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GEOLOGICAL REPORT ON THE
ELMORE (LOT 91 C) MINERAL CLAIM
VICTORIA MINING DIVISION
NTS 92 B 13W
LOCATED 8 MILES SOUTH OF LADYSMITH B.C.
REPORT BY J.R. DEIGHTON

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

NO.

6600

MAP NO.

GEOLOGICAL REPORT ON THE LINDRE LOT 91 G MINERAL CLAIM,
VICTORIA TILING DIVISION, BRITISH COLUMBIA

LOCATION AND ACCESS:

The Lindre Lot 91 G Mineral Claim is located approximately eight miles south of Ladysmith B.C. and straddles the Chemainus River at this point.

Access is by the main logging haul road of McMillan and Blodell Logging Company, west of Chemainus B.C.

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 mappable 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 Granodiorite to Diorite in composition. The contacts of the intrusions are generally sharp, well-defined and near vertical.

The Cretaceous Kananis 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.F. Pyles 1955; G.S.C. Paper 60 - 50: Geology and Mineral Deposits of Alberni Map Area, B.C. Muller and Carson 1969; G.S.C. Memoir 96: Cooke 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.

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 $1/8$ " 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 Elmore Fr. is underlain by the Sicker Group volcanics. These volcanics consist of sericitic to chloritic-sericitic schist strongly foliated in an almost east-west direction.

A band of agglomeritic volcanics occurs within this schistose band and in itself has partially been altered to chloritic schists. The agglomerate units contain bombs, fragments or rounded knots of quartz epidote along with finer material of andesitic to rhyolitic material with an aphanitic character.

Faulting is evident within the volcanic units and is notably in two directions; one parallel to the schistosity and one in a northeast - southwest direction. Both faults have steep dips. The northeast - southwest fault system has a left-handed lateral movement.

Pyrite as disseminations within the sericitic schists is noted. The pyritic content in places can reach as much as 1 - 5%.

Pyrite with minor chalcopryrite and quartz occurs in the east-west striking shear at the northern boundary of the claim. The shear-vein zone is approximately 1 meter wide where exposed on either side of the river. A small adit has been driven a short distance along this shear-vein zone on the west side of the river. *Adit parallel to Elmore Fr. part of adit and a shaft are on Copper Canyon claim (L. 226)*

*see M-I. 928-86
and Ass. Rpt. 4626*

CONCLUSIONS

The claim is underlain by Sicker Group volcanic rocks of Permian age.

Pyrite - chalcopryrite mineralization occurs on the claim within a shear zone. Faulting is also evident in this zone.

Northeast - southwest faulting has a left lateral movement.



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:

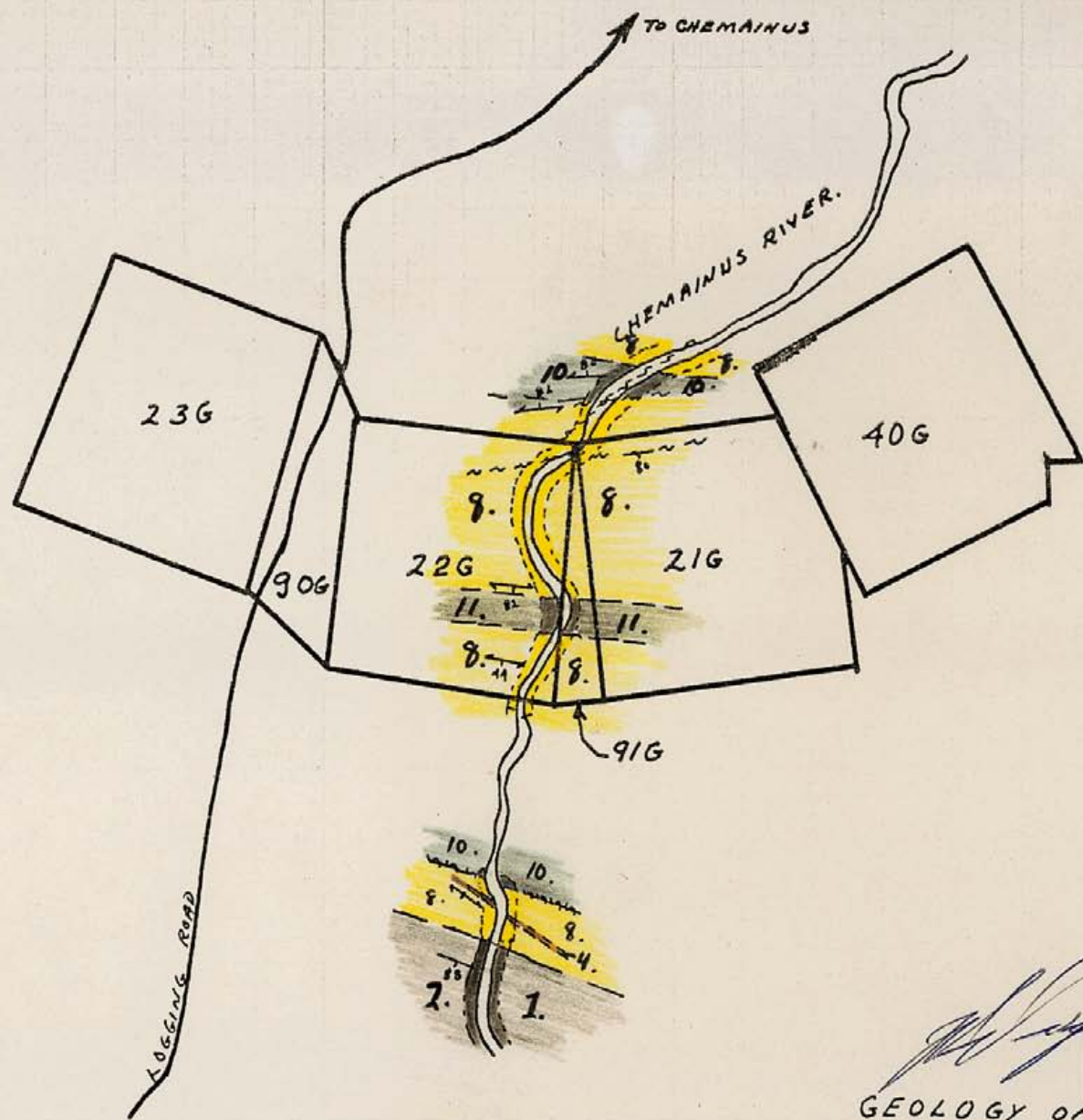
Mine (Lot 91 G) Mineral Claim in the Victoria Mining Division, located on the Chehalis River, approximately 2 miles south of Ladysmith, B.C.

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

That three days (3) were spent in the field and that one (1) day was spent in the office doing assessment work on the above claim and the following disposition of expenses are claimed.

4 days of time..(J.H.Deighton)..at \$125/day\$500.
3 days car expenses..at \$20/day 60.
ferry to and from Vancouver Island 28.
3 days food and accomodation..at \$20/day 60.
report typing and preparation <u>20.</u>
TOTAL EXPENSES	<u>\$668.</u>





GEOLOGY OF THE
 ELMORE FARM LOT 91G
 VICTORIA MINING DIVISION
 GEOLOGY BY: J.R. DEIGHTON
 DATE: DECEMBER 27TH 1977
 SCALE 1:12000

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.

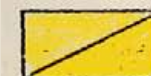
VOLCANICS



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