1871

1968 GEOLOGICAL AND GEOCHEMICAL REPORT

on the

TATIN LAKE MOLYBDENITE PROSPECT

Omineca Mining Division
93 K 3

W. Lodder

Amax Exploration, Inc.
May 1969

T.J.R. Godfrey, P.Eng.(B.C)

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SUMMARY AND CONCLUSIONS

The Tatin Lake Molybdenite Prospect is located five miles northwest of Endako, British Columbia at latitudes 54°9'N and longitude 125°6'W. The property consists of 18 claims (Ken 1-18 inclusive) staked by AMAX Exploration, Inc. in August 1968. The property is underlain by two grantic phases of the composite Topley batholith (? Jurassic). These phases are intruded by aplite and quartz-plagioclase porphyry dykes. The aplite dykes are thought to be related to the cooling stage of the Topley Intrusions, the quartz-plagioclase porphyry dykes are thought to post-date the composite batholith.

Towards the south of the property the intrusive rocks are overlain by a complex volcanic sedimentary sequence of Tertiary Age.

Structurally the property is characterized by a set of fault and/or shear zones with gouge zones up to 2 - 3 feet in width. The fault and shears are steeply dipping and strike either to the northeast or northwest.

In the western portion of the property the faults and shears act as loci for quartz veining (up to 5 feet in width). Molybdenite mineralization on the property is confined to those quartz veins. The distribution of molybdenite in the quartz veins is erratic. The molybdenite occurs as coarse platings, fine disseminations and dense fine grained seams. Chalcopyrite and magnetite, in trace amounts, is sometimes associated with the molybdenite

but pyrite appears to be absent. Zones of K-feldspathization and argillization (up to 2 feet in width) are developed in varying degrees along the quartz veins. Weak chloritization of biotite is found peripheral to the K-feldspathization and argillization. Geochemistry has outlined an area of scattered molybdenum anomalies over the western portion of the claim group. The anomalies are over the projected extension of the mineralized quartz veins.

INTRODUCTION

General Statement

A program of geological mapping and geochemical sampling was conducted from August 2nd to August 28th, 1968 on the Tatin Lake Molybdenite prospect five miles northwest of Endako, British Columbia.

The claims covering the prospect are underlain predominantly by granitic rocks of the composite Topley batholith intruded by aplite and quartz-plagioclase porphyry dykes. The aplite dykes may relate to the cooling stage of the Topley batholith. The quartz plagioclase porphyry dykes show chilling effects and are thought to post-date the batholith. A number of showings containing molybdenum mineralization confined to quartz veins and shear zones have been found in the area.

Location and Access (Figure 1)

The Tatin Lake molybdenite prospect is located five miles northwest of Endako at latitude 54°9'N and longitude 125°6'W between elevations of 2200 - 2500 feet.

Access to the claims is by float equipped fixed wing aircraft from Burns Lake or Fort St. James.

Property (Figure 1)

The property consists of 18 claims (Ken 1-18 inclusive) staked by AMAX Exploration, Inc. and recorded on August 9, 1968.

GEOLOGY

Regional Geology (Figure 1)

The area is mostly underlain by part of the Topley Intrusions a composite batholith comprising numerous members and by overlying Tertiary volcanic and sedimentary rocks. The Topley Intrusions form a northwest trending belt which extend northwestward and southeastward for distance of eighty miles on either side of the area. Northwest and southeast trending acid and basic dykes are common throughout the composite batholith.

Generally the Topley Intrusions are considered to be of Lower Jurassic Age, but published radiometric dates from the intrusions range from the Lower Jurassic to Lower Tertiary.

Molybdenite mineralization in the Topley Intrusions is most commonly associated with the acid-alkali phases, the latter being best exposed around Endako. Here the mineralization occurs associated with hydrothermal alteration and dyke activity. Structurally the molybdenite occurs in highly fractured zones adjacent to major east and northeast trending breaks or fault zones.

Geology of the Claim Group (Figure 2)

Geological mapping was carried out over the claim group on a scale of 1" = 400 feet. The claim location lines and the geochemical grid lines, located by chain and compass provided the basic control. The claim group is underlain by two granitic phases of the Topley Intrusions. These phases are intruded by aplite and quartz-plagioclase porphyry dykes. The aplite dykes are thought

to be related to the cooling stage of the Topley Intrusions, the quartz-plagioclase porphyry dykes are thought to post-date the batholith.

Towards the south of the property the intrusive rocks are overlain by a complex volcanic sedimentary sequence of Tertiary Age.

Intrusive Rocks

Two granitic phases of the Topley Intrusions and a number of dyke rocks outcrop within the claim group. The two granitic phases comprise an older, medium to coarse grained, porphyritic granite and a younger, generally fine grained, sugary granite. The older granite, the Glenannan granite, outcrops in the eastern and northern portion of the claim group, the younger granite, the Casey granite, is confined to the western and southern portion of the property.

Fine grained pink aplite dykes ranging in width from a few inches up to 20 feet cut the Casey granite. Gray or brown quartz plagioclase porphyry dykes (up to 90 feet in width) are found cutting both Casey and Glenannan granite. At the present it is believed that the aplite dykes are related to the cooling stage of the Topley Intrusions and that the quartz-plagioclase porphyry dykes post-date both the intrusions.

The pinkish-gray rocks of the Glenannan granite are best exposed in the eastern portion of the property. The Glenannan granite displays a mesocratic, medium to coarse grained, porphyritic

character with conspicuous pink-colored phenocrysts of K-feldspar (up to 4 cm in length, average length 2 cm). The K-feldspar phenocrysts constitute normally 4 - 5% of the rock but locally occur in greater amounts, forming elongated "pegmatitic" pods or clusters as much as two feet in width. The K-feldspar phenocrysts are accompanied by less conspicuous phenocrysts of quartz, plagioclase and amphibole. These minerals together with K-feldspar and abundant biotite also form the matrix.

Numerous inclusions of fine grained granodiorite and/or diorite at various stages of resorption are common in the Glenannan granite. They are mainly rounded or elongate and locally show lengths up to a few feet.

The pinkish, commonly sugary textured rocks of the Casey granite are best exposed in the western and southern part of the property. This unit comprises light colored rocks (alaskites) which although varying slightly in appearance due to their differing grain size (fine grained-medium grained) and local porphyritic development, all are characterized by the absence of hornblende, a low biotite content, and an inequigranular texture.

Exposure of the Casey granite in the central portion of the property is characterized by fine grained rocks. They are pink, more or less porphyritic rocks which resemble aplites and have an average grain size of about one-half millimeter. K-feldspar and quartz phenocrysts are locally present and are generally about 3 millimeters in size, in some rocks they are as large as one-half

centimeter. Towards the western and southern portions of the property rocks of the Casey granite become coarser grained, with average grain sizes ranging up to four millimeters. The coarser-grained rocks contain phenocrysts of K-feldspar and quartz which appear to increase in size and number with increasing grain size of the rock. With increasing coarseness the rocks adopt a less granular, more interstitial texture.

Aplites (only partly indicated on Figure 2) are rare in the Glenannan granite and, by contrast, are abundant in the Casey granite. Normally they occur as small (few inches in width) northwest and northeast trending dykes locally measuring as much as 20 feet in width. The aplites are pink, of uniform appearance and show an average grain size of less than one millimeter. They consist of K-feldspar, quartz and minor amounts of plagioclase and biotite.

Dykes having quartz and plagioclase phenocrysts in variable amounts occur scattered over the property in both the Glenannan and Casey granite. These quartz-plagioclase porphyry dykes possess a northeasterly or northwesterly strike, a subvertical dip and are quartz latitic in composition. The commonly light grey to brown dykes vary in width from less than ten feet to more than ninety feet. Some dykes are characterized by crowded plagioclase phenocrysts (up to 1 cm in length) and inconspicuous phenocrysts of quartz, whereas other dykes are characterized by prominent quartz phenocrysts. Biotite is generally present and

occasionally amphibole. Several dykes contain epidote and are moderately chloritized.

These dykes are found in cross-cutting relationship with the aplites and show effects of chilling along their contacts.

Extrusive and Sedimentary Rocks

Tertiary extrusive and sedimentary rocks are present on the extreme southern portion of the property. They comprise fragmental basalts, andesites and tuffs, varying in color from purple to brown. The basalts and andesites are normally characterized by lath-shaped feldspar phenocrysts embedded in a fine grained matrix. Conglomerates are locally present within the extrusive sequence occurring as thin horizons or small lenses.

Structural Geology

Evidence is insufficient to describe the structure of the property in detail and only generalizations can be attempted. Repeated conditions of tension were necessary to allow the successive emplacement of intrusions in the area, such as the Glenannan granite, the Casey granite and the dyke rocks. The Glenannan granite was apparently faulted and sheared prior to the emplacement of the Casey granite. Numerous faults and shear zones have been noticed in the Glenannan granite, with gouge zones varying from a few inches to 2 - 3 feet in width. The faults and shears are steeply dipping and strike either to the northeast or northwest. It is currently thought that the faulting and shearing of the Glenannan granite formed the main control for the emplacement of the

Casey granite (see contacts Casey granite, Figure 2).

After the emplacement of the Casey granite faulting and shearing with similar trends remained active in both intrusive units. These fault and shear directions are characterized by carbonate and chloritic alteration in the Glenannan granite. In the Casey granite the fault and shear directions, especially the northeasterly ones, are marked by intense argillic alteration, and in the eastern portion of the Casey granite the fault and shear zones acted as loci for quartz veining. The quartz veins are confined to the fault and/or shear zones and range in width from a fraction of an inch to up to four or five feet.

Finally, the northeasterly and northwesterly fault and/or shear directions in the Glenannan and Casey granite acted as loci for the aplite and quartz plagioclase porphyry dykes.

All features mentioned above suggest that intrusions and alteration on the property may be aligned with old faults and shears.

Mineralization and Alteration

Molybdenite mineralization appears to be restricted to the eastern portion of the Casey granite and shows a strong structural control since molybdenite was noted only in quartz veins developed along fault and shear directions (See Structural Geology). Molybdenite mineralization in the quartz veins is erratic and virtually restricted to the veins itself. The molybdenite occurs as coarse platings, fine disseminations and dense fine grained

seams, the latter giving the veins a ribboned appearance. Chalcopyrite and magnetite, in trace amounts, is sometimes associated with molybdenite. Pyrite appears to be absent. Except for some magnetite and pyrite, in accessory amounts, no mineralization has been exposed in the wallrocks along the quartz veins.

Quartz veining and associated molybdenite mineralization is most intense in the eastern portion of the Casey granite (1 - 2 veins per foot) and decreases rapidly to the west. Exposures of Casey granite in the western portion of the property displays widely spaced barren quartz veins.

Argillization, K-feldspathization, chloritization and carbonate have been noted in varying degrees throughout the property. Except for some minor carbonatic and chloritic alteration along fault and shear zones in the Glenannan granite, the alteration features mentioned above are confined to the Casey granite and are found along fault and shear directions.

Intense K-feldspathization is restricted to the eastern portion of the Casey granite, where it occurs as K-feldspar envelopes (up to 2 cm in width) along quartz veins.

Argillization developed along quartz veins, fault and shear directions is common throughout the Casey granite. Zones (up to 2 feet in width) of intense argillic alteration are found in the eastern portion of the Casey granite peripheral to the K-feldspar envelopes. The intensity and dimension of the argillization appears to decrease rapidly going westward. Weak

chloritization of biotite is found peripheral to the argillization and K-feldspathization.

GEOCHEMISTRY (See Figure 3)

A total of 231 soil samples were collected on the property. The sampling was done along claim location lines, compass and tape lines spaced at approximately 1400, 400 and 200 feet. The sample interval was 200 and 100 feet. In addition about four silt and water samples were collected from creeks draining the property and its immediately adjacent areas.

The samples were analyzed at the AMAX laboratory in North Burnaby. Soil and silt samples were analyzed for molybdenum and copper. Water samples were analyzed for molybdenum only. Determination of pH was done on every fifth soil and silt sample and on all water samples.

The sampling procedures, analytical methods and laboratory methods are outlined in Appendix I. The sample location and results are shown in Figure 3. The dominant soils within the area of interest consist of gray wooded earths and weakly developed podzols. The pH of the soil on the property ranges from 5.5 to 6.0. The Mo and Cu content in soils and silts ranges widely. A background of 2 ppm Mo was established for the area and the anomalous threshold was set at 4 ppm Mo. The Mo content ranges from 0 - 180 ppm.

Cu values are indicated on Figure 3, however, no background and anomalous threshold was set for copper.

Geochemical sampling outlined an area of scattered anomalous Mo values over the central portion of the property (See Figure 3). Most of the anomalous Mo values occur over the projected eastern portion of the Casey granite and are explained by molybdenite mineralization as exposed.

In the southern part of the claim group the coincidence of some scattered high Mo values with high copper peaks suggests hydromorphic dispersion and organic accumulation of both elements.

W. Lodder

T.J.R. Godfrey, P.Eng. (B.C.)

APPENDIX II

APPENDIX II - ASSESSMENT DATA

Ken 1 - 18 inclusive

Work done on Ken 1-18 inclusive mineral claims from August 2nd to August 28th, 1968.

Geochemical Soil Survey	5 miles
Silt and Water Survey	4 locations
Geological Mapping	1.5 square miles

Geochemical Samples Analyzed

Soil	231	(Cu,Mo, pH for every fifth sample)
Silt	3	(Cu,Mo, pH for every fifth sample)
Water	1	(Cu, pH)

Personnel Employed

W.Lodder- Geologist I/C - 601-535 Thurlow Street,Vancouver, B.C.
K.E.Card- Senior Assistant-4337 W 13th Ave., Vancouver, B.C.
D.M.Fraser-Junior Assistant-6050 Chancellor Blvd.,Vancouver, B.C.
N.I.Norrish-Junior Assistant-Box 556, Summerland,B.C.

Salaries

W.Lodder	August 15-19, 1968	5 days @ $45.00	=	$ 225.00
K.Card	August 2-7 & 11-28,1968	23 days @ $21.37		491.51
D.Fraser	August 2-19, 1968	18 days @ $16.24		292.32
N.Norrish	August 19-28,1968	10 days @ $13.69		136.69
				$1145.52

Board

56 man days @ $5.00/day $ 280.00

Flying Time (Beaver-float equipped)

Access to claims and supplying of crew on claims

August 2, 1968	1 hour @ $77.00/hour	$	77.00
August 7, 1968	0.55 hour		70.62
August 11, 1968	0.45 hour		57.75
August 16, 1968	0.55 hour		70.62
August 19, 1968	0.55 hour		70.62
August 22, 1968	1.50 hours		141.25
August 28, 1968	0.55 hour		70.62
		$	558.48

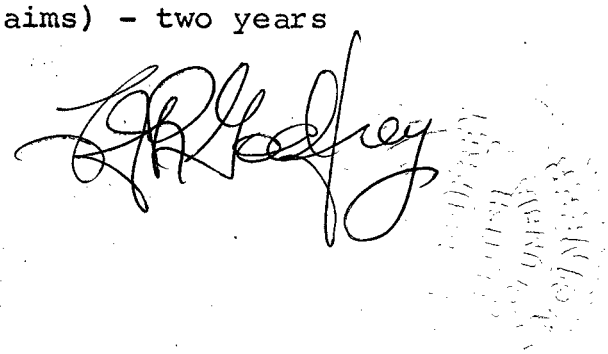
Geochemical Sample Analyses

231 soil samples @ $2.00/sample	$ 462.00
3 silt samples @ $2.00/sample	6.00
1 water sample @ $2.00/sample	2.00
	$ 470.00
Report Preparation and Drafting	$ 60.00
GRAND TOTAL	$2514.00

To be applied as follows:

Ken 2,7,8,9,11 and 13-18 inclusive (11 claims) - one year

Ken 1,3-6, inclusive, 10,12 (7 claims) - two years



APPENDIX

SAMPLE HANDLING PROCEDURE

Procedures for Collection and Processing of Geochemical Samples

Amax Exploration, Inc.

Vancouver Office

December 1968

R.F. Horsnail

SAMPLE COLLECTION

Soils

B horizon material is sampled and thus organic rich topsoil and leached upper subsoil are avoided. Occasionally organic rich samples have to be taken in swampy depressions.

Samples are taken by hand from a small excavation made with a cast iron mattock. Approximately 200 gms of finer grained material is taken and placed in a numbered, high wet-strength, Kraft paper bag. The bags are closed by folding and do not have metal tabs.

Observations as to the nature of the sample and the environment of the sample site are made in the field on standard forms, examples of which are shown overleaf.

Drainage Sediments

Active sediments are sampled with stainless steel trowels from tributary drainages which are generally of five square miles catchment or less. Composite samples are taken of the finest material available from as near as possible to the centre of the drainage channel thus avoiding collapsed banks. More than one sample is taken if marked mineralogical or textural segregation of the sediments is evident.

Some 200 gm of finer material is collected unless the sediment is unusually coarse in which case the weight is increased to 1 kg. Samples are placed in the same type of Kraft paper bag as are employed in soil sampling.

RECCE SAMP DATA SHEET

Camp _____

Collector _____ Project _____ Area (lake, highway, etc.) _____

Date _____ Plotted (map, photo) _____

Number	Type					Location		Environment		Sample Description		Analytical Results				Remarks
Sample Number	Rock	Soil	Water	Silt a b c	Veg.	General	Sample Site	TOPO. Terrain TYPE	DIRECTION Drainage TYPE	SIZE Texture TYPE	TONE Colour BASE	pH	Mo	Cu		(Geology, Geomorph., Culture, Float)
1				a b c		N E										
2				a b c		N E										
3				a b c		N E										
4				a b c		N E										
5				a b c		N E										
6				a b c		N E										
7				a b c		N E										
8				a b c		N E										
9				a b c		N E										
10				a b c		N E										
11				a b c		N E										

COMM

General Remarks:

Form JAH-67

REFERENCE FOR COMPLETING RECCE SAMPLE DATA SHEET

Code Number - Year, project, samplers initial and type of sample

Sample Number - Each sampler is to number consecutively irrespective of sample type or area.

Sample Type: Rock, Soil, Water, Silt, Veg.
- Put check mark in appropriate column. In case of silt (stream sediment) more than one sample is commonly taken at given site, therefore, identify different samples by subscript a,b,c, and check accordingly. If only one sample, check "a" and add subscript to number on sample envelope.

Location - Location information is used to assist accurate plotting and re-locating site in field:

General	Sample Site
Given with reference to plot on map or photo, e.g., highway, lake, river, creek, mountain, traverse, etc.	Detailed location of actual sample site; e.g., side of road, mountain slope, distance from lake, stream junction, bridge, swamp, culture, etc.

N _____ E - The "N" and "E" spaces refer to some numerical coordinate, i.e., latitude or longitude, leave blank in field, for office use later.

Environment

Terrain
- Topo - mountainous, hilly, rolling, flat, dissected, (other) (specify other)
- Type - deciduous, coniferous, grassland, swamp, cultivated, grazing, orchard, jungle, rock, (other)

Drainage
- Direction - N, NE, E, SE, S, SW, W, NW, ?
- Type - groundwater, sheetwash: for streams-mature or meandering, youthful or eroding; PLUS size in actual feet at water level - seepage, 1 ft, 1-5 ft, 5-15 ft, over 15 ft.

Sample Description

Texture
- Size - very fine, fine, medium, coarse, very coarse, unsorted, mixed, (other)
- Type - Rock -- acid granitic, intermed. granitic, basic granitic, acid volc., basic volc., sandstone, carbonate, shale, metamorphic, (other)
  Soil -- A_0, A_1, B_1, B, C (if recognized) PLUS clay, loam, silt, sand, and approximate proportion of organic content - 1/4, 1/2, 3/4, if any
  Silt -- clay, loam, silt, sand, (other); PLUS amount of organic material-1/4,1/2,3/4, if any

Colour
- Tone - pastel, light, medium, dark, deep, speckled, spotted, (other)
- Base - white, gray, black, brown, yellow, orange, red, mixed, (other)

NOTE: In describing Environments and Samples pick one word only for each section; (put any additional comments under the "Remarks" column).

Remarks - Any additional information not covered by other columns that may be pertinent to interpretation of results, e.g., geological features such as faults, dikes, quartz veining, geology of float, use of fertilizers on cultivated soils, sample below culvert, old mine, etc.

General Remarks - Any comments worth noting either with respect to area in general or taking and handling of samples including analytical remarks noted in lab report.

Water samples are taken at all sites where appreciable water is present. Approximately 100 mls are sampled and placed in a clean, screw sealed, polythene bottle.

Observations are made at each site regarding the environment and nature of the sample. The same standard sheet that is used for soil sampling is employed.

Rock Chips

Composite rock chip samples generally consist of some ten small fragments broken from unweathered outcrop with a steel hammer. Each fragment weighs some 50 gms. Samples are placed in strong polythene bags and sealed with non-contaminating wire tabs. Samples are restricted to a single rock type and obvious mineralization is avoided.

Soil, sediment and rock samples are packed securely in cardboard boxes or canvas sacks and dispatched by road to the AMAX geochemical laboratory in Vancouver.

SAMPLE PREPARATION

Packages of samples are opened as soon as they arrive at the laboratory and the bags placed in numerical sequence in an electrically heated sample drier (maximum temperature 70°C).

After drying soil and sediment samples they are lightly pounded with a wooden block to break up aggregates of fine particles and are then passed through a 35 mesh stainless steel sieve. The coarse material is discarded and the minus 35 mesh fraction replaced in the original bag providing that this is undamaged and

not excessively dirty.

Rock samples are exposed to the air until the outside surfaces are dry; only if abnormally wet are rocks placed in the sample drier. Rock samples are processed in such manner that a fully representative ½ g sample can be obtained for analysis. The entire amount of each sample is passed through a jaw crusher and thus reduced to fragments of 2 mm size or less. A minimum of 1 kg is then passed through a pulverizer with plates set such that 95% of the product will pass through a 100 mesh screen. Where samples are appreciably heavier than 2 kg the material is split after jaw crushing by means of a Jones splitter. After pulverizing the sample is mixed by rolling on paper and is then placed in a Kraft paper bag.

WEIGHING AND DIGESTION FOR Cu and Mo ANALYSIS

Digestion tubes (100 x 16 mm) are marked at the 5 ml level with a diamond pencil. Tubes are cleaned with hot water and concentrated HCl. 0.5 g samples are weighed accurately, using a Fisher Dial-O-Gram balance, and placed in the appropriate tubes.

To each of the samples thus prepared are added 2 ml of an acid mixture comprising 15% nitric and 85% perchloric acids. Racks of tubes are then placed on an electrical hot plate, brought to a gentle boil (½ hour) and digested for 4½ hours. Samples unusually rich in organic material are first burned in a porcelain crucible heated by a bunsen burner before the acid mixture is

added. Digestion is performed in a stainless steel fume hood.

After digestion tubes are removed from the hot plate and the volume is brought up to 5 ml with deionized water. The tubes are shaken to mix the solution and then centrifuged for one minute. The resulting clear upper layer is used for Cu and Mo determination.

MOLYBDENUM DETERMINATION

1. Transfer a 1 ml aliquot of digestion solution into a clean test tube.
2. Add 2 ml of a freshly prepared mixture comprising 1:1 5% KSCN solution and 15% $SnCl_2$ solution.
3. Make up to 10 mls with demineralized water.
4. Add 1 ml isopropyl ether, cork tube and shake for 45 minutes.
5. Estimate Mo content by matching intensity of amber-yellow colour in solvent phase with a standard series.

Standard Molybdenum Solutions

Stock Standard Solution (100 µg/ml) - Dissolve .015 gms of MoO_3 in 5 ml conc. NaOh and make up to 100 ml with demineralized H_2O. This solution must be made up bi-monthly.

Working Standard Solution (10 µg/ml) - Pipette 10 ml of 100 gamma/ml stock solution in a 100 ml volumetric flask and make up to 100 ml with demineralized H_2O.

Molybdenum Standards of Analyses for Soil, Silt & Rock Chip - To 11 clean 16 x 100 mm test tubes marked at 5 ml mark, pipette the following amounts of standard solution:

mls of 10 µg/ml Mo Solution	ppm
0.2	4
0.4	8
0.8	16
1.2	24
2.0	40

mls of 100 µg/ml Mo Solution	ppm
0.4	80
0.6	120
0.8	160
1.2	240
1.6	320
2.0	400

∴ then make up to 5 ml

To 16 x 150 ml test tubes pipette 1 ml from each of the 11 standards made above. After the standard solution has been added, the following solutions are to be pipetted in the standard tubes.

1) 1 ml of HCl
2) 2 drops of $FeCl_3$ (1% solution)
3) 1 ml of 5% KSCN solution
4) 1 ml of 15% $SnCl_2$ solution
5) Make up to 10 ml with H_2O
6) 1 ml isopropyl ether
7) Stopper and shake for 45 seconds.

Molybdenum Determination in Waters

1) Measure pH of samples with pH meter
2) Transfer 50 mls of sample into 125 ml separatory funnel
3) Add 5 mls dilute(1:1)HCl
4) Add 4 mls of a mixture comprising 1 part 1% $FeCl_3$ solution to 3 parts 5% KSCN solution and shake
5) Add 3 mls 15% $SnCl_2$
6) Add 2 mls isopropyl ether, shake for 30 seconds and allow phases to settle
7) Drain off water layers, retaining organic layer into 13 x 100 mm test tube. Compare with standards.

Molybdenum Standards - Label 10 clean test tubes 0, 4, 10, 16, 20, 40, 50, 60, 70, and 80 ppb, to the respective tubes pipette the following volumes of 1 gamma/ml Mo work solution:

mls of 1 µg/ml Mo Solution	ppb
.20	4
.50	10
.80	16
1.00	20
2.00	40
2.50	50
3.00	60
3.50	70
4.00	80

After the standard solution has been added, the following solutions are to be pipetted into the standard tubes:

1) 1 ml 1:1 HCl solution
2) 2 drops of 1% $Fe_2(SO_4)_3(NH_4)_2SO_4$
3) 2 mls of 15% KSCN solution
4) 1 ml of 15% $SnCl_2$ solution
5) 1 ml of isopropyl ether
6) Stopper and shake for 45 seconds.

COPPER DETERMINATION

The digestion solution is sprayed directly into a Perkin-Elmer 290B atomic absorption spectrophotometer from which the Cu concentration is read on the scale.

Instrument settings are:

Coarse Wavelength Control	280.1
Slit Width	7 A°
Lamp Current	5 ma
Acetylene Flow	14.0
Air Flow	14.0

The instrument is calibrated such that the maximum scale reading corresponds to 20 ppm in solution ie: 200 ppm in the sample. Samples with Cu contents of over 200 ppm are diluted until a reading is obtained on the scale. It is practical to measure concentrations in the range 5 ppm to 1%.

pH MEASUREMENTS

Soil and drainage sediment samples are dampened with water in a glass beaker to a pasty consistency. Demineralized water is used for this purpose as it has a low buffer capacity and thus does not influence the pH of the sample. Measurement is made with a Fisher Acumet pH meter. Electrodes are stored in buffer overnight. A 30 minute warm up time is allowed for the instrument each morning. A 10 ml aliquot is taken from water samples for pH measurement.

CLAIM LOCATION LINE

CLAIM POST

KEN 7 KEN 8

KEN 17 KEN 18

KEN 11 KEN 12

KEN 5

KEN 6

KEN 15 KEN 16

KEN 13 KEN 14

KEN 9 KEN 10

KEN 3 KEN 4

KEN 1 KEN 2

LINE 68-1

LINE 68-2

S w a m p

TATIN LAKE

L E G E N D

Sample Site

SOIL SAMPLE

0 - 4	ppm	Mo	Background
5 - 8	ppm	Mo	Positive
9 - 20	ppm	Mo	Anomalous
> 20	ppm	Mo	Highly Anomalous

SILT SAMPLE

0 - 4	ppm	Mo	Background
> 4	ppm	Mo	Anomalous

WATER SAMPLE

0 - 4	ppb	Mo	Background
> 4	ppb	Mo	Anomalous

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1871 MAP 1

1871

AMAX EXPLORATION INC.

TATIN LAKE Mo Sz PROSPECT

OMINECA MINING DIVISION BRITISH COLUMBIA

GEOCHEMICAL MAP

SCALE 1 INCH = 400 FEET

DATE REVISED		DATE PRINTED	Drawn by:	Completed by N.GB	Fig. 3
				Date April 30, 1969	
				N. T. S. File	

To Accompany Report " TATIN LAKE Mo Sz PROSPECT "
by: W. Lodder and T.J.R. Godfrey Date April 30, 1969

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1871 MAP 2

TATIN LAKE
MoS_2 PROSPECT

Ken 7 | Ken 8 | Ken 17 | Ken 18
Ken 11 | Ken 12 | Ken 5 | Ken 6 | Ken 15 | Ken 16
Ken 9 | Ken 10 | Ken 3 | Ken 4 | Ken 13 | Ken 14
Ken 1 | Ken 2

Tatin Lake

TATIN CREEK

Savory Lake

Loch Carry

To Endako Mines

HWY 16

ENDAKO

54°

125°

L E G E N D

TOPLEY INTRUSIONS

1 Porphyry Dykes (Acid–Basic)

2 Casey Granite

3 Glenannan Granite

4 Endaka Quartz Monzonite

EXTRUSIVE AND SEDIMENTARY ROCKS

5 Tertiary Volcanic And Sedimentary Rocks

S Y M B O L S

- Road
- Dykes
- Geological Contact (Defined - Inferred)
- Fault
- Outcrop
- Swamp
- Highway No. 16
- River, Creek
- Railroad

1871

AMAX EXPLORATION INC.

TATIN LAKE MoS_2 PROSPECT
OMINECA MINING DIVISION, BRITISH COLUMBIA

LOCATION, CLAIM & REGIONAL GEOLOGY MAP

SCALE 1 INCH = 1/2 MILE

DATE REVISED		DATE PRINTED	Drawn by:	Completed by: N.GB	Fig. 1
				Date May 1, 1969	
				N.T.S. File	

To accompany report "TATIN LAKE MoS_2 PROSPECT"
by W. Lodder and T.J.R. Godfrey Date May 1, 1969

CLAIM LOCATION LINE

KEN 7 KEN 8 KEN 17 KEN 18

KEN 11 KEN 12 KEN 5 KEN 6 KEN 15 KEN 16

KEN 9 KEN 10 KEN 3 KEN 4 KEN 13 KEN 14

KEN 1 KEN 2

TATIN LAKE

Quartz Vein

R-41-44

L E G E N D

INTRUSIONS

2 Casey Granite

3 Glenannan Granite

1 Aplite

1A Quartz - Plagioclase Porphyry

EXTRUSIVES AND SEDIMENTS

5 Tertiary Volcanic And Sedimentary Rocks

S Y M B O L S

Fault

Outcrop

Claim Post

Strike And Dip (Joint - fracture - shear)
" " " (Contact)

Geological Contact (Defined, Inferred)

Mo O Mineralized Float (Mo Sz)

Mo x Mineralized Float (Trace MoSz

R10 Sample Number

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1871 MAP 3

1871

TATIN LAKE Mo Sz PROSPECT

OMINECA MINING DIVISION BRITISH COLUMBIA

GEOLOGICAL MAP

SCALE 1 INCH = 400 FEET

DATE REVISED	DATE PRINTED	Drawn by	Completed by: N.GB
			Date May 1, 1969
			N.T.S. File

Fig. 2

To Accompany Report " TATIN LAKE Mo Sz PROSPECT "
by: W. Lodder and T.J.R. Godfrey Date May 1, 1969