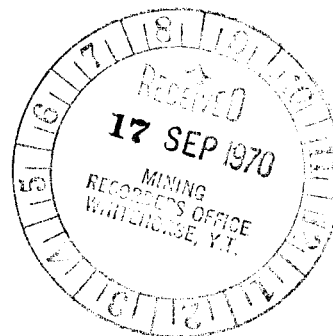


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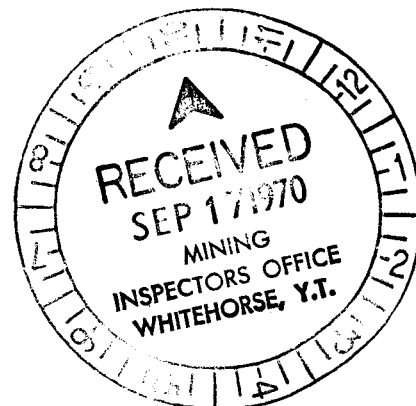
BENTALL CENTRE, VANCOUVER, B.C. 688-3022 OR 522-1562

POST OFFICE BOX 1708
WHITEHORSE, Y.T.

GEOLOGICAL, GEOCHEMICAL
AND MAGNETOMETER SURVEYS
BULLDOZER TRENCHING



Mothers 1 - 12 M.C.s (Y36904-915)
Claim Sheet 115-J-10
East Coffee Creek Area, Dawson Range
Whitehorse Mining District



September 3, 1969 - September 1, 1970

Dawson Range Joint Venture

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$3,865

A handwritten signature in cursive script, appearing to read "D. B. Craig".

~~Resident Geologist or
Resident Mining Engineer~~

A. C. Ogilvy, P. Eng.

September, 1970

Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act.

A large, stylized handwritten signature in cursive script, likely belonging to the Commissioner of Yukon Territory.

Commissioner of Yukon Territory

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ILLUSTRATIONS

Figure 1 - Portion of NTS Map 115 J Shwg Location of "Mother" M.C.'s 1" = 4 mi.	ff 1
Figure 2 - Portion of Staking Sheet 115-J-10 showing Mother 1-12 M.C.'s 1" = $\frac{1}{2}$ mi.	ff 2
Figure 3 - Molybdenum Geochem. Survey 1" = 800 ft.	ff 3
Figure 4 - Copper Geochem. Survey 1" = 800 ft.	ff 3
Figure 5 - Geology, Magnetic Intensity and Geochem. Anomalies 1" = 400 ft.	(in pocket)

SUMMARY

The Mother Claims contain significant copper and molybdenum anomalies, the latter associated with a weakly altered quartz porphyry. An intermittent belt of molybdenum anomalies, visible pyrite and maficless rocks strikes southwest from the porphyry zone through the quartz monzonite.

RECOMMENDATIONS

Bulldozer trenching, followed by detailed mapping and sampling of the above occurrences is warranted.

INTRODUCTION

MOTHERS 1 - 12 M.C.'s were recorded after the completion of the 1969 field phase of a geochemical survey begun on the adjoining ZAPPA claims. That work is described in a report entitled "Geochemical Sampling and Preliminary Geology, Zappa claims, Coffee Creek Area" by R.S. Cathro, P.Eng., August 10th, 1970 on file in the Whitehorse Mining Recorders Office.

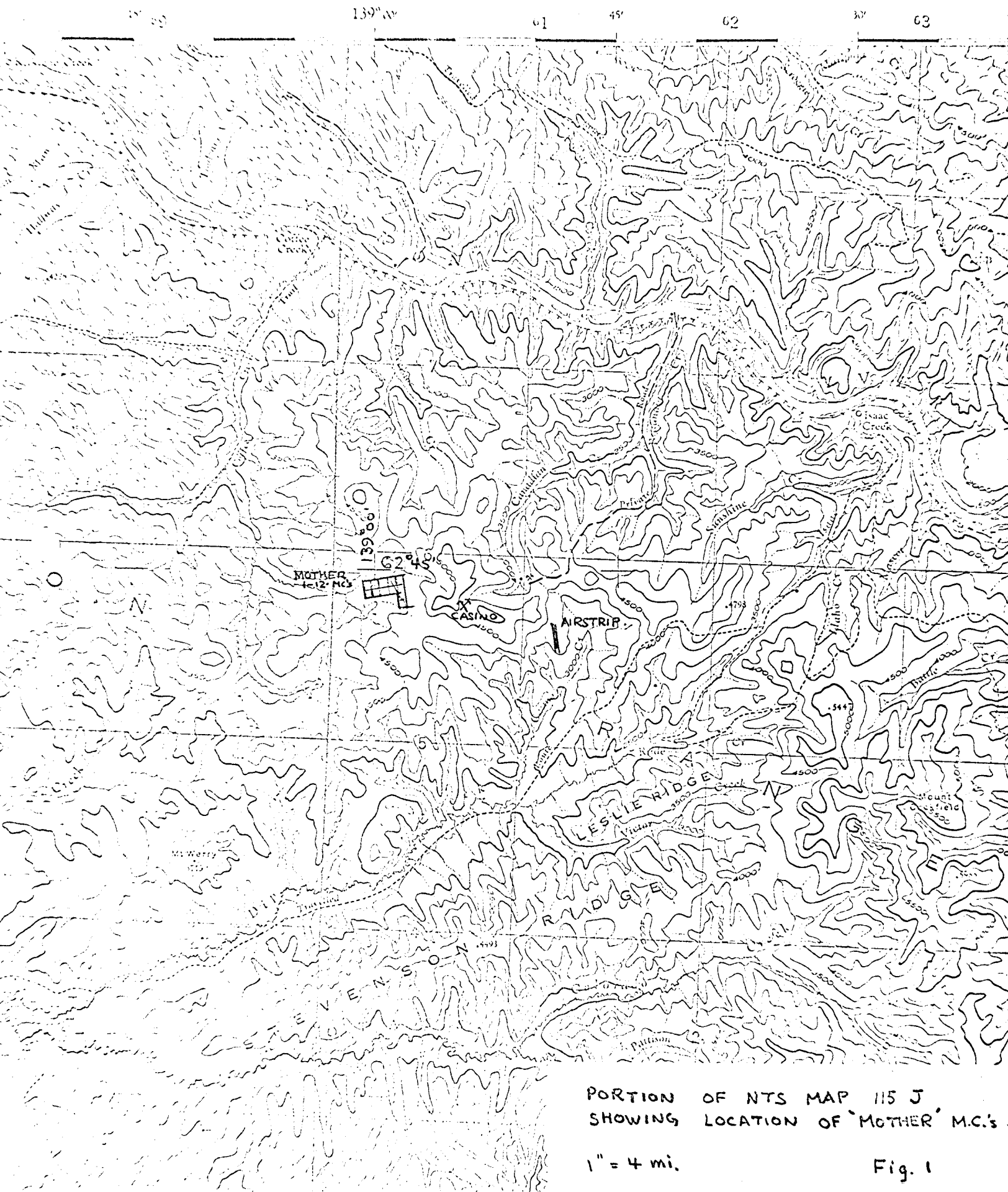
Between August 31st and September 3rd, 1970, the writer, assisted by P. Tredger, B.A.Sc. carried out a geological magnetrometer survey and a review of the previous geochemical survey.

In the spring of 1970, a cat-road was constructed across the property. Approximately 6,300 ft of "trench" with an average depth of 1 ft lies on the Mothers claims. This greatly facilitated geological mapping

LOCATION AND ACCESSIBILITY

Location is shown in Figure 1. Coordinates are 62°44'N, 138°59'W, Elev 3,500 to 4,000 ft., ie at the northwest corner of claim sheet 115-J-10. The property lies in the Dawson Range at the headwaters of the east fork of Coffee Creek. Casino Camp lies 5 miles to the east.

Although a rough cat-road joins the property to Casino and the Casino winter road, the only practical access is by helicopter.



PORTION OF NTS MAP 115 J
SHOWING LOCATION OF 'MOTHER' M.C.'s

1" = 4 mi.

Fig. 1

PROPERTY AND OWNERSHIP

The property consists of Mothers 1 - 12 M.C.'s, Grant No.'s Y36904-915. These were staked 17 August 1969 and recorded at Whitehorse 3 September 1969. They are shown on Staking Sheet 115-J-10 (see Figure 2), and adjoin Zappa 1-8 on the south end.

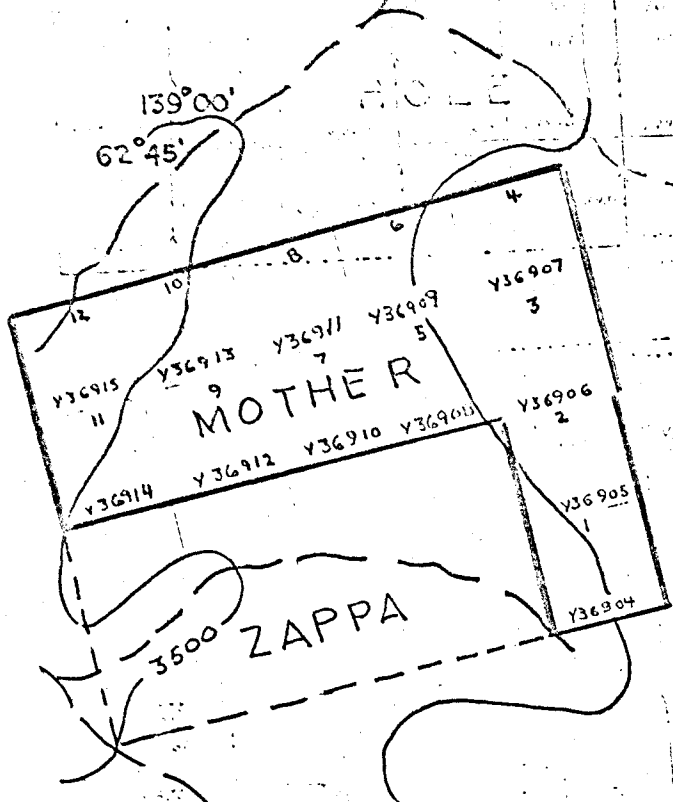
The Mothers and Zappa claims were staked by Archer, Cathro & Associates Ltd. on behalf of the Dawson Range Joint Venture (DRJV), comprised of Straus Exploration, Trojan Consolidated Mines, Great Plains Dev. Co. of Canada Ltd., and Molybdenum Corp. of America.

HISTORY

This is believed to be a new prospect. There is no record or evidence of work prior to the DRJV Geochemical survey of 1969.

REGIONAL GEOLOGY

The claims lie within the Snag map area which has not yet been mapped by the Geological Survey of Canada. Reconnaissance mapping carried out by DRJV indicates that the claims lie within Klotassin batholith (Coast Intrusives) 2 miles south of a mile-wide pendant of Yukon Group rocks. The porphyry copper deposit of Casino Silver Mines Ltd., lies 5 miles to the east.



139°00'
62°45'

MOTHER

3500 ZAPPA

AZTEC

H O

3500

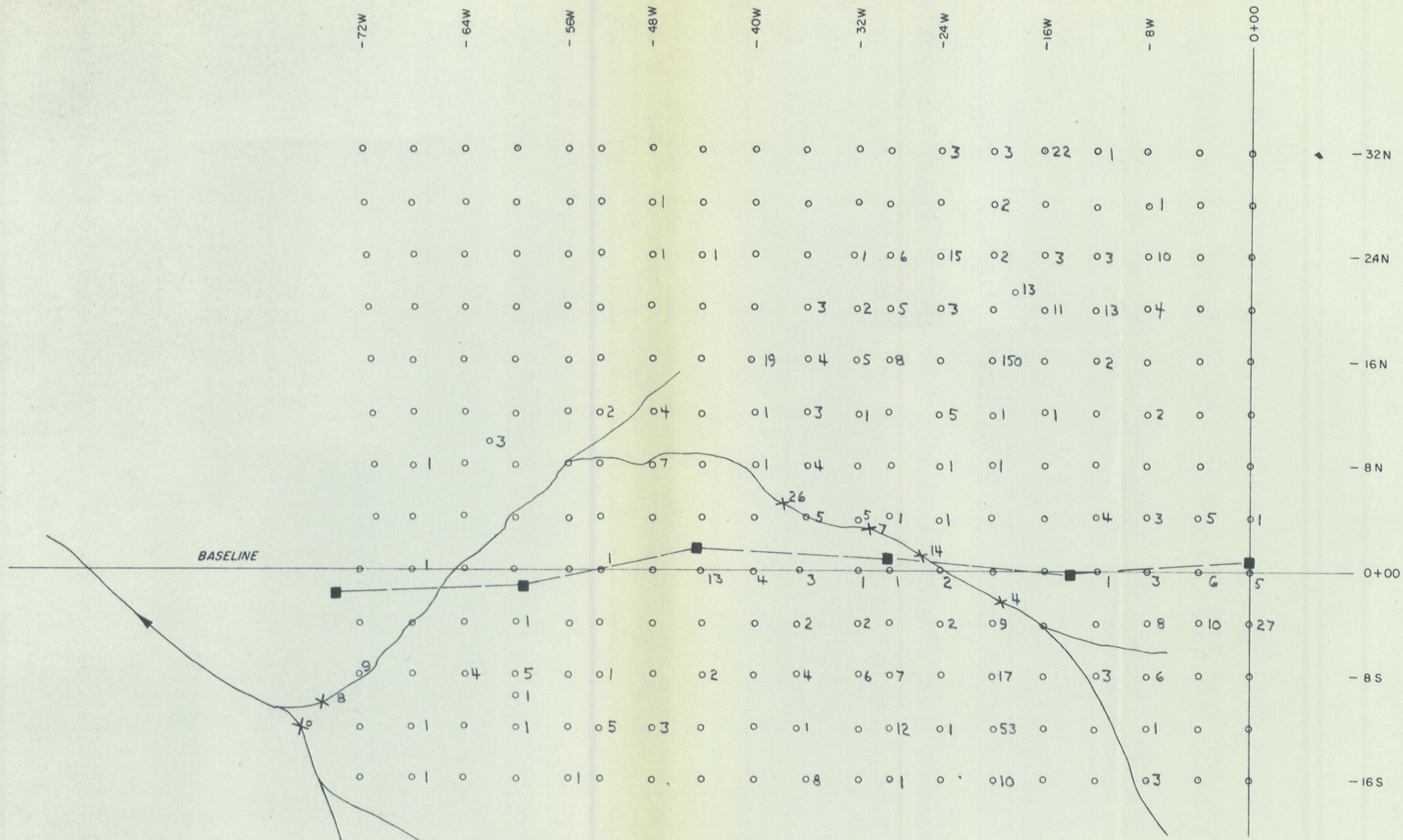
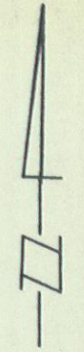
PORTION OF STAKING SHEET 115-7-10
SHOWING MOTHER 1-12 MICH (Y36904-15)
(REV. 18 AUG. 1970)
1 1/2 mi.
Fig. 2

PHYSICAL SETTING

The setting is typical unglaciated Dawson Range topography. Mother 1 and 2 M.C.'s cover a drainage bowl at the head of the northeasterly of three west-flowing tributaries forming the headwaters of the east fork of Coffee Creek. Mother 3 and 4 cover a west-facing slope, the lower part of the ridge separating the property from the Casino Camp. Mother 5-12 M.C.'s occupy the crest and gentle south slope of a ridge. The claims lie mainly between 3,500 and 4,000 ft. elevation, the western (lower) third being lightly forested and the remainder covered with thick moss and buck-brush. Outcrop is extremely scarce and within the claims is restricted to scattered patches to the east, although good exposures are found on the ridge crest and in the creeks to the south and west of the claim group. Geological mapping was therefore largely restricted to float. No solid bedrock was encountered on the road-bed, but at the one-foot level, the soil consisted of clay and numerous boulders and cobbles, and at least the higher elevations appear to be the B.C. horizon of a residual soil.

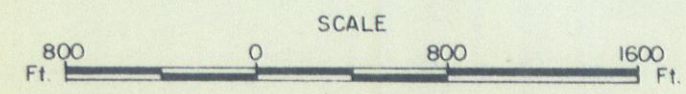
1969 GEOCHEMICAL RESULTS

The 1969 follow-up geochemical survey consisted of 247 samples taken at 500 ft centres on 19 lines 500 ft apart. A further study of this previously reported work gives the following conclusions:



■ CLAIM POST
 ○ SOIL } PPM Mo
 X SILT }

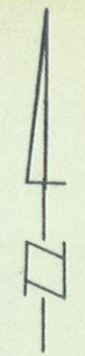
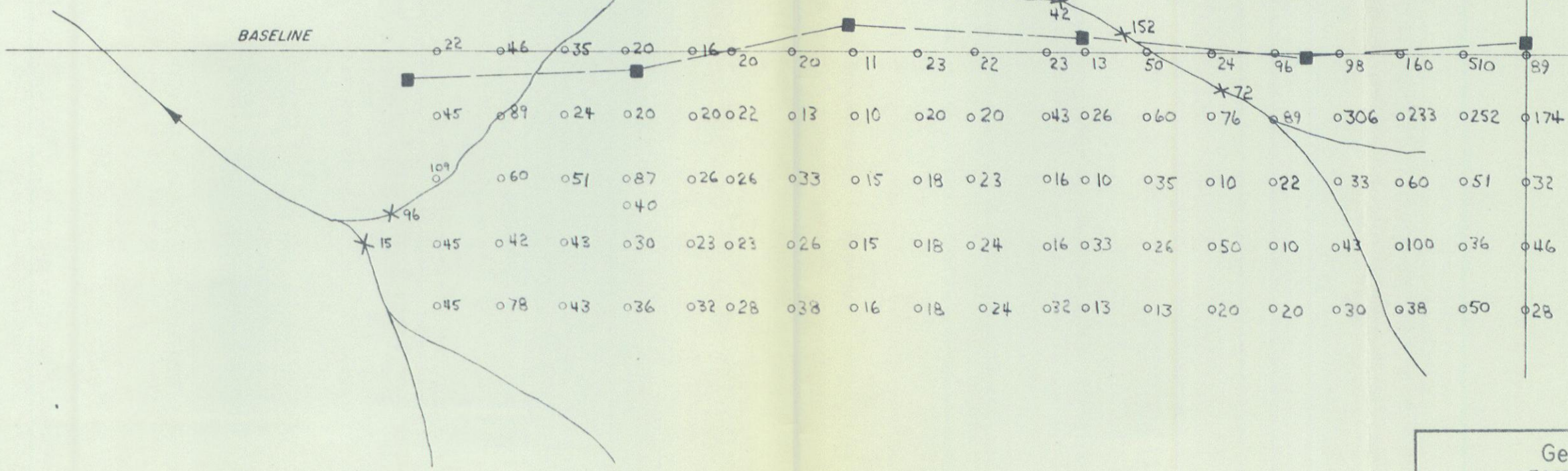
Note: Sample Locations left blank assayed 0 ppm Mo.



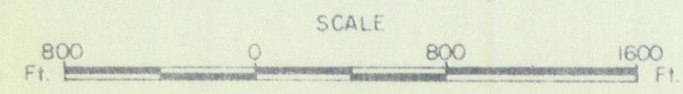
MOLYBDENUM

Geochemical Survey EAST COFFEE CREEK AREA DAWSON RANGE SYNDICATE, Y.T.		
ARCHER & CATHRO Consulting Geological Engineers		
DATE	Sept., 1969	rev. Sept '70
DRAWN	<i>[Signature]</i>	acc
SCALE	1" = 800'	DWG. No. 3

-72W	-64W	-56W	-48W	-40W	-32W	-24W	-16W	-8W	0+00										
032	08	032	023	070	052	048	087	070	055	052	045	035	080	064	026	010	015	018	-32N
052	078	043	040	051	028	030	043	064	048	038	046	070	040	038	030	032	038	022	
032	036	076	040	036	028	045	054	062	050	032	055	074	028	030	018	026	023	038	-24N
022	032	050	083	062	046	051	030	045	035	057	050	043	045	050	050	020	026	022	
046	040	069	046	069	050	026	023	043	051	036	069	035	064	064	038	036	023	022	-16N
046	030	050	054	028	069	024	020	033	024	022	032	028	035	032	038	048	032	048	
042	048	0117	028	043	096	065	010	024	054	060	024	032	032	024	0122	020	023	050	-8N
038	0115	085	036	032	043	022	022	020	020	087	023	030	038	026	0126	069	0117	026	
022	046	035	020	016	020	020	011	023	022	023	013	050	024	096	098	0160	0510	089	0+00
045	089	024	020	020	022	013	010	020	020	043	026	060	076	089	0306	0233	0252	0174	
060	051	087	026	026	033	015	018	023	016	010	035	010	022	033	060	051	032	032	-8S
045	042	043	030	023	023	026	015	018	024	016	033	026	050	010	043	0100	036	046	
045	078	043	036	032	028	038	016	018	024	032	013	013	020	020	030	038	050	028	-16S



■ CLAIM POST
 ○ SOIL } PPM Cu
 X SILT }



COPPER

Geochemical Survey EAST COFFEE CREEK AREA DAWSON RANGE SYNDICATE, Y.T.		
ARCHER & CATHRO Consulting Geological Engineers		
DATE	Sept., 1969	rev. Sept '70
DRAWN	<i>Archer</i>	aco
SCALE	1" = 800'	DWG. No. 4

149 samples returned no molybdenum, whereas 84 samples were in the 1 - 9 ppm range, 10 gave 10 - 19 ppm, and 4 exceeded 20 ppm Mo. Although distribution of positive Mo values is erratic, those exceeding 10 ppm are grouped in one large (24-acre) anomaly and 6 smaller ones. The large anomaly includes the highest single response -- 150 ppm, and is located in the northeast quadrant of the grid.

25% of the assays exceed 50 ppm copper and can be considered anomalous, but are randomly distributed. 13 samples exceed 100 ppm Cu. These are grouped in one large (26-acre) anomaly and two much smaller ones. The large copper anomaly is centered 0.5 mi SSE of the molybdenum anomaly. It includes 4 samples in excess of 200 ppm Cu (VIZ. 233, 252, 305 and 510 ppm), and incidentally a single high Mo response (27 ppm)--at the eastern edge of the grid.

Significantly, both the copper and molybdenum anomalies are on south-facing slopes, apparently related to melted permafrost. The molybdenum anomaly is related to a quartz porphyry intrusion (see Property Geology).

MAGNETIC SURVEY

Several attempts at a magnetic survey using an MF-1 magnetometer were made, but these proved largely useless due to magnetic storms. Corrected results of one traverse having a maximum drift of 200 gammas are depicted on Fig. 5. This survey was made in the vicinity of the large Cu

geochemical anomaly and the porphyry contact. It suggests that the quartz porphyry is less magnetic than the surrounding rocks and that under quiet conditions, and possibly with the employment of a stationary magnetometer, this method could be valuable in outlining that rock type.

PROPERTY GEOLOGY

As previously stated, outcrop is scarce and geological mapping was largely dependent on float. Three main rock units were distinguished: (a) foliated quartz monzonite, (b) quartz monzonite (non-directive) and (c) quartz porphyry. These are distributed as shown on Fig 5 and are described below:

(A) Foliated quartz monzonite has an average composition of 20% mafics, 20-30% quartz and 50-60% grey feldspar. Mafics consist of biotite and hornblende in a ratio ranging between 20/80% to 80/20%. Both mafic minerals are coarser than the quartz and feldspar. Biotite averages 2 mm (5mm max) and hornblende averages 5 mm length (2 cm max). The biotite is occasionally slightly chloritized. Both mafic minerals tend to lie in parallel planes, but true banding is absent. The zone lying in the westerly Zappa claims contains considerable amounts of remnant Yukon Group quartzites and some schists, but a gradation with these metasediments is not demonstrated.

(B) Quartz Monzonite. This non-directive rock is identical in composition with unit "A", but lacks the foliation of the mafic minerals.

In the outcrops to the south of the Zappa claims, the quartz monzonite is cut by aplite dykes. A belt running northeasterly across the Zappa claims shows evidence of aplite dykes also. In this belt, the aplite is gradational with very local maficless phases of the quartz monzonite. These tend to host pyrite disseminations and veins.

(C) Quartz porphyry. This rock, largely restricted to a subdued knob on Mother 3 M.C., appears to be gradational with "B", but lacks the mafic minerals. Typically the quartz forms small rounded grains, but towards the edges of the occurrence this feature is lacking. Alteration (Kaolinization) is weak. Pyrite (and Chalcopyrite?) is weakly disseminated along some of the fractures, and slightly leached.

CONCLUSIONS

Units A and B are gradational with one another, but their sequence of formation is in doubt. Two possibilities exist:

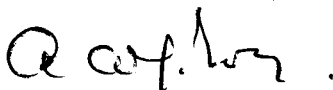
(1) The foliation of unit "A", and its association with metasediments, suggest it may be a result of incomplete granitization of the Yukon Group (as opposed to unit "B" wherein granitization is complete). Lack of a demonstrated gradation between the metasediments and unit "B", such as the presence of a true banded gneiss, however, raises an objection to this theory.

(2) The mineralogical similarity between units "A" and "B", and the association of "B" around the quartz porphyry suggests that the foliation in "B" may have been caused by the forceful intrusion of the quartz porphyry into a still viscous quartz monzonite body. (If this conclusion is valid, it would suggest that foliated plutonic rocks in the region may be a guide to later intrusions).

It is concluded that the porphyry zone as mapped, as well as its possible southwest extension (consisting of scattered occurrences of malicless rocks, pyrite and high-Mo soil responses) warrant further checking.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES LTD.



A.C. Ogilvy, P.Eng.

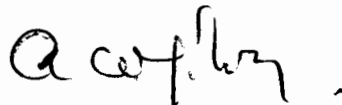
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AND ASSOCIATES LTD.
CONSULTING GEOLOGICAL ENGINEERS

BENTALL CENTRE, VANCOUVER, B.C. 688-3022 OR 522-1562

POST OFFICE BOX 1708
WHITEHORSE, Y.T.

AFFIDAVIT

I, A. C. Ogilvy, with business address at Box 1708, Whitehorse, Y. T. , hereby declare that, to the best of my knowledge and belief, the attached statement of expenditures is a fair and accurate representation of the cost of exploration on the Mother 1-12 claims, claim sheet 115-J-10, since August 12, 1969.



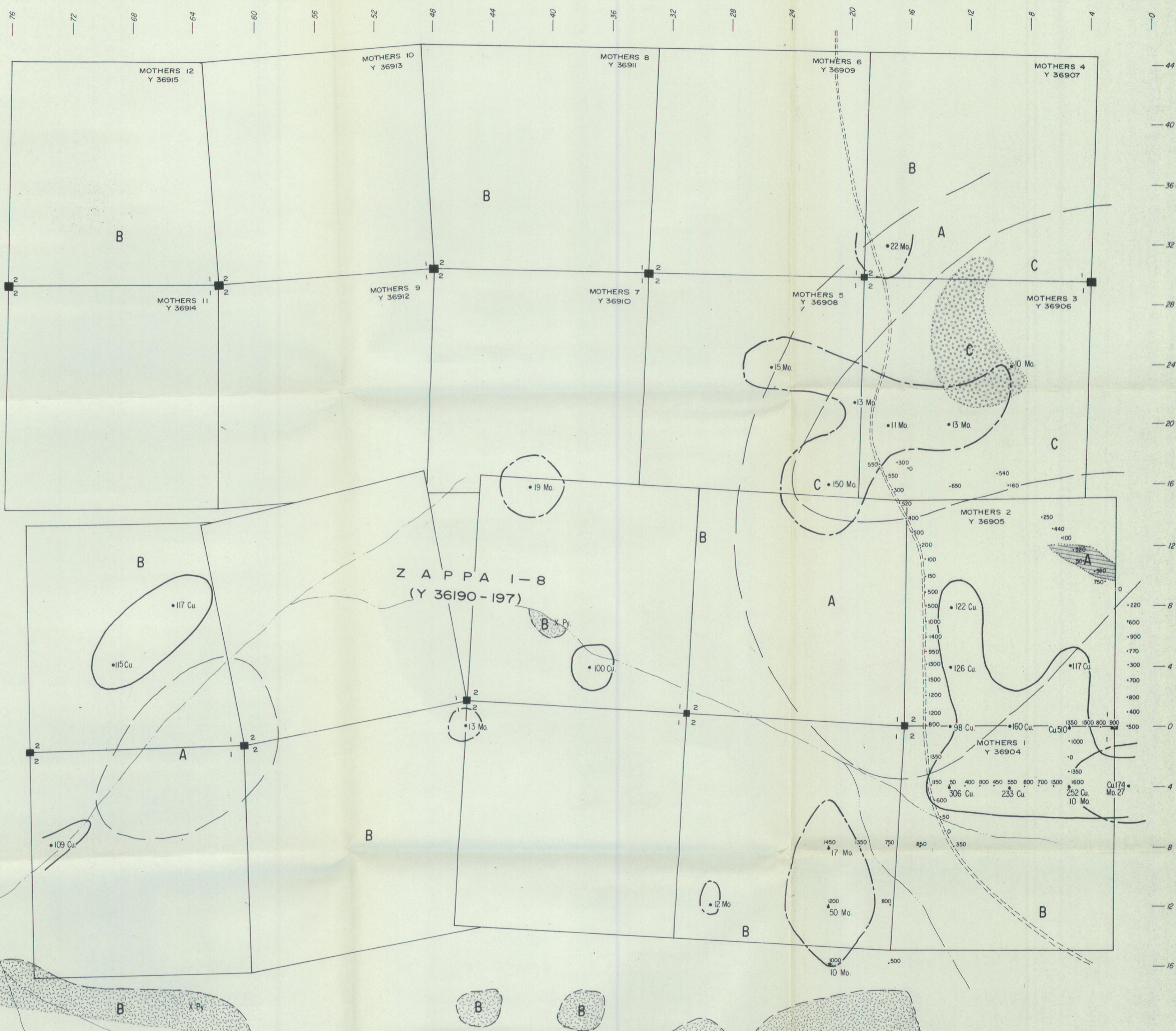
A. C. Ogilvy, P. Eng.

ARCHER, CATHRO & ASSOCIATES LTD.

Signed before me at
Whitehorse this 17 day
of September, 1970:



Notary for Yukon



LEGEND

OUTCROP / INFERRED

C Maficless Quartz Porphyry

B Hornblende - biotite Quartz Monzonite
 B1: intruded by aplite dykes;
 B2: contains remnants of orthoquartzite

A Quartz Monzonite, foliated.

X Py Pyrite observed

• Cu > 100 ppm Cu

• Mo > 100 ppm Mo

• 950 magnetic field (gammas)

--- bulldozer road

■ claim post

ARCHER, CATHRO & ASSOC. LTD.
**GEOLOGY, MAGNETIC INTENSITY
 & GEOCHEM. ANOMALIES**
 MOTHERS 1-12 & ZAPPA 1-8 CLAIMS
 COFFEE CREEK EAST, WHITEHORSE M.D., YUKON
 DAWSON RANGE JOINT VENTURE
 SCALE IN FEET
 400 0 400 800 1600
 Sept. 15, 1970