

6602

GEOLOGICAL REPORT ON THE
MARGIE (LOT 5 G), MOLLIE (LOT 6 G), MOLLIE FR. (LOT 7 G)
AND
YANKEE (LOT 89 G) MINERAL CLAIMS
VICTORIA MINING DIVISION
NTS 92 B 13 W
LOCATED ON BIG SICKER MOUNTAIN
REPORT BY J.R. DEIGHTON

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

NO. 6602

MAP NO. _____

GEOLOGICAL REPORT ON THE YANKEE LOT 89 G
MARGIE LOT 5 G, MOLLIE LOT 6 G AND MOLLIE FR. LOT 7 G
MINERAL CLAIMS
VICTORIA MINING DIVISION BRITISH COLUMBIA

LOCATION AND ACCESS:

The Yankee Lot 89 G, Margie Lot 5 G, Mollie Lot 6 G and Mollie Fr. Lot 7 G are located on the south and west side of Big Sicker Mountain, approximately seven miles north-northwest of Duncan B.C.

Access is by an old logging-mining road and a B.C. Telephone tower road that leads to the old Twin "J" mine, located on Big Sicker Mountain. These claims adjoin each other in an east west line near the crest of the mountain.

REGIONAL GEOLOGY:

The area covered in this report is underlain by a sequence of volcanics and sediments of Permian Age. These rocks form the Sicker Group and have been subdivided by the author into various mapable units. The group in the area north of the Chemainus River forms a steeply dipping eastern limb of an anticline.

Granite intrusions of middle to late Jurassic Age occur throughout the area and are mainly Granordiorite to Diorite in composition. The contacts of the intrusions are generally sharp, well-defined and near vertical.

The Cretaceous Nanaimo Group unconformably overlies all the above rock units. It comprises a sequence of sediments containing conglomerates, sandstones and shales with associated coal seams.

A brief description of the lithology of the various formations follows and the reader is referred to the published material for detailed descriptions of the various units. (See particularly B.C. Dept. Mines Bull. #37 - Geology of the Cowichan Lake Area Vancouver Island - J.T. Fyles 1955; G.S.C. Paper 68-50: Geology and Mineral Deposits of Alberni Map Area, B.C. Muller and Carson 1969; G.S.C. Memoir 96: Sooke and Duncan Map Areas, Vancouver Island Clapp and Cooke 1917.)

LITHOLOGY

Mancino Group sediments (Cretaceous)

This unit is comprised of sandstone, shale, and conglomerates, which are poorly bedded and sometimes poorly consolidated.

Island Intrusives (Middle to Late Jurassic)

The unit is a dark grey to black, poorly fractured intrusive. The "Star porphyry" phase has radiating phenocrysts of white feldspar in a dark aphanitic groundmass. The intrusive grades into a dark coarse-grained diorite, and may contain pyrite and chalcopyrite locally along the contacts. The contacts are usually steep and sharp.

Quartz Monzonite to Granodiorite

The unit is made up of grey, medium to coarse-grained poorly fractured granitic rocks that may contain rounded mafic inclusions. The granitics form elongated masses with steep sharp contacts.

Sicker Group (Pennsylvanian to Permian)

Sediments

Graphitic Schists to Meta-argillite

Dark grey, thin, platy schists to dark argillaceous sediments form this unit. It is a narrow unit within sericite schists, that is found only in eastern region (Mt. Richards), and may be equivalent to the "Iron Formation".

"Iron Formation"

"Iron Formation" is a field term used to describe a variable and poorly sorted sequence of black to purple shales, andesitic tuffs, and mixed clastic sediments. The unit contains beds of jasperoid and magnetite iron formation. Magnetite, hematite, pyrrhotite, pyrite and very minor chalcopyrite are found in local concentrations.

Cherts

This unit is composed of siliceous cream to black, fine-grained, bedded sediments that may exhibit cross bedding in places. Small sections of andesitic and rhyolitic tuffs may also occur within the unit.

Volcanic Rocks

Quartz-Feldspar Porphyry

The quartz-feldspar porphyry is a white to cream, massive unit with glassy quartz eyes and/or white feldspar phenocrysts up to $\frac{1}{2}$ " across. The rock exhibits a slight foliation and may be an intrusive unit.

Rhyolite to Sericite Schists

This unit is white to cream coloured and forms thin platy schists to less schistose masses that may have occasional small glassy quartz eyes. Bands of chlorite schists and chlorite-sericite schist may also be present within the unit.

Dacitic Tuffs to Chlorite-Sericite Schists

The unit is composed of light to medium green, fine to medium-grained fragmentals, usually containing minor amounts of pyrite. A well developed schistosity is often present. The dacite may grade into rhyolite.

Andesitic Tuffs to Chloritic Schists

Dark green chloritic schists or tuffs with small $\frac{1}{8}$ " rounded fragments of feldspar and epidote make up this unit.

Agglomerates to Chloritic Schists

The composition of this unit is dark to medium green, volcanic rocks with rounded epidote/quartz bombs or fragments up to 10" across enclosed in a aphanitic to fine-grained green groundmass.

Hornblende Andesites to Chloritic Schists

Dark green andesites with phenocrysts of hornblende $\frac{1}{8}$ " long form this unit. In the schistose varieties, hornblende is altered to biotite or chlorite. The unit grades into andesitic tuffs.

STRATIGRAPHIC SECTIONS

Holyoak Creek Section

South to north section west of Holyoak Creek, East Concession area.

Top of Section

Cherty sediments

Cherts, siltstone, sandstones, minor volcanic tuffs, rhyolitic and andesitic in character.

Andesitic to Dacitic Tuffs	Andesitic to dacitic tuffs and related chloritic and chlorite-sericite schists.
Rhyolitic Tuffs	Sericitic schists with minor sections of chlorite, chlorite-sericite schists.
Andesites and Rhyolites	Andesitic and rhyolitic tuffs and flows and related schists. No individual unit is of any great thickness.
Andesite and Rhyolite Tuffs	Tuffs and related chlorite, chlorite-sericite, and sericite schists. Massive pyrite associated with chlorite schist-andesitic tuff unit.

Base of Section

The bottom two units may form the core of an anticlinal fold. Intrusive units, diorite and quartz-feldspar porphyry, have been excluded from section. The sequence is not well established due to lack of exposure.

FOLDING AND FOLIATION

There appear to be two major fault or stress patterns exhibited in the area. A major fault pattern striking 020° with vertical dips, is found to be the trace of major valleys. This is exhibited by the Chemainus River, Hummingbird Creek, Chipman Creek and several branches of Solly Creek. The faults are vertical, left-handed, transverse faults.

The second fault or strain system is represented by the regional foliation of the area. This foliation is consistent throughout the region on a $110-120^{\circ}$ trend with vertical dips. Local variations occur next to intrusive bodies. The foliation is found in all rocks except the Vancouver Intrusives, and therefore must be the first stress plane, as the Vancouver Intrusives have been offset on 020° planes.

Other faults have been mapped throughout the region but do not appear to have any set pattern.

CLAIM GEOLOGY

The area of the claim group is underlain by Sicker Group volcanics of Permian age, that have been intruded by diorite bodies of Jurassic age. Two areas of Cretaceous Manaimo Group sediments overlie the volcanics and diorite unconformably.

Outcrop within the claim group is not good. The main bodies of outcrop occur along ridge crests and in road cuts.

Andesitic volcanics that were probably originally flows underlie the northeastern portion of the Lergie claim (Lot 5 G). These volcanics are chloritized hornblende andesites. The remaining scattered outcrops of andesitic volcanics are also heavily chloritized but appear to be generally more tuffaceous in origin. Many of these andesitic outcrops have been altered to such an extent as to be classified as chloritic schists.

Large and small outcrops of sericitic and chlorite-sericite schists are found in an almost continuous band that occupies the central portion of the claims. Some of these outcrops are more massive than others and it is thought that the schists were probably derived from these rhyolitic to dacitic masses, or related rocks.

Relationships between the chloritic and the sericitic schists and the various volcanic units could not be determined because of the lack of continuity of outcrop and the lack of observable structural features within the claim area.

An agglomerate-breccia unit is found to occur in two outcrops in the northern portion of the Lollie Fr. (Lot 7 G). This unit is made up of large and small fragments of dacite and quartz-epidote blocks, bombs or rounded fragments in a fine grained to aphinitic groundmass. The significance and extent of the unit is not known.

Schistosity and foliation in the claim area is generally east-west to slightly north of east-west. The schistosity generally has vertical to steep dips to the south, although an occasional northerly dip was measured.

Diorite intrusive bodies are found in large and small masses or dykes within the Sicker Group volcanics. These masses are elongated in the schistosity direction. They are generally

massive, poorly fractured and have steep sharp contacts. A large body of diorite occurs along the northern boundary of the claim group, while smaller dykes or masses occur within the claims.

Hanaimo Group Sediments of Cretaceous Age are found south of the southern boundary of the claims. Small isolated masses of these sediments, mainly conglomerates and volcanic sandstones, unconformably overlies the Sicker Volcanics and diorite intrusives on the claims.

Because of the large amount of cover over the claims only two faults were observed. A major fault direction is postulated to run in an east-west direction through the center of the claim block. A north-north easterly fault with a steep westerly dip observed in a roadcut is thought to be a minor fault direction. This direction of faulting observed elsewhere in the Sicker Group had a left lateral offset.

One pyritic vein, 10 cm. wide, was observed in a small pit found on the Yankee claim. This vein followed the schistosity of the outcrop.

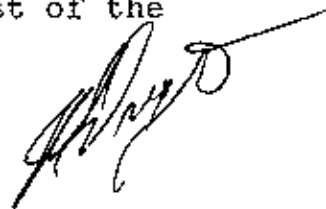
Irregular lensy quartz veins with steep to vertical dips were found south of the postulated fault running the length of the property. These veins lie in the schistosity or cut the schistosity at low angles. The largest vein was several meters in length and approximately 10 cm. wide. No sulphide mineralization was observed with these veins although some are rusty and contain vugs.

CONCLUSIONS

The claims are underlain by Sicker Group volcanic rocks of Tertiary Age. They have been intruded by diorite bodies of Jurassic Age. Cretaceous Sediments unconformably overlies the above two units.

Quartz and pyritic veins occur within the claim area.

The volcanics found within the claim area are similar in character to those found in the area of the Twin "J" - Richard III Mine, located a short distance to the northwest of the claim group.



CERTIFICATION

I, JOHN RAYMOND DEIGHTON, of 3250 West 33rd Avenue, Vancouver, British Columbia, do hereby certify that:

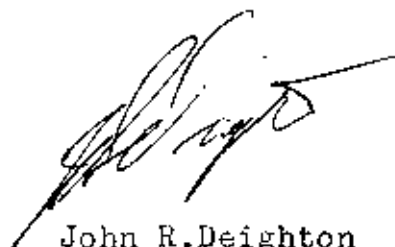
I am a graduate of the University of British Columbia, with a Bachelor of Science Degree in Geology, 1965.

Since graduation I have been engaged in Mineral Exploration in British Columbia, Yukon, Northwest Territories, Washington, Arizona and California.

I am a Fellow of the Geological Association of Canada and of the Canadian Institute of Mining and Metallurgy.

I am a Geologist.

Vancouver, B.C.



John R. Deighton
Geologist

In the matter of assessment work on:

Yankee (Lot 89 G), Margie (Lot 5 G), Lollie (Lot 6 G)
and Lollie Fr. (Lot 7 G) Mineral Claims, located in the
Victoria Mining Division, B.C., on Big Sicker Mountain,
north of Duncan, B.C.

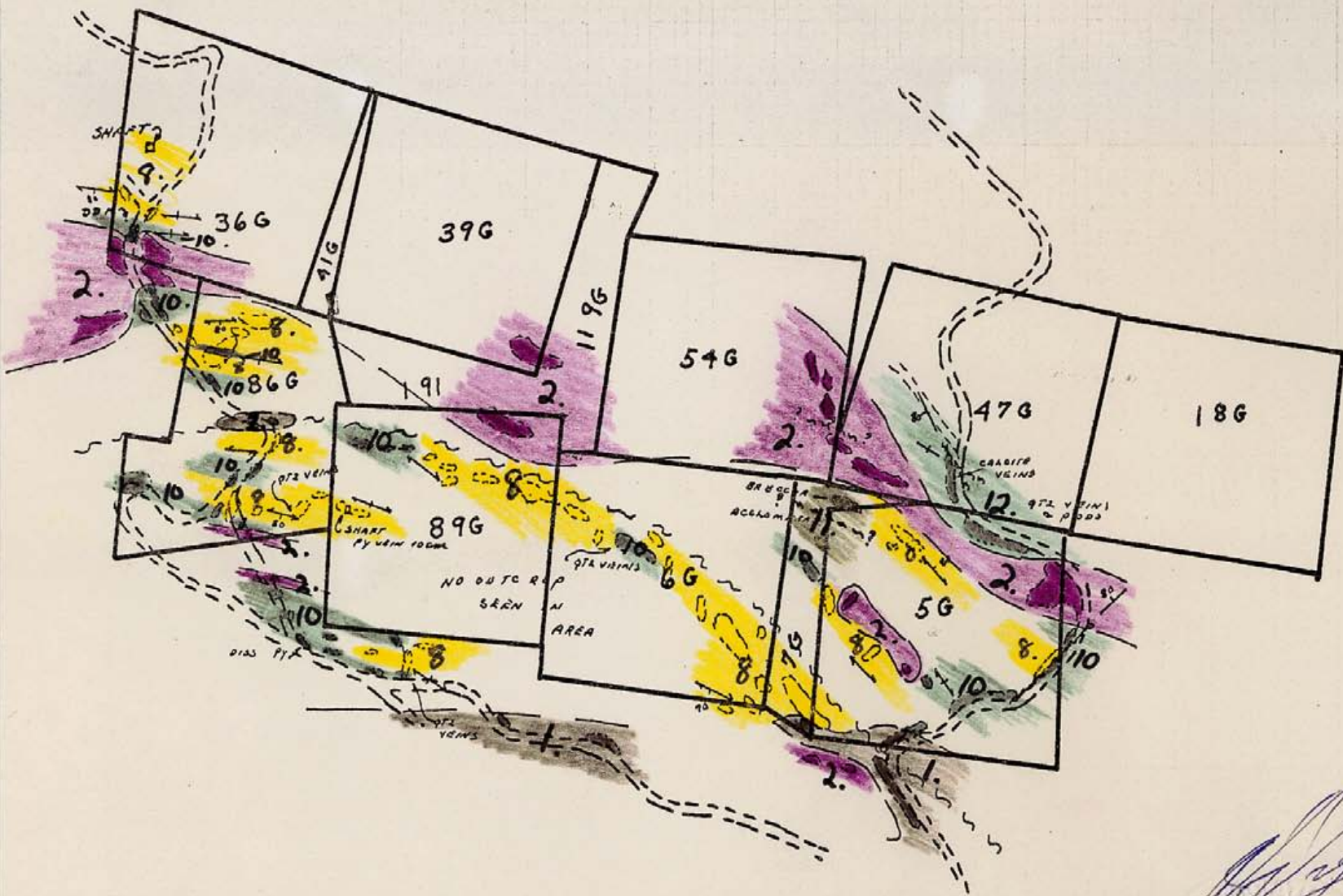
I, John R. Deighton, of 3250 West 33rd Avenue, Vancouver, B.C.,
do solemnly declare:

that five (5) days were spent in the field and one (1) day
was spent in the office doing assessment work on the above
claims and the following disposition of expenses are
claimed:

6 days of time..(J.R.Deighton)..at \$125/day\$750.
5 days car expenses..at \$20/ day 100.
ferry transportation to and from Vancouver Island 28.
5 days food and accomodation..at \$20/day 100.
report typing and preparation <u>20.</u>

TOTAL EXPENSES \$998.






GEOLOGY OF THE
 YANKEE (LOT 89G), MARGIE (LOTS 5G), MOLLYE (LOT 6G),
 AND MURPHY (LOT 7G)
 VICTORIA B.C.

GEOLOGY BY: J.R. DEIGHTON
 DATE: DECEMBER 29, 1977


SCALE 1:12,000


LEGEND

CRETACEOUS


-  1. Nanaimo Group Sediments
SANDSTONE, SHALE AND CONGLOMERATE
POORLY BEDDED AND SOMETIMES POORLY CONSOLIDATED.


MID TO LATE JURASSIC


-  2. Island Intrusives
STAR PORPHYRY TO DIORITE
HORNBLLENDE FELDSPAR PORPHYRY, TO COARSE GRAINED DIORITE.

-  3. QUARTZ MONZONITE TO GRANODIORITE
MEDIUM GRAINED, POORLY FRACTURED.


PENNSYLVANIAN TO PERMIAN


-  4. Sicker Group Sediments
GRAPHITIC SCHISTS
NARROW UNIT OF GREY TO BLACK GRAPHITIC SCHIST TO META ARGILLITE.


-  5. Iron Formation
BLACK TO PURPLE SHALES, ANDESITIC TUFFS AND MIXED SEDIMENTS AND TUFFS.
CONTAINS BEDS OR BANDS OF RED JASPER. AND/OR RED JASPER FRAGMENTS.
MAGNETITE, PYRRHOTITE, PYRITE, HEMATITE AND CHALCOPYRITE LOCALLY.


-  6. CHERTY SEDIMENTS
CHERTS, WITH MINOR TUFFS AND ARGILLITES, USUALLY THIN BEDDED.


VOLCANICS


-  7. QUARTZ FELDSPAR PORPHYRY
QUARTZ EYE AND QUARTZ FELDSPAR PORPHYRY, MAY BE INTRUSIVE UNIT.

-  8. RHYOLITE TO SERICITE SCHIST
THIN PLATY CREAM COLORED SCHISTS WITH OCCASIONAL ROUNDED FRAGMENT
OR QUARTZ, EYE.

-  9. DACITE TUFF TO CHLORITE SERICITE SCHIST
LIGHT GREEN, FINE GRAINED TUFFS, ALMOST INVARIABLY PYRITIC, MAY GRADE
INTO RHYOLITE.

-  10. ANDESITE TUFF TO CHLORITE SCHISTS
DARK GREEN, TUFFS OR SCHISTS THAT CONTAIN SMALL 1/16"-1/8" ROUNDED
FRAGMENTS OF QUARTZ AND EPIDOTE.

-  11. AGGLOMERATE TO CHLORITE SCHISTS
DARK GREEN, CONTAINING BOMBS OR FRAGMENTS OR ROUNDED QUARTZ-EPIDOTE
UP TO 10" ACROSS

-  12. HORNBLLENDE ANDESITES TO CHLORITIC SCHISTS
HORNBLLENDE ANDESITES AND ASSOCIATED TUFFS AND SCHISTS, DARK GREEN IN COLOR

CONCESSION BLOCK NOW HELD

CONCESSION AREA TO BE RETAINED

CONCESSION TO BE APPLIED FOR