

014394

Geological Report

on the

SAM CLAIM

for

TAHTSA MINES LTD.

Omenica Mining Division

93 E 11W

January 10, 1980
Vancouver, B.C.

L. Sookochoff, P.Eng.
Consulting Geologist

PROPERTY FILE

93E035

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Part A

SUMMARY AND CONCLUSIONS

The SAM claim located near the east end of Tahtsa Lake covers two known parallel shear zones containing significant silver-lead-zinc mineralization.

The Captain shear zone, situated within a fine grained diorite intrusive - the Swing Peak Stock - was originally explored in 1929 by a 116 meter drift. The workings expose intermittent mineralized lenses, one of which reportedly assayed up to "14.4 oz. Ag, 4.8% Pb and 1.7% Zn over 13 inches and exposed for one hundred and twenty feet."

The shear zone and Captain vein is exposed 160 meters to the north of the portal where a 45 cm sample reportedly assayed 255.4 oz. Ag/ton, 11.2% Pb and 5.52% Zn.

A parallel shear zone to the west exposes the Bennett Vein for 100 meters along strike with an indication of a vein 125 meters to the south. The southernmost exposure reportedly assayed 75.75 oz. Ag/ton 29.2% Pb and 10.2% Zn across a 45 cm vein. Float has also been found between the Captain and Bennett veins.

The surface exposures are exposed over a vertical distance of 300 meters and a horizontal distance of 500 meters. The individual zones vary from 2.5 to 17.5 cm to .6 to one meter in width at the 1745 m elevation.

Copper mineralized float material has also been found in the area.

The known shear zones with the included lead-zinc-silver present encouraging exploration potential for the location of economic zones of mineralization. Vein material exposed in the talus slopes may represent other parallel mineralized shear zones.

In addition to potential economic mineral zones within the shear zones, geological indications reflect the potential for deep seated porphyry mineralization within the intrusive.

The property thus warrants an exploration and development program to determine the extent of known mineral zones in addition to locating potential associated economic zones of mineralization.

RECOMMENDATIONS

It is recommended that a surface exploration program in addition to underground exploration and bulk sampling be carried out on the Tahtsa Mines Sam property.

The surface exploration program would be comprised of a geological mapping program in addition to an E.M. survey.

The underground exploration and bulk sampling would essentially be comprised of 40 meters of cross-cutting and drifting on a mineralized zone exposed on the surface below the Captain drift. Bulk sampling with shipments to Trail, B.C. would also be undertaken.

It is also recommended that Tahtsa Mines Ltd. allocate the sum of \$104,000.00 to initiate and execute the recommended program.

Respectfully submitted



Laurence Sookochoff, P.Eng.
Consulting Geologist

January 10, 1980
Vancouver, B.C.

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TAHTSA MINES LT .

Part B

INTRODUCTION

At the request of officers of Tahtsa Mines Ltd., the writer prepared the following report on the potential of locating zones of economic mineralization of the six unit Sam claim. The report is essentially a compilation of available data dating from 1927 and as cited under references. Additional information was obtained from personal communication with persons who have worked on the property and from a property examination carried out during October 6-8, 1979. The writer is also familiar with the general area from a reconnaissance exploration program carried out in 1966.

PROPERTY

The property consists of one located claim which is comprised of six units. Particulars are as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
SAM	797	Sept. 30, 1983

LOCATION AND ACCESS

The property is located five km southeast of Swing Peak and four km south of Tahtsa Reach. Burns Lake is 110 km to the northeast.

Recently a five km access road was constructed from Tahtsa Reach thus vehicle access is available from Burns Lake. Burns Lake is situated on the No. 16 Highway, 200 km west of Prince George and 120 km east of Smithers which are served daily by a commercial airline.

HISTORY

The pertinent showings were originally staked as the Swannell Group in the early 1920's. From 1928 to 1930, the Tahtsa Mining Co. carried out a program of exploration and development which included 116 meters of drifting and some surface trenching. Since 1930, the property has been periodically explored predominantly by trenching, sampling and limited underground work.

Within the last two years a road was constructed from Tahtsa Reach, thus providing access to the claim and individual showings.

GEOLOGY

In the general area of the property, the Swing Peak stock intrudes a northwesterly trending band of Lower Cretaceous sedimentary and volcanic rocks and which overly the Hazelton Group. The Swing Peak Stock is a light coloured, porphyritic plutonic rock which weathers light brown to rusty and is composed of phenocrysts of feldspar, biotite, and hornblende in a light grey groundmass.

The Lower Cretaceous Rocks are comprised of a lower half of entirely sedimentary rocks of marine origin with an overlying series of volcanic rocks. The sedimentary strata consist of grey to black mudstones, grey to fawn arkose, with a covering sequence of fawn to grey fine grained and well stratified arkosic sandstone.

The overlying volcanic rocks consist of red, green and brown breccia and tuff with grey, brown and black andesitic and basaltic lava flows. Some flows show the characteristics of a flow breccia.

All strata on Swing Peak have a general strike of N 40° W to N 80° W with a general easterly and southerly dip.

The fractures in the property area strike northerly. Most of the fracture zones are narrow but some reach a width of one meter or more. They dip steeply to the east, and are commonly marked by much gouge.

The main showing the Captain shear is a shear zone one to three meters wide that strikes northerly and dips steeply to the east. This zone crosses both the lavas and the fine grained porphyritic intrusive rock.

OLD WORKINGS

Former workings include a 116 meter adit at an elevation of 1,520 m. driven to test a mineralized shear zone on the Captain shear. The adit intersected and explored the shear zone 30 meters below its most prominent surface exposure.

About 50 meters below the adit and on the northerly extension of the shear zone, a mineralized lens six meters long and .3 m. to .6 m. wide within a one meter wide shear is exposed in an open cut.

MINERALIZATION

Mineralization of galena, sphalerite, pyrite, arsenopyrite and tetrahedrite occur in fracture zones and within a gangue of quartz, minor calcite and wall rock.

Reported values within the underground workings are as follows:

"At 273 feet from the portal the adit intersected a fracture containing 6 to 18 inches of gouge and a mineralized seam from one inch to four inches wide on the hanging wall that continued for 65 feet. A picked sample of ore from this seam yielded, an assay of 12.40 per cent lead, 5.42 per cent zinc, 63.07 ounces silver per ton, and a trace of gold.

About 150 feet below the adit, on the northerly extension of the shear zone, there occurs a mineralized lens 20 feet long and one foot to two feet wide where the shear zone is three feet wide. ... an assay of the mineralized section gave 22.4 per cent lead, 9.50 per cent zinc, 25 ounces of silver and .005 ounces of gold a ton.

About 750 feet southwest of the adit are two narrow mineralized stringers about four feet apart striking north 25 degrees west, dipping 75 degrees to the northwest, and with similar mineralization to that in the adit. About 500 feet to the southeast on the strike of these stringers, an open-cut exposes a similarly mineralized vein 6 to 7 inches wide."

Assays of samples reported by Lamb in his report on the Captain Group in 1951 are as follows:

"Two chip samples taken from the last 130 feet of drift" -

<u>Width</u>	<u>oz. Ag/ton</u>	<u>Pb%</u>	<u>Zn%</u>
6 in.	3.00	0.5	0.2
8 in.	1.00	0.5	0.1

Samples on the zone below the adit returned 47 oz. Ag/ton, 20.0% Pb, and 6% Zn across .31 meters.

Other reported assays and as indicated on the accompanying map indicate substantial values within the Captain Shear zone.

On the Bennett shear 350 meters southeast of the adit and which is one to 1.2 m wide, several cuts along a slope length of 75 meters expose "one to four inches" of coarse cube galena on the footwall. A picked sample of this material reportedly assayed 0.68 oz. Ag/ton, 60% Pb and .1% Zn.

From an ore lens exposed within a shear zone 100 meters southwest of the uppermost cut on the main Bennett shear, a 45 cm sample reportedly assayed 75.75 oz. Ag, 29.2% Pb and 10.2% Zn.

A sample of lightly to moderately altered porphyry adjacent to the vein at the portal returned .02 oz Ag/ton and <.01% Cu.

RECOMMENDED EXPLORATION PROGRAM

A concurrent program of surface exploration in association with underground development and testing of the vein structure is recommended.

The surface exploration program should be comprised of an E.M. survey and geological mapping to locate potential parallel or extensions of known mineral bearing structures.

The underground development and testing of the vein structure should be carried out on the vein within the Captain shear zone. The development of the vein structure would be in crosscutting to and drifting along the vein exposed 50 meters below the adit. The mineralized zone exposed on the surface in this location and which is reportedly seven meters long, .3 to .6 m wide with significant values in lead, zinc and silver would thus be tested for extension.

Bulk sampling of the zone would be carried out in association with the drifting. The bulk sample would be shipped to Trail B.C. for processing and testing.

ESTIMATED COST OF RECOMMENDED EXPLORATION PROGRAM

Surveyed grid layout and E.M. Survey	\$10,000
Geological mapping and prospecting	6,000
Drifting and crosscutting 40 meters @ \$750	30,000
Bulk sampling	5,000
Transportation costs .	
(shipping bulk samples to Trail)	7,500
Mobilization and demobilization costs	7,500
Supervision and overhead	5,000
Camp costs	5,000
Assays, field expenses, travel etc.	3,000
Engineering and reports	15,000
Contingencies	<u>10,000</u>
Estimated cost	\$104,000

The program would take three months to complete.

Respectfully submitted,



Laurence Sookochoff, P.Eng.
Consulting Geologist

January 10, 1980
Vancouver, B.C.

REFERENCES

BULLIS, A.R. - Report on Captain Group, Swing Peak, B.C.,
August 18, 1953

LAMB, J. Report on the Captain Group, Tahtsa Lake, B.C.,
September 1951

B.C. MINISTER OF MINES - Annual Reports:

1927, p.p. 154-155

1929, p. 184

1945, p.p. 67-68

CERTIFICATE

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist with the firm of Pan-American Consultants Ltd. of 2602-1055 West Georgia Street, Vancouver, B.C.

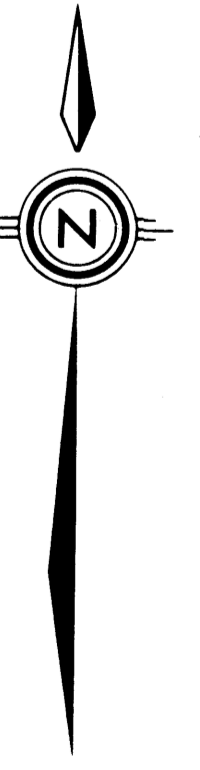
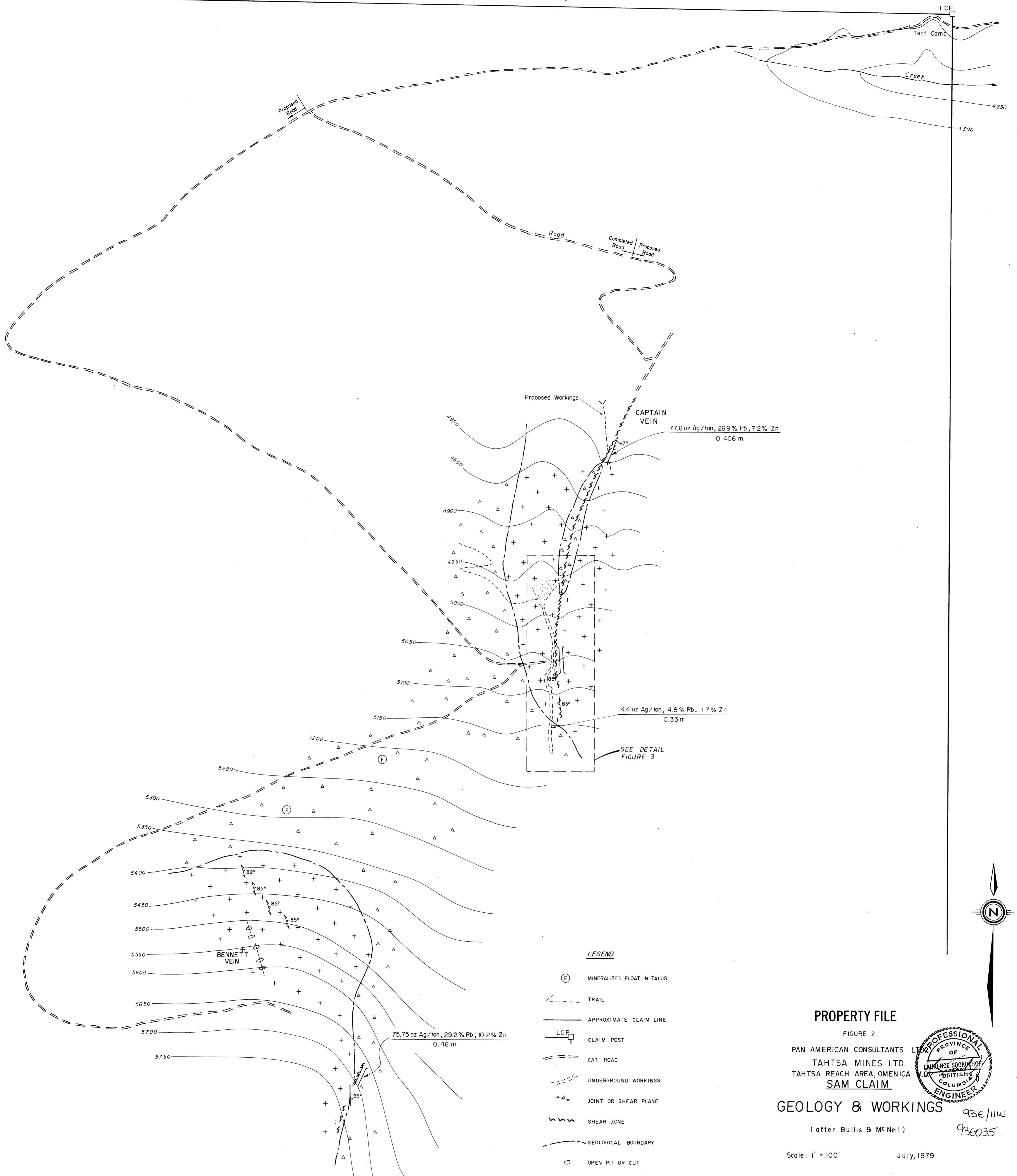
I further certify that:

1. I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
2. I have been practising my profession for the past thirteen years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. The information for this report was obtained from pertinent publications and from the writer's previous work experience in the general area. The writer has performed a property examination during October 6-8, 1979.
5. Neither I or Pan-American has direct or indirect interest in the property described herein, or in the securities of Tahtsa Mines Ltd.

Laurence Sookochoff, P.Eng.
Consulting Geologist

January 10, 1980
Vancouver, B.C.





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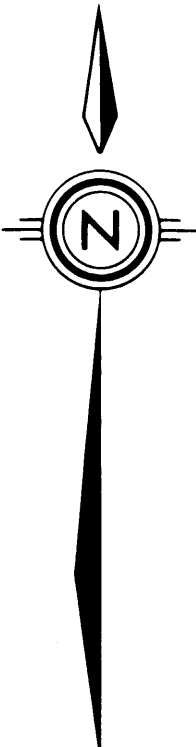
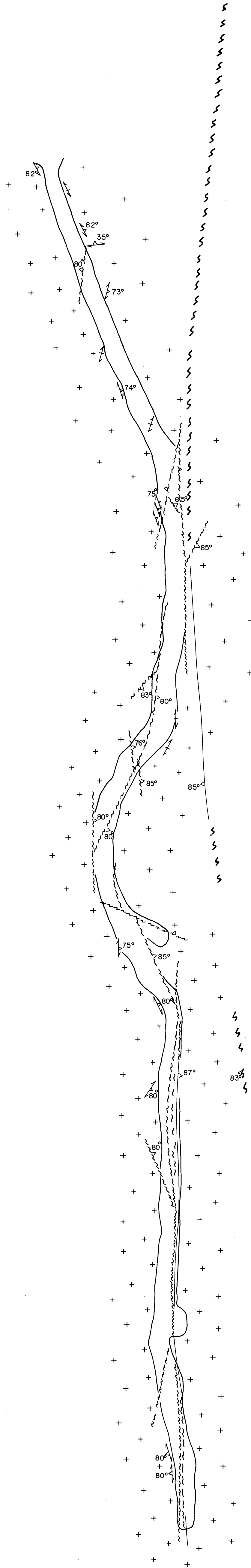
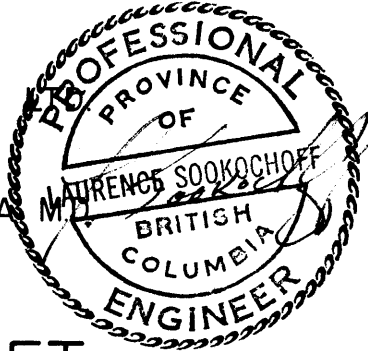


FIGURE 3

PAN AMERICAN CONSULTANTS
 TAHTSA MINES LTD.
 TAHTSA REACH AREA, OMEICA
SAM CLAIM



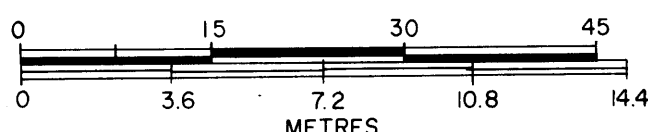
GEOLOGY - DRIFT

(after Bullis & McNeil)

July, 1979 936035

PROPERTY FILE

SCALE IN FEET



- UNDERGROUND WORKINGS
- ▲ JOINT OR SHEAR PLANE
- ~~~~ SHEAR ZONE
- - - - GEOLOGICAL BOUNDARY
- OPEN PIT OR CUT
- + + + + FINE GRAINED DIORITE