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GEOLOGICAL REPORT ON THE MILDRED MINERAL CLAIM

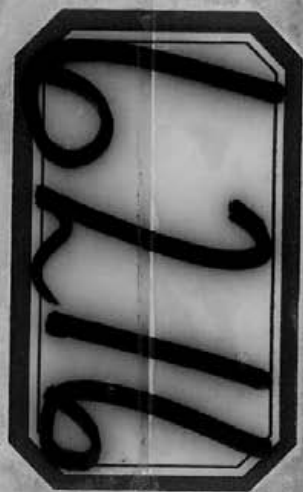
LOT 96G

VICTORIA M.D.

NTS 92 B 13 W $\frac{1}{2}$

LOCATED 8 MILES SOUTH OF LADYSMITH B.C.

REPORT BY J.R. DEIGHTON



6216

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

NO. _____

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LOT 96G

VICTORIA B.C.

NTS 92 B 13 W2

LOCATED 8 MILES SOUTH OF LADYSMITH B.C.

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LOCATION AND ACCESS:

The Mildred Mineral Claim Lot 96G is located on the west side of Holyoak Creek, a southerly flowing tributary of the Chemainus River. It is approximately 8 miles south of Ladysmith B.C.

Access is by McMillan and Blodel logging road, west of Chemainus B.C. to mile 6.6; thence by poor and overgrown gravel road for 4 miles to Holyoak Creek. A short walk over the remainder of the road and a scramble across Holyoak Creek puts you on the Mildred Mineral Claim.

REGIONAL GEOLOGY:

The area covered by 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 limb of an anticline.

Granite intrusions of middle to late Jurassic Age occur throughout the area and are mainly Granodiorite 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

Nanaimo Group Sediments (Cretaceous)

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

Islnd 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 $1/8$ " 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 $1/8$ " 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.

FAULTING 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 geology of the Mildred Claim not precisely known, although it is known to be underlain by a variety of rock types. The main rock units are the sericitic and chloritic schists, having a general northwesterly lithological strike and foliation. The schists and a massive unit of quartz-feldspar porphyry are believed to be of the same age (Pennsylvanian to Permian) and the same group (Sicker). This group has been intruded by bodies of massive diorite of Middle to Late Jurassic Age. These intrusives occur on the southern portion of the claim and off the northern boundary. They appear to have been implanted in elongate bodies along the foliation (schistosity) or strike of the various units of the Sicker Group.

Pyrite as stringers, elongate masses or as disseminations and minor chalcopryrite has been found within the schistose units of the Sicker Group on the Mildred Claim. The sulphide content varies within these units, but may generally be said to be in the 2-5% range. Short sections of massive sulphides up to 6" thick occur throughout some of the schistose units.

A fault is thought to follow the course of Holyoak Creek.

SUMMARY AND CONCLUSIONS

The claim is underlain by Sicker Group schists and intrusives (?) which have been intruded by elongate bodies of diorite of Jurassic Age.

Disseminated and massive sulphides, lenses (pyrite and chalcopryrite) have been located within the schistose units of the Sicker Group on the claim.

A handwritten signature in black ink, located in the bottom right corner of the page. The signature is cursive and appears to be the name of the author or reviewer.

LEGEND

CRETACEOUS



1

Nanaimo Group Sediments

SANDSTONE, SHALE AND CONGLOMERATE
POORLY BEDDED AND SOMETIMES POORLY CONSOLIDATED.

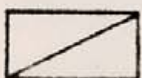
MID TO LATE JURASSIC



6

Island Intrusives

STAR PORPHYRY TO DIORITE
HORNBLENDE FELDSPAR PORPHYRY, TO COARSE GRAINED DIORITE.



QUARTZ MONZONITE TO GRANODIORITE
MEDIUM GRAINED, POORLY FRACTURED.

PENNSYLVANIAN TO PERMIAN



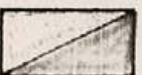
Sicker Group Sediments

GRAPHITIC SCHISTS
NARROW UNIT OF GREY TO BLACK GRAPHITIC SCHIST TO META ARGILLITE.



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.



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

VOLCANICS



5

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



4

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



3

DACITE TUFF TO CHLORITE SERICITE SCHIST

LIGHT GREEN, FINE GRAINED TUFFS, ALMOST INVARIABLY PYRITIC, MAY GRADE
INTO RHYOLITE.



2

ANDESITE TUFF TO CHLORITE SCHISTS

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



1

AGGLOMERATE TO CHLORITE SCHISTS

DARK GREEN, CONTAINING BOMBS OR FRAGMENTS OR ROUNDED QUARTZ-EPIDOTE
UP TO 10" ACROSS

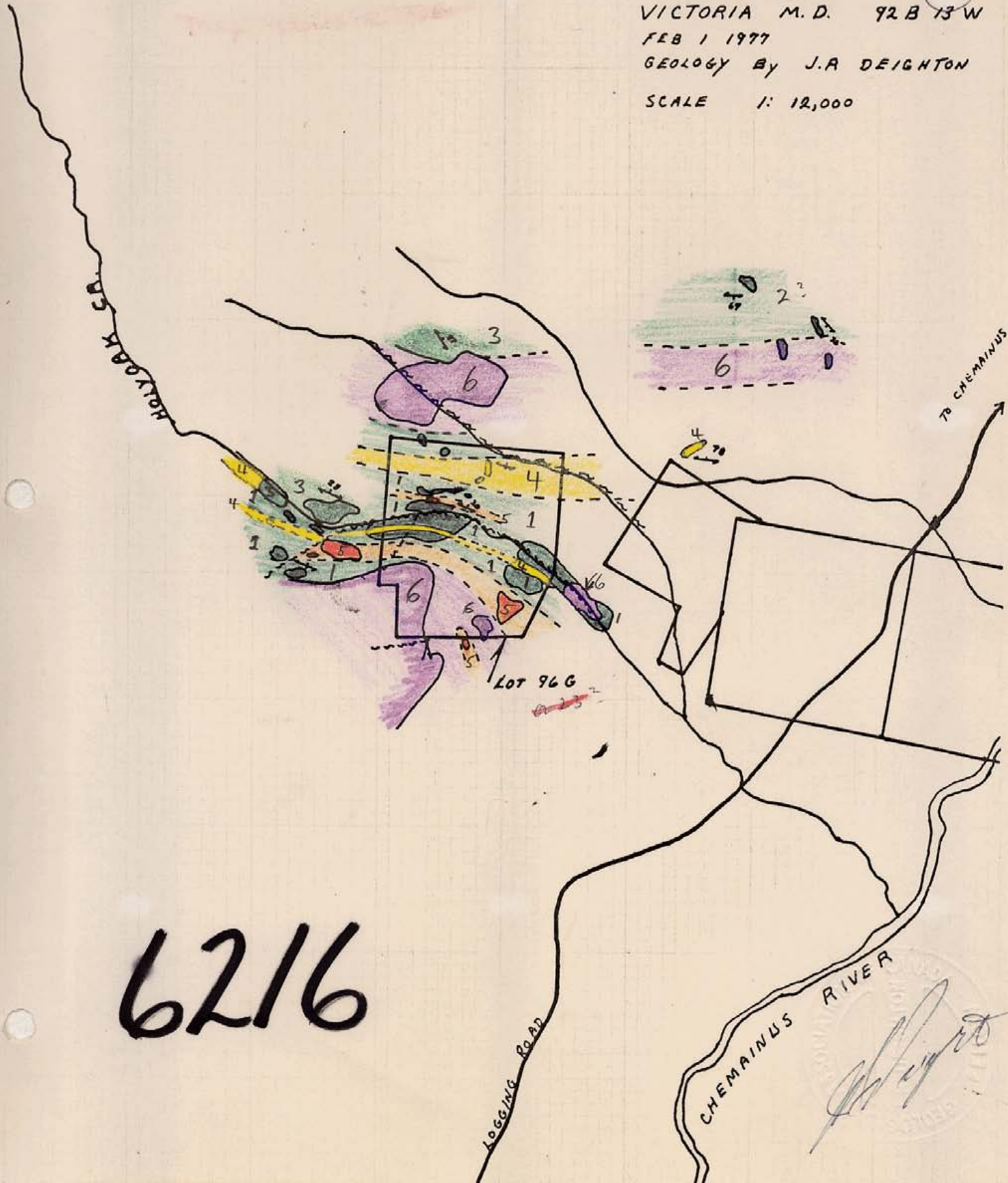


HORNBLLENDE ANDESITES TO CHLORITIC SCHISTS

HORNBLLENDE ANDESITES AND ASSOCIATED TUFFS AND SCHISTS, DARK GREEN IN COLOR

MILDRED

GEOLOGY OF THE SUSAN ~~24~~
 MINERAL CLAIM LOT 96 G
 VICTORIA M. D. 92 B 13 W
 FEB 1 1977
 GEOLOGY BY J.A. DEIGHTON
 SCALE 1: 12,000



6216

J.A. Deighton

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:

Susan Lot ²³96G and Mildred Lot ²⁶23G Mineral Claims
located in the Victoria Mining Division, approx-
imately 8 miles south of Ladysmith, B.C.

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

that five (5) days were spent in the field and one (1)
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 \$100/day.....	\$600.
Car expenses...5 days at \$10/day 50.
200 miles at 10¢/mile 20.
Vancouver to claims, work on claims and return ferry transportation 28.
Food and accomodation..5 days at \$10/day <u>50.</u>
TOTAL EXPENSES	<u>\$748.</u>

One-half of above expenses and work to be claimed for
each of the above mineral claims; Susan Lot 96G and Mildred
Lot 23G, Victoria Mining Division. ^{23G}

96G

