

44050

REPORT ON THE GEOLOGICAL SURVEY
AND DIAMOND DRILLING

CONDUCTED ON THE PROPERTY

OF

CHATAWAY EXPLORATIONS CO. LTD.

LOCATED IN THE

HIGHLAND VALLEY AREA, BRITISH COLUMBIA

FOR

INTERNATIONAL MOGUL MINES LIMITED

BY

JACK G. WILLARS, P.Eng.
MINING GEOLOGIST

Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 4050 MAP
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New Liskeard, Ontario

October 10, 1972

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REPORT ON THE GEOLOGICAL SURVEY
AND DIAMOND DRILLING
CONDUCTED ON THE PROPERTY
OF
CHATAWAY EXPLORATIONS CO. LTD.
HIGHLAND VALLEY AREA, BRITISH COLUMBIA
FOR
INTERNATIONAL MOGUL MINES LIMITED

INTRODUCTION

During the period of June to October, 1972, International Mogul Mines Limited conducted an exploration program for copper and molybdenum mineralization on the west half of the property of Chataway Exploration Co. Ltd. located in the Highland Valley area of British Columbia. This segment of the property is held by International Mogul through a working option agreement. The work consisted of geological mapping and diamond drilling.

Previous geological work was performed without the benefit of an accurate base map to a satisfactory scale and a standard nomenclature system of the Guichon batholith rock types. Where possible, much of the previous work was incorporated in the present geological survey and the outcome of the present work is considered to represent a much more accurate geological picture of this segment of the Chataway Exploration holdings.

PROPERTY

The western one-half of the Chataway Exploration Co. Ltd. property held under option by International Mogul Mines Limited consists of 204 contiguous, unsurveyed mining claims, bearing the following designations:

<u>Claim Name</u>		<u>Record Number</u>
Bob	No. 1 - 8	25387 - 25394 incl.
Cap	1 - 4 Fr.	47577 - 47580 "
Cece	1 - 3 Fr.	61891- 61892, 101254
Coe	2, 4, 6, 8 Fr.	52312 - 52314 incl., 63532
D.J.	1, 2	70188, 70189
Jay	1 - 6 7, 8 9, 10 11 12 12 Fr.	25395 - 25400 incl. 31416, 31417 47242, 47243 52322 47245 52321
Len	1, 3 5, 7	38773, 38775 63035, 63037
Mab	2, 3, 4 Fr. 5, 6, 7 Fr.	31282 - 31284 incl. 47693 - 47695 incl.
Moon	1 - 6 7 - 8	25349 - 25354 incl. 25419 - 25420 "
Ros	1 - 8	39211 - 39218 incl.
Rum	1 - 5	38766 - 38770 incl.
Sky	1 - 8	25411 - 25418 incl.
Sun	1, 2	25429, 25430
T.D.M.	24 Fr.	69620
Tom	1 Fr.	101253
Tom	1 - 7	30316 - 30322 incl.
Trish	1 - 8	25333 - 25340 incl.

<u>Claim Name</u>		<u>Record Number</u>
Val	No. 1 - 4	25325 - 25328 incl.
	5	38802
	6	65791
	7, 8	38804, 38805
	9 Fr.	50953
	10 Fr.	101255
Wis	7, 8	18722, 18723
	9 Fr.	18724
Cat	1 - 8	25371 - 25378 incl.
D.J.	7 - 16	70190 - 70199 incl.
	20 - 22 Fr.	70200 - 70202 "
Glen	1	70117
	2 Fr.	70118
	3 - 6	70119 - 70122 incl.
	8 - 9 Fr.	70123 - 70125 incl.
	10 - 13 Fr.	73957 - 73960 incl.
Moss	1, 2	38777, 38778
	3 - 8 incl.	40456 - 40461 incl.
	6, 8 Fr.	66625, 66626
Pro	1 - 4	17329 - 17332 incl.
Sho	1 - 4	34912 - 34915 incl.
	5 - 6	20593 - 20594 "
	9 Fr.	34916
	10 - 13	34917 - 34920 incl.
	14 - 20	38728 - 38734 incl.
Shoo	23 - 27	63975 - 63979 incl.
Stad	1 - 8	38806 - 38813 incl.
	9 Fr.	40367
Tom	1 - 3	69949 - 69951 incl.
	10 - 14 Fr.	69945 - 69948 incl.
Wiz	5, 6	10673, 10674
	10, 11	20585, 20586
PH	1 - 8	49514 - 49521 incl.

LOCATION AND ACCESS

The property is located in the south central part of British Columbia on the southeast side of the Highland Valley at latitude 50° 22' north and longitude 120° 55' west. Excellent base camp facilities are located at the south end of Dot Lake and are accessible by 21 miles of paved and gravel roads from Merritt, B.C.

Bulldozer roads traverse a great portion of the property. Consequently, through the use of light truck and four wheel drive vehicles any segment of the property is readily reached from the base camp.

TOPOGRAPHY, TIMBER AND CLIMATE

The property occupies a plateau area whose elevation lies in the 4,500 to 5,000 ASL range. This plateau area is characterized by a thick blanket of sand and gravel which owe their origin to various glacial processes. The plateau area is dissected by meltwater stream channels which valleys reach depths of 100 - 150 feet.

Less than 5% of the property area is characterized by outcrop and these are primarily confined to creek beds, abandoned meltwater channels and along flank and crest of hills.

Timber is predominantly of lodgepole pine with scattered patches of fir, birch, poplar and spruce. On the whole, the area is easily traversed except for several areas of dense windfall. Parts of the area have been burned over and evidence of more than one forest fire is obvious.

The climate during this year was warm and dry providing good working conditions.

GENERAL GEOLOGY

The Guichon batholith is an elliptical shaped intrusive complex consisting of an assemblage of granodiorite rocks underlying an area of 400 square miles and bounded by the Thompson and Nicola Rivers and Guichon Creek valleys. It is composed of at least five nearly concentric phases of granodiorite with varying textures and compositions which decrease in relative age to the core of the assemblage. Peripheral to this is the hybrid phase which consists of volcanic country rock intruded by and combined with the first phase of Guichon batholith intrusion.

Within the batholith the criteria for the identification of the different phases is purely on textures. The texture of the quartz and mafic mineral grains is the major difference, with grain size considered of secondary importance. Colour index is used for the hybrid rim which is much darker than the adjacent Guichon phase.

The outer and oldest phase is called Guichon. It is characterized by an uneven distribution and ragged crystals. There are often clusters of mafic and quartz grains. The quartz is wedgy and toothlike. It is generally medium grained and mottled pink. The mafics compose a large part of the rock.

The next youngest phase is called Chataway. This rock is characterized by an even distribution, evenly spaced, squarish mafic grains either fine, medium or coarse grained. The mafics can vary from hornblende to biotite,

but are typically hornblende. The mafic grains are predominant in texture and abundance.

The Bethlehem phase is the next youngest in age. It is a bimodal distribution of mafic grains which are not as abundant as in the Chataway. Poikilitic textures sometimes prevail. The quartz occurs as medium grained anhedral crystals. Generally, this rock is finer grained than the other phases. It intrudes the older rocks in dike form as well.

The Skeena phase is the next youngest and consists of large grains of anhedral quartz and large mafic grains with scattered small grains in the matrix. The amount of mafics has decreased a great deal to less than 8%. This rock is a transition zone between the Bethlehem and Bethsaida phases. It intrudes the older rocks in dike form.

The Bethsaida phase is the youngest and is the core of the batholith. It is characterized by predominant large square grains of quartz accompanied by large, bookish grains of biotite. The mafics are less than 8% of the rock. A porphyritic texture prevails and the contacts generally contain very fine grained or no mafics. It intrudes the older rocks in dike form.

The above assemblage of rocks is intruded by several types of dikes in addition to the ones already mentioned. These are very fine grained aplites, quartz eye and feldspar porphyries, alaskites, and crowded porphyry. (Phenocrysts are greater than 60% volume and are very closely spaced).

Ore deposits to date have been discovered in the batholith associated with faulting and major fracturing combined with rock alteration,

and at the contacts of different rock phases.

EXPLORATION METHODS

In order to accurately co-ordinate and integrate all of the previous exploration work it was found necessary to properly locate the whole grid system of control lines and replot the I. P. , .E.M. , magnetometer, geochemical results and claim and drill hole locations. In addition, the geology was completely remapped guided by up to date research on the Guichon batholith problem. Mineralized areas that appeared to be significant were remapped on a scale of 1" = 100'. Additional I.P. surveys were conducted on part of the property and an additional 1,000' of diamond drilling was done.

At the outset a base map was compiled from aerial photographs of the area showing topography, roads, altitude control, etc., and good accuracy. The above mentioned program was applied to this control with changes being made when encountered during the field work.

PROPERTY GEOLOGY

The optioned group of claims is located on the southeast flank of the Guichon batholith. All of the five phases of the granodiorite are represented on the property in varying degrees. The west part of the property includes part of the Bethsaida core trending generally north-south. Skeena rocks are represented in the central part and Chataway in the eastern part, both with generally north-south trending contacts. In the south part of the property

Bethlehem dikes are seen and to the extreme southeast Guichon is seen. These latter two phases are exposed on surface to a much lesser degree than the other three phases.

Dikes of Bethsaida, Skeena and Bethlehem were observed as well as aplite, quartz eye and feldspar prophyry and crowded porphyry dikes. Other than the mineralized areas especially mentioned below, sparse amounts and widely separated copper mineralization was seen at various locations on the property, but was not considered significant. Areas of alteration were noted, most of which was mild to moderate degree, except for the Jay 11 area which was the only wholesale type of alteration on the property.

Glacial drift covers much of the property. The trend is N 15° W directed southerly. This is evidenced by eskers, glacial valleys and plains, and alignment of swampy areas. It is depicted excellently on the aerial photographs.

Major linears and possible fault structures could be located in Roscoe Creek trending north-northwest, the No. 1 of the Three Creeks area trending north-northwest, and Chataway Lake and Creek trending north-northeast (also Twin Dot Creek and Dot Lake). Associated intense fracturing and rock alteration should be an aid to finding ore.

The south end of Chataway Lake is the intersection of two of these faults and is expressed topographically by a large swamp. This depression is a catch basin for sediments and thus a geochemical anomaly is coincident and not unexpected at this location.

ECONOMIC GEOLOGY

Mineral exposures present on the property which are the most noticeable are summarized below:

92I/5E-92

Jay 11 Area

Jay 11 area is located at L 278 N, 190 E, and lies just east of the Bethsaida - Skeena contact and in Skeena rocks. The Skeena rocks have been intensely altered and fractured for distances up to 50 feet from the contact. Minor amounts of malachite and chalcopryrite associated with magnetite were noted. A northeast trending fault traverses the exposure and a Bethsaida dike intrudes adjacent to the east of the exposure. In addition to geological and geophysical surveys and bulldozing, four percussion holes were drilled in the immediate area and of these (D-8, D-8B, D-8C, D-8D)

D-8C showed 1917 ppm. Cu. Two diamond drill holes (M 72-3, M 72-4) by Mogul indicated minor copper values only, one hole being drilled under D-8C.

Bob 6 Area

-17

Bob 6 area is located at L 302 N, 207 E, and outcrops along No.3 Creek. The exposure consists of a N 15° W trending Bethsaida dike about 250 feet wide which intersects Skeena rocks. It is mildly to moderately altered and fractured. Rusty weathering is deep. Widespread, but in small amounts, malachite, pyrite and chalcopryrite were noted. Re logging of drill holes A-1 and A-2 did not improve observations from an ore viewpoint. Percussion holes

drilled in the area showed only background results. No work was conducted here this summer.

Three Creeks Area

Three Creeks area is located at the junction of three creeks named No. 1, No. 2 and No. 3 and at L 274 N, 225 E. The mineral exposure occurs in Chataway rocks close to and east of the Chataway-Skeena contact. The rocks are moderately fractured with alteration applied to the walls of fracture planes. Rusty weathering is deep. Widespread and sparse amounts of malachite are noted. The exposure is approximately 600' wide.

A series of diamond drill holes (J.S. series) were drilled on this zone without success. Three diamond drill holes numbered Sky 7-1 to 3 were drilled some 2,000' north to test an I.P. anomaly without success. Percussion hole results in the vicinity were not outstanding. No new work was done in this area.

Northwest Area

Three exposures within 2,000' of each other lie in the northwest part of the property. One at L 333 N, 240 E, is a rusty weathered, moderately fractured exposure containing mild, skin deep alteration, minor specks of malachite and is adjacent to the Roscoe Creek fault. A drill hole M 72-2 by Mogul did not produce positive results. This situation occurs in Chataway rocks just east of the Chataway-Skeena contact.

Another exposure is located at L 325 N, 220 E. This area is moderately fractured with deep rusty weathering, mildly altered and contains minor amounts of malachite. It occurs in Skeena rocks and trends north. Two earlier short diamond drill holes Bo 6 and 7 produced no ore results. The width is approximately 400 feet.

The third exposure is located L 349 N, 220 E, and is a north trending, rusty weathered 500' wide band of mildly altered, moderately fractured Skeena rocks with sparse amounts of malachite noted.

This season no new work was carried out on the last two exposures.

Roscoe Creek Area

- 61

Roscoe Creek area is located L 278 N, 230 E, just west of Chataway Lake. Considerable spotty malachite is present in Chataway rocks which are mildly altered, moderately fractured and are adjacent to the Roscoe Creek fault and east of it. Two adits have tested this exposure with no success. No new work was carried out here.

Chataway Lake Area

- 158

This area is located south of Chataway Lake. Several diamond drill holes tested I.P. conductors in a series of holes numbered C and CS. Chataway rocks under gravel overburden were encountered. These are relatively fresh with sparse and minor specks of malachite present. This occurs south of the junction of Chataway Lake and Roscoe Creek faults. Mogul drilled a vertical hole (M 72-1) to a depth of 328 feet in overburden to test the only definite I.P. conductor obtained during the recent survey.

No success was achieved in this area to date.

Moss 4 Area

Moss 4 area is located L 206 N, 220 E. Bulldozing has uncovered rusty weathered and moderately altered rocks in Chataway close to the Skeena-Chataway contact. Boulders by the trenches showed bornite and chalcopryrite in quartz veins, however, none were seen in place. An earlier diamond drill hole (Moss 4-1) did not intersect ore.

Sho 11 Area

Sho 11 area is located on Twin Dot Creek at L 144 N, 290 E. A northeasterly trending Bethlehem dike 500 feet wide and tapering intrudes the Chataway rocks. The west contact has been exposed by bulldozing. Moderate alteration along the fracture planes has occurred and malachite can be observed over an area of about 600' x 250' with scattered sparse amounts around the periphery of this area. Diamond drill holes in the series numbered SS have investigated this exposure and several percussion holes were drilled on it, all with no positive results. No new drilling was carried out this season.

Shoo 23 Area

The Shoo 23 area is located 2,000 feet east of Twin Lakes and on the Chataway boundary. Much bulldozing has been done and revealed minor amounts of malachite that are widespread in fresh Chataway rocks. No new work was done here.

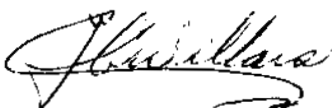
In the extreme southeast part of the property sparse and minor occurrences of malachite in Guichon rocks were seen. This occurred just south of the Guichon - Chataway contact. The rocks are moderately fractured in places and hardly altered at all.

RESULTS OF EXPLORATION

The objective of correlating all previous exploratory work and presenting this information accurately was achieved. Maps illustrating this information accompany this report. The results of this year's work are being studied and evaluated and hopefully a working hypothesis can be formulated to guide next year's exploration of the large untested segments of the Chataway property. It is quite obvious that diamond drilling will be required to effectively test those potential areas for copper mineralization.

The diamond drilling embarked upon this season was aimed at providing information to guide any possible future drilling program on this property.

Respectfully submitted,


J. G. Willars, B.A.Sc., P. Eng.

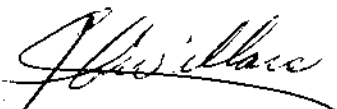
New Liskeard, Ontario.

October 10, 1972

CERTIFICATE

THIS IS TO CERTIFY THAT:

1. I am a graduate in Mining Geology from the University of Toronto in 1951, and I hold the degree of Bachelor of Applied Sciences and I have been practising my profession continuously for the past twenty-one years.
2. I am a member in good standing of The Association of Professional Engineers of Ontario, and I reside and hold office at 127 Lakeshore Road, New Liskeard, Ontario.
3. I have no direct, indirect or anticipated interest in the properties mentioned in this report nor in the securities of the Company to which they belong.
4. My report is based on research of available information, field mapping conducted on the property during the months of June to September, 1972, and my experience in the mining exploration business.


J.G. Willars, B.A., ~~Sc.~~, P. Eng.

New Liskeard, Ontario
October 10, 1972

Canada

In the Matter of

Province of

On this:

a geological report on behalf of Chataway Exploration Co.Ltd. (N.P.L.)

I, M. H. Sanguinetti, 401 - 550 Burrard Street, of the British Columbia Co. Ltd. (N.P.L.)

Do Solemnly Declare that a geological survey was conducted on the Trish, Sky, Cat, Sho, DJ and Bob Groups in the Kamloops and Nicola Mining Divisions. These claims are located in the Highland Valley in the vicinity of Chataway Lake. The work was conducted during the period June 15th, 1972 to October 15, 1972 during which time the following expenses were incurred:

Table with 5 main categories: 1. Wages (J. Willars, C. Jessup, M. Sanguinetti), 2. Travel, food, miscellaneous field supplies and equipment, 3. Equipment Rental on property, 4. Report, data compilation, draughting, filing, 5. Consulting; interpretation; field supervision. Total: \$20,495.45

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

in the Province of

this

day of

A.D. 1972

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

Sub-Mining Recorder

Dated

19

In the Matter of

Statutory Declaration

WILLIAMS & MACRIS LTD. Printers and Stationers
Form No. 47

WEST

EAST

ROAD

CREEK

L 238 N
263 E

SURFACE 4575'

(-90°)

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **4050** MAP **#4**

OVERBURDEN

WATER 175'

WATER 263'

PROFILE SECTION M72-1
 CLAIM MOON 7
 (LOOKING NORTH)
 INTERNATIONAL MOGUL MINES
 CHATAWAY OPTION, B.C.

SCALE: 1" = 40'

328'

J. G. Willars
 J. G. WILLARS

DIAMOND DRILL LOG

D. D. HOLE NO. 72 - 1

PROPERTY INTERNATIONAL MOGUL MINES LTD.

PAGE 1

LOCATION Chataway Mines, B.C. Claim Moon 7

COLLAR: LAT. L 238 N.

DEP. 263

ELEV. 4575 ASL

BEARING none

DIP -90°

DEPTH OF HOLE 328'

STARTED Sept. 11, 1972.

COMPLETED Sept. 15, 1972.

DRILLED BY Connors Drilling
Core Size BQWL

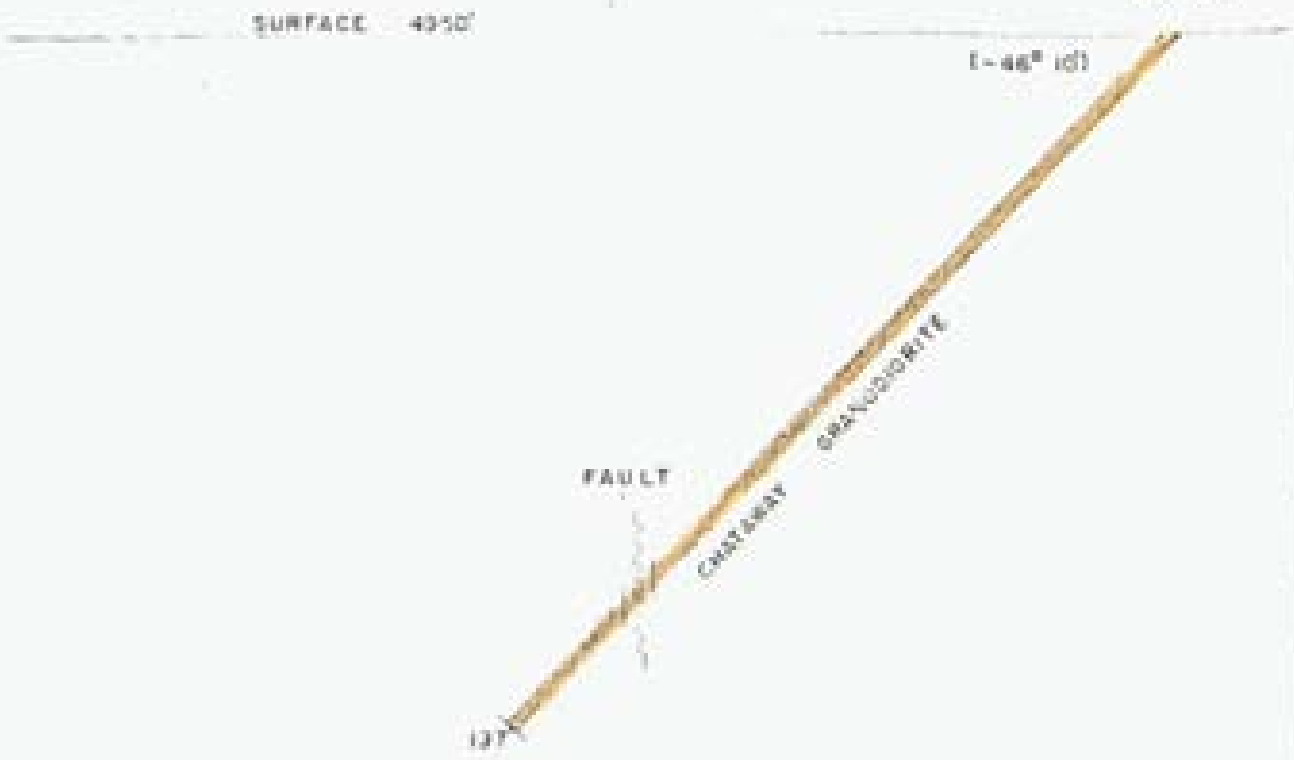
FROM	TO	DESCRIPTION	SAMPLE NO.	CORE FT.
0	328'	<p>OVERBURDEN</p> <p>Tricone bit drilling through overburden. water encountered at 175'. water encountered at 263' that had a flow of 20 gallons per minute which washed out the mud walls consequently causing cave. Rods broke leaving 110' in the hole. Hole broke in and was lost. No bedrock achieved. Hole abandoned.</p>		
	328'	<p>END OF HOLE</p>		

Handwritten signature: J. G. Willars

SIGNED *Handwritten signature*
JACK G. WILLARS B.A.Sc., P. ENG.

N 15° W

L 35,774 N
24079 E



Department of
 Mines and Technical Resources
 ASSESSMENT REPORT
 NO. **4050** MAP #5

PROFILE SECTION M72-2
 CLAIM SKY I
 (LOOKING EAST)
 INTERNATIONAL MOGUL MINES LTD.
 CHATAWAY OPTION, B.C.

SCALE: 1" = 40'

J. G. Willars
 J. G. WILLARS

J. G. Willars

DIAMOND DRILL LOG

D. D. HOLE NO. 72 - 2

PROPERTY INTERNATIONAL MOGUL MINES LTD.

PAGE 1

LOCATION Chataway Mines, B.C. Claim Sky 1

DEPTH OF HOLE 197'

COLLAR: LAT. L 33874 N

STARTED Sept. 16, 1972.

DEP. 21079 moved 8' west and parallel

COMPLETED Sept. 18, 1972.

ELEV. 1950 ASL

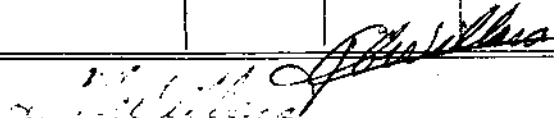
DRILLED BY Cormors Drilling

BEARING N 15° W

Core Size BQWL

DIP - 16° 10' N

FROM	TO	DESCRIPTION	SAMPLE NO.	CORE FT.
0	12'	CASING		
12'	71'	CHATAWAY GRANODIORITE Medium to coarse grained granodiorite with square mafics (chiefly hornblende, minor biotite) up to 1/2" size with an even distribution of grains. From 12'-25.5' there is surface weathering and fracturing which gradually diminishes with depth. The top 5' may be mildly altered. From 25.5'-71' it is fresh Chataway with joints at 60° and 45° to the core axis. Predominantly grey feldspar, some pink aplite 56'-56.8' and other scattered 1/4" and 1/2" aplite mostly at 60° to the core axis. There is a faint semblence to gneissosity in the mafic grain arrangement, at 30° to the core axis. There are irregular fine fractures along the core axis or at small angles to it. These are filled with carbonate, chlorite and sparse epidote.		
71'	130'	CHATAWAY As above but fine grained mafic grains. Near the bottom of th this section the mafics grade to medium grained texture. Jointing is at 45° and 60° to the core axis. 1/2" aplites occur sparsely and at 80° to the core axis. Sparse fine fractures occur along the core.		
130'	153'	CHATAWAY Medium grained rock altered in part with a greenish and pinkish coloured hue. More fratures along the core than above which are filled with quartz up to 1/8" size.		
153'	160'	FAULT From 153'-156' sand seam. From 156'-160' brecciated Chataway with quartz-carbonate filling and red hematite stain.		
160'	197'	CHATAWAY Medium to coarse grained mafics as at the top of the hole. Sparse aplite stringers (some may alaskite or Bethsaida porphyry contact type rock). At 190' 1/2" serpentine on slip. Some chlorite on fracture and joint planes.		
	197'	END OF HOLE.		

SIGNED  JACK G. WILLARS B.A.Sc., P. ENG

DIAMOND DRILL LOG

D. D. HOLE NO. ~~M-72-2~~

PROPERTY INTERNATIONAL MOGUL MINES LTD. Chataway Mines, B.C.

PAGE 2

FROM	TO	DESCRIPTION	SAMPLE NO.	CORE FT.
		<p>SLUDGES:</p> <p>28' - 38'</p> <p>38' - 50'</p> <p>50' - 60'</p> <p>60' - 74'</p> <p>74' - 85'</p> <p>85' - 97'</p> <p>97' - 107'</p> <p>107' - 117'</p> <p>117' - 127'</p> <p>127' - 137'</p> <p>137' - 147'</p> <p>147' - 158'</p> <p>158' - 167'</p> <p>Lost return water at 167'</p> <p>Sludges stored at Chataway core house.</p>		

SIGNED _____

Jack G. Willars
 JACK G. WILLARS B.A.SC., P. ENG.

DIAMOND DRILL LOG

D. D. HOLE NO. 72 - 3

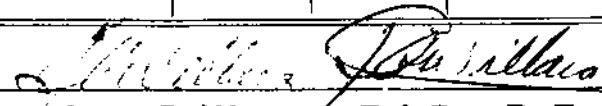
PROPERTY INTERNATIONAL MOGUL MINES LTD.

PAGE 1

LOCATION Chataway Mines, B.G. Claim Jay 11
 COLLAR: LAT. L 27718 N
 DEP. 18935 measured from L 274 N
 ELEV. 5130 ASL
 BEARING S 50°
 DIP - 47° S

DEPTH OF HOLE 222'
 STARTED Sept. 18, 1972
 COMPLETED Sept. 20, 1972
 DRILLED BY Connors Drilling
 Core Size BQML

FROM	TO	DESCRIPTION	SAMPLE NO.	CORE FT.
0	20'	CASING		
20'	52.5'	<p>SKEENA GRANODIORITE</p> <p>Chiefly a hard, medium to coarse grained granitic rock with rounded quartz eyes, minor mafics - sparse hair line seams of white carbonate. From 39'-41' there are seven 1/8" irregular seams of hematite and carbonate. The main rock is greenish in colour with red feldspar spotty sections. From 20'-31' rusty weathering on fracture planes. Minor alteration and sparse patches of more intense alteration (soft, chalky). At 44' there is 2" of pink calcite and quartz.</p>		
52.5'	125'	<p>SKEENA</p> <p>This is the same rock but with wholesale alteration. It is bleached green in colour with bleached red feldspar spots, much softer and powdery. Some chlorite alteration spots. Lost core from 102'-107', 117.5'-119'.</p>		
125'	222'	<p>SKEENA</p> <p>Medium grained granitic rock with sparse numbers but definite square quartz eyes. Some spotty chlorite alteration, leucoxene and hair lines of carbonate. Potash feldspar more predominant. Hematite on the fractures. Large squarish chlorites - alteration of the mafic grains. Harder rock than the above section. Perhaps close to contact of Skeena and Betis aida.</p> <p>FAULT at 186'-195'. This is the same rock brecciated and sealed with pink and white carbonate. Some heulandite on the fracture planes.</p> <p>In the main rock there is sparse very fine grained magnetite.</p> <p>Lost core from 128'-129', 130'-131', 132'-133', 134'-135', 138'-139', 139.5'-143', 198'-201', 205.5'-207'.</p>		
	222'	END OF HOLE.		

SIGNED 
 JACK G. WILLARS B.A.Sc., P. ENG

DIAMOND DRILL LOG

D. D. HOLE NO. H 72 - 3

PROPERTY INTERNATIONAL MOGUL MINES LTD.

PAGE 2

FROM	TO	DESCRIPTION	SAMPLE NO.	CORE FT.	Gr
		SLUDGES :			0.02
		27' - 37'			0.01
		37' - 47'			0.005
		47' - 57'			0.005
		57' - 67'			0.005
		67' - 77'			0.02
		77' - 87'			0.01
		87' - 97'			0.01
		97' - 107'			0.005
		107' - 117'			0.01
		117' - 127'			0.005
		127' - 137'			0.01
		137' - 144'			0.005
		144' - 147'			0.01
		147' - 152'			0.02
		152' - 155'			0.02
		155' - 160'			0.015
		160' - 165'			0.01
		165' - 170'			0.015
		170' - 175'			0.01
		175' - 180'			0.015
		180' - 185'			0.01
		185' - 190'			0.025
		190' - 194'			0.02
		194' - 201'			0.015
		201' - 211'			0.02
		211' - 222'			

SIGNED

Jack G. Willars
 JACK G. WILLARS B.A.Sc., P. ENG.

S 30° E



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 4050 MAP #6

PROFILE SECTION M 72 - 3

CLAIM JAY II

(LOOKING NORTHEAST)

INTERNATIONAL MOGUL MINES LTD.

CHATAWAY OPTION, B. C.

SCALE 1" = 40'

J. G. Willans
J. G. WILLANS

J. G. Willans

S 85° E

L 27950N
19435 E

D - BC



Department of
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NO. **4050** MAP #7

PROFILE SECTION M72 - 4

CLAIM BOB 2

(LOOKING NORTH)

INTERNATIONAL MOGUL MINES LTD.

CHATAWAY OPTION, B.C.

SCALE: 1" = 40'

J. G. Willars
J. G. WILLARS

J. G. Willars

DIAMOND DRILL LOG

D. D. HOLE NO. M 72 - 4

PROPERTY INTERNATIONAL NICOL MINES LTD.

PAGE 1

LOCATION Chateau Mines, B.C. Claim Bob 2

COLLAR: LAT. 49°50' 3

DEP. 10705 2

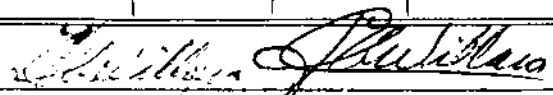
ELEV. 1150 A.L.

BEARING S 85° E

DIP. 17°

DEPTH OF HOLE 253'
 STARTED Sept. 20, 1972.
 COMPLETED Oct. 23, 1972.
 DRILLED BY Corsons Drilling
 Core Size 3 1/2"

FROM	TO	DESCRIPTION	SAMPLE NO.	CORE FT.
0	18'	CASING		
18'	210'	<p>SKELIA</p> <p>Medium to coarse grained rock containing pink orthoclase and gray plagioclase in the mass with quartz eyes, some coarse grains of square shaped quartz, rectangular and squarish mafics rich altere to chlorite, cordierite also present. Mafics in large scattered grains. Joint planes at 15° and 40° to the core axis. Gray alteration halos 1/2" on each side of joints. Rusty weathering to 11'. Malachite at 11.5'</p> <p>At 35.1' very 5" shear with malachite flecks.</p> <p>At 37.5' 3" carbonate at 40° - dark red or purple colour scratches red - hematite.</p> <p>Fine specks of magnetite scattered sparsely through the core.</p> <p>From 51'-59' specimen sample for character - speck of chalcocite encryrite at 58.3' and 3/4" and 60.5'.</p> <p>Scattered hematite, ramsdellite and spinel. Malachite carbonate, slight epidote alteration. Large chlorites derived by alteration. Minor limonite on the fractures.</p> <p>From 65'-110' broken to core.</p> <p>From 100'-101' intense alteration.</p> <p>At 110' carbonate stringers.</p> <p>Narrow soft alteration sections at 130'-132.5', 113'-114.5' otherwise fresh rock with mild alteration.</p> <p>From 117'-171' mild epidote alteration coming in.</p> <p>From 171'-210' darker coloured rock, increased alteration and carbonate veins.</p> <p>At 210' 6" fault gouge at 30° to the core axis.</p>		
210'	253'	<p>BETHSIADA</p> <p>Fine grained pink groundmass with square quartz eyes and bookish biotite, altered rock - soft, chlorite, epidote. Resembles the contact rock of the Bethsiada intrusive. Probably a dike from the main body.</p>		
	253'	END OF HOLE.		

SIGNED 
 JACK G. WILLARS B.A.Sc., P. ENG

DIAMOND DRILL LOG

D. D. HOLE NO. 472-4

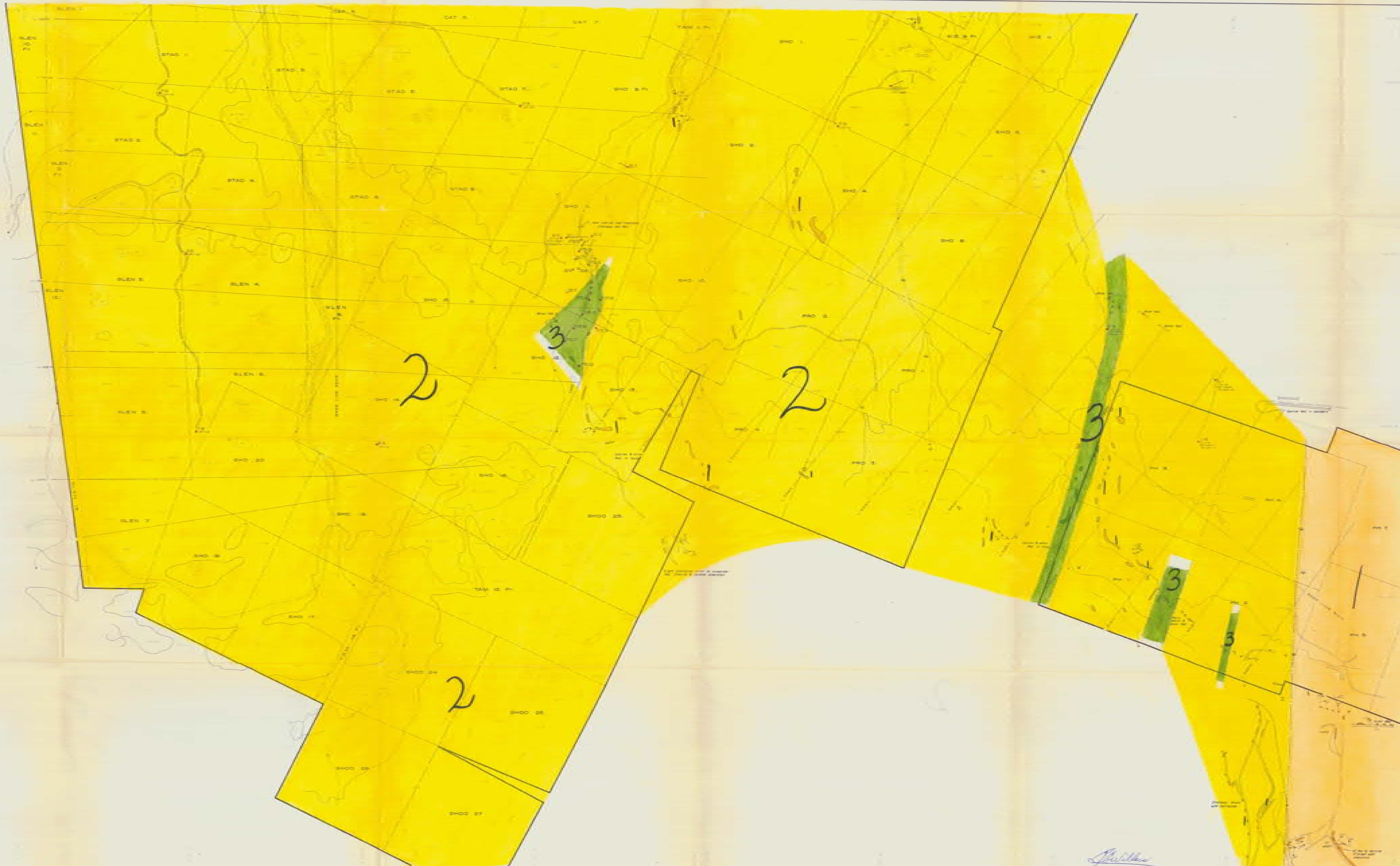
PROPERTY INTERNATIONAL MOGUL MILES LTD.

PAGE 2

FROM	TO	DESCRIPTION	SAMPLE NO.	CORE FT.	G/G
		SLTD GCS :			
		21' - 31'			0.02
		31' - 41'			0.30
		41' - 51'			0.025
		51' - 61'			0.02
		61' - 71'			0.01
		71' - 81'			0.02
		81' - 91.8'			0.025
		91' - 101'			0.02
		101' - 111'			0.03
		111' - 121'			0.035
		121' - 131'			0.02
		131' - 141'			0.025
		141' - 151'			0.01
		151' - 161'			0.02
		161' - 171'			0.05
		171' - 181'			0.03
		181' - 191'			0.15
		191' - 201'			0.03
		201' - 211'			0.08
		211' - 221'			0.07
		221' - 231'			0.05
		231' - 241'			0.05
		241' - 253'			0.06

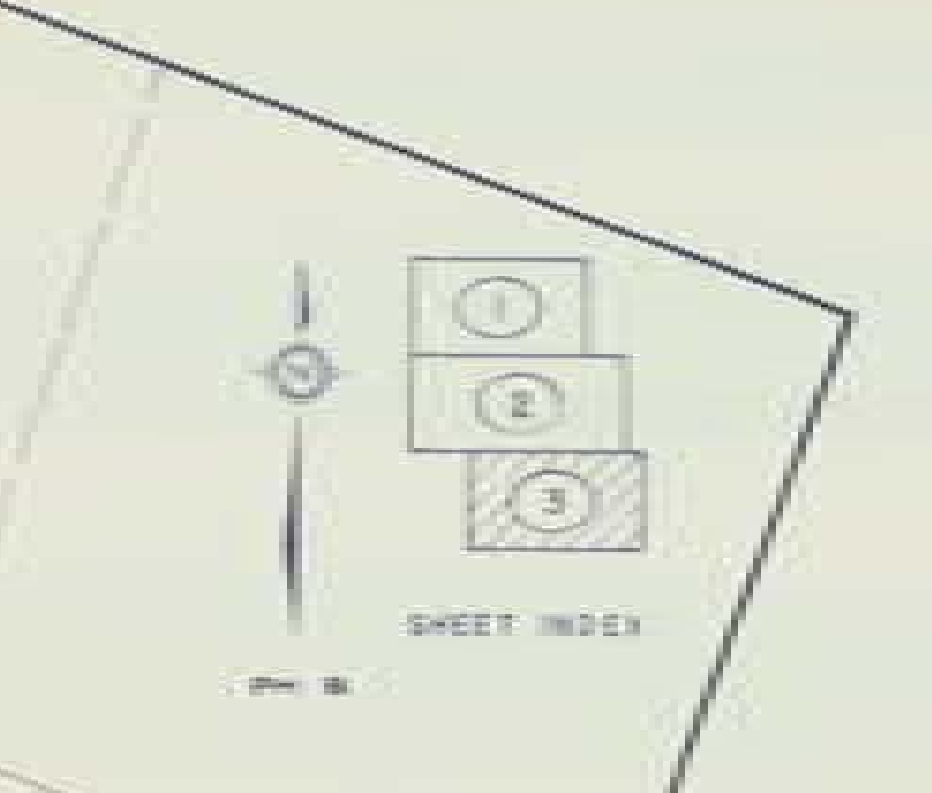
SIGNED

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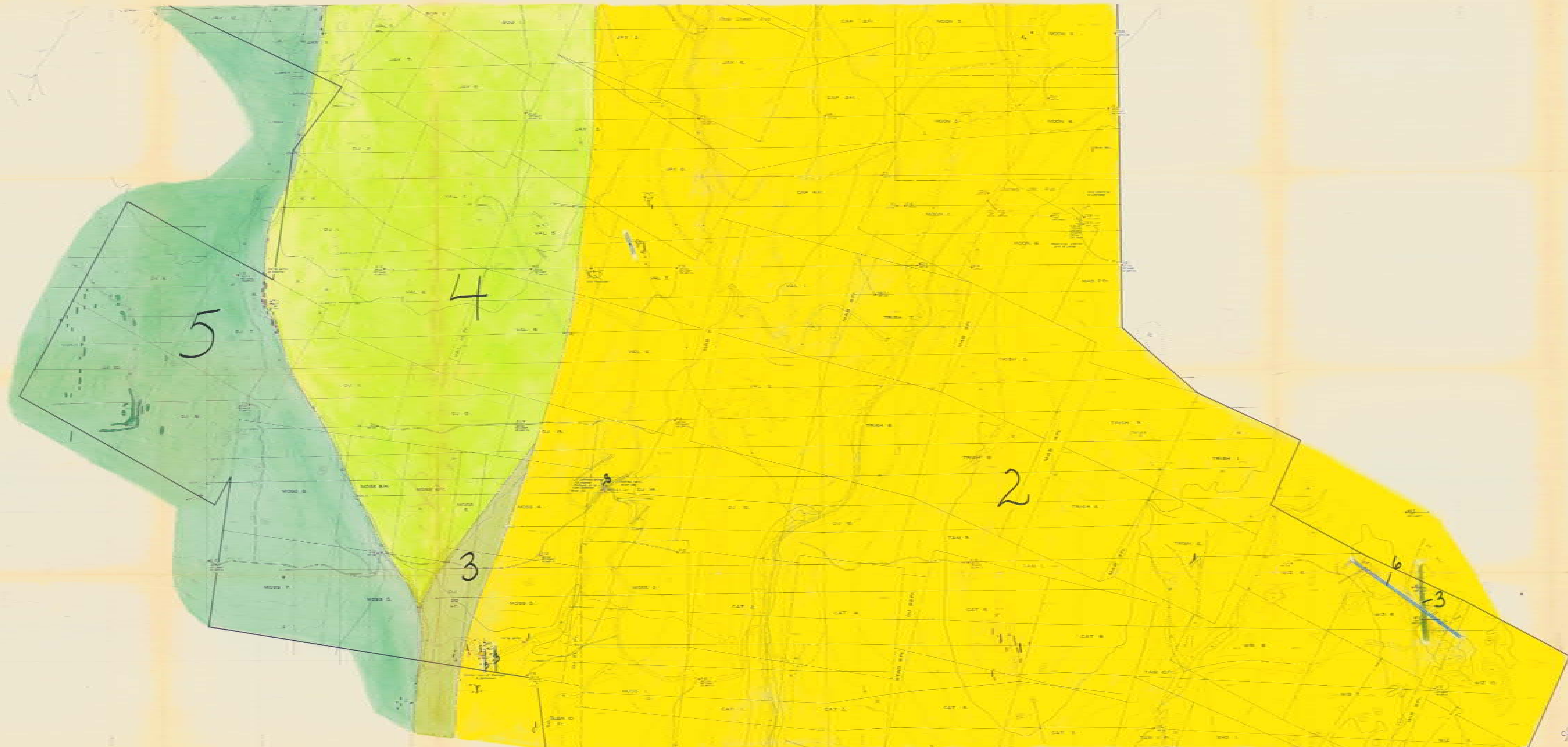
LEGEND

- Rock Types:**
- Unfractured Porphyry
 - Lockite
 - Schist
 - Crossed Porphyry
- Suction Creek Grandbank Serpentine - andites**
- Serpentine phase
 - Serpentine phase
 - Serpentine phase
 - Chlorite phase
 - Serpentine phase
- Symbols:**
- Strike and dip of jointing - vertical, rotated
 - Direction of glacial features
 - Strike
 - Region
 - Road
 - Contour
 - Outcrop
 - Geological contact
 - Creek
 - Dip-slip and hole - vertical, rotated
 - Vertical dimension of hole
 - True number, depth of overburden, size depth of hole, and average quality of hole in parts per million copper



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 No. 4050 sub. #3

INTERNATIONAL MOGUL MINES LIMITED
 CHATAGAY EXPLORATION PROJECT
 HIGHLAND VALLEY - BRITISH COLUMBIA
GEOLOGICAL PLAN



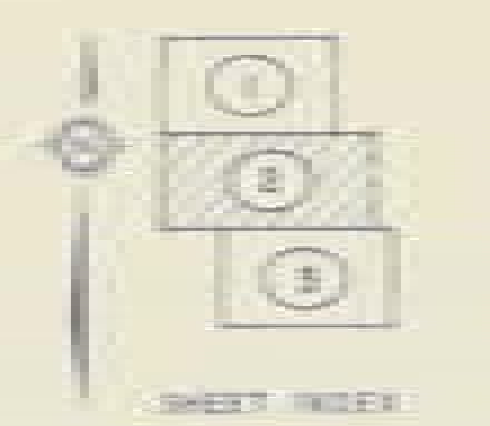
LEGEND

Rock Types

[Pink]	Unlithified Porphyry
[Light Green]	Lignite
[Blue]	Cracked Magma
[Light Green]	Granodiorite (Schist)-andesite
[Green]	Andesite gneiss
[Yellow-Green]	Diorite gneiss
[Yellow]	Cherty gneiss
[Orange]	Sulfur gneiss

Symbols

[Symbol]	Strike and dip of jointing-vertical, inclined
[Symbol]	Direction of glacial features
[Symbol]	Dike
[Symbol]	Trench
[Symbol]	Road
[Symbol]	Subroad
[Symbol]	Subtop
[Symbol]	Geological contour
[Symbol]	Creek
[Symbol]	Demarcation drill hole-vertical, inclined
[Symbol]	Drill hole (depth of collar, surface, and depth of hole, and average length of hole in collar or interior collar)

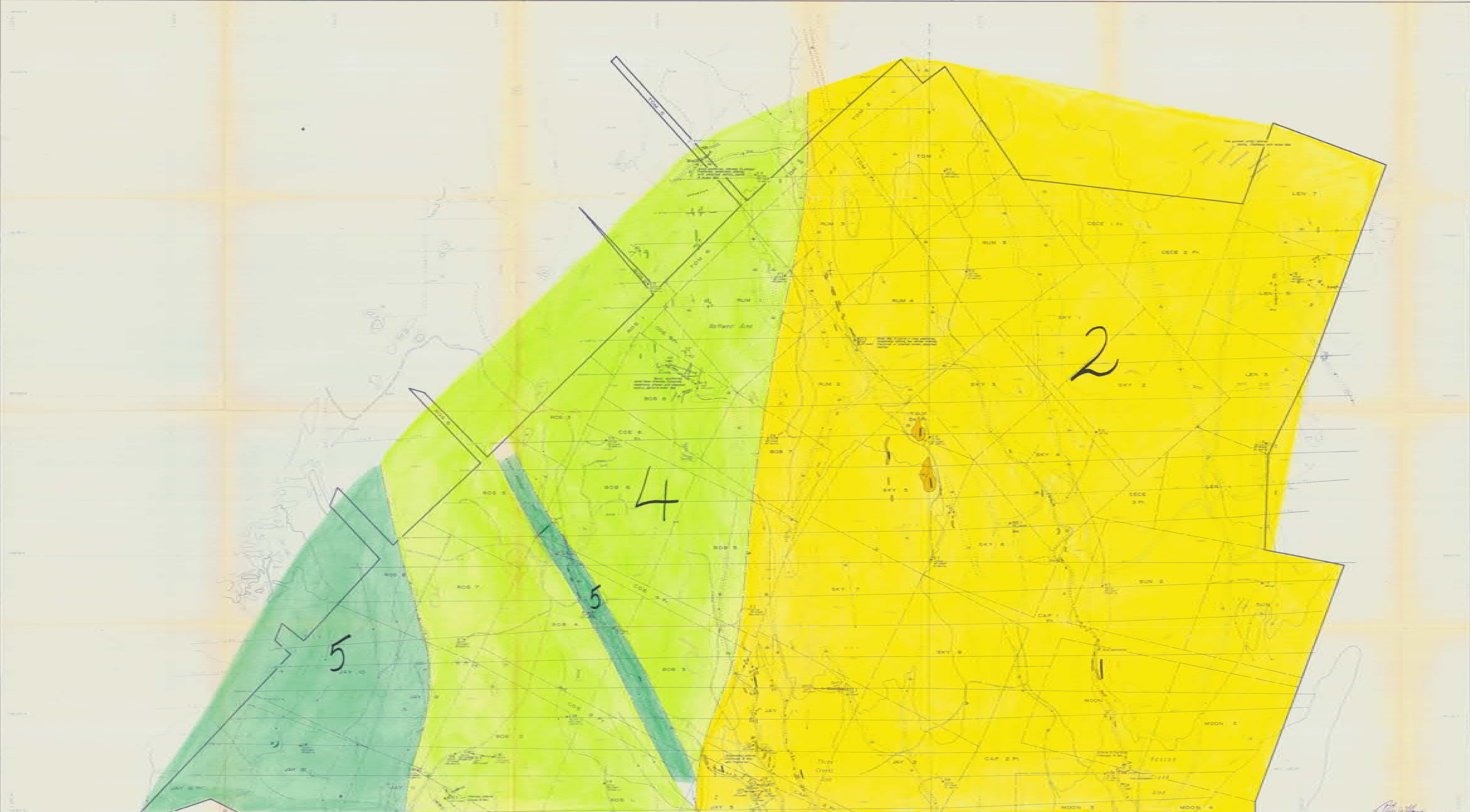


Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 4050 SUB #2

INTERNATIONAL MOGUL MINES LIMITED
 CHATEWAY EXPLORATION PROJECT
 MIDLAND VALLEY - BRITISH COLUMBIA
GEOLOGICAL PLAN

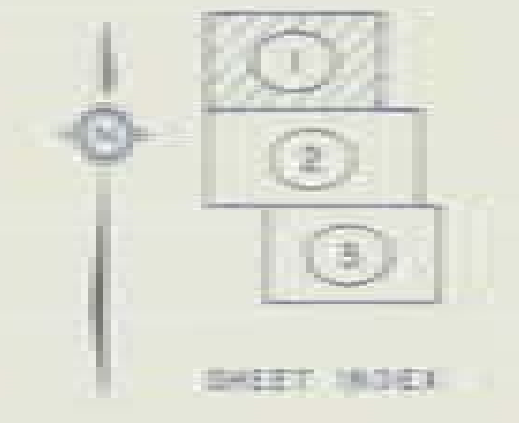
Geological

SCALE: 1" = 400' (DATE: October 1972) Sheet #2



LEGEND

- Rock types**
- MISSISSIPPIAN
- Crystalline**
- Undifferentiated Porphyry
 - Alaskite
 - Aplite
 - Crowded Porphyry
- Sutton Creek**
- Granodiorite Batholith-varieties
 - Bethlehem phase
 - Stewart phase
 - Bethlehem phase
 - Chowbey phase
 - Sutton phase
- Symbols**
- Strike and dip of jointing-vertical, inclined
 - Direction of ground features
 - Pile
 - Trench
 - Roof
 - Swamp
 - Outcrop
 - Geological contact
 - Creek
 - Diamond drill hole-vertical, inclined
 - Vertical dimension in ft
 - Core number, depth of sample, test depth of hole, and average grade of hole in parts per million copper



Continued on
Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. 4050 MR #1

INTERNATIONAL MOGUL MINES LIMITED
 CHATSWAY EXPLORATION PROJECT
 HIGHLAND VALLEY - BRITISH COLUMBIA
GEOLOGICAL PLAN

SCALE 1:50,000 (1972, December 1972)
 DRAWN BY [signature]
 SHEET NO. 1