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AND ASSOCIATES LTD.
CONSULTING GEOLOGICAL ENGINEERS

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Report On

Geology and Geochemistry

FETISH 1-20 MINERAL CLAIMS

(Grant No.'s Y73634 to Y73637 and Y73694 to Y73709)

Latitude: 61°25'N Longitude: 130°07'W

Watson Lake Mining District, NTS 105G/8

for

FINLAYSON JOINT VENTURE

November 15,1973

A.R. Archer

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

$ 2823.37

Resident Geologist or
~~Resident Mining Engineer~~

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

Consulting Geological Engineer

Commissioner of Yukon Territory

060258

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INTRODUCTION

The Fetish showing was found in late June, 1973, by the Finlayson Joint Venture exploration syndicate managed by Archer, Cathro & Associates Ltd. The central portion of the property was explored by geological mapping and soil sampling from July 15-23, 1973 by field men M. Richards and E. Jensen. Additional visits were made on August 16, 21,31, and September 24 to dig hand pits for geochemical profiles.

PROPERTY, LOCATION, ACCESS

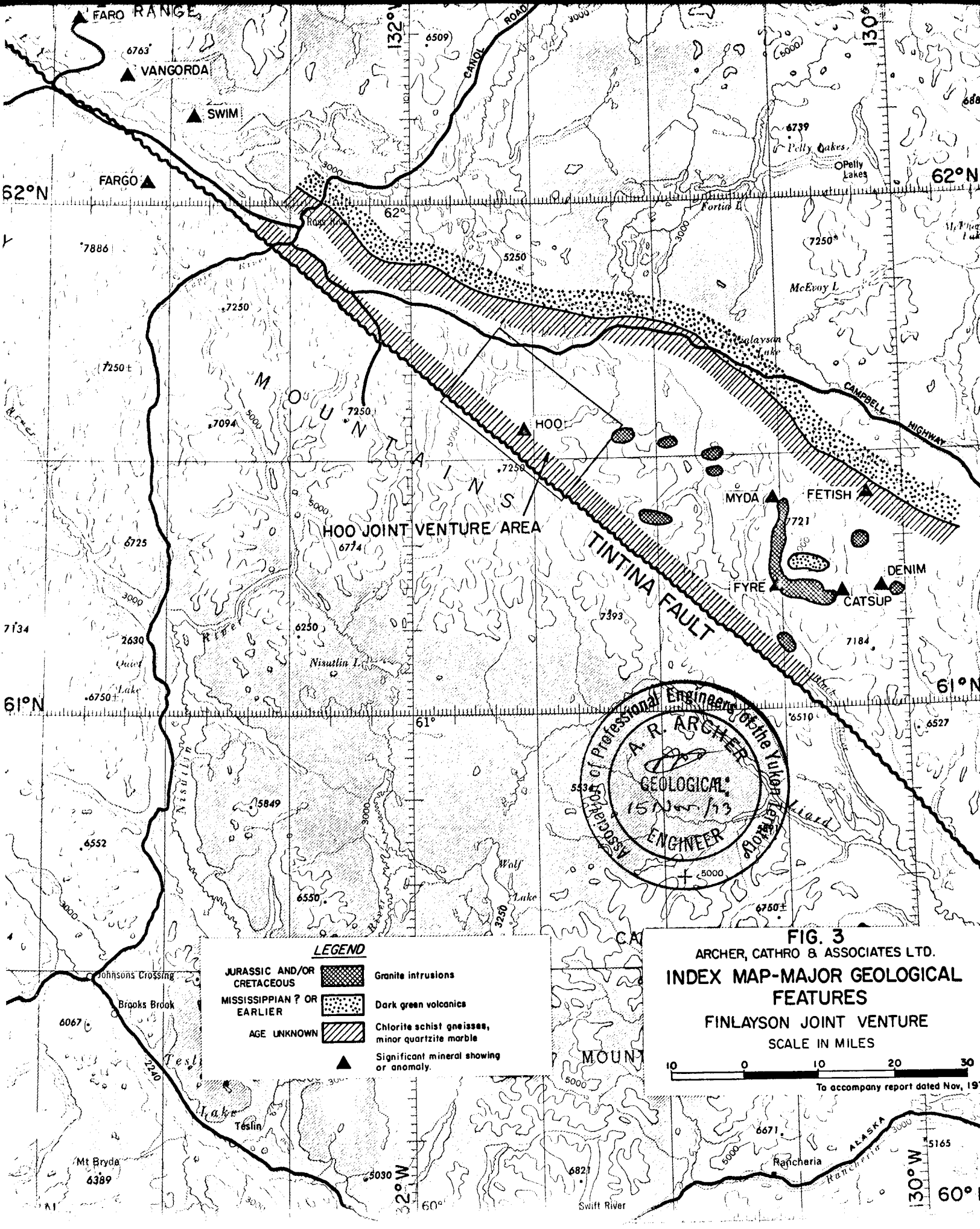
The Fetish showing is staked as the Fetish 1-20 mineral claims registered in the Watson Lake Mining District as follows:

Claim Name	Number	Record Number	Expiry Date
Fetish 1-4	~~6~~ 4	Y73634-Y73637	15 July, 1974
Fetish 5-20	16	Y73694-Y73709	15 July, 1974

The claims are situated on NTS map sheet 105G/8 at Latitude 61°25'N and Longitude 130°07'W. Access is by helicopter and the nearest road is the Campbell Highway some eleven miles to the northeast.

GEOLOGY

The property is underlain by a belt of schists and gneisses of unknown age (possibly Cambrian?) bounded on the northeast by foliated volcanic rocks of Mississippian or earlier age. The general geology and property location are illustrated on Figure 3 on the following page. Foliation trends northeast and dips about 40° northeast, and no contacts between the units are exposed. Outcrop is not plentiful in the area of subdued relief underlain by schists and gneisses. Near the main showing, the topography consists of a series of swampy, overburden-filled gulleys which trend more or less parallel to the foliation. Overburden seems fairly thin and consists mainly of residual and fluvial material mixed with a little glacial till.


FARO RANGE
VANGORDA
SWIM
FARGO
62°N
62°
132°
130°
CANOL ROAD
Ross River
Fortin L.
Petly Lakes
McEvoy L.
Finlayson Lake
CAMPBELL HIGHWAY
MOUNTAINS
HOO
HOO JOINT VENTURE AREA
TINTINA FAULT
MYDA
FETISH
FYRE
DENIM
CATSUP
Nisutlin R.
Nisutlin L.
Wolf Lake
Liard
61°N
61°
Johnsons Crossing
Brooks Brook
Teslin
Teslin Lake
Mt Bryde
Swift River
Rancheria
ALASKA
60°
132°W
130°W
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LEGEND
JURASSIC AND/OR CRETACEOUS
Granite intrusions
MISSISSIPPIAN ? OR EARLIER
Dark green volcanics
AGE UNKNOWN
Chlorite schist gneisses, minor quartzite marble
Significant mineral showing or anomaly.
FIG. 3
ARCHER, CATHRO & ASSOCIATES LTD.
INDEX MAP-MAJOR GEOLOGICAL FEATURES
FINLAYSON JOINT VENTURE
SCALE IN MILES
10 0 10 20 30
To accompany report dated Nov, 19

Mineralization has been found only in float near a narrow limonite gossan and in handpits dug in soil anomalies. Three types of mineralization have been found on the claims: (a) leached chlorite schist containing limonite and chalcopyrite which was found as residual till in Pit 7. A sample of schist with no visible sulfides assayed 3.53 per cent copper, 0.24 per cent zinc, 0.36 oz/ton silver, 0.01 per cent lead and trace in gold, antimony and arsenic. A second sample from the same location consisted of malachite-stained quartz lenses from the schist horizons and it assayed 2.1 per cent copper, 0.09 per cent zinc, 0.06 oz/ton silver and trace in gold, lead, antimony and arsenic. Both assays were considerably higher than visual estimates, which suggests that some chalcocite, tenorite or copper pitch must be present in the limonite. (b) milky quartz float derived from veins or lenses containing minor amounts of galena and chalcopyrite. A sample of surface float with visible chalcopyrite assayed 0.18 per cent copper and trace gold and silver. (c) bedded magnetite and hematitic jasper found in a string of narrow quartzite bands in schist just north of the gossan and geochemical anomaly. No samples were assayed.

GEOCHEMISTRY

A total of 197 soil samples were collected, of which most were from a grid near the main showing. Soil samples were analyzed at Chemex Labs Ltd, North Vancouver. Each sample was dried, screened to a minus 80 mesh fraction, digested in nitric-perchloric acid and routinely analyzed for copper, molybdenum, lead and zinc using atomic absorption spectrometry. Grid samples were taken at 200 foot intervals on lines 400 feet apart over an area of about six claims centered on the main showing. As mentioned previously, overburden appears to be fairly thin (less than ten feet) over much of the property, and consists mainly of residual rock fragments and fluvial material, well mixed with small

patches of glacial till. Details of the soil types encountered in the hand trenches are shown on Figure 10 in the pocket. Soil sampling has produced an aligned series of well-defined copper and lead anomalies over 3500 feet long, which follow the trend of the foliation and drainage channels and extend through the main showing.

Copper assays in ppm are plotted with molybdenum on Figure 11 in the pocket and show a close relationship to underlying rock types. The northeast side of the grid, uphill from the showing, is underlain by volcanics and has a background of about 60 ppm copper. Reconnaissance sampling over the volcanics indicated several areas of weakly anomalous response (up to 164 ppm) from well exposed, steep slopes where no visible sulfides other than weakly disseminated pyrite were seen. Most of the grid is underlain by schists and gneisses which have a lower background of about 20 to 30 ppm copper. The copper anomaly consists of two parallel linear zones that are generally less than 500 feet wide and show a strong contrast with assays in the range from 75 to 500 ppm. Low assays between the northeast side of the anomalies and a drainage channel near the contact between schists and volcanics indicates there has been no downslope contamination from higher background volcanics. The copper anomalies extend off both ends of the grid and the southeast end of the anomaly is partially obscured by a swampy drainage channel that could not be sampled.

Molybdenum response is generally less than 1 ppm and only one cluster of weakly anomalous (5 to 10 ppm) assays were obtained. These are too scattered to define a trend but generally occur along the southwest side of the anomaly where black shale float was seen in overburden. The soil response is thought to be caused by a higher rock background in the shale. One strongly anomalous silt assay of 26 ppm was obtained from a small stream flowing north into Fetish Lake. Reconnaissance soil sampling in this area returned background values and the high assay is probably an erratic.

Lead assays, which are plotted with zinc on Figure 12, show a similar anomalous pattern to that outlined by copper. The only exception occurs at the southwest end of lines 24 and 28 NW, where three strongly anomalous assays between 200 and 516 ppm were obtained from an area with low copper response. Lead background is about 30 to 35 ppm over all rock types and anomalies show a sharp contrast in the range from 75 to greater than 500 ppm. The main anomaly is roughly coincident with the copper anomaly although shifted slightly uphill in a few places.

Zinc background is relatively low (under 100 ppm) even in the areas thought to be underlain by black shale. Anomalous response in the range from 250 to 1500 ppm is erratic and is uaually associated with areas of highest lead response. Three high zinc assays (424 to 1320) occur with low lead values near the northwest end of the claim group. A 456 ppm assay was obtained with a low lead value from the same silt sample south of Fetish Lake that was anomalous in molybdenum, suggesting that high rock background may be the source.

HAND TRENCHING

Seven hand pits ranging in depth from 2 to 7 feet and in length from 4 to 15 feet were dug on geochemical anomalies. Bedrock was not reached in any trenches but all encountered soil and residual rock fragments which had not been transported more than a few hundred feet. Soil profiles and/or selected rock samples were assayed geochemically from each trench.

Trenches 3 and 4 are located in the main copper and lead anomaly about 1000 feet northwest of the main gossan. Trench 4 was just uphill from the anomaly and returned background assays. In Trench 3, assays of soil consistently increased in all four metals from fairly low values at surface to much higher values at a depth of 4 to 6 feet. The increases measured were: copper- from 44 ppm on surface to between 1200 and 1760 ppm ; molybdenum from less than 1 to between 8 and 13 ppm ; lead from 107 to between 375 and 680 ppm ; and

zinc from 148 ppm to between 3000 and 3200 ppm. Assays on samples of typical rock fragments from the bottom of this trench assayed 51 to 96 ppm copper, up to 7 ppm molybdenum, 12 to 52 ppm lead and 43 to 400 ppm zinc. The highest assays in each metal were obtained from a leached and brecciated phyllitic quartzite with weak limonite staining.

Trench 5 is situated 500 feet southeast of Trenches 3 and 4, within the main anomaly. No definite trend was obtained in soil samples from this trench but the highest copper and lead assays (363 and 180 ppm respectively) were obtained midway down.

Trenches 6 and 7 were cut in the main gossan itself and showed that the limonitic soil is only a few inches thick and is underlain by near-bedrock float which retains its rough bedding attitude. Assays of leached chlorite schist fragments with malachite stain, as reported previously, are low in all metals except copper, which constitutes 3.53 per cent of the schist and 2.1 per cent of the quartz lenses from within the schist. Geochemical assays of soil from the trench below the gossan returned 7700 to 12,200 ppm copper, 6 to 11 ppm molybdenum, 172 to 375 ppm lead and 2050 to greater than 4000 ppm zinc. The limonitic gossan on surface assayed 2800 ppm copper, 7 ppm molybdenum, 835 ppm lead and greater than 4000 ppm zinc.

In summary, trenching has shown that the copper anomalies are probably derived from a leached stratabound sulfide zone in chloritic schist . Galena and sphalerite probably occur with pyrite in close association with the copper horizon, either together in a single horizon or as individual bands nearby. No information on the thickness of the mineralization has been obtained. The dip of the mineralization was measured in one pit at 50° southwest.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES LTD.

A.R. Archer, B.A.Sc., P.Eng.

CONCLUSIONS AND RECOMMENDIATIONS

Mineralization is poorly exposed at surface on the Fetish claims, but grid soil sampling and hand pitting have shown that a leached copper zone is present which has a length of at least 3500 feet and appears to be conformable with the enclosing Unit A chloritic schists. Geochemical response suggests that galena and sphalerite are probably associated with the copper horizon in lesser amounts. The significance of this showing depends on its thickness and grade and a modest program of shallow drilling is recommended to get this information. A series of four 250 foot holes, estimated to cost $30,000 is recommended with the following budget:

Drilling

1000 ft. AQ @ $15/ft	$ 15,000.
Helicopter Mobilization	5,000.
Camp Costs & Trucking	2,000.
Engineering & Assays	2,000.
Contingency	1,000.
	$ 25,000.
Additional grid soil sampling, mapping, and magnetic surveys-	$ 5,000.
	$ 30,000.

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POST OFFICE BOX 4127
WHITEHORSE, Y.T.

CERTIFICATE

I, Alan R. Archer, with business addresses in Whitehorse, Yukon Territory, and Vancouver, British Columbia, and residential address in South Burnaby, British Columbia, do hereby certify that:

1. I am a consulting geological engineer.

2. I graduated from the University of British Columbia with a B.A.Sc. in Geological Engineering in 1957.

3. I am a registered Professional Engineer in British Columbia and Yukon Territory.

4. From 1957 to 1966 I was engaged in mineral exploration in Canada as a geologist for a number of companies. I was Chief Geologist for United Keno Hill Mines Ltd. when I retired to private practice in 1966.

Respectfully submitted,

Alan R. Archer, B.A.Sc., P.Eng.

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GEOLOGICAL
ENGINEER

WOLVERINE LAKE

FETISH LAKE

Old Camp

magnetite & hematite float

FJV Camp

sulphosalt sample

BASELINE 0+00

TIE LINE 0+00

BASELINE 28+00SW

FETISH 1-20 CLAIMS

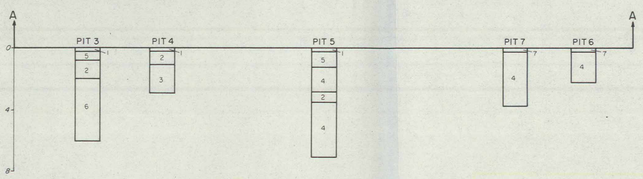
61°20'

149°07'

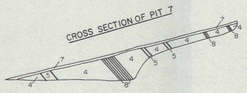
58+00NW 52+00NW 48+00NW 44+00NW 40+00NW 36+00NW 32+00NW 28+00NW 24+00NW 20+00NW 16+00NW 12+00NW 8+00NW 4+00NW 0+00 4+00SE 8+00SE 12+00SE 16+00SE 20+00SE 24+00SE 28+00SE

16+00NE 12+00NE 8+00NE 4+00NE 0+00 4+00SW 8+00SW 12+00SW 16+00SW 20+00SW 24+00SW 28+00SW

SECTION A-A



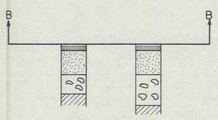
CROSS SECTION OF PIT 7



GEOLOGY

1. White, and black organic
2. Yellow brown soil with rounded greenstone volcanic boulders
3. Yellow brown sandy clay
4. Weathered chlorite schist chlorite quartz muscovite schist.
5. Red to yellow brown soil with phyllite fragments and schist.
6. Red brown stratified soil with angular micaceous quartzite and black phyllite. Some bull quartz.
7. Red-Brown rusty gossan soil
8. Malachite bands in chlorite quartz muscovite schist
9. Quartz bands, minor malchite

SECTION B-B



GEOLOGY

- Black organic
- Grey brown rocky soil
- Red brown rocky with gneiss float
- Micaceous quartzose gneiss outcrop

GEOLOGY

MISSISSIPPIAN OR EARLIER	Go	Dark green foliated volcanics
AGE UNKNOWN	A	Chlorite schist, black phyllite, quartz muscovite schist, micaceous quartzite, quartz veins
	Aq	Metaquartzite, with magnetite up to 30% by, minor pyrite
	C	Quartzose muscovite augen gneiss

LEGEND

- Hand pit
- Claim post
- Gossan
- Mineral occurrences
- Boulder train
- Swamp
- Foliation inclined
- Outcrop
- Geological boundary approximate

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FIG. 10

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GEOLOGY

FETISH PROPERTY

FINLAYSON JOINT VENTURE

SCALE IN FEET

400 0 400 800 1200

To accompany report dated Nov. 1973

WOLVERINE LAKE

FETISH LAKE

Old Camp

mapped thrust fault

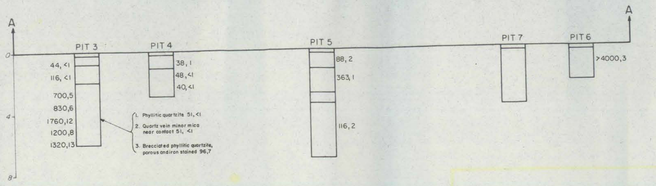
FETISH 1-20 CLAIMS

TIE LINE 0+00

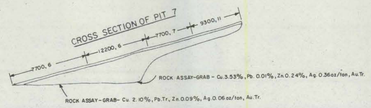
BASELINE 0+00

BASELINE 28+00S.W.

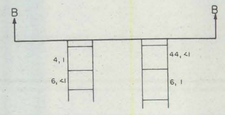
SECTION A-A



CROSS SECTION OF PIT 7



SECTION B-B



LEGEND

Soil } Cu, Mo.
Silt }

Assays in ppm by Chemex Labs Ltd.

Anomalous trend outlined by grid sampling with copper response greater than 75 ppm.

LEGEND

Hand pit
Claim post
Gossan
Mineral occurrences
Boulder train
Swamp

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ENGINEER

FIG 11

ARCHER, CATHRO & ASSOCIATES LTD

COPPER & MOLYBDENUM GEOCHEMISTRY

FETISH PROPERTY

FINLAYSON JOINT VENTURE

SCALE IN FEET

400 0 400 800 1200

To accompany report dated Nov. 1973

WOLVERINE LAKE

FETISH LAKE

Old Camp

FETISH 1-20 CLAIMS

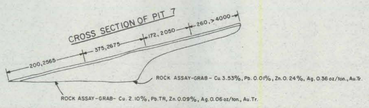
BASELINE 0+00

TIE LINE 0+00

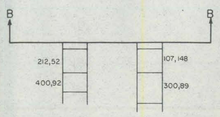
BASELINE 28+00SW

SECTION A-A

CROSS SECTION OF PIT 7



SECTION B-B



LEGEND

- Soil
- Silt
- Pb, Zn

Assays in ppm by Chemex Labs Ltd.

Anomalous trend outlined by grid sampling with lead reponse greater than 175 ppm.

LEGEND

- Hand pit
- Claim post
- Gossan
- Mineral occurrences
- Boulder train
- Swamp

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FIG. 12
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LEAD & ZINC GEOCHEMISTRY

FETISH PROPERTY
FINLAYSON JOINT VENTURE

SCALE IN FEET
400 0 400 800 1200

To accompany report dated Nov. 1973