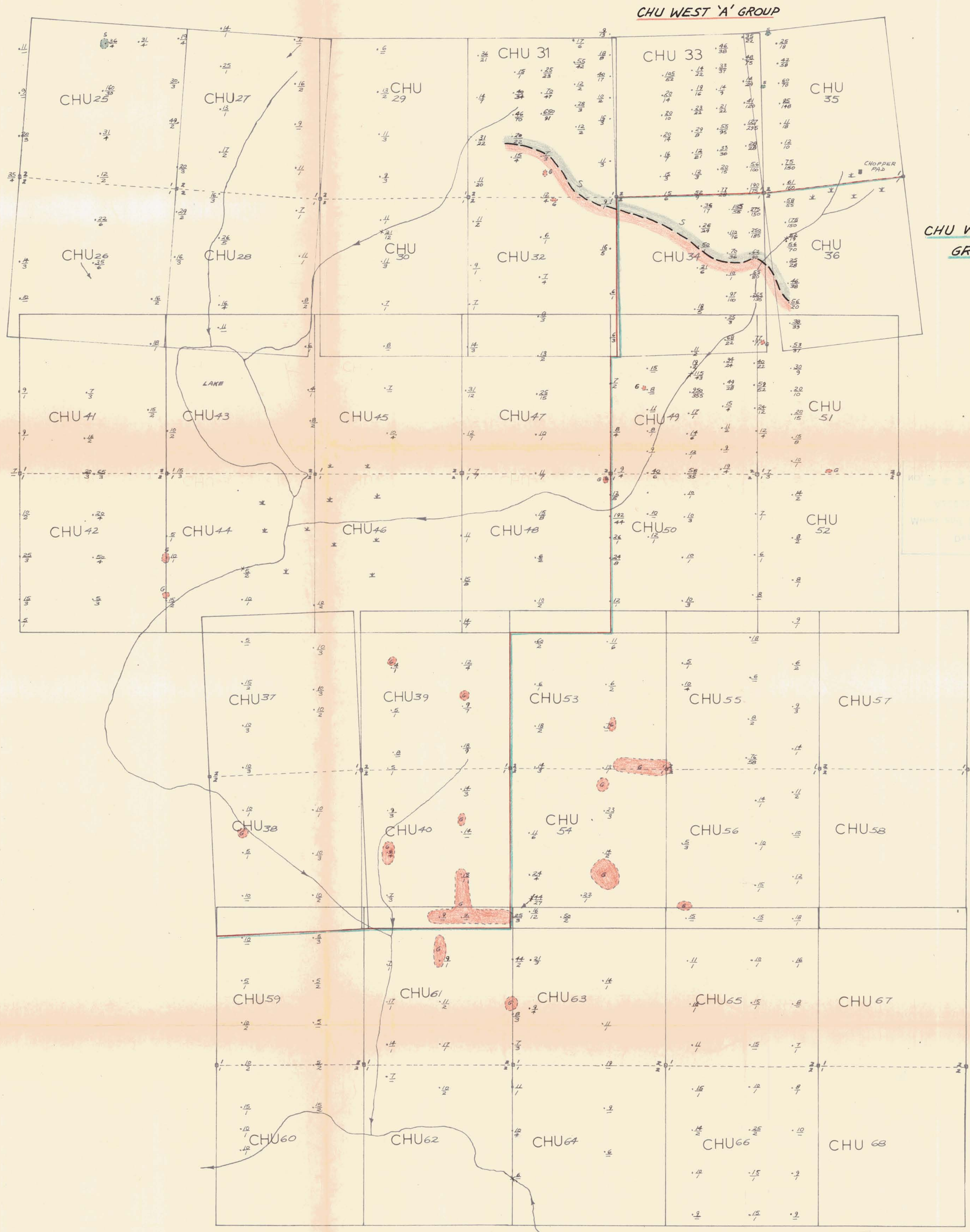
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Subscribing Recorder

APPENDIX "A"

MINERAL CLAIM SCHEDULE

<u>GROUP</u>	<u>CLAIM NAME</u>	<u>RECORD NO.</u>
Chu West "A" Group	Chu 25-33, 35, 37-48	79987-79995, 79997, 79999-80010
Chu West "B" Group	Chu 34, 36, 49-68	79996, 79998, 80011-80030



CHU WEST 'B' GROUP

2674

TO ACCOMPANY REPORT
 Dated: SEPT. 16, 1970
 By: D. H. OLSON
 Filed: N. K. O'Brien

CHU WEST 'A' and CHU WEST 'B'
 CLAIM GROUPS

MOLYBDENUM-COPPER PROSPECT
 OMINECA MINING DIVISION
 GEOCHEMICAL SURVEY



- LEGEND
- |0 2-- claim post
 - outcrop
 - G granodiorite
 - S Hazelton Group
metamorphosed sediments & volcanics
 - station location
 - * swamp
 - 25 ppm Cu
 - 3 ppm Mo
 - x silt
 - approx. rock contact



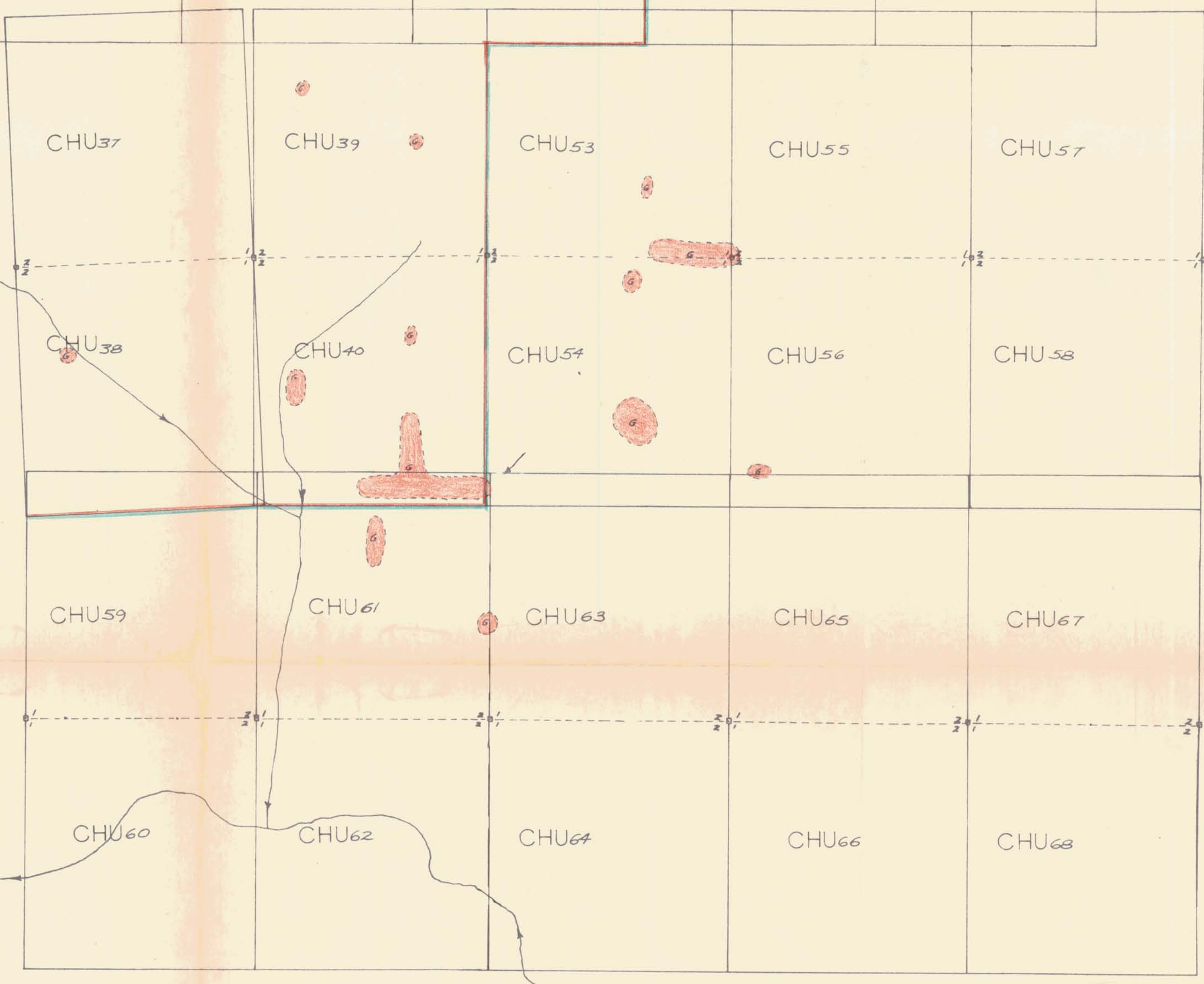
SCALE: 1 inch = 500 feet

SEPT. 70 DHO & MRG

CHU WEST 'A' GROUP



CHU WEST 'B' GROUP



- LEGEND
- claim post
 - outcrop
 - G granodiorite
 - S Hazelton Group metamorphosed sediments & volcanics
 - station location
 - * swamp
 - 1520 mag reading in gammas
 - - - approx. rock contact

2674

TO ACCOMPANY REPORT
 Dated: SEPT 16, 1970
 By: D. H. OLSON
 Filed: N.T. Nelson

CHU WEST 'A' and CHU WEST 'B' CLAIM GROUPS

MOLYBDENUM-COPPER PROSPECT
 Omineca Mining Division
 MAGNETOMETER SURVEY



SCALE: 1 inch = 500 feet

SEPT 70 DNO # MRC