

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **3306** MAP

3306

GEOLOGICAL AND GEOCHEMICAL REPORT

M1-37 & TAMMY GROUPS

located on Adam River

at

9 air-miles southwest of Sayward, B.C.
Lat. $50^{\circ}-16'$ N, Long. $126^{\circ}-04.5'$ W.

in the

92 L / 1E, 8E

NANAIMO MINING DIVISION

by

W. M. SHARP, P. ENG., B.C.

FOR

WESTERN STANDARD SILVER MINES LTD. (N.P.L.)
KELOWNA, B.C.

between

August 1st - 31st, 1971

WILLIAM M. SHARP, M.A.Sc., P.ENG.
CONSULTING GEOLOGICAL ENGINEER
171 W. ESPLANADE, NORTH VANCOUVER, B.C.

October 8, 1971

President & Directors,
Western Standard Silver Mines Ltd. (N.P.L.),
c/o P.O. Box 462,
Kelowna, B.C.

Gentlemen:

The accompanying "GEOLOGICAL AND GEOCHEMICAL REPORT, M1-37 AND TAMMY GROUPS", NANAIMO MINING DIVISION", dated October 8, 1971 results from data accruing from the writer's geological surveys, and from field and laboratory work performed by Barringer Research Limited - the geochemical contractor.

The above-noted investigations, described and summarized in this report, comprise a form of assessment work which is acceptable for credit by the B.C. Dept. of Mines. This report provides the necessary evidence that such work, with a gross value in excess of \$100 per claim, has been done on both groups. Hence, the report may be submitted (in duplicate) to the Mining Recorder of the Nanaimo Mining Division - noting that these follow upon the Certificates of Work (Form B, Mineral Act) previously submitted by you.



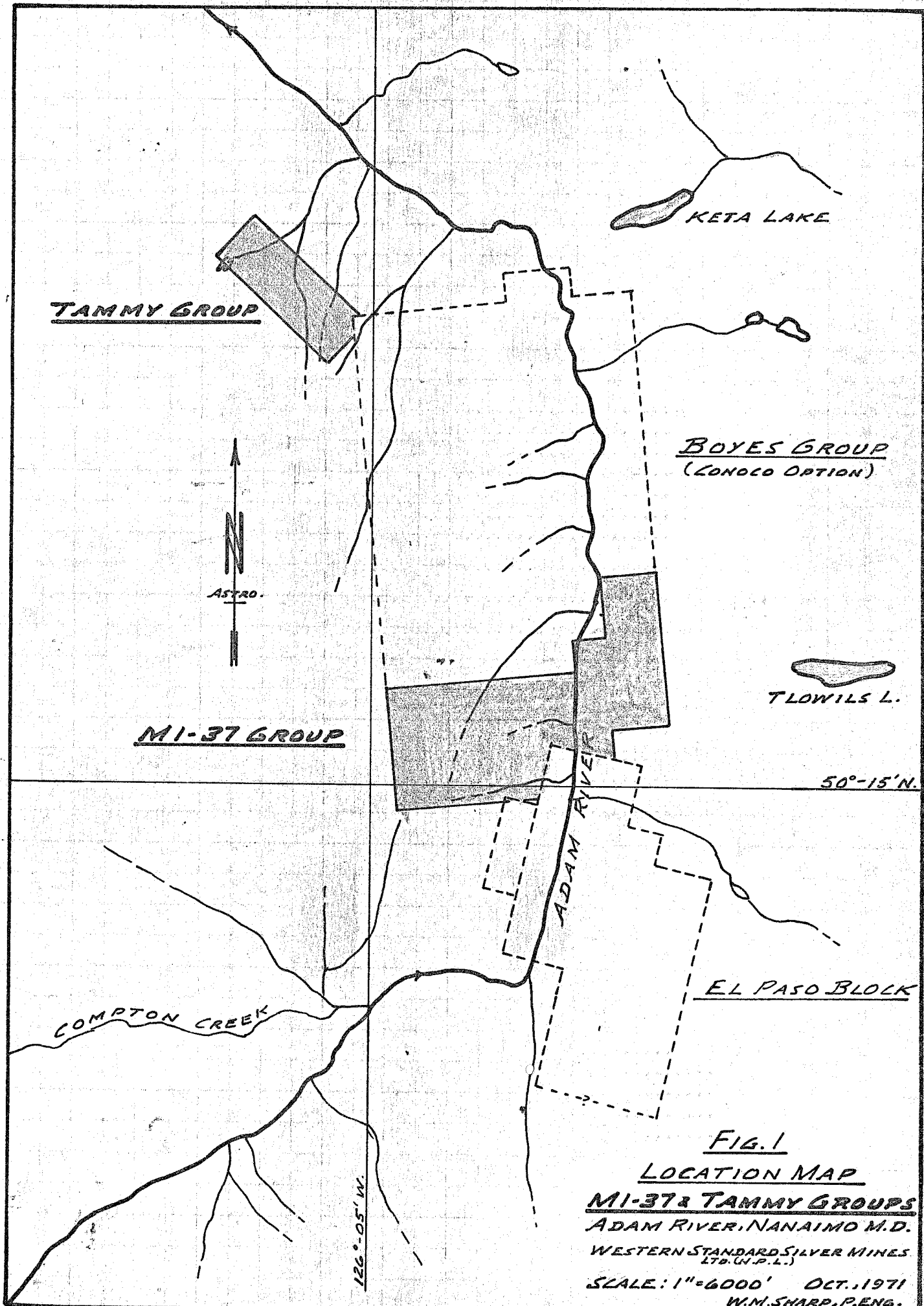
W. M. Sharp, P. Eng.

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TAMMY GROUP

KETA LAKE

BOYES GROUP
(CONOCO OPTION)



MI-37 GROUP

50°-15' N.

ADAM RIVER

COMPTON CREEK

EL PASO BLOCK

126°-05' W.

FIG. 1
LOCATION MAP
MI-37 & TAMMY GROUPS
ADAM RIVER, NANAIMO B.C.
WESTERN STANDARD SILVER MINES
LTD. (N.P.L.)
SCALE: 1" = 6000' OCT., 1971
W.M. SHARP, P. ENG.

INTRODUCTION

From Sayward, the property is reached via 15 miles of main-line and branch logging roads serving the Adam River section of McMillan-Bloedel's Kelsey Bay logging division.

The M1-37 and Tammy claim groups lie on relatively southerly and northerly intervals of the ridge lying west of Adam River and north of the Adam River-Compton Cr. junction. In addition, the M1-37 group straddles Adam River and the lower slopes of the easterly-adjacent ridge. Both groups, lying at roughly 3 miles apart, adjoin the intervening Boyes group; within the latter, veining and disseminated copper mineralization have been opened on at least three distinct structures.

The Tammy group comprising a relatively small (10-claim) block, situates on the upper N.E. end of the ridge. Vehicle access is to the 1000-foot elevation. Surface elevations over the group range between 1800-2500 feet. Ground-access within the claim block is relatively difficult by reason of the steep, sharply dissected terrain and generally dense cover of typical coastal forest growth. Ground access within the westerly half of the M1-37 group is, on the average, as difficult - in that the advantages of a less severe topography are counter-balanced by the disadvantage of a greater vertical range of surface elevations. In view of the above factors, plus the attendant time and budgetary limitations, the writer's original plans for a 'normal' grid-survey were extensively revised. However, the adopted survey coverage appears to have provided the essential information required for a general assessment of the potential of both groups.

The writer carried out geological mapping and provided supervision of the geochemical surveys during three visits to the property. The geochemical survey crews made the required surveys during the period August 19-26, 1971.

The Tammy group comprises:

Tammy #1-10 incl.; Rec. No's. 27042-51(m);
rec. date 17 Sept. 1968

The M1-37 group comprises:

M1-M37 incl.; Rec. No's. 29559-95(m);
rec. date 9 Sept. 1969

FIELD WORK

1. GEOLOGICAL SURVEYS:

A, M1-37 Group

Reconnaissance mapping was accomplished on 1 in. = 1/4 mi. topographic map, with a 100-foot contour interval. Observation points were determined by altimeter, by reference to mapped topographic features, by compass resections on topographic reference points, and by pacing. Geological features mapped included rock-type, bedding (incl. flow-layers) attitudes, prominent fracture attitudes, rock textures, and alteration. No economic mineralization was seen to occur within the bedrock exposures examined.

B, Tammy Group

Field mapping procedures were similar to those employed on the M1-37 group. In addition, a detailed Brunton-tape survey was carried out - primarily for the purpose of establishing a geochemical survey datum - along the small creek traversing the Tammy #9 and #10 claims.

Continued.....

2. GEOCHEMICAL SURVEYS:

General

The writer, on behalf of his client, arranged that Barringer Research Limited would perform the necessary field and laboratory work on a total-contract basis, but under his general direction. Mr. B. W. Smee, staff geochemist for Barringer, provided on-site supervision of the field work. Initially, the writer provided the contractor with a detailed plan specifying the gross areal coverage and sample spacing desired. However, for reasons noted previously, the survey plans were modified and carried out as depicted in Drawings M-2 and T-2.

On both groups the general character of the overburden varies markedly in accordance with nature of the local terrain, forest cover, and drainage. In general, requisite B-zone soil occurs at depths of a few inches to 2 feet in areas of steeper, well-timbered slopes, and at depths of 2-5 feet, or more, within hill-slope drainage courses or flat swampy areas. The over-lying A-zone comprises a difficultly-penetrable layer of roots and decomposing vegetation.

The soil-samples were derived from the B-horizon wherever possible, and bog samples taken where groundwater circulation was upward towards the ground surface. In most cases a mattock was used for taking samples; where required by a thick 'organic' cover, an extendible auger sampler was used. Each sample was field-packaged in a standard high wet-strength kraft paper bag, with its grid, or general survey position marked by felt pen on one side of the bag.

A, M1-37 Group

Drawing M-2 provides details of this survey.

Soil-sample traverse lines totalled approximately 8 miles. In general, soil samples were taken on these flagged (100') lines at 400 foot intervals; local bog stream, and bank samples were taken at closer intervals.

Continued.....

A total of 188 samples was collected - principally from the more easily-covered east half of the claim block.

B, Tammy Group

Drawing T-2 provides details of this survey.

Soil-sampling was carried out over 5 parallel traverse lines of different length, at 400'- 800' line separations. A total of 4 miles of line was traversed, with sampling at 400-ft. line-intervals.

Including local bog samples, 60 samples in all were collected.

OFFICE WORK

Office work by Mr. Smee included a statistical classification of the geochemical laboratory data relating to each claim group, the preparation of the relevant histograms, the preparation of rough geochemical survey maps showing classified soil-copper anomalies, and the provision of a brief description and summary of Barringer's field and laboratory work.

Related office work by the writer includes the preparation of the preliminary geochemical survey layouts, interim cost estimating and reporting, the office examination of collected rock samples, and the preparation of this report and accompanying maps.

LABORATORY WORK

This was restricted entirely to the geochemical component of the combined geological-geochemical survey. The following descriptions derive principally from the preliminary summary provided by Mr. Smee:

Continued.....

The geochemical analytical work was performed in the Vancouver, B.C. laboratory of Barringer Research Limited. All samples were hot air-dried on Al. shells, cooled, and the natural fines screened to minus-80 mesh through nylon sieves. A sample weight of 0.25 grams was placed in a test tube with perchloric acid and digested on a hot plate for 3 1/2 hours. The resulting solutions were cooled, and analyzed for "total-copper" content by atomic absorption spectrophotometry - employing a Techtron AA-5 instrument. The AA analyses were performed by Mr. D. Koop of Barringer Research Limited.

GENERAL GEOLOGY

The general claims area, comprising the Adam River valley and adjacent ridges in this locality, is underlain by a thick section of generally flatly north-dipping crystalline basaltic lavas. This lithologic section relates to upper part of the regional Karmutsen formation of (Upper Permian?-) Triassic age.

Locally, the local Adam River section includes a distinctive intra-formational band of variably recrystallized and bleached carbonaceous limestone. The Adam River assemblage of limestone and volcanics is irregularly intruded (and metamorphosed) by a local granodiorite-diorite pluton, which also comprises the main mass of the ridge east of the river.

Where exposed adjacent to the intrusive, the above mixed assemblage is seen to be more-or-less sheared, brecciated, and metasomatically altered, and to include later-magmatic intrusions of siliceous granitic to pegmatitic material. Locally, chlorite-K-feldspar alteration associates with the more strongly migmatized zones. Two such exposures on the east (rel. to the river) road contains appreciable contact metamorphic magnetite and minor amounts of disseminated chalcopyrite.

Continued.....

The writer did not see any outcrops of limy or granitic rocks within either the Tammy group or west ridge areas of the M1-37 groups.

Air photo studies by the writer and others provide evidence of significant faulting within the general geological section.

DETAILED GEOLOGY

A, M1-37 Group

Frequent bedrock exposures occur within the steeper lower slopes and creek valleys. Bedrock within the flatter summit areas is almost totally concealed by glacial drift, a dense cover of brush, or by organics filling swampy depressions.

The present evidence indicates that granitic rocks underlie most of the slope and ridge east of Adam River. Westward, close to river level, these make intrusive contact with a 300'- 400' thick section of (limy?) basaltic tuffs and dark carbonaceous limestone - this section being more-or-less metasomatically altered to pyroxene-rich migmatites and/or bleached and recrystallized limestone. Locally, the course of the river appears to be controlled by this relatively 'weak' assemblage.

The current extent of mapping indicates that Karmutsen lavas underlie all claims to the west of the river. These rocks comprise a plus-3000 foot section of lithologically uniform crystalline lavas of predominantly basaltic composition. Most have amygdaloidal and/or porphyritic textures, and have a generally 'fresh' appearance. Plagioclase feldspar, zeolites, epidote, and quartz comprise the phenocrysts and amydules. On the basis of the 'bedded' exposures noted within this claim block and adjoining Boyes group, the general section appears to dip rather flatly northward.

Continued.....

Some disseminated magnetite and pyrite occurs within the more altered and fractured volcanics adjacent to the mixed-limy and granitic rocks. No other mineralization was noted within the almost totally drift-covered contact zone.

B, Tammy Group

This general area is underlain by crystalline basalts similar to those exposed southward along the ridge. The local section, however, appears to contain a somewhat greater proportion of lighter (andesitic?) lava.

On the basis of a relatively few observations of flow attitudes, it appears that the local assemblage dips flatly northward to northwestward - with probable markedly sinuous strikes.

An E.N.E.-striking zone of sheet-fracturing and faulting traverses the Tammy #9 - #10 claims. Within the mapped westerly interval of this structure the fractured crystalline basalts are slightly bleached, chloritized, or epidotized, and erratically veined with quartz. However, there is no evidence of copper mineralization.

GEOCHEMISTRY RESULTS

A, M1-37 Group

A pair of narrow 3rd-order anomalies occur within the ridge area delimited by the M5, M6 & M8 claims. Each of these contains only a 1st or 2nd order spot-anomaly. These, and adjoining 3rd-order anomaly opening northward are of little apparent geochemical importance.

An extensive 3rd-order anomaly ajoin the east bank of Adam River where it traverses the M16-M1 row of claims. This is complemented

Continued.....

by a smaller anomaly on the west bank of the river on M1 & M2. Within M1 both anomalies include small to medium-sized 2nd order cores.

Neither of the pair of anomalies by the river, nor of the several local 2nd and 3rd order anomalies within more westerly areas of the group appears to be of obvious geochemical significance.

B, Tammy Group

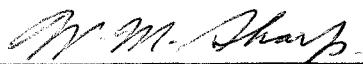
None of the anomalies delineated within the actual Tammy claims are geochemically significant. The narrow 2nd order anomaly which occurs within the extreme N.W. corner of the Boyes group (in Tammy #2 M.C.) may be of indirect significance, in that copper mineralization is known to occur within more southerly claims of the Boyes group.

CONCLUSIONS

The present geological and geochemical data provide no evidence of the occurrence of even minor copper mineralization within the Tammy group.

The combined geological-geochemical data relating to the M1-37 group indicate only one zone of potential bedrock mineralization which may, or may not be economically significant. Such mineralization that might occur would appear to associate with the metamorphosed and migmatized band of limy volcanics and limestones flanking the Adam River granodiorite body. Possible occurrences of copper mineralization within this panel would most likely lie within larger zones of disseminated magnetite. Therefore, at least a magnetic survey covering the geochemical anomalies abutting the river is warranted.

Respectfully submitted,



W. M. Sharp, P. Eng.

CANADA
PROVINCE OF
BRITISH COLUMBIA

Geological
In the Matter of ~~Contract~~ and geochemical exploration
of the M1-37 (Rec. No's. 29559-95 incl.) and Tammy (Rec.
No's. 27042-51 incl.) claim groups, Nanaimo Mining Division
for Western Standard Silver Mines Ltd. (N.P.L.) between
Aug. 1-31, 1971, and subsequent map and report preparation
to October 8, 1971.

TO WIT:

I. William M. Sharp, P. Eng., B.C.
of 171 West Esplanade Avenue, North Vancouver

in the Province of British Columbia

do solemnly declare that the following is an accurate estimate of time and costs in-
volved in the above field exploration and related laboratory and office work:

M1-37 GROUP

Geochemical Survey Contract per Barringer Research Inv. #9491.....	\$3,019.60
Geological Survey:	
W. M. Sharp, P. Eng., Consultant:	
Field fees - Aug. 8, 9, 26, Sept. 3 for 3½ days @ \$125/day..	\$437.50
Travel fees - Aug. 7, 9, 26 for 1½ days @ \$75/day.....	\$112.50
S. Fegan, geol. asst.	
Field wages - Aug. 7, 8, 9, for 3 days @ \$40/day.....	\$120.00
W. Sharp & S. Fegan travel expense, Aug. 7-9 & 24-26:	
B.C. Ferries.....	\$ 18.00
Lodging & meals.....	\$ 24.00
U-drive rental.....	\$ 51.26
W. M. Sharp, P. Eng. - proportion report prep. fees & expense...	\$300.00
	<u>\$1,063.26</u>
TOTAL, M1-37 GROUP.....	\$4,082.86

TAMMY GROUP

Geochemical Survey Contract per Barringer Research Inv. #9494.....	\$1,069.50
Geological Survey:	
W. M. Sharp, P. Eng., Consultant:	
Field fees - Aug. 25, for 1 day @ \$125.....	\$125.00
Travel fees - Aug. 26 portion - ½ day @ \$75.....	\$ 37.50
Travel expense: B. C. Ferries.....	
Lodging & meals.....	\$ 14.00
Car rental.....	\$ 33.60
W. M. Sharp, P. Eng. - proportion report prep. fees & expense...	\$200.00
	<u>\$ 422.10</u>
TOTAL, TAMMY GROUP.....	\$1,491.60

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
North Vancouver in the
Province of British Columbia, this
16th day of October
A. D., 1971

W. M. Sharp

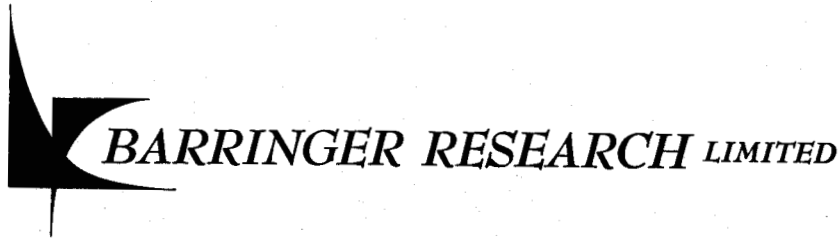
LIST OF SURVEY PERSONNEL

1. Geochemical Survey:

B. W. Smee, Geochemist, Barringer Research Limited, Vancouver, B.C.
R. Ficek, Soil Sampler, Don Mills, Ontario.
G. Rowe, Soil Sampler, North Vancouver, B.C.
I. McLeod, Soil Sampler, Vancouver, B.C.
W. Boyes, Jr., Soil Sampler, Sayward, B.C.

2. Geological Survey:

W. M. Sharp, P. Eng., Consulting Geological Engineer, North Van., B.C.
S. Fegan, Geologists Assistant, Vancouver, B.C.



304 CARLINGVIEW DRIVE
 REXDALE, ONTARIO, CANADA
 PHONE: 416-677-2491
 CABLE: BARESEARCH

ADVANCED TECHNIQUES AND INSTRUMENTATION FOR THE EARTH SCIENCES

DATE: September 7, 1971

PROJECT: 156.34

PERIOD COVERED:

PROGRESS BILLING: 2 FINAL

SHIPPING REPORT:

WORK REPORT:

FED. SALES TAX:

ONT. SALES TAX:

Mr. W. Sharp
 171 West Explanade Street
 North Vancouver, B. C.

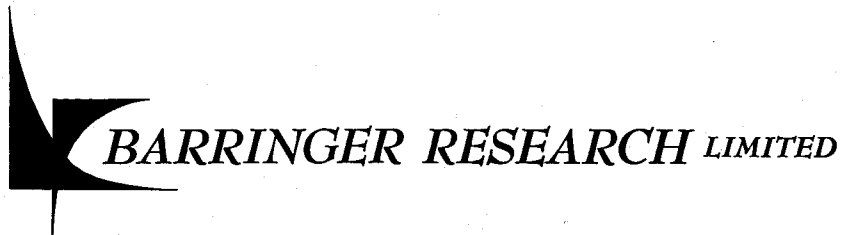
TERMS: NET

AUTHORITY: Contract Signed August 18, 1971

to: Geochemical Survey M Group

Mobilization	225.00	
Sampling - 18 Man Days @ 75.00 per day	1,350.00	
Analysis 174 samples @ 1.20 per sample	208.80	
<u>Consulting by Mr. Smee</u>		
3 1/2 Days at 125.00 per day	437.50	
Expenses	25.00	
Helper 5 days @ 30.00 per day	150.00	
Plotting Results	62.50	
Helicopter - 2:05 hours	520.00	
Cessna 180	40.00	
	<hr/>	
	3,019.60	
LESS: 1/2 of amount received, 589.26	294.63	
	<hr/>	
		2,724.97
		=====

INVOICE N^o 9491



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ADVANCED TECHNIQUES AND INSTRUMENTATION FOR THE EARTH SCIENCES

DATE: Sept. 7, 1971

PROJECT: 156.34

PERIOD COVERED:

PROGRESS BILLING: 2 Final

SHIPPING REPORT:

WORK REPORT:

FED. SALES TAX:

ONT. SALES TAX:

Mr. W. Sharp
 171 West Esplanade Street
 North Vancouver, B. C.

TERMS: NET

AUTHORITY: Contract signed August 18, 1971

TO: Geochemical Survey Tammy Group

Sampling 6 Man days	@ 75.00 per day	450.00
Analysis 60 samples	@ 1.20 per sample	72.00
<u>Consulting by Mr. Smee</u>		
2 1/2 days	@ 125.00 per day	312.50
Helper - 2 days	@ 30.00 per day	60.00
Plotting results		62.50
Demobilization 3 Men		112.50
		<hr/> 1,069.50
Less: 1/2 of amount received, \$589.26		294.63
		<hr/> 774.87

774.87

APPENDIX



BARRINGER RESEARCH LIMITED
 304 CARLINGVIEW DRIVE
 METROPOLITAN TORONTO
 REXDALE, ONTARIO, CANADA
 PHONE: 416-677-2491
 CABLE: BARESEARCH

GEOCHEMICAL LABORATORY REPORT NO. 189 - 8 DATE 2 Sept/71 *HK*

SAMPLE NO.	HCO ₃ ⁻ Cu PPM	Sample NO.	HCO ₃ ⁻ Cu PPM	Sample NO.	HCO ₃ ⁻ Cu PPM
00 BL T	8	T 8N BL	210	T 16N BL	60
4E	5	4E	35	4E	27
8E	14	8E	45	8E	49
12E	45	12E	20	12E	17
16E	9	16E	28	16E	26
20E	9	20E	55	20E	49
4N BL	7	24E	10	24E	44
4E BOG	30	28E	38	28E	6
8E	10	32E	28	32E	88
12E	8	36E	38	36E	8
16E	22	40E	40	40E	9
20E	79	44E	39	44E	59
24E	14	46E	110	48E	14
28E	20	BL 12N	27	52E	15
32E BOG	35	12N 4E	7	56E	28
36E BOG	23	8E	38	60E	130
40E BOG	17	12E	3	64E	55
44E	11	16E	67	68E	46
4N 47.2ET	3	12N 20E	58	16N 72E	10



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GEOCHEMICAL LABORATORY REPORT NO. 190 - 8 DATE 2 Sept 71 JK

SAMPLE NO.	HClO ₄ Cu PPM	Sample NO.	HClO ₄ Cu PPM	Sample NO.	HClO ₄ Cu PPM
JE 12N	102	5E 12S C	28	12E 12S	102
16N	98	16S	40	16S	114
20N	136	20S	38	20S	118
24N	32	7E 40N	92	24S	56
28N	86	8E BL +25 S	128	12E 4N	70
32N	40	8E 4S	90	8N	138
36N	120	8S	66	10N	130
40N	30	12S	76	13E BL C	44
44N	66	16S	88	4S	42
48N	64	20S	136	8S	30
52N	140	24S	134	12S	20
3E 56N	44	8E 40N	82	16S	36
5E B.L.C	30	44N	80	20S	18
4N	126	48N	72	13E 4N	56
8N	164	52N	42	8N	N.S.
12N	56	56N	46	12N	38
16N	56	9E 19+55	164	16N	38
SE 45 C	66	12E BL B	60	20E 8S	132
SE 85 C	38	12E 4S	76	20E 16S	72



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GEOCHEMICAL LABORATORY REPORT NO. 190 - B DATE 2 Sept 1971 *AK*

SAMPLE NO.	HClO ₄ Cu ppm	Sample NO.	HClO ₄ Cu ppm	Sample NO.	HClO ₄ Cu ppm
20E 20S	62	28E 32N	10	0W 16N	6
20E 4N	12	36N	14	20N	112
20E 24S	116	40N	26	24N	54
8N	80	28E 8S	112	8W BL	24
12N	64	12S	60	4N	390
16N	122	16S	90	8N	142
	34				
20N		20S	66	12N	50
24N	24	28E 24S	100	8W 4S	16
28N	24	20E 4S	60	8S	100
32N	36	20E 12S	50	12S	114
36N	24	0W BL	112	16S	90
20E 40N	20	0W 4S	12	20S	64
28E 4N	28	8S	38	15W BL	38
8N	N.S.	12S	106	16W BL	124
12N	64	16S	32	17W BL	176
16N	44	20S	100	18W 200' N	74
20N	52	0W 4N	40	18W BL	64
24N	14	8N	62	21W 100' N	40
28E 28N	30	0W 12N	50	21W BL	88

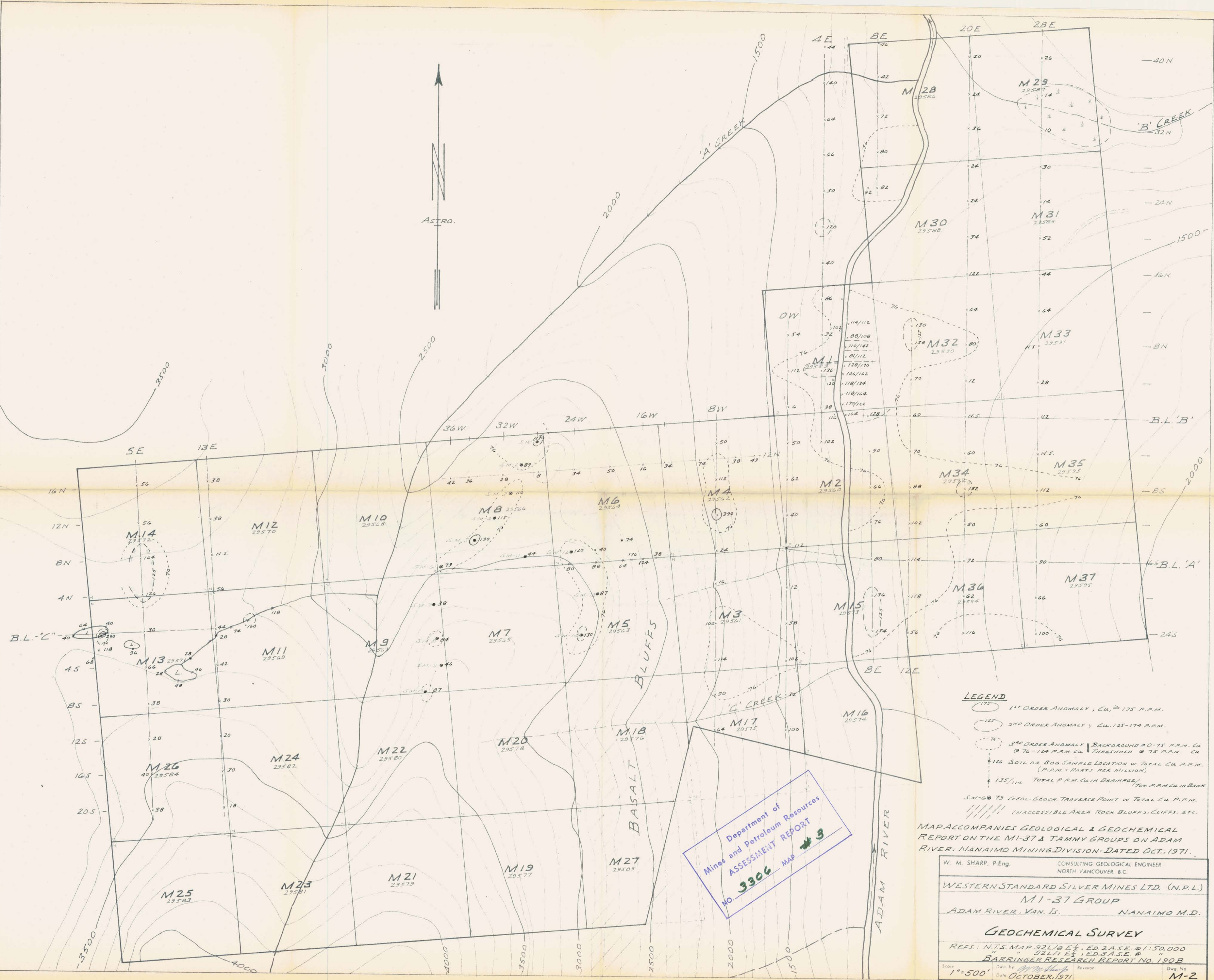


BARRINGER RESEARCH LIMITED
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 METROPOLITAN TORONTO
 REXDALE, ONTARIO, CANADA
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GEOCHEMICAL LABORATORY REPORT NO. 190 - B DATE 2 Sept/71

JK

SAMPLE NO.	HClO ₄ Cu ppm	Sample No.	HClO ₄ Cu ppm	Sample No.	HClO ₄ Cu ppm
24W 8L	80	R.B 20N	116	12N 6W	38
12N	34	R.B 28N	102	10W	74
32W 12N	28	M1 BOG	290	14W	34
36W 12N	36	M2 BOG	40	16W	16
S.W. 100' A	114	M3	64	20W	50
200' A	88	M4	40	28W	8
300' A	110	M5 BOG	186	37SW	42
400' A	82	M6 BOG	68	16N RB	116
500' A	128	M7 BOG	96	N32 R.B.	110
600' A	106	M8	28	24N R.B.	120
700' A	118	M9	46	A RIVER 100 SW OF 10N 12E	112
800' A	118	M10	48	200 SW OF 12	108
900' from BANK	122	M11	28	300SW	142
900' A RIVER	130	M12 CREEK	60	400SW OF 10.12	112
BL B 20E	16	M13	28	500SW OF 10.12	170
55' NE OF RIVER 1000' A	114	M14 S.S.	74	600SW OF 10.12	162
3.75E 12N RIVER BANK	136	M15	160	700 OF ON RE	134
85 12E	88	M16	118	800 SW OF 10.12	164
125 20E	72	12N 4W	44		



LEGEND

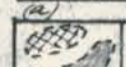


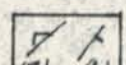
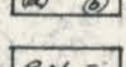
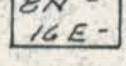

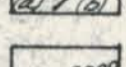
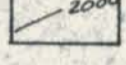

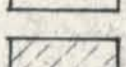
- 175 1ST ORDER ANOMALY; Cu, ≥ 175 P.P.M.
- 125 2ND ORDER ANOMALY; Cu, 125-174 P.P.M.
- 76 3RD ORDER ANOMALY BACKGROUND @ 0-75 P.P.M. Cu @ 76-124 P.P.M. Cu THRESHOLD @ 75 P.P.M. Cu
- 126 SOIL OR BOG SAMPLE LOCATION W. TOTAL Cu P.P.M. (P.P.M. = PARTS PER MILLION)
- 135/114 TOTAL P.P.M. Cu IN DRAINAGE / TOT. P.P.M. Cu IN BANK
- SM 79 GEOL. GEOCH. TRAVERSE POINT W. TOTAL Cu P.P.M.
- ||||| INACCESSIBLE AREA ROCK BLUFFS, CLIFFS, ETC.

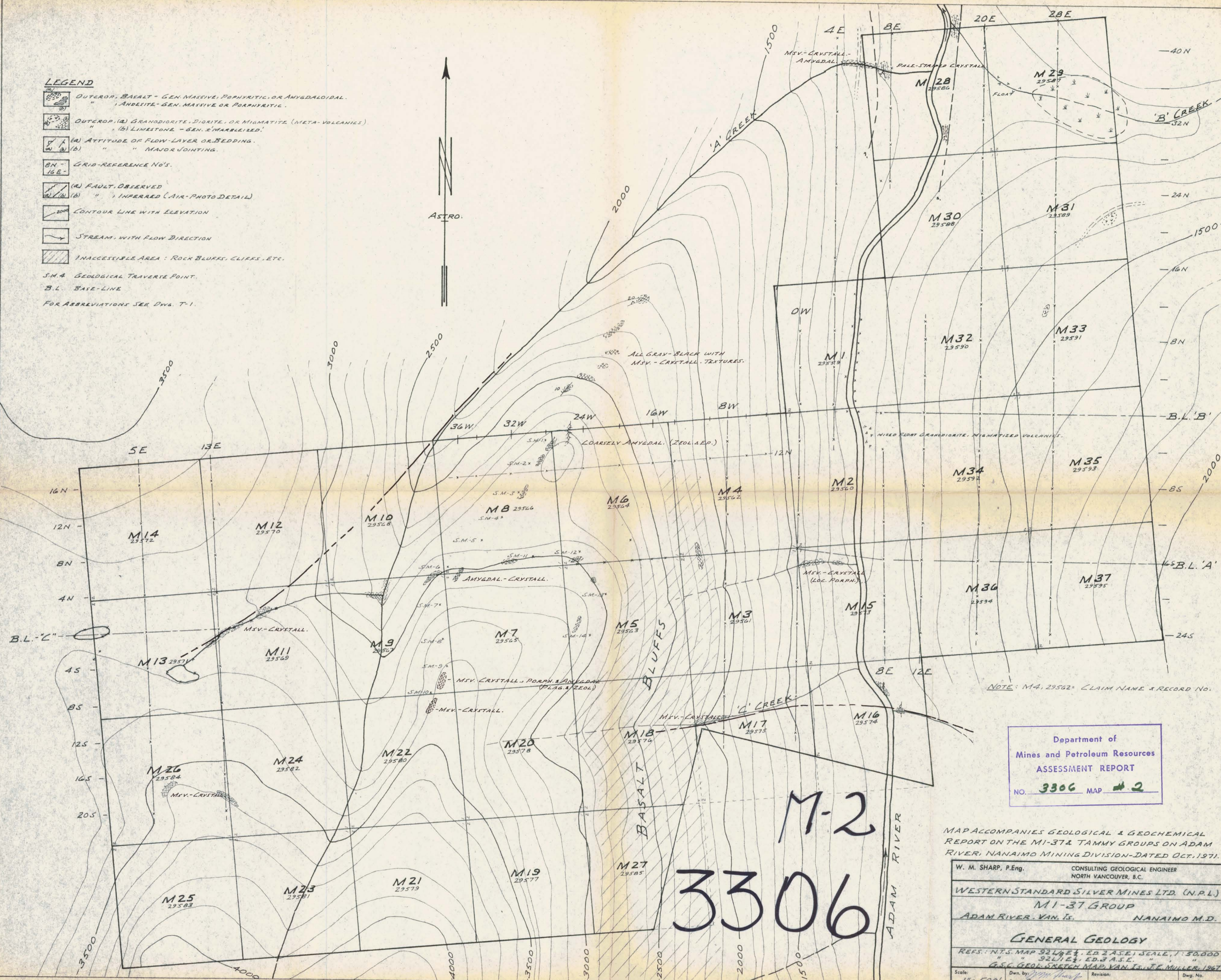
MAP ACCOMPANIES GEOLOGICAL & GEOCHEMICAL REPORT ON THE M1-37 & TAMMY GROUPS ON ADAM RIVER, NANAIMO MINING DIVISION, DATED OCT., 1971.

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 No. 3306 Map # 3

W. M. SHARP, P.Eng.	CONSULTING GEOLOGICAL ENGINEER NORTH VANCOUVER, B.C.
WESTERN STANDARD SILVER MINES LTD. (N.P.L.)	
M1-37 GROUP	
ADAM RIVER, VAN. IS.	NANAIMO M.D.
GEOCHEMICAL SURVEY	
REFS.: N.T.S. MAP 92L/B E1, ED 2, A.S.E. @ 1:50,000	
" 92L/I E1, ED 3, A.S.E. @ " "	
BARRINGER RESEARCH REPORT NO. 190B	
Scale 1" = 500'	Date OCTOBER, 1971
Dwg. No. M-2	Revision

LEGEND

-  OUTCROP, BASALT - GEN. MASSIVE, PORPHYRITIC, OR AMYGDALOIDAL.
 -  " " ANDESITE - GEN. MASSIVE OR PORPHYRITIC.
 -  OUTCROP, (a) GRANODIORITE, DIORITE, OR MIGMATITE (META-VOLCANICS); (b) LIMESTONE - GEN. LIMESTRUCTURED.
 -  (a) ATTITUDE OF FLOW-LAYER OR BEDDING.
 -  (b) " " MAJOR JOINTING.
 -  GN - GRID-REFERENCE NO'S.
 -  (a) FAULT, OBSERVED.
 -  (b) " " INFERRED (AIR-PHOTO DETAIL).
 -  CONTOUR LINE WITH ELEVATION.
 -  STREAM, WITH FLOW DIRECTION.
 -  INACCESSIBLE AREA: ROCK BLUFFS, CLIFFS, ETC.
- S.M. 4 GEOLOGICAL TRAVERSE POINT.
 B.L. BASE-LINE
 FOR ABBREVIATIONS SEE DWG. T-1.



NOTE: M-4, 29562 = CLAIM NAME & RECORD NO.

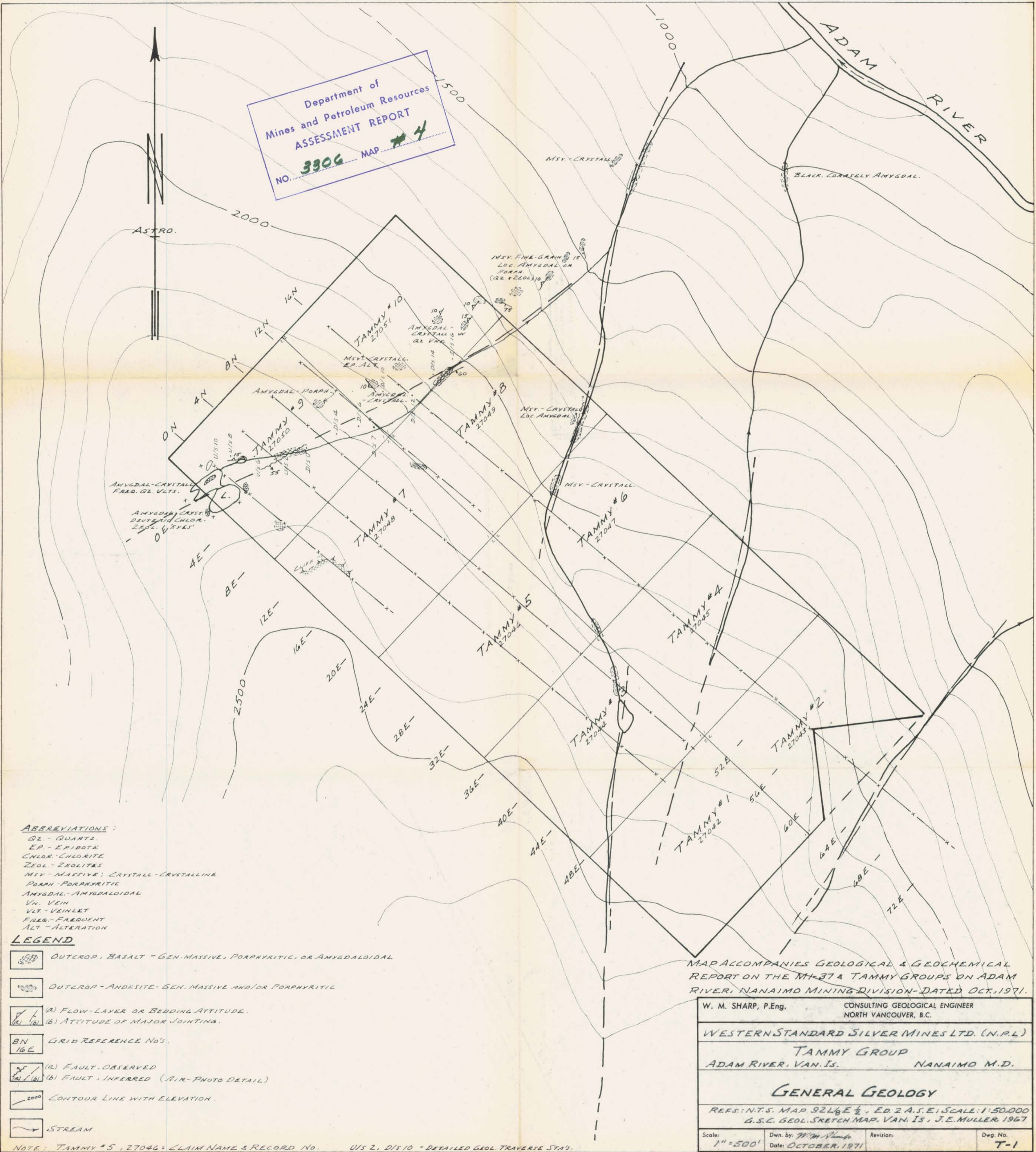
Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. **3306** MAP # **2**

M-2
 3306

MAP ACCOMPANIES GEOLOGICAL & GEOCHEMICAL REPORT ON THE M1-37 & TAMMY GROUPS ON ADAM RIVER, NANAIMO MINING DIVISION-DATED OCT. 1971.

W. M. SHARP, P.Eng.	CONSULTING GEOLOGICAL ENGINEER NORTH VANCOUVER, B.C.
WESTERN STANDARD SILVER MINES LTD. (N.P.L.)	
M1-37 GROUP	
ADAM RIVER, VAN. IS. NANAIMO M.D.	
GENERAL GEOLOGY	
REFS.: N.T.S. MAP 92/16 E4, ED. 2, A.S.E. 1 SCALE, 1:50,000	
" " 92/16 E4, ED. 3, A.S.E. " " "	
G.S.C. GEOL. SKETCH MAP, VAN. IS., J.E. MULLER, 1967	
Scale: 1" = 500'	Dwn. by: W.M. Sharp Date: OCTOBER, 1971
Revision:	Dwg. No. M-1

Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. **3906** MAP # **4**



ABBREVIATIONS:
 QZ - QUARTZ
 EP - EPIDOTE
 CHLOR. - CHLORITE
 ZEOL. - ZEOLITES
 MSV - MASSIVE; CRYSTALL - CRYSTALLINE
 PORPH. - PORPHYRITIC
 AMYGDAL. - AMYGDALOIDAL
 VN. - VEIN
 VLT. - VEINLET
 FREQ. - FREQUENT
 ALT. - ALTERATION

LEGEND

- OUTCROP - BASALT - GEN. MASSIVE, PORPHYRITIC, OR AMYGDALOIDAL
- OUTCROP - ANDESITE - GEN. MASSIVE AND/OR PORPHYRITIC
- (a) FLOW-LAYER OR BEDDING ATTITUDE.
 (b) ATTITUDE OF MAJOR JOINTING.
- BN
16E GRID REFERENCE No's.
- (a) FAULT, OBSERVED
 (b) FAULT, INFERRED (AIR-PHOTO DETAIL)
- 2000 CONTOUR LINE WITH ELEVATION.
- STREAM.

NOTE: TAMMY # 5, 27046 = CLAIM NAME & RECORD No. U15 2, D15 10 = DETAILED GEOL. TRAVERSE STA'S.

MAP ACCOMPANIES GEOLOGICAL & GEOCHEMICAL REPORT ON THE M-37 & TAMMY GROUPS ON ADAM RIVER, NANAIMO MINING DIVISION - DATED OCT., 1971.

W. M. SHARP, P.Eng.	CONSULTING GEOLOGICAL ENGINEER NORTH VANCOUVER, B.C.	
WESTERN STANDARD SILVER MINES LTD. (N.P.L.)		
TAMMY GROUP		
ADAM RIVER, VAN. IS.		NANAIMO M.D.
GENERAL GEOLOGY		
REFS.: N.T.S. MAP 92L6E 1/2, ED. 2 A.S.E.1, SCALE: 1:50,000 G.S.C. GEOL. SKETCH MAP, VAN. IS., J.E. MULLER, 1967		
Scale: 1" = 500'	Dwn. by: <i>W.M. Sharp</i> Date: OCTOBER, 1971	Revision: Dwg. No. T-1

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3306 MAP 5

ASTRO.



LEGEND:

- 1ST ORDER ANOMALY: $Cu \geq 150$ P.P.M.
- 2ND " " : " @ 100-149 P.P.M.
- 3RD " " : " @ 50-49 " (BACKGROUND @ 0-49 P.P.M. Cu.)
- * 80 SOIL OR BOG SAMPLE LOCATION WITH TOTAL CU IN P.P.M. (PARTS PER MILLION).
- V BOG OR SWAMP AREA.

MAP ACCOMPANIES GEOLOGICAL & GEOCHEMICAL REPORT ON THE MI-37 & TAMMY GROUPS ON ADAM RIVER, NANAIMO MINING DIVISION-DATED OCT., 1971.

W. M. SHARP, P.Eng.	CONSULTING GEOLOGICAL ENGINEER NORTH VANCOUVER, B.C.
WESTERN STANDARD SILVER MINES LTD. (N.P.L.)	
TAMMY GROUP ADAM RIVER, VAN. IS. NANAIMO M.D.	
GEOCHEMICAL SURVEY	
REFS.: N.T.S. MAP 9248 E 1/2, ED. 2 A.S.E. SCALE 1:50,000 BARRINGER RESEARCH REPORT NO. 189B.	
Scale: 1"=500'	Dwn by W.M. Sharp Date OCTOBER, 1971
Revision:	Dwg No. T-2