114P/10E

MAID NO. 1 and MAID NO. 2 GROUPS

Adjacent to Maid of Erin Mine

Rainy Hollow, Atlin Mining Division, B.C.

57 mi. N. W. of Haines, Alaska

59° 136° N. W.

Geological Report

Alexander Smith, R.P.E.

July - August, 1948. January, 1949.

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GEOLOGICAL REPORT

on

MAID NO. 1 and MAID NO. 2 GROUPS

RAINY HOLLOW

BRITISH COLUMBIA

by

ALEXANDER SMITH

GEOLOGICAL REPORT

MAID No. 1 and MAID No. 2 GROUPS

RAINY HOLLOW, B. C.

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MAPS:

No.	Scale		
#1/M.E.9	1" = 500'	-	Interpretive Geology, Maid of Erin Mine and Maid No. 1 and No. 2 Groups.
#2-7/M.E.1-6	1" = 200'	-	Outcrop Geology, Maid of Erin Mine and Maid No. 1 and No. 2 Groups.

GEOLOGICAL REPORT

ON THE

MAID NO. 1 and MAID NO. 2 GROUPS

RAINY HOLLOW, B. C.

SUMMARY:

The general strike of the limestone, quartzite, and argillite is northeasterly with dips at medium to steep angles to the northwest. These sediments have been intruded by a tongue like body of diorite and later by a batholith of tonalite. A belt of the sediments between the diorite and tonalite masses has a northwesterly trend and dips gently to the north. This is at variance with the usual northeasterly trend of the sediments. The Maid of Erin and Elise bornite-chalcocite deposits are associated with a band of skarn having this orientation. Neither this band nor the mineralization could be traced into the adjoining Maid Group claims. Also no lead-zinc deposits similar to those on the Victoria were found. Several deposits of massive pyrrhotite follow N.30°E high angle faults. One of these contains some galena and sphalerite. Prospecting should be concentrated near skarn limestone contacts.

INTRODUCTION:

These claims are adjacent to the Maid of Eri mine, situated 3-1/2 miles northwest of Rainy Hollow in the Atlin Mining Division. Rainy Hollow is at Mile 54 on the Haines Cut-Off route of the Alaska Highway. This Cut-Off is a first class gravel road, with a good grade to tidewate at Haines. The claims lie at elevations ranging between 2 and 4500 feet, on the southern and easterly slopes of Miner Mountain. At Rainy Hollow (elevation 1750') the country i well timbered, but the claims are above timberline. The property is reached by an old cat road, now only a track, from Rainy Hollow.

The general character of the district, geolog and mineral deposits have been described in detail in Bulle tin No. 25 of the B. C. Department of Mines, "The Squaw Creek-Rainy Hollow Area" by K. DeP. Watson, 1948.

GENERAL GEOLOGY:

The principal mineral deposits at Rainy Hollo occur in sedimentary rocks of Permo-carboniferous age. Thes rocks have been intruded by tonalite (quartz diorite) and diorite, also by small bodies of gabbro felspar porphyry an rhyolite. These intrusives are considered to be Jurassic or later in age.

The Permo-carboniferous rocks consist mainly of limestone, quartzite and argillite. The quartzites are

generally light grey thin bedded rocks (beds range from 1/4" to 2 feet). They are often felspathic and contain biotite. The limestones are light to dark grey with bedding generally indistinct. The argillites are principally, thin bedded black varieties with well defined bedding. Interbedded with the argillites are argillateous quartz containing disseminated pyrite and pyrrhotite. These weather rusty.

The diorite, apparently the oldest intrusive outcropping in the area, extends northeasterly from the Klehini river for about seven thousand feet. Its maximum width is about two thousand feet. The rock often shows gneissic structure, and on the margins of the main body it has in places intruded quartzite in lit-parr-lite relationship.

The tonalite is a relatively fresh rock showing no gneissic structure. The portion mapped is on the contact of a large batholith. The intrusive probably underlies the whole area with the mass of Mineral Mountain a pendant within it.

A small lense of felspar porphyry occurs within the tonalite. It is the only outcrop of this rock noted on these claims, but to the east of the mapped area dikes and sill like masses of this rock are common. Rhyolite sills or dikes cut the sedimentary rocks in the eastern part of the area.

STRUCTURE:

The general trend of the sediments is northeasterly with dips of 40 to 70° to the northwest. However, there is an area of sediments between the tonalite, the diorite and the argillite mass of Mineral Mountain, wherein the general strike of the sediments is westerly or northwesterly with dips of 10 to 30° to the north.

The axis of the diorite intrusion strikes about N.30°E and flow layers therein have this trend with dips of about 60° to 70° to the northwest. This trend is about 30° counter-clockwise from the average northeasterly trend of the sediments. The emplacement of the diorite may have been controlled by a series of N.30°E faults.

The northeast margin of the tonalite dips gently to the northeast conformably with the overlying sediments. The easterly margin dips more steeply and appears to be aligned with north-south and north 30°E high angle faults.

The structural relations of the belt of northwesterly trending sediments crossing the Elise, Maid of Erin and M. E. 2 and 12 claims is not clear. Watson suggested (Bulletin 25 p. 40) that these rocks were on a gently dipping western limb of a north plunging syncline. Second order folds and drag structures in the overlying argillites have axes trending about due north and south. This evidence would be in support of this hypothesis. The disturbing factor

is that the general strike of the overlying argillite is north-easterly with dips of about 45° to the northwest.

The long narrow belt of skarn crossing the Maid of Erin and the Elise claims, and in which the principal ore deposits on these claims occur, has a general gentle dip to the north. There has been in places considerable fault movement along this zone. It might be either a low angle fault zone or an attenuated limb of a recumbent fold. The feature fold evidently antidates the period of intrusion.

The area has been cut by numerous high angle faults striking between due north and N.30°E. The displacement on most of these fractures is small. Such faults cut the dicrite but none were found extending into the tonalite. Faults of this type may have been effective during the intrusion of the diorite and tonalite. They have also caused minor offsets in the belt of skarn described in the previous paragraph.

ECONOMIC GEOLOGY:

The mineral deposits of the area have pneumatolytic characteristics. They consist of three fairly distinct types:

1. Bornite-chalcopyrite ores, carrying good values in silver, such as Maid of Erin.
2. Galena-sphalerite deposits such as on the Victoria.
3. Pyrrhotite deposits with subordinate amounts of chalcopyrite, sphalerite and galena.

Most of these deposits are associated with skarns, of which there are several different types. The most important

from the economic point of view is a yellow skarn consisting mainly of yellowish green garnet and white monticellite, together with coarse crystalline calcite. The Maid of Erin and Victoria deposits are associated with this type of skarn. It is developed from the alteration of limestone. Brown garnet skarn has little mineralization with it. Greenish skarns containing diopside are often found near the pyrrhotite type of mineralization. A considerable portion of the brown skarn has probably replaced quartzites, i.e. the skarns are not derived solely from limestones. In addition to the conspicuous skarns, there are at the Maid of Erin and Victoria deposits zones of silicification up to 15 feet wide. These follow fault zones in the limestone. The resulting rock is light grey resembling a rhyolite or quartzite in appearance.

The ore deposits on the Maid of Erin and Victoria claims have been adequately described by Watson (Bulletin 25, pp. 14-53). No deposits of these two types were found on the Maid No. 1 and No. 2 Groups, but several occurrences of pyrrhotite mineralization were found mainly in N.30°E fault zones. The deposits consist mainly of lenses of massive sulphide 2 feet to 6 feet in width. In most cases pyrrhotite and pyrite are the only sulphides visible, but on the M.E. 7 claim just below the road a 4 foot width of similar mineralization occurring on the contact between limestone and skarn, contains interesting amounts of galena and

sphalerite in with the pyrrhotite.

CONCLUSIONS:

The bornite-chalcocite and the galena-sphalerite types of mineralization are apparently associated with limestone, and a yellow skarn derived therefrom. No deposits of these two types were found on the Maid Groups, but a pyrrhotite band occurring in a N.30°E fault zone does carry fair values in lead and zinc.

Alex. Smith.

Vancouver, B. C.
April 6th, 1949.

ST. EUGENE MINING CORPORATION LIMITED, N.P.L.

TELEPHONE PACIFIC 8540

626 WEST PENDER STREET
VANCOUVER, B. C.

April 6th, 1949

The Mining Recorder,
Atlin, B. C.

Dear Sir:

Re: Filing of Geological Survey for Assessment Work of Maid No. 1 & Maid No. 2 Groups. Statement of Qualifications of Alexander Smith as a Geologist, and James A. Robertson as a specially qualified worker.

The following is an outline of qualifications as required by Order-in-Council 1532 -

Alexander Smith: Geologist. Registered Professional Engineer. (Geological Engineering).

James A.Robertson: 1930 Compassman timber surveys. 1941-1948 Assistant to Alexander Smith in mining examination and geological surveying. Plane-table operator. Transit and Compass Surveyor, etc.

Yours very truly,

Alex. Smith.

Alexander Smith, R.P.E.

ST. EUGENE MINING CORPORATION LIMITED, N.P.L.

TELEPHONE PACIFIC 8540

626 WEST PENDER STREET
VANCOUVER, B. C.

April 6th, 1949

The Mining Recorder,
Atlin, B. C.

Dear Sir:

The following is the record of salaries, wages and expenses paid in connection with the Geological Survey of the Maid No. 1 and No. 2 Groups.

July and August, 1948:	Days	Rate	Total
Alexander Smith	36	$35.00	$1,260.00
James A. Robertson	41	$15.00	615.00
January and February, 1949:			
Alexander Smith	30	$35.00	$1,050.00
James A. Robertson	30	$15.00	450.00
			$3,375.00

Portion applicable to Maid #1 & #2 Groups $1,300.00

Distribution - $100.00 per claim on each of the following claims in the above groups:

Maid Group #1 - M.E.1 - M.E.2, M.E.3, M.E.4, M.E.6, M.E.10, M.E.12, M.E.13

Maid Group #2 - M.E.5, M.E.7, M.E.8, M.E.9, M.E.11.

Yours very truly,

Alex. Smith

AFFIDAVIT:

I declare the above statements to be true and correct,

Alex. Smith.

Declared before me
at Vancouver BC
8 Apl 1949

Chas J Archer

A Justice of the Peace in and for the Province of British Columbia

THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA

MINERAL ACT.

FORM D. (SECTION 49.)

Affidavit on Application for Certificate of Work.

I, ALEXANDER SMITH

of VANCOUVER, B. C., in the District

of VANCOUVER, B. C., free miner, make oath and say:—

I have done, or caused to be done, work on the MAID No. 1 and MAID No. 2 Groups - M.E.1, M.E.2, M.E.3, M.E.4, M.E.5, M.E.6, M.E.7, M.E.8, M.E.9, M.E.10, M.E.11, M.E.12, M.E.13 Mineral Claims situate at RAINY HOLLOW, B. C.

in the ATLIN Mining Division, to the value of at least Thirteen Hundred Dollars ~~one hundred dollars~~ since the 30th day of April, 1948

The following is a detailed statement of such work:—

(Set out full particulars of the work done in the twelve months in which such work is required to be done by section 49.)

Geological survey of these claims to the value of more than thirteen hundred dollars ($1,300.00), as per accompany report and maps. (Work to the value of at least $100.00 was done on each of the claims included in these two Groups).

I have affixed, or caused to be affixed, to the legal posts of the above-mentioned mineral claim numbered 1 and 2, as required by section 33 of the "Mineral Act," metal tags marked or impressed with the serial number same as given when these claims were recorded.

Sworn and subscribed to at Vancouver
this 8th day of April
1949., before me—

Alex. Smith.

Dorothy White
DEPUTY MINING RECORDER

NOTE.—This affidavit may be made by an agent, and can be altered to suit circumstances. If the mineral claim was located before July 1st, 1933, the last paragraph of this affidavit shall be struck out.

★ 5M-647-3993

MAID OF ERIN MINE
RAINY HOLLOW AREA
ATLIN MINING DIVISION B.C.

LEGEND

BEDDING : INCLINED, ⊥ VERTICAL, ⊣⊢
FOLIATION : INCLINED, ▲ VERTICAL, ◆
FRACTURE CLEAVAGE: INCLINED, ⊥ VERTICAL, +
PITCH OF DRAG FOLDS, →
FAULTS : KNOWN ~~~~~~~~, ASSUMED, ~~~~~~~~
CONTACTS : KNOWN, ——— ASSUMED, — — —
OUTCROPS:
ASSAY SEQUENCE : SAMPLE Nº — WIDTH —
SILVER IN OZ — COPPER IN %

ABBREVIATIONS :

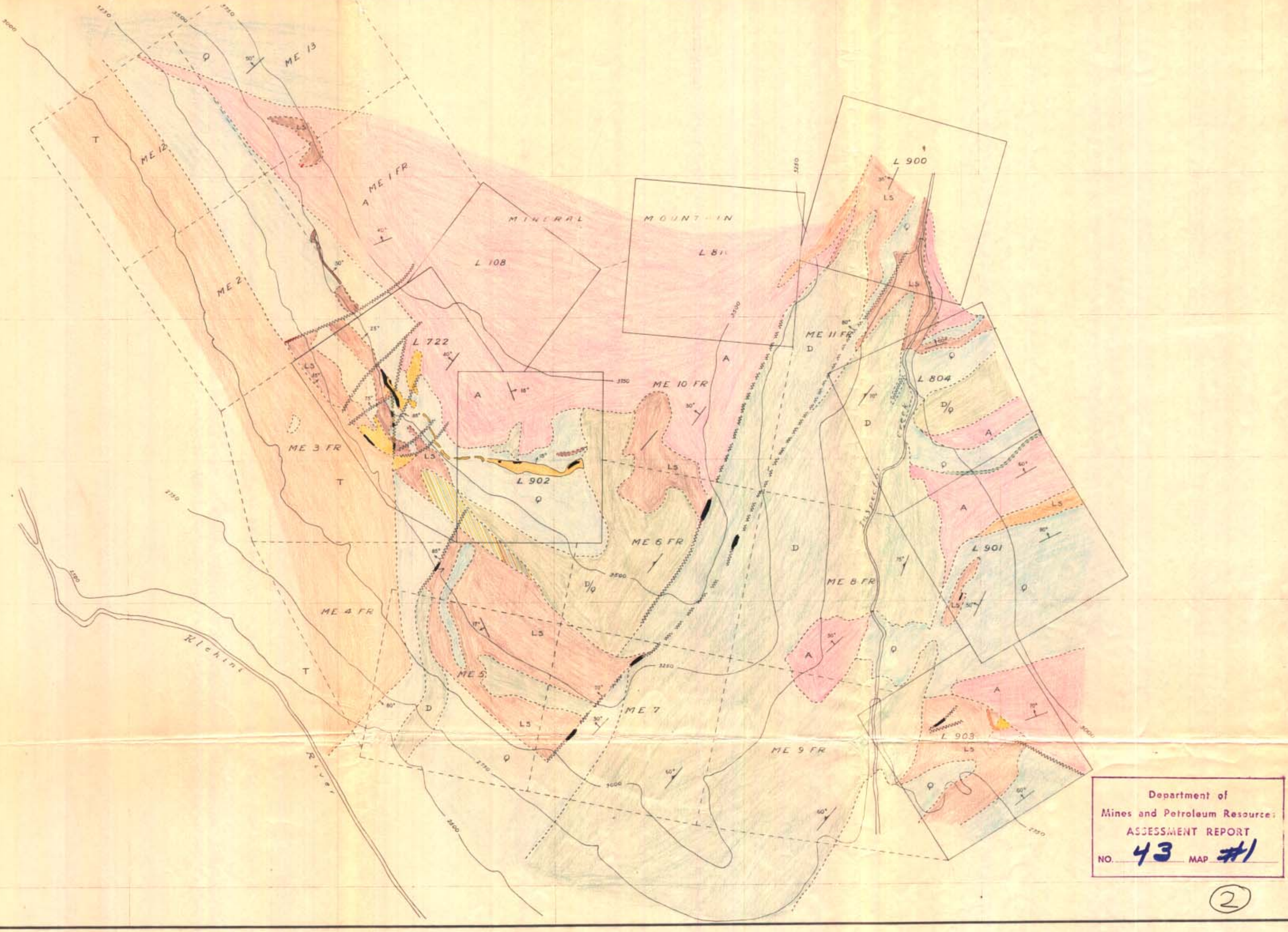
BORNITE	BOR.	CHALCOPYRITE	CP.
PYRRHOTITE	PYRRHO.	GALENA	GAL.
SPHALERITE	SP.	BIOTITE	BIOT.
BROWN	BR.	IMPURE	IMP.
ALTERED	ALT.	GNEISSIC	GN.
RUSTY WEATHERING	RW.	MASSIVE	M.
OUTCROPS	%	PORPHYRY	Pry

JURASSIC OR LATER
- MINERALIZATION
- SILICIFICATION — S
- SKARN — SK
- RHYOLITE
- FELSPAR PORPHYRY
- TONALITE (QUARTZ DIORITE) — T
- DIORITE — D
- DIORITE LIT-PAR-LIT INTO Q — D/Q

PERMO-CARBONIFEROUS
- ARGILLITE — A
- QUARTZITE — Q
- LIMESTONE — LS

(1)

REPORT #43
~~MAP #1~~ LEGEND



SCALE 1 INCH TO 500'

COMPANY ST EUGENE MINING CORP
PROPERTY MAID OF ERIN
LOCATION RAINY HOLLOW . ATLIN M D B C

WORKING PLACE SURFACE
FOR DETAIL SEE MAPS ME 1-6
TYPE OF MAP GEOLOGY & TOPOG

DATE MARCH 1949
DRAWN BY AS & JAR
MAP NO. ME 9

TALUS 60% PYROXENITE

BUFF WEATHERING QTZ EPI SKARN R WITH PYRRHO & CP

RW A.Q WITH LIGHT MINER DISSEM PYRRHO & CP

TALUS ALL GN Q

GOSSAN AREA

RW G. GN Q

M.E 13

STEEP ROCK BLUFFS OF MINERAL MAINLY ARGILLITES, ARGILLACEOUS QUARTZITES & QUARTZITES IN LARGE PART INACCESSIBLE

NO OUTCROPS

Creek

FAIRLY REGULAR SLOPE TO KLEHINI RIVER COVERED WITH TALUS & GLACIAL GRAVELS

TALUS

M.E 12

A WITH PYRRHO

RW AQ

LS, SILIC, S, SK

30 IMP ALT Q LS & AQ

Q SK

AQ

M E 1 FR

S PYRRHO

Q ALT

T DYKE

M E 2

GN AQ

50 THINS LS

AL AQ

EMPEROR

L 108

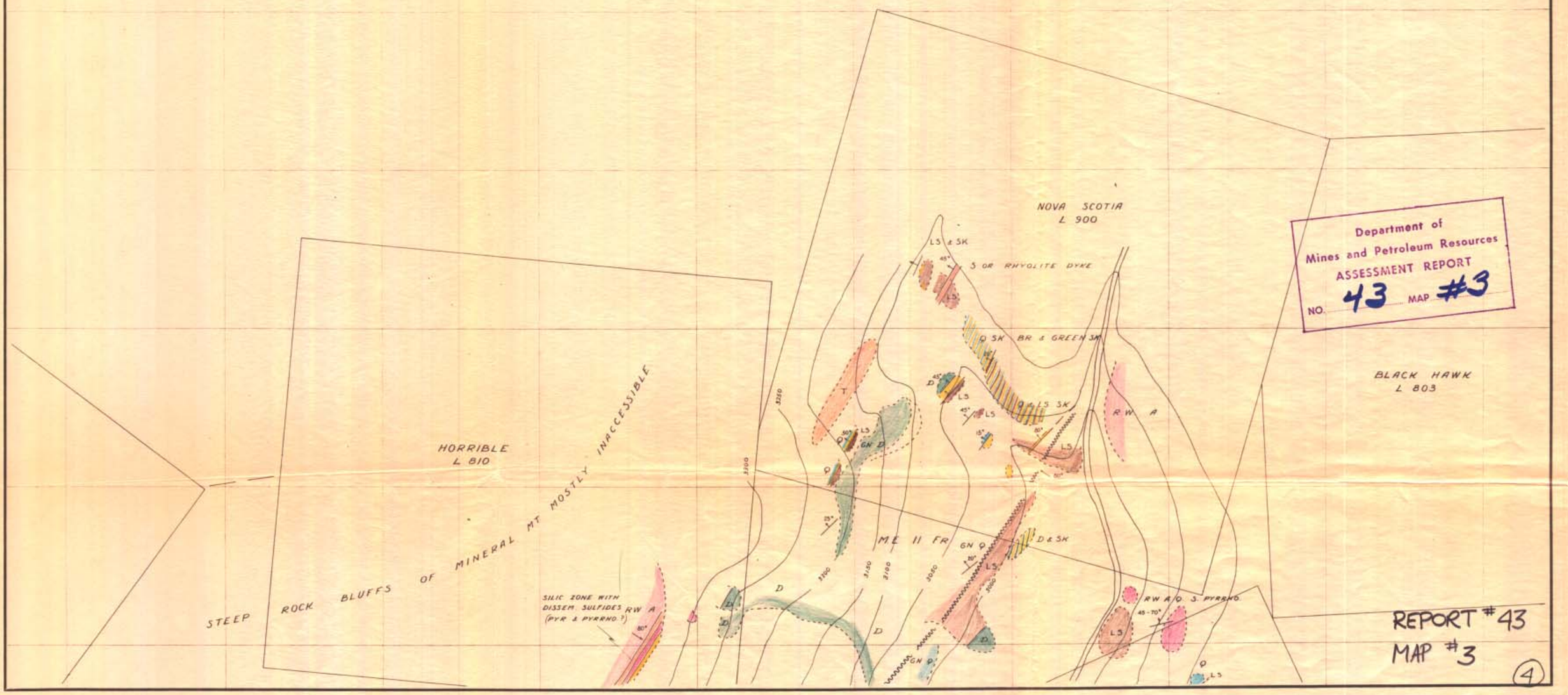
Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 43 MAP #2

REPORT 43
MAP 2

(3)

SCALE 1 INCH TO 200'

COMPANY STEUGENE MINING CORP.
PROPERTY MAID OF ERIN
LOCATION RAINY HOLLOW ATLIN MD B.C
WORKING PLACE SURFACE
TYPE OF MAP GEOLOGY & TOPOG
DATE MARCH 1 1949
DRAWN BY A S
MAP NO. ME-1



REPORT #43
MAP #3

(4)

-200 0 200 400 600 800 1000 1200 1400

SCALE 1 INCH TO 200'

COMPANY ST EUGENE MINING CORP
PROPERTY MAID OF ERIN
LOCATION RAINY HOLLOW ATLIN M.D. B.C.

WORKING PLACE SURFACE
TYPE OF MAP GEOLOGY & TOPOG

DATE MARCH 1 1949
DRAWN BY A.S.
MAP NO. ME - 2

3 PYRRHO

FELSPAR PORPHYRY

ME 3 FR

ME 4 FR

MAID OF ERIN
L 722

ELISE
L 902

BROWN SKARN

1-3 MASSIVE PYRRHO.

Kitchini River

GRAVEL BARS RIVER SPLIT UP
INTO NUMEROUS CHANNELS IN THIS STREAM

REPORT 43
MAP #4

(5)

200 0 200 400 600 800 1000 1200 1400

SCALE 1 INCH TO 200'

COMPANY ST EUGENE MINING CORP
PROPERTY MAID OF ERIN
LOCATION RAINY HOLLOW ATLIN MD B.C

WORKING PLACE SURFACE
TYPE OF MAP GEOLOGY & TOPOG

DATE MARCH 1 1949
DRAWN BY A.S.
MAP NO. ME-3

ME 10 FR

ME 11 FR

ME 6 FR

ME 8 FR

RHYOLITE DYKE IN RW SILIC. ZONE WITH DISSEM PYR

RW A Q

CU STAIN

3% M PYRRHO

WINDSOR L 804

3 M PYRRHO

RW Q, SD

SPRING

GN BIOT Q

GN Q

AQ, SD

BIOT FELS. Q

BIOT A

RHYOLITE DYKE?

FELS. BIOT. Q

WAR EAGLE L 901

GN A & D

Q & SK

LS & SK

Q 3%

AQ 10°

SITE OF OLD BRIDGE (SPAN 23')

Inspector Creek

Marvis creek

REPORT 43
MAP #5

(6)

SCALE 1 INCH TO 200'

COMPANY ST EUGENE MINING CORP
PROPERTY MAID OF ERIN
LOCATION RAINY HOLLOW ATLIN MD B C

WORKING PLACE SURFACE
TYPE OF MAP GEOLOGY & TOPOG

DATE MARCH 1 1949
DRAWN BY A.S.
MAP NO. ME-9

GRAVEL BARS IN THIS STRETCH

NUBBIN IN GRAVEL FLAT

RIVER SPLIT UP INTO NUMEROUS CHANNELS

ALT Q

ME 5

4' PYRRHO WITH 3 GALENA & SPH

LAND SLIDE AREA

GRAVEL 95% T

LARGE TALUS BLOCKS D

START OF RAPIDS & FALLS

D TALUS

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 43 MAP #6

(7)

200 0 200 400 600 800 1000 1200 1400

SCALE 1 INCH TO 200'

COMPANY ST EUGENE MINING CORP
PROPERTY MAID OF ERIN
LOCATION RAINY HOLLOW ATLIN MD B.C.

WORKING PLACE SURFACE
TYPE OF MAP GEOLOGY & TOPOG

DATE MARCH 1 1949
DRAWN BY A.S.
MAP NO. ME-5

ME 7

ME. 9 FR

L5 & 5K

5 GALENA & 3PH

D

O/C'S & TALUS

RW A. or AQ
S. PYRRHO

CREEK IN STEEPWALLED ROCK CANYON
RAPID DROP (500' IN ½ MILE)
TO KLEHINI RIVER

GN Q

VICTORIA
L 903

BIOT Q

FELS BIOT
Q

RW AQ

3550
3500
3450
3400
3350
3300
3250
3200
3150
3100
3050
3000
2950
2900
2850
2800
2750
2700
2650
2600
2550
2500

(8)

200 0 200 400 600 800 1000 1200 1400

SCALE 1 INCH TO 200'

COMPANY ST EUGENE MINING CORP
PROPERTY MAID OF ERIN
LOCATION RAINY HOLLOW ATLIN MD B C

WORKING PLACE SURFACE

TYPE OF MAP GEOLOGY & TOPOG

DATE MARCH 1 1949
DRAWN BY A S
MAP NO. M.E. 6