

4973

1040/16W

REPORT ON THE  
TAM 1-20 MINERAL CLAIMS  
LIARD MINING DIVISION, B. C.

FOR  
BELMORAL MINES LTD. (NPL).

#4973

1040/16W

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 4973 MAP

January 17, 1974  
Vancouver, B.C.

F. Holcapek, P. Eng.,  
Geologist.

LIST OF ILLUSTRATIONS

	<u>SCALE</u>
#1 LOCATION MAP	1" = 110 Mi. 1¼" = 1 Mi. Approx.
#2 GEOLOGY SKETCH	1" = 200'
#3 SKETCH SHOWING - GOSSAN ZONE DIAMOND DRILL HOLES AND UPPER AND LOWER ADITS	1" = 200'
#4 VERTICAL CROSS SECTION OF NO. 2 ZONE	1" = 40'
#5 VERTICAL CROSS SECTION OF UPPER ADIT	1" = 40'

TABLE OF CONTENTS

	<u>PAGE</u>
1-00	SUMMARY..... 1
2-00	CONCLUSIONS..... 3
3-00	RECOMMENDATION..... 4
	<u>3-1 Program</u> ..... 4
4-00	COST ESTIMATE
	<u>PHASE I</u> ..... 5
	<u>PHASE II</u> ..... 6
5-00	INTRODUCTION
	<u>5-10 Scope and Date of Report</u> ..... 7
	<u>5-20 Ownership and Title</u> ..... 7
6-00	HISTORY..... 7
7-00	GEOGRAPHY
	<u>7-10 Location and Access</u> ..... 10
	<u>7-20 Physiography</u> ..... 10
8-00	GEOLOGY
	<u>8-10 Regional Geology</u> ..... 11
	<u>8-11 Stratigraphy</u> ..... 11
	<u>8-12 Economic Geology</u> ..... 12
	<u>8-20 Property Geology</u> ..... 13
	<u>8-30 Description of Trenches</u> ..... 13
	<u>8-40 Discussion of Exploration Results</u> ..... 14
	<u>No. 2 Zone</u> ..... 14
	<u>No. 4 Zone</u> ..... 16
	<u>No. 8 Zone</u> ..... 17
9-00	INDIRECT EXPLORATION PROGRAMS..... 17
	<u>9-10 Geochemical Survey</u> ..... 17
	<u>9-20 AFMAG Survey</u> ..... 17
	<u>9-30 Induced Polarization Survey</u> ..... 18
	CERTIFICATION..... 19
11-00	BIBLIOGRAPHY..... 20

REPORT ON THE  
TAM 1-20 MINERAL CLAIMS  
LIARD MINING DIVISION, B.C.  
FOR  
BELMORAL MINES LTD. (NPL)

1-00

SUMMARY

The TAM 1-10 mineral claims, restaking of the old Silverknife property, are located 4 miles northeast of Tootse Lake in the Liard Mining Division, B.C. 12 miles south of mile 701 on the Alaska Highway.

Strong gossan zones containing fragments of galena extremely high in silver were discovered in the area in 1955. The area was staked the following year and optioned to Conwest Exploration Co. Ltd. The property was mapped geologically and two adits, plus extensive diamond drilling and sampling were completed on the No. 2 and No. 4 zones. Final conclusion was that "the property has a possible distant future potential as a base metal property with a low precious metal content." In 1958 Noranda, Canex and Bralorne obtained an option on the property. The group completed three drill holes from the lower adit. Little mineralization was found and the property was returned to the owner. From 1967 to 1969 Chapman, Wood and Griswold Ltd on behalf of Pegasus Mines Ltd, Rodstrom Yellowknife Mines Ltd and Silverknife Mines Ltd, respectively did exploration work on the property. The program consisted of rotary drilling, diamond drilling, ground and airborne electromagnetic survey, geochemical survey and additional diamond drilling. Only parts of the results of these surveys were available to the writer.

The property is underlain by the Sylvester Group, Upper Devonian in age, consisting of phyllites, shales and greywacke, underlain by the McDame Group, a carbonate sequence consisting of limestone and dolomitic limestone. The two units are in

fault contact with the east side down thrown. Numerous secondary faults cut the sediments. The Cassiar Batholith outcrops to the west of the claim.

Work completed to date has outlined three gossanous zones, which are very strongly oxidized to depths in excess of 200 feet below the surface, and carry high silver values in fresh galena float. The mineralization, in general, follows a northwesterly trending fault, cutting the limestone or dolomitic limestone. Average grades from the No. 4 zone in the upper adit, from muck samples, are 13.84 ozs. silver and 15.43% lead. An average from 11 channel samples from the Lower Adit, No. 4 zone, assayed over 5 feet 0.2 ozs. silver, nil lead and 3.6% zinc. Diamond drilling from the portal of the upper adit to check the No. 4 zone below the adit returned in general higher zinc values. A change from silver, lead to mainly zinc at depth is indicated. Best grades intersected are over 70 feet, intersected width, .58% silver, .40% lead, and 12.03% zinc.

The No. 2 zone, a gossan 700 feet long and 20 - 65 feet wide, has been explored by trenching and diamond drilling. Surface samples average 5.53 ozs. silver, 6.29% lead and 4.7% zinc. Drilling showed that mineralization is erratically distributed within the zone. The best intersection obtained was .0275 oz/T gold, 6.64 oz/T silver, 10.9% lead and 1.5% zinc. Testing of induced polarization anomalies by diamond drilling showed that the amount of pyrite and graphite within the phyllite can account for the anomalies. At the time of the visit of the property by the writer, nearly all trenches were sloughed and hence could not be examined in detail.

2-00

CONCLUSIONS

Strongly oxidized gossan zones, cutting the limestone, have been explored in the past for silver-lead and minor zinc mineralizations. The two best zones, No. 2 and No. 4 have been trenched, tested by diamond drilling and two adits.

The two adits intersected the No. 4 zone. Sampling shows a decrease of silver values and general weakening of mineralization with depth. Average grades from muck samples and drilling in the Upper Adit showed good mineralization of ore grade, but extent of the zone is not known. Channel samples from the lower adit, 600 feet below, assayed very low over 5 feet. This vein was interpreted as the down dip extension of No. 4 zone. The mineralization is strongly weathered and oxidized and the vein material consists of brown oxides, lead and zinc carbonate and yellow ochre.

The No. 2 zone, a gossan 700 x 20 to 65 feet wide, was explored by trenching and drilling. Surface grab samples gave high values in silver and lead, but channel samples averaged 5.53 ozs. silver, 6.29% lead, and 4.7% zinc. Sludge samples from DDH 12 assayed similarly over an intersected width of 20 feet. In the trenches the mineralization is completely oxidized and shows erratic distribution. The property was explored as a high grade silver-lead deposit, but results of past work indicates the possibility of a low silver base metal deposit. The results are inconclusive in respect to structural setting, geology, extent of mineralized zones and grade in respect to lead-zinc. The deep oxidation and weathering of the mineralized zones made exploration by drilling difficult. The oxides and carbonates ore minerals will be difficult to concentrate. The possibility of finding bedding controlled lead zinc mineralization exists on the property, but the search for this type of deposit will be very costly and should be delayed till more detailed geological information is available.

The property has good potential for a base metal deposit with low values in precious metal. This potential has been enhanced by the increase in metal prices.

3-00

RECOMMENDATION

The following program is recommended to test No. 2 and No. 4 zone for base metal content and size.

3-1 Program

1. Re-establish a grid, consisting of 200 feet lines by 100 feet stations using a baseline running N 20° W, perpendicular to the indicated strike of the zones, to obtain ground control over the whole claim group.
2. Establish a detailed grid 100 feet lines by 50 feet stations in area of mineralization.
3. Geological mapping of the whole claim group at a scale of 1" = 200 feet. Special attention should be paid to lithological changes within the limestone and the phyllites and to fault and shear zones.
4. A electromagnetic survey using the shoot back configuration to cancel topographic effect over known mineralized zones. If the results are positive extend over the whole property.
5. Cleaning of trenches, sampling and assaying for silver, lead and zinc. This should be done on both, No. 2 and No. 4 zones.
6. Tracing of both zones along indicated strike.
7. Trenching of No. 8 zone and sampling.
8. Allow for 1500 feet diamond drilling to check previous results from No. 2 and No. 4 zones.

9. Regional prospecting for similar showings in the McDame limestone.

#### PHASE II

If the results of the above program warrant, Phase II should be initiated at the recommendation of the consultant engineer.

1. Re-opening of the upper and lower adits.
2. Re-mapping and resampling of adits.
3. Diamond drilling; allow a minimum of 3,000 feet.

Further development will depend on the evaluation of data from the above program.

4-00

#### COST ESTIMATE

##### PHASE I

1. Repair camp - allow	\$ 1,000.00
2. Establish grid - allow for 40 line miles	2,500.00
3. Geological mapping 1" = 200 feet	1,500.00
4. Electromagnetic survey - allow	2,000.00
5. Cleaning of trenches and additional trenching by bulldozer	3,000.00
6. Regional prospecting	2,500.00
7. Diamond drilling - 1500 feet @ \$20/foot	30,000.00
8. Engineering and supervision	2,000.00
	<hr/>
	44,500.00
20% contingency	8,900.00
	<hr/>
	\$53,400.00



PHASE II

(Initiation of this phase depends on the results of Phase I and on recommendation of the consulting engineer.)

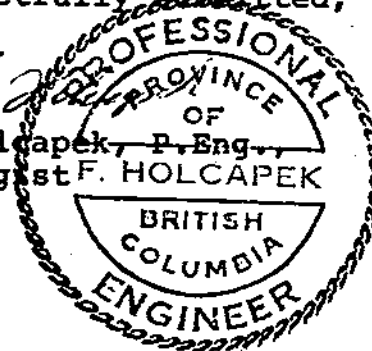
1. Re-open upper and lower adits - allow	\$15,000.00
2. Mapping and sampling of adit	2,000.00
3. Diamond drilling - allow 3,000 feet @ \$20/foot	60,000.00
4. Engineering, supervision, etc.	7,000.00
	<hr/>
	84,000.00
20% Contingency	16,800.00
	<hr/>
	\$100,800.00

Total Phase I and II - \$154,200.00

The program outlined should be under the continued supervision of a qualified engineer and adjusted according to results obtained.

Respectfully submitted,

F. Holcapek, P. Eng.  
Geologist F. HOLCAPEK



Vancouver, B.C.  
January 17, 1974

5-00 INTRODUCTION

5-10 Scope and Date of Report

At the request of Mr. R. Hughes, President of Belmoral Mines Ltd., the writer visited the property and completed surface mapping of the main area of trenching. The writer spent September 17 to September 19, 1973 inclusive in the field. The purpose of this report is to review all available data and make recommendations.

Assay values, longitudinal section of the 5123 level adit, drill section and plan, showing outline of adits have been taken from previous reports and are marked as such.

5-20 Ownership and Title

The Tam 1-20 mineral claims were located by Mr. A. Harnah. Centre of the property is at 59° 55' 4" North Latitude and 130° 22' West Longitude.

<u>Claim Name</u>	<u>Record Number</u>
Tam 1-20	69693 E - 69712 E

6-00 HISTORY

During the summer of 1955 several strongly oxidized gossan zones containing silver and galena were found in the area now covered by the Tam mineral claims. In 1956 the showings were staked by Mr. A. Zborovsky and partners. Hand trenching showed that abundant boulders of silver bearing galena were contained in the gossan zones.

Conwest Exploration Co. Ltd acquired an option on the property and initiated an extensive exploration program consisting of two adits, the first at an elevation of 5,123 feet for 510 feet, the second at elevation 4,530 feet for 1,290 feet and 2,500 feet of diamond drilling from surface and underground.

The results were very discouraging, while limited near surface oxidized mineralization was delineated, the mineralization intersected by the Lower Adit consisted only of narrow sulphide stringers of galena and pyrite and a 10 foot wide fault zone. Conwest established a rough surface road from Mile 702 on the Alaska Highway to the property a distance of 14 miles. The company erected a camp consisting of 6 woodframe buildings. Conwest incurred expenditures of \$300,000.00 for exploration of the property before the option was relinquished. The above work program was mainly confined to the No. 2 and No. 4 zones.

No. 2 was explored by trenching and drilling and the results showed that mineralization was erratic and an insignificant portion of the vein material. Average value of trench samples were .53 ozs. per ton silver, 6.29% lead and 3.08% zinc. The average value of the best drill intersections was 3.08 ozs. silver, 4.7% lead and 5.1% zinc.

No. 4 zone was intersected in both the upper and lower adit. Muck samples from the upper adit involving 175 cars representing a 38 foot length, 33 samples, assayed 13.84 ozs. silver, 15.43% lead. Eleven channel samples from the lower adit, 600 feet below the upper adit, averaged 0.2 ozs. silver, nil lead and 3.6% zinc over a true width of 5 feet. In 1958 Noranda-Canex and Bralorne obtained an option on the property. The access road was repaired and 4 miles of road were relocated. A program of plane table mapping of the showings and diamond drilling for a total of 3,296 feet in three holes were completed. The diamond drilling did not intersect No. 2 zone, but results were of geological value.

Based on all data available at the time, a geological concept, postulating flat dipping ore structures controlled by bedding and stratigraphic traps subsequently sliced by faulting was

formulated. If this holds true than the gossan zone on the property are possible drag ore along fault planes from blind ore bodies or talus from completely eroded deposits. The option was relinquished, although the mineral potential of the property was not disproved.

From 1961 to 1963, Chapman Wood and Griswold, on behalf of Pegasus Exploration Ltd., executed an exploration program consisting of geological mapping, review of data available, electromagnetic survey using an AFMAG unit, induced polarization surveys, geochemical survey and diamond drilling. Rodstrom Yellowknife Mines Ltd., completed 2,243 feet of rotary drilling to check the induced polarization anomaly. Silver Knife Mines Ltd. (NPL) conducted further drilling and airborne electromagnetic surveys.

No information on the exploration results obtained during 1966 and 1967 were available to the writer, except the report by Mr. C.P. Selmsler, P.Eng., dated November 25, 1967.

Although several induced polarization anomalies were outlined and the geochemical survey indicated a lead anomaly, diamond drilling did not prove additional ore grade mineralization. It was found that diamond drilling was difficult and expensive. The option was relinquished because of high exploration costs and the probable size and grade of a potential target was felt to be insufficient to warrant the high exploration costs. Nearly all of the drilling was confined to the southern portion of the property.

During spring of 1973 the property was restaked and the writer visited the property from September 17 to 19, inclusive, 1973.

7-00

GEOGRAPHY7-10 Location and Access

The Tam 1-20 mineral claims, restaking of the old Silvertip property, are located 4 miles northeast of Tootse Lake in the Liard Mining Division, B.C. and 12 miles south of Mile post 701 on the Alaska Highway. Access to the property is from Watson Lake, Y.T. via the Alaska Highway to mile 701 and from there via gravel road to the property a distance of 17 miles. The road is in good condition, but after rain or during break up a four wheel drive vehicle is necessary.

7-20 Physiography

The claim group lies  $3\frac{1}{2}$  miles east of Tootse Lake on a northwesterly flowing tributary of Tootse River. The claims cover a mountain spur between 4,500 and 5,600 feet above sea level. The valley has a typical U-shape configuration with moderate to steep walls. Willows, buckbrush and scrub spruce cover the valley floors. Open swampy areas are common. Above the 5,000 foot contour alpine meadows with occasional patches of buckbrush predominate.

Permafrost is common along northerly facing slopes and exist a few inches below surface. Frost heavel and down slope movement of rock outcrops due to frost action is common. The climate in the area is typical of northern B.C. Summers are mild but winters are cold and heavy snowfall prevails. Temperatures vary from a high of 80 degrees in the summer to 60 below zero in the winter. The area is snow free from mid-June to the beginning of October.

8-00

GEOLOGY8-10 Regional Geology

The area has been geologically mapped by the Geological Survey of Canada and published as Paper 68-55H. Gabrielse and minor modification and additions from K. de P. Watson and W.H. Mathews. The property lies along the eastern contact of the Cassiar Batholith along the western limb of the McDame Synclitorium. In vicinity of the intrusive secondary folding, drag folding and faulting render the geological setting highly complex. Rock units mapped in the area have been divided into stratigraphic units varying in age from Precambrian to Tertiary.

8-11 Stratigraphy

The stratigraphic units exposed in vicinity of the TAM mineral claims according to H. Gabrielse are as follows:

Mid Cretaceous

Cassiar Batholith - Biotite quartz monzonite, granodiorite, muscovite quartz monzonite.

Jurassic

Nome Lake Batholith - biotite hornblende granodiorite and quartz monzonite.

Carboniferous

(Mainly Pennsylvanian) - chert, argillite, slate, quartz hornfels, limestone, dolomite.

Oblique Creek Formation - meta chert, quartzite, hornfels, greenstone, meta-diorite, schist gneiss and crystalline limestone.

Mississippian and Later (?)

Serpentinite, peridotite, dunite.

Mississippian (in part or entirely)

Sylvester group - upper part; Massive greenstone, agglomerate, minor chert.

Upper Devonian (mainly or entirely ?)

Sylvester Group - lower part; slate, in part graphitic argillites, chert, chert arenites, greywacke, pebble conglomerates, siltstone and limestone.

Middle Devonian

McDame Group - fetid dolomite and limestone

Upper Silurian and Lower Devonian (?)

Sandy dolomite, dolomitic sandstone, laminated, well bedded dolomite.

Lower Ordovician (?) Lower and Middle Silurian (?)

Black graptolitic shale, platy siltstone, locally hornfelsed, includes uppermost part of Kechika Group.

Cambrian and (?) Ordovician

Kechika Group - Thin bedded hornfels, skarn, calcareous phyllite, phyllitic limestone.

Cambrian and Hydrian -

Atan and Good Hope groups; undivided; cordierite-hornfels, dolomite, limestone skarn, quartzite, including carbonates of uncertain age.

8-12 Economic Geology

Lead-zinc-silver mineralization has been found along the eastern margin of the Cassiar Batholith. The host rocks are generally limestones belonging to the McDame group of Middle Devonian age or the Atan group of Cambrian age.

Mineralization occurs as veins, normally fault controlled near or at the contact with shales and argillites. The surface expression of the mineralization is strongly developed rusty gossanous zones characterized by deep weathering.

Grades of this vein deposits can be as high as several hundred ounces of silver and 50% lead - zinc combined.

### 8-20 Property Geology

The TAM 1-20 mineral claims are underlain by the lower part of the Sylvester group consisting of shales and phyllites in contact with McDame group fine-grained limestone and dolomitic limestone. The contact between the two units is faulted. A major north trending fault cuts the strata with the eastern side being down thrown. Several secondary faults cut the limestones and mineralization appears to be localized by this structure.

### 8-30 Description of Trenches

During the property examinations all mapping was completed using chain and compass. During the course of the mapping numerous pickets were found laying on the ground. The markings were faded and many of the pickets had moved down slope, hence the old grid could not be used to obtain ground control. Most of the trenches found are very shallow cat trenches sloughed showing poor bedrock exposure. Previous companies reported abundant high grade float in the gossanous areas. The writer found very few massive galena float, normally less than 2 inches in size. Old drums and boxes partially filled with high grade galena suggests that the property had been high graded. Abundant hard gossanous float in vicinity and above the 5,123 foot adit and the presence of red soil containing minor galena float and gossan material above the adit appears to be the surface expression of No. 4 zone.

- Trench #1: Minor red soil and oxidized float; sloughed
- Trench #2: Dark to light grey limestone, fractured.
- Trench #3: Limestone rubble mixed with gossanous material along the western margin.
- Trench #4: Strong, reddish to yellowish soil, occasional pebble of galena. (No. 2 zone)
- Trench #5: Heavy gossan consisting of reddish to yellow soil and hard rusty rubble.



- Trench #6: Blasted in talus, limestone with gossanous material; occasional galena fragment.
- Trench #7: Below limestone scarp; limestone rubble and pieces of galena, hand blasted.
- Trench #8: Soft reddish gossan in limestone.
- Trench #9: Limestone talus, sloughed, no gossan or galena.
- Trench #10 & 11: Limestone, fine grained.
- Trench #12 & 13: Phyllites, rubble mainly; rusty possibly pyrite.
- Trench #14: In the central part of this trench a block of limestone is in fault contact with the phyllites. A strong rusty gossanous zone up to 5 feet wide is exposed along the fault. The gossan is of yellowish to light brown color and appear to originate from the phyllites. Pyrite casts have been observed and the general appearance of the gossan suggest it was derived from disseminated pyrite in phyllites.
- Trench #15, 16, & 17: Phyllites or phyllite rubble.

#### 8-40 Discussion of Exploration Results

Exploration work during the past was concentrated on No. 2, and No. 4 zones. Minor trenching on No. 1 and 3 zones showed these to have limited potential. No. 5 and No. 7 zones were float locations only. In the lower adit No. 8 zone was intersected and minor surface trenching showed that this zone warrants more work.

#### No. 2 Zone

This zone was explored by surface trenching and diamond drilling. Surface trenching exposed a strong gossan zone consisting of oxides, lead and zinc carbonates and limestone rubble. The zone has a width from 15 to 65 feet and has been traced for 700 feet on surface. Trench samples average 5.53 ozs. silver, 6.29% lead and 4.7% zinc, diamond drill sampling

suggest erratic distribution of mineralization with the weighted average values quoted below. Widths given are not true widths.

<u>DDH#</u>	<u>Sample</u>	<u>Au oz/ton</u>	<u>Ag oz/ton</u>	<u>Pb%</u>	<u>Zn%</u>	<u>Width</u>
12	Sludge	0.0275	6.64	10.9	1.5	20'
13	"	Traces only				
14	Sludge	trace	1.11	0.01	5.9	21'
15		Nil				
16	Sludge	-	1.31	2.0	7.9	57'

Mineralization intersected in DDH 12, 14 and 16 indicates a southerly dip of No. 2 zone.

#### Underground drilling upper adit;

5	No mineralization encountered					
17	Lost in cave - minor oxide at the end of hold - No. 2 zone (?)					
4	Sludge	?	14.9	57.5		22'
4	Core		1.98	2.6		?
4	Core		22.62	63.3		?

The ore grade mineralization intersected by DDH No. 4 is not part of No. 2 zone.

#### Underground drilling - Lower Adit:

Diamond drill holes 18, 19 and 20 were set up in the lower adit to cut No. 2 zone at depth. No significant mineralization was apparently intersected. The results from this work suggested that the surface showing has been displaced for up to 200 feet down slope and that the zone has a steep dip. The mineralization appears to be erratic, consists mainly of oxides and carbonates with minor galena. Deep weathering of the sulphides makes for poor core recovery and difficult drilling.

No. 4 Zone

This zone has been explored by two adits and several diamond drill holes.

Upper Adit - 5,123 level:

The purpose of the upper adit was to intersect the gossan areas, No. 4 and No. 2 at depth. The first was intersected and drifted on for 65 feet. A raise was driven to ascertain the dip of the vein. Material mined consisted of powdered oxides with lead and zinc carbonates and some fresh galena. A grab sample from a 30 pound galena piece assayed 112.2 ozs/ton of silver and 72.25% lead. The zone was sampled by taking 33 muck samples from 175 cars representing 38 feet of length of the upper part of the vein. The sample averaged 13.84 ozs/ton of silver, and 15.43% lead. The dip of the vein is apparently reversed at surface because of downslope creep and slide of the surface layer. Diamond drill hole 1, 2 and 3 were drilled from the portal to help establish the attitude of the vein. The results indicate flattening of the dip. Diamond drill holes 6 to 11 were spotted at surface to check the vein at depth. Widths given are not true widths. Values quoted are weighted averages of intersections.

<u>DDH</u>	<u>Sample</u>	<u>Au oz/ton</u>	<u>Ag oz/ton</u>	<u>Pb%</u>	<u>Zn%</u>	<u>Width</u>
1	No results - most of core lost					
2	Sludge		11.89	13.31		32'
3	Lost core					
6	No mineralization					
7	Sludge	trace	.68	1.42	7.6	21'
8	No mineralization					
9	Sludge		.58	.40	12.03	70'
10	No mineralization					
11	Minor mineralization at the bottom of the hole.					

Lower Adit

The lower adit was started 600 feet vertically below the upper adit to hopefully intersect the unweathered vein. At 1,200 feet from the portal a vein, believed to be the No. 4 zone, was intersected. Here it is 5 feet wide and strikes N 70 E with a dip of 60° N. Average assay value from 11 channel samples is 0.2 ozs per ton, nil lead and 3.6% zinc.

No. 8 Zone:

The original No. 8 zone consisted of a few float pieces and minor gossan. Float pieces assayed 29.2 ozs/ton silver, and 27.3% lead. At 250 feet from the portal an 8 foot zone showing galena mineralization was cut. This appears to be No. 8 zone. Mineralization occurs with jointing, the major joint system strikes N 55 E and dips at 50° NW. A calcite vein with the same attitude forms the footwall of the vein. No assays are available from the vein, but they were reportedly disappointing.

9-00

INDIRECT EXPLORATION PROGRAMS

Chapman Wood and Chriswold Ltd., on behalf of Pegasus Exploration Ltd., completed geochemical, electromagnetic and induced polarization surveys on the property.

9-10 Geochemical Survey

The geochemical survey outlines a total heavy metal anomalous area. The amount of float material, strongly gossanous soils present on the property and the widespread occurrence of float combined with extensive down slope creep makes this anomalies inconclusive.

9-20 AFMAG Survey

The results of this survey was inconclusive although three anomalies were outlined. Anomaly A is parallel and coinciding with a creek and interpreted as a probably NW fault. Anomaly B is too weak to be of significance, and anomaly C is not well

CERTIFICATION

I, FERDINAND HOLCAPEK of 92 - 10842 152nd Street, Surrey, B.C. do hereby certify that:

1. I am a graduate of the University of British Columbia, with a Bachelor of Science Degree in Geology, 1969.
2. Since graduation I have been engaged in mining exploration in British Columbia, Yukon Territory, Northwest Territories, Quebec, Nevada, Arizona and Australia.
3. I am a registered member, in good standing, of the Association of Professional Engineers of British Columbia.
4. I am a Consulting Geologist.
5. I have visited the subject area of this report from September 17 to September 19, 1973 inclusive. The report is based on the result of this visit and a literature research on the area.
6. I have not received, nor do I expect to receive, any interest, directly or indirectly in the properties or securities of Belmoral Mines Ltd (NPL).

F. Holcapek, P. Eng.  
Geologist

January 17, 1974  
Vancouver, B.C.

11-00 BIBLIOGRAPHY

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8. The Silver Tip - Lead - Zinc Property, Summary Report by J.H. Sheperd, March 10, 1966.
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Note: Some of the maps from 5, 8 and 9 were missing.

DOMINION OF CANADA:  
PROVINCE OF BRITISH COLUMBIA.  
To Wit:

**In the Matter of** Evidence of expenditure incurred in connection with geologic examination and mapping of the Tam group of claims in the Liard Mining Division of British Columbia.

I, F. Holcapek

of 107 - 325 Howe St., Vancouver, B.C. V6C 1Z7

in the Province of British Columbia, do solemnly declare that I am employed by Agilis Engineering Ltd. as a mining geologist; that our company was employed by Belmoral Mines Ltd. to complete a property examination, geologic map and report on the afore mentioned claims; that the following persons were employed and disbursements made for the account of Belmoral Mines Ltd. at the rates and fees as set forth;

F. Holcapek - P. Eng. Supervisor	6 days @ 125.00	750.00
D. Reinke, assistant	6 days @ 63.63	381.78
N. Balley - helper	3 days @ 50.00	150.00
Disbursements		<u>1,372.85</u>
		2,654.63

That the following fees were paid and related disbursements were made for office compilation of field data;

F. Holcapek - P. Eng.	2 days @ 150.00	300.00
R. Rollings - draftsman	31 hrs @ 8.50	263.50
Disbursements		<u>118.56</u>
		682.06

That the above expenditures were made on behalf of Belmoral Mines Ltd. owners of the Tam claims and include only fees and expense incurred for performance of the examination and geologic mapping.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 16  
day of May, A.D. 1974

*F. Holcapek*

*M. Howard Black*

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

In the Matter of

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**Statutory Declaration**  
(CANADA EVIDENCE ACT)

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**Agilis Engineering Ltd.**  
 CONSULTING ENGINEERS AND GEOLOGISTS

Telephone: 688-1508

107-325 HOWE STREET, VANCOUVER, B. C. V6C 1Z7

February 25, 1974.

BELMORAL MINES LTD. (NPL).

Invoice#: 73-243

Re: Tam Claims - silverknife property -  
 Report Preparation.

Personnel - Office

F. Holcapek - P. Eng.	2 days @ 150.00	300.00
R. Rollings - drafting	31 hrs @ 8.50	263.50
		<u>563.50</u>

Disbursements

Printing		17.98
Reproduction		.30
Typing service		89.50
	10% overhead	10.78
		<u>118.56</u>

Total Payable: \$682.06

Invoice 73-201	2,654.63
Invoice 73-243	<u>682.06</u>

Total Project Cost \$3,336.69



**Agilis Engineering Ltd.**  
CONSULTING ENGINEERS AND GEOLOGISTS

Telephone: 688-1508

107-325 HOWE STREET, VANCOUVER, B. C. V6C 1Z7

December 17, 1973.

BELMORAL MINES LTD. (NPL)

INVOICE #: 73-201

Re: Tam claims - silverknife property -  
Examination and Mapping.

Personnel - field charges

F. Holcapek, P. Eng.	6 days @ 125.00	750.00
D. Reinke - assistant	6 days @ 63.63	381.78
N. Balley	3 days @ 50.00	150.00
		<u>1281.78</u>

Disbursements

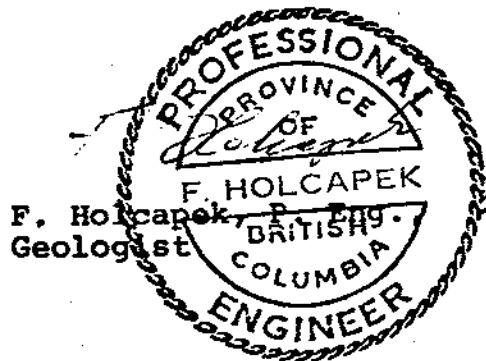
Airfare		603.00
Air photos		17.00
Freight		10.25
Hotel		108.00
Meals		51.00
Vehicle rental - 7 days @ 30.00 + mileage		305.25
Engineering supplies		25.00
Groceries		120.00
Telephone		8.55
	Overhead 10%	<u>124.80</u>
		1,372.85
	Total Payable	\$2,654.63.

enough defined to allow spotting for drill targets.

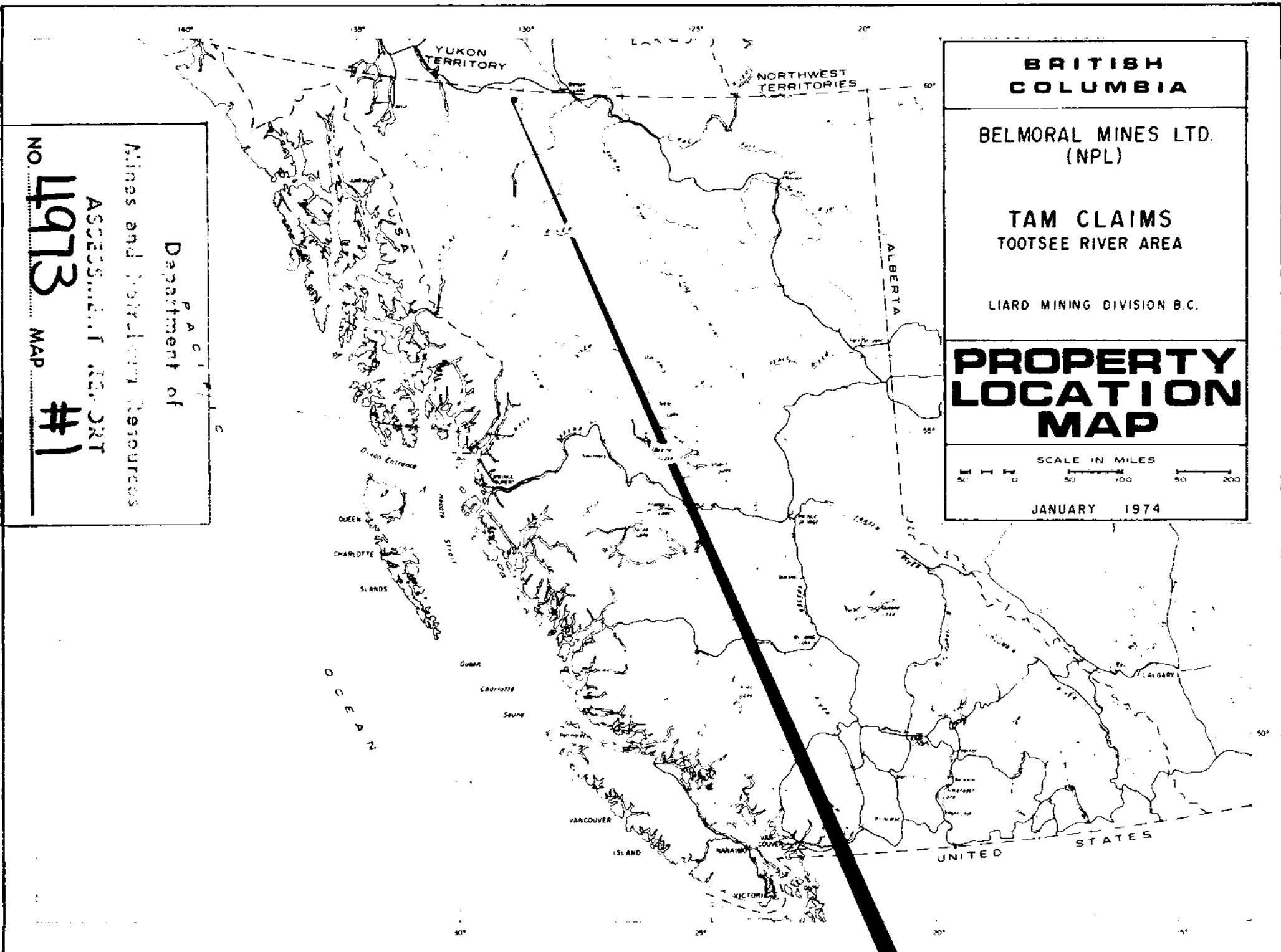
9-30 Induced Polarization Survey

Anomalies outlined by this survey have been checked, in part, by diamond drilling. Rocks intersected belong to the lower part of the Sylvester Group consisting of phyllites, slates, greywacke and shales. Graphite and pyrite, up to 7.3% have been observed along slip planes and as disseminations in drill core.

Four diamond drill holes were completed. Analysis of the results showed that Hole 1, 2 and 3 were drilled in fault zones, hole 4 intersected dolomite breccia with bands, up to 8 feet wide, containing 50% pyrite.

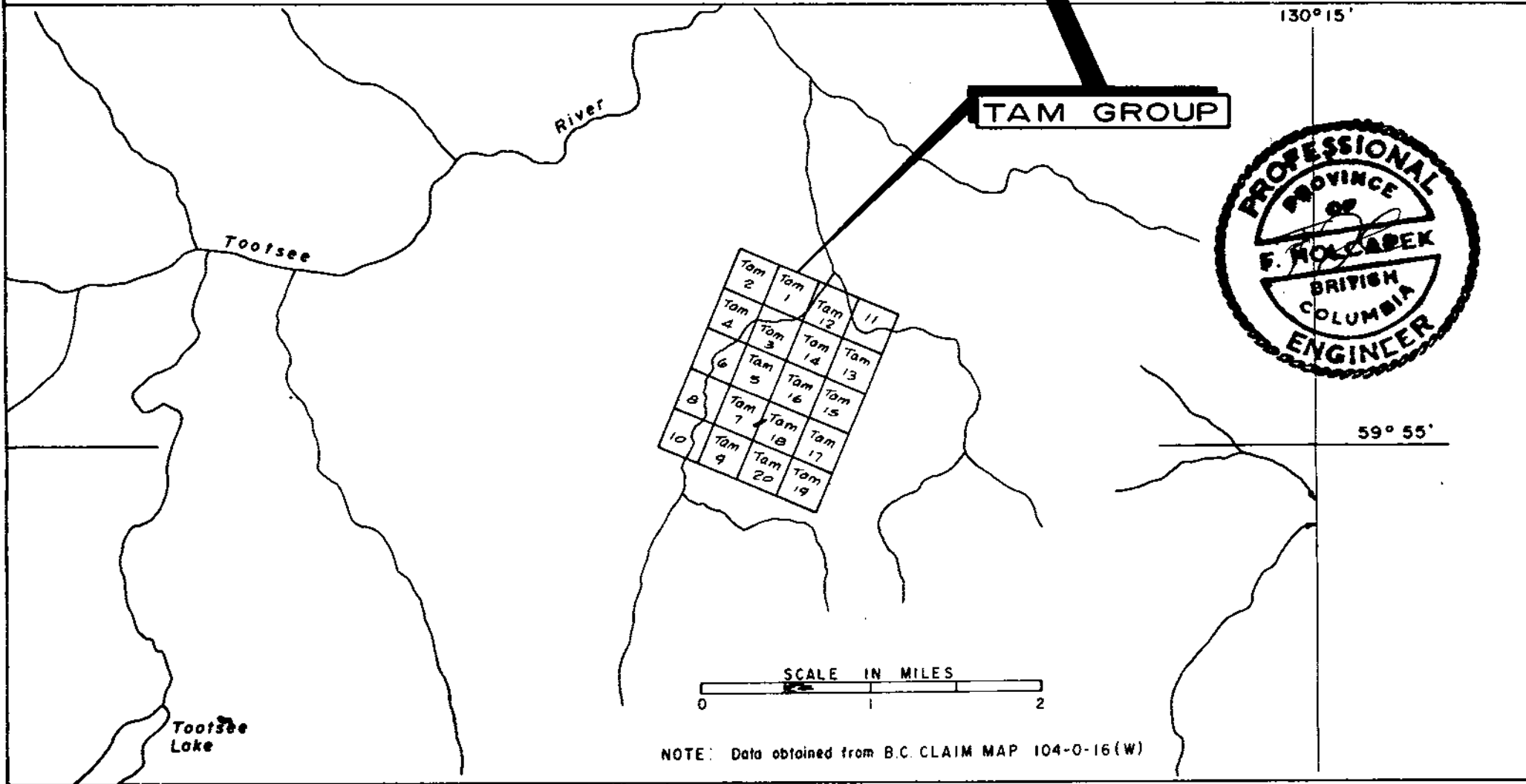


January 17, 1974  
Vancouver, B.C.

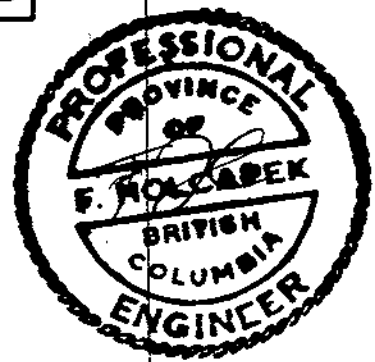


Department of  
**PACIFIC**  
 Mines and Technical Resources  
 ACCESSIBILITY REPORT  
 NO. **4973** MAP #1

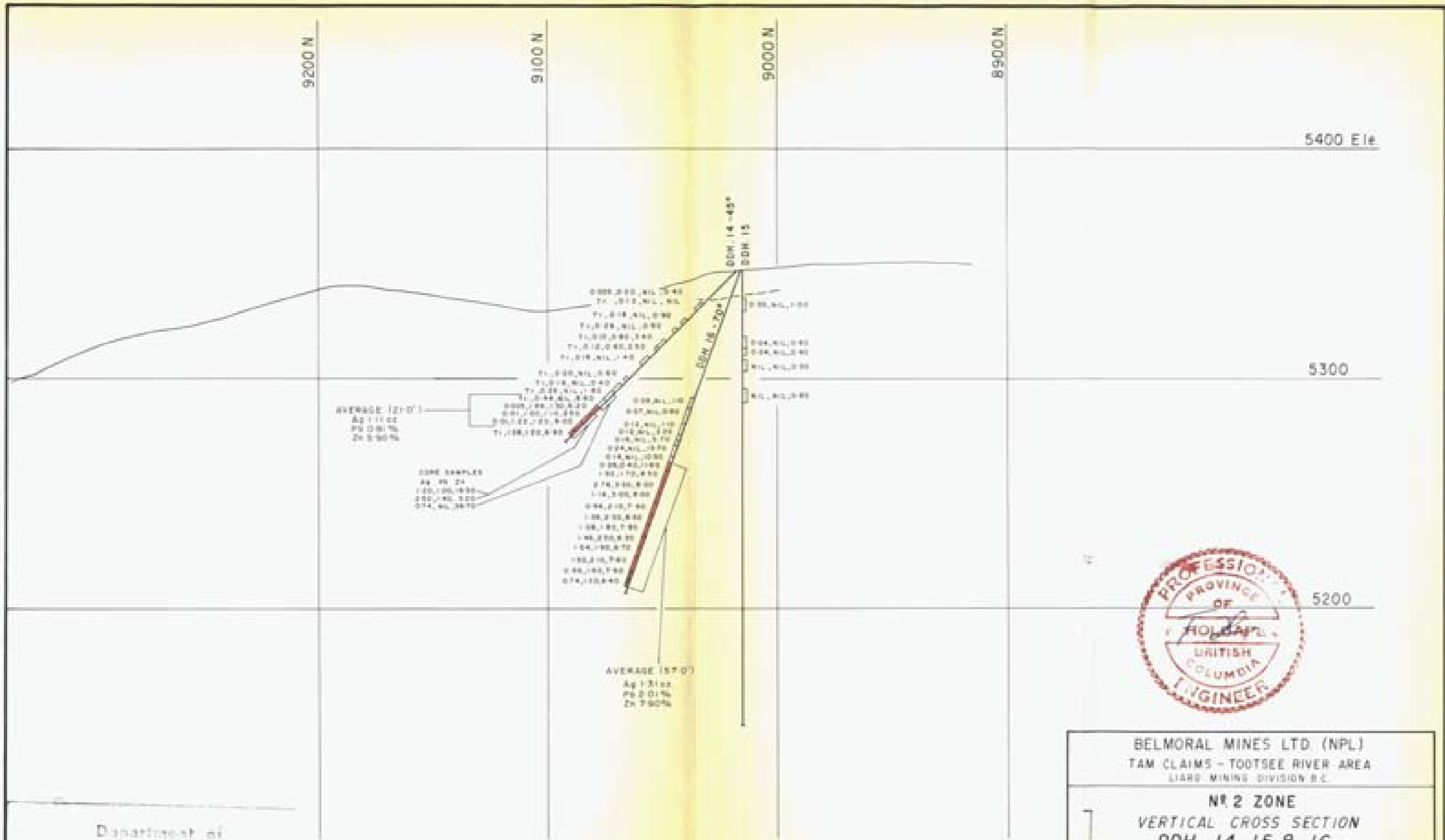
**BRITISH COLUMBIA**  
 BELMORAL MINES LTD.  
 (NPL)  
**TAM CLAIMS**  
 TOOTSEE RIVER AREA  
 LIARD MINING DIVISION B.C.  
**PROPERTY LOCATION MAP**  
 SCALE IN MILES  
 0 50 100 150 200  
 JANUARY 1974



Tam 2	Tam 1	Tam 12	Tam 11
Tam 4	Tam 3	Tam 14	Tam 13
Tam 6	Tam 5	Tam 16	Tam 15
Tam 8	Tam 7	Tam 18	Tam 17
Tam 10	Tam 9	Tam 20	Tam 19



SCALE IN MILES  
 0 1 2  
 NOTE: Data obtained from B.C. CLAIM MAP 104-0-16(W)



BELMORAL MINES LTD (NPL)  
 TAM CLAIMS - TOOTSEE RIVER AREA  
 LIARD MINING DIVISION B.C.

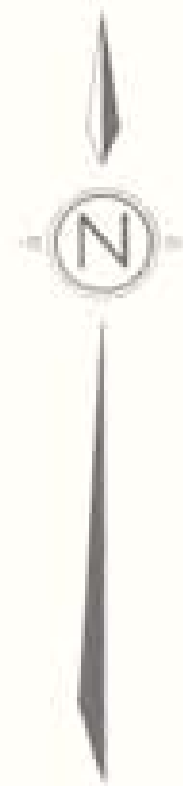
**№ 2 ZONE**  
**VERTICAL CROSS SECTION**  
**DDH. 14, 15 & 16**  
**LOOKING EAST**

SCALE IN FEET  
 40 0 40 80

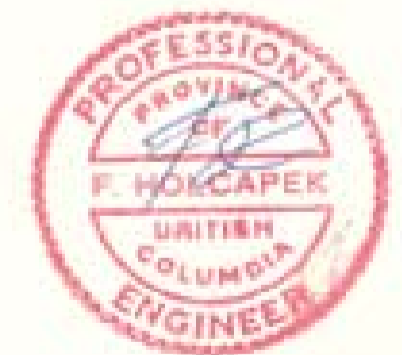
ADLIS ENGINEERING LTD. JANUARY, 1974

NOTE: Map based on data obtained from CONWEST P. Eng. reports.

Department of  
 Mines and Technical Surveys  
 ASSESSMENT REPORT  
**4973** MAP **#4**



Department of  
Mines and Geology, Vancouver  
Assignment Number  
NO. 4973 MAP #2



BELMORAL MINES LTD. (NPL)  
TAM CLAIMS - TOOTSEE RIVER AREA  
LARD MINING DIVISION B.C.

GEOLOGY SKETCH

SCALE IN FEET  
0 200 400

ASL'S ENGINEERING LTD. JANUARY, 1974

4973  
M2

NOTE: Geology by F. HOLCAPEK P.Eng.

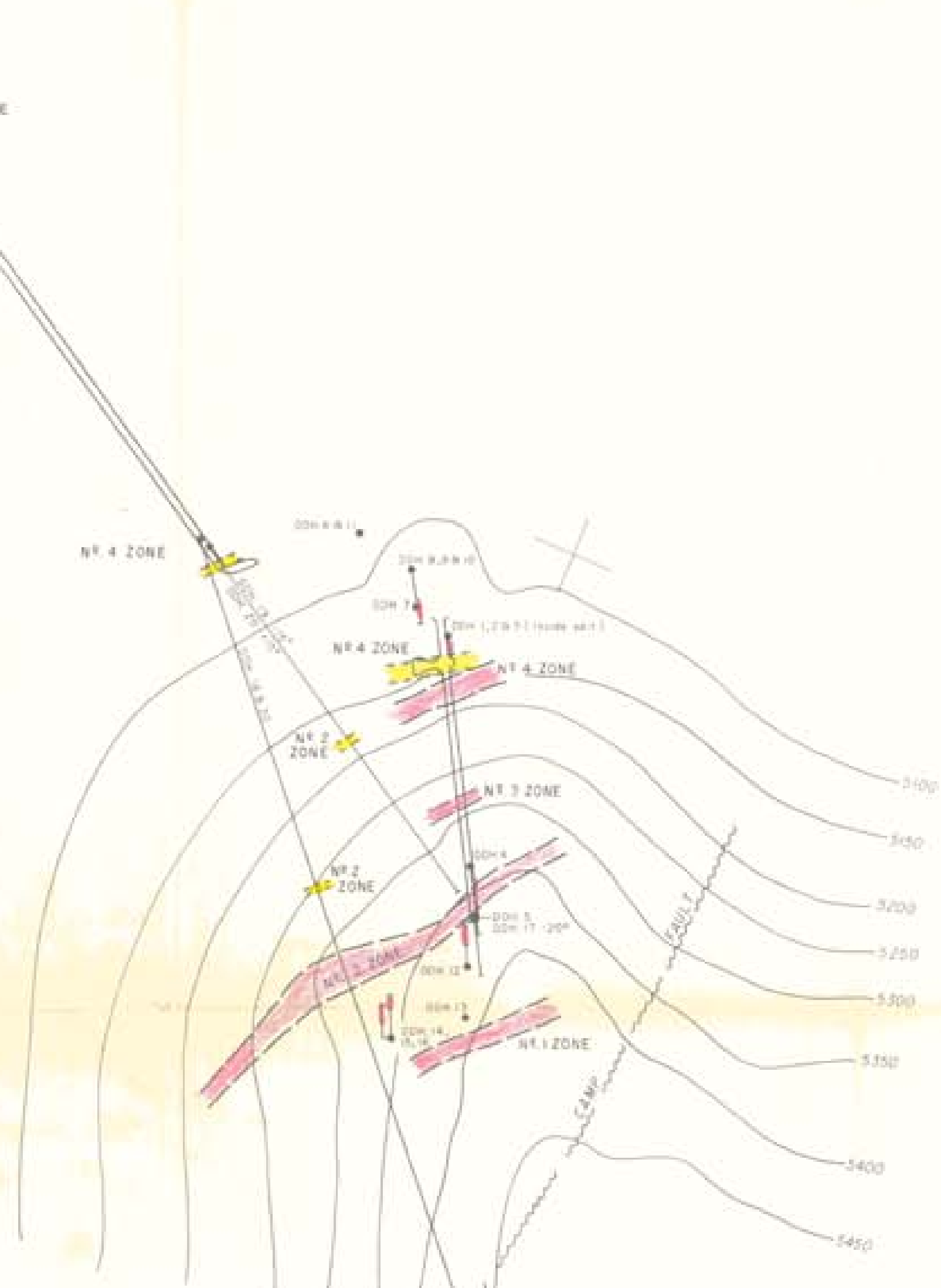
LEGEND:

- UPPER DEVONIAN  
Saxenstet Group - Lower part
- B Phyllites
- MIDDLE DEVONIAN  
McCone Group
- A Limestone, dolomitic limestone
- Outcrop
  - Trenches
  - Bedding strike & dip
  - Contact
  - Faults observed
  - Faults inferred

C Gosses - rusty & salt, pebbles of gosses



TAM 2 TAM 3  
TAM 6 TAM 7



TAM 10 TAM 15  
TAM 16 TAM 17

TAM 1 TAM 18  
TAM 9 TAM 20

Department of  
Mines and Geotechnical Resources  
ASSESSMENT REPORT  
NO. **4973** MAP #3



TAM 16 TAM 17  
TAM 20 TAM 18

4973  
M3

BELMORAL MINES LTD. (NPL)  
TAM CLAIMS - TOOTSEE RIVER AREA  
LARD MINING DIVISION B.C.

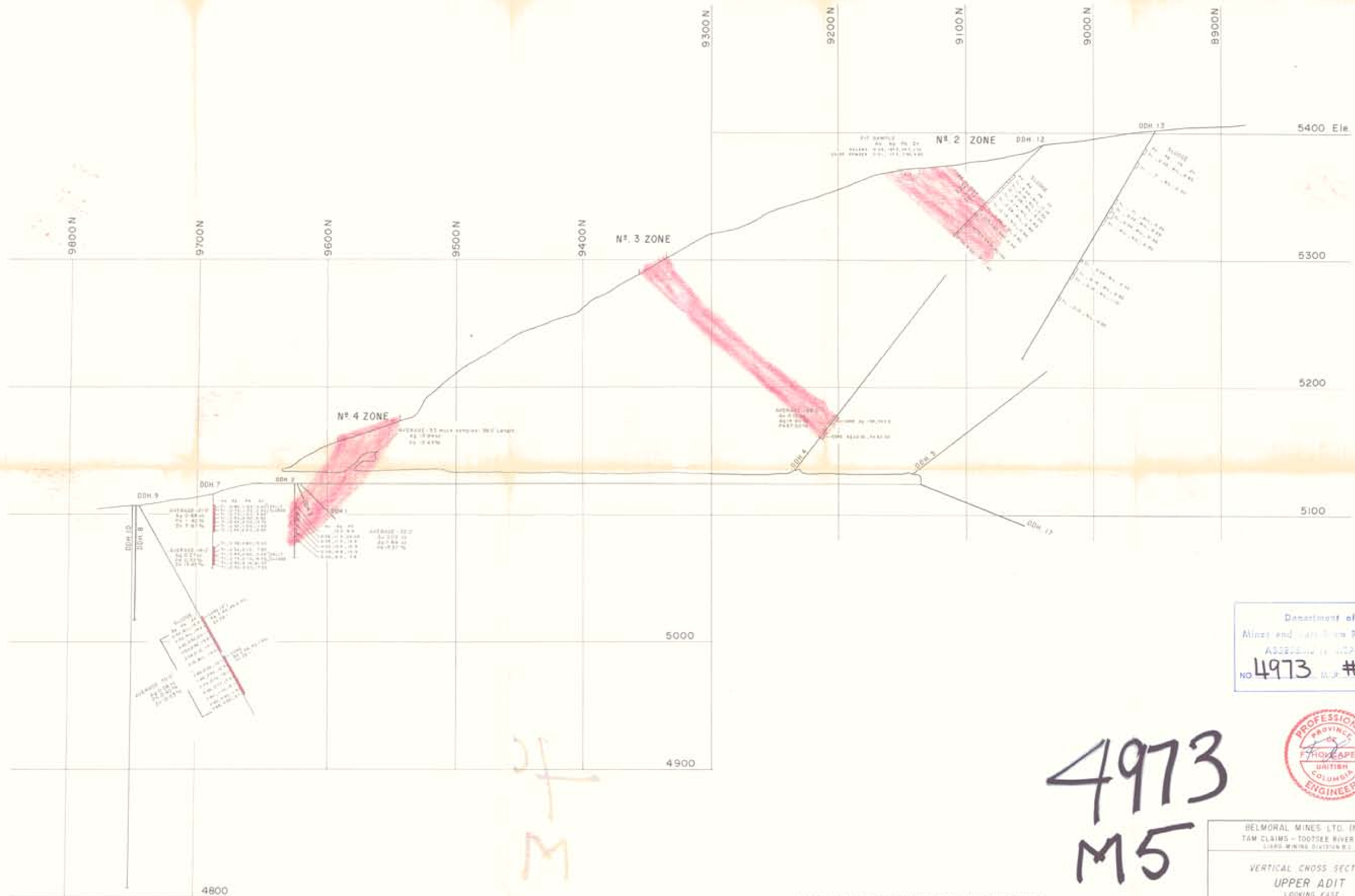
SKETCH SHOWING  
COSSAN ZONES, DIAMOND DRILL HOLES  
, AND UPPER & LOWER ADITS

SCALE IN FEET  
0 200 400

AGLIS ENGINEERING LTD. JANUARY, 1974

NOTE: Map based on data obtained from CURWEST  
CHAPMAN, WOOD & GRISWOLD P. Eng. reports.

PA  
M



Department of  
 Mines and Technical Surveys  
 ASSESSMENT REPORT  
 NO 4973 M.P. #5



BELMORAL MINES LTD. (NPL)  
 TAM CLAIMS - TOOTSEE RIVER AREA  
 LEAD MINING DIVISION B.C.

VERTICAL CROSS SECTION  
 UPPER ADIT  
 LOOKING EAST

SCALE 1" = 100 FEET

WILCO ENGINEERING LTD. JANUARY, 1974

NOTE: Map based on data obtained from CONWEST P. Eng reports