104K/13E

GEOLOGICAL REPORT ON THE SPEC CLAIMS

ATLIN MINING DIVISION

104K/13E

Spec No. 1 134883

Spec No. 2 134882

These claims lie 1 1/4 miles north of the Tulsequah Chief mine, Lat. 58°, Long. ~~135~~ 133° NW, N.W.

by

W. T. Irvine, Prof. Eng.

Work done on July 18th, July 21st to 26th inclusive, July 30th, Oct. 2nd, 3rd, 4th and 6th, in 1952.

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The Consolidated Mining and Smelting Company of Canada Limited

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The Consolidated Mining and Smelting Company of Canada Limited

GEOLOGICAL REPORT ON THE SPEC CLAIMS

INTRODUCTION

A geological study and map of the Spec No. 1 and Spec No. 2 claims was made during parts of July and August, 1952. This work was done by J. K. Webb, M.A., and A. K. Christensen, B.A., under the supervision of W. T. Irvine, Prof. Eng. Tape and compass traverses were used to tie in the rock outcrops.

SUMMARY AND CONCLUSIONGS

(1) The bedrock exposed on the claims consists of Permian or Pre-Permian limestone, and banded rocks which are argillitic to tuffaceous in appearance, interspersed with greenstone. These rocks are either Pre-Permian or Triassic in age. Intermediate quartz feldspar porphyry and aplite dykes also occur.

(2) The banded rocks display a steeply east dipping monoclinal structure, and are intersected by strong regional north striking faults and minor east striking cross faults.

(3) A small pyrrhotite body containing low copper values occurs as a bedded replacement in limestone. This body is open at the north end, and may continue in that direction under the Shazah Creek gravels.

(4) It is recommended that a possible northward extension of the sulphide replacement body be tested by an electromagnetic geophysical survey.

PHYSIOGRAPHY

The claims lie on the east side of Shazah Creek, a tributary of the Tulsequah river, and extend from an elevation of 500 feet above sea-level on the rocky timbered slope of the valley wall, down and partly across the gravel covered valley bottom which is about 100 feet above sea-level. Prominent and well marked draws incise the valley wall, and are the topographic expression of regional north striking faults.

GENERAL GEOLOGY

The claims are underlain by rocks which are mainly volcanic or show volcanic affinities, with only a small area of banded limestone exposed near No. 1 location post. F.A. Kerr's mapping for the Geological Survey of Canada shows a considerable area here underlain by Pre-Permian rocks which are generally classified as chloritic schist and sedimentary rocks, with some interbedded andesitic flows. On the Spec claims it was difficult to correlate rock types with the general types of Pre-Permian rocks described by Kerr. Mainly the rocks were greenstones alternating with banded tuffs, which in places were somewhat argillaceous in appearance. Similar associated types have been noted near the base of the Upper Triassic Stuhini volcanics, and this casts douby on Kerr's expressed it in G.S.C. Memoir 248, "it is impossible to know definitely whether these beds (volcanic and limestone) are comformable parts of the (Pre-Permian) series as infolded bits of the overlying Permian and Mesozoic formations." From the evidence at hand we would say that while Permian or Pre-Permian limestone definitely occur on the claims, the banded tuffaceous and argillaceous rocks and the volcanic flows may be either Pre-Permian or Triassic.

cont'd..

DETAILS OF ROCK FORMATIONS

Felsite Dykes - Dense creamy aplitic dykes from 18 inches to two feet in width.

Quartz Feldspar Porphyry - Grey-Green groundmass with abundant fine to medium grained light feldspar phenocrysts, sparse quartz phenocrysts and scattered fine grained femic minerals. Occurs in dykes up to 25 feet in width.

Volcanic Flow - Medium to coarse grained hornblende porphyrite with intermediate groundmass.

Tuffaceous Types - Fine gray green massive to banded tuff or argillite.

Limestone - Coarse sugary, massive to thin bedded.

STRUCTURAL GEOLOGY

The banded rocks strike northerly and dip steeply east. There is nothing on the claims to suggest other than this monoclinal structure, but from Kerr's more regional mapping, it is known that the Palacozoic rocks occupy an anticlinal area with respect to the overlying Mesozoic volcanics. However, the older rocks must have undergone one or more periods of deformation and erosion before being covered by the Triassic volcanics. The attitudes seen in the banded rocks thus probably represent these older structures, which are impossible to work out from the relatively small area of corresponding formations exposed.

Regional north striking faults occur in the Tulsequah area, and can be traced for miles by the well marked draws which are their topographic expressions. These faults are associated in places with broad shear zones in which ore bodies are known to occur, as at the Tulsequah Chief and Big Bull mines. North striking draws which traverse the Spec claims can be traced into known fault structures farther south, and undoubtedly represent faults and possibly some narrow sheared zones.

Less conspicuous east striking structures which may represent small faults, intersect the main north striking faults in places.

ROCK ALTERATION AND MINERALIZED OCCURRENCES

Some areas of low to medium grade felsitic alteration occur, mainly enveloping structural breaks. The most westerly break mapped shows some alteration of this type near where it intersects the creek gravel. Felsitization of a slightly sheared greenstone is here accompanied by sparse pyrite mineralization. The largest area of felsitization mapped is just east of the claim boundary and envelopes an east striking break, then spreads out along the contact between banded tuffaceous (argillaceous?) rock and porphyritic greenstone. A narrow felsitic dyke is exposed within the felsitized area, but there is no associated sulphide mineralization.

Scattered outcrops show other small felsitized areas which cannot be related to known structures.

Apart from the slightly pyritic felsitized shear described above, only one sulphide exposure occurs on the claims. This forms a pyrrhotite band six feet wide and 40 feet long in the limestone near No. 1 post. The sulphide band strikes north and dips at 50° to 75° east. It is parallel to banding in the limestone and is thus probably a replacement along bedding planes. The mineralization tapers out at its southern extremity, but continues north until covered by the gravel of Shazah Creek Valley.

THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA LIMITED

RECORD OF WORK - SPEC CLAIMS

Date 1952	Employee	Occupation	Hours	Standard Rate	Amount
July 18	J. K. Webb	Geologist	8	$15.00/day	$15.00
	A.K. Christensen	Geologist	8		$15.00
July 21	J.K. Webb	Geologist	8		$15.00
	A.K. Christensen	Geologist	8		$15.00
July 22	J.K. Webb	Geologist	8		$15.00
	A.K. Christensen	Geologist	8		15.00
July 23	J.K. Webb	Geologist	8		15.00
	A.K. Christensen	Geologist	8		15.00
July 24	A.K. Christensen	Geologist	8		15.00
July 25	A.K. Christensen	Geologist	8		15.00
July 26	J.K. Webb	Geologist	8		15.00
	A.K. Christensen	Geologist	8		15.00
July 28	A.K. Christensen	Geologist	8		15.00
July 30	J.K. Webb	Geologist	8		15.00
	A.K. Christensen	Geologist	8		15.00
Oct. 1	J.K. Webb	Geologist	8		15.00
	A.K. Christensen	Geologist	8		15.00
Oct. 2	J.K. Webb	Geologist	8		15.00
Oct. 3	J.K. Webb	Geologist	8		15.00
Oct. 4	J.K. Webb	Geologist	8		15.00
	A.K. Christensen	Geologist	8		15.00
Oct. 6	J.K. Webb	Geologist	8		15.00
			176		$330.00

Certified a true and correct accounting of work done on "Spec No. 1 & Spec No. 2 " Mineral Claims during the year 1952.

Recap -

Paid J.K. Webb - $165.00
Paid A.K. Christensen - $165.00
Total $330.00

PROPERTY SUPERINTENDENT

BRANCH ACCOUNTANT

WRH;nb
Tuls. Office
October 8, 1952
(5)

Scattered chalcopyrite occurs throughout the pyrrhotite of this showing, and representative samples grade as follows: -

Sample No.	Width	Au.	Ag.	Cu.	Pb.	Zn.	Fe.
5495	4'	Tr.	Tr.	0.7	Nil	Tr.	28.0
5496	10'	Tr.	Tr.	0.3	Nil	Tr.	31.1
5497	8'	Tr.	Tr.	0.1	Nil	Tr.	20.7

Structural control over sulphide deposition other than limestone banding is not obvious, but since a north striking fault draw lies 30 feet east of the showing, and will intersect the sulphide band on dip, it can be inferred that mineralizing solutions followed the fault and spread out along a favorable horizon in the limestone.

RECOMMENDATIONS

This low grade and apparent small size of the main sulphide showing would not ordinarily invite further interest, but due to the fact that the apparent structural control is similar to productive structures elsewhere in the area, and that the northern extent of the sulphide body under Shazah Creek gravels is unknown, some further work could be done to test for a possible higher grade area of sulphides along the strike. As a first step it is recommended that a geophysical survey be performed to test for a northward extension of the main sulphide occurrence, as well for possible blind ore bodies near potentially favorable structures. The MacPhar Clinometer, an electromagnetic device, is recommended for this work.

Submitted by: _____
W. T. Irvine
Senior Mine Geologist,
Western District

WTI:il

c.c. Chief Geologist
Mines Division (2)
Legal Division (2)
Prince Rupert Office

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DOMINION OF CANADA)
) IN THE MATTER OF Geological surveying with respect to the mineral claims Spec Nos. 1 and 2, Atlin Mining Division.
PROVINCE OF BRITISH COLUMBIA)
)
TO WIT:)

I, WILLIAM T. IRVINE, of 150 Cambridge Road, in the City of Trail, in the Province of British Columbia, Professional Geological Engineer,

DO SOLEMNLY DECLARE:

That the statement of expenditures amounting to $330.00 for geological surveying of the mineral claims Spec Nos. 1 and 2, situated near Tulsequah, in the Atlin Mining Division, as contained in the attached statement signed by J. C. McLean, Property Superintendent, and W.R. Harris, Branch Accountant, of The Consolidated Mining and Smelting Company of Canada Limited, owner of the claims, is correct.

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".

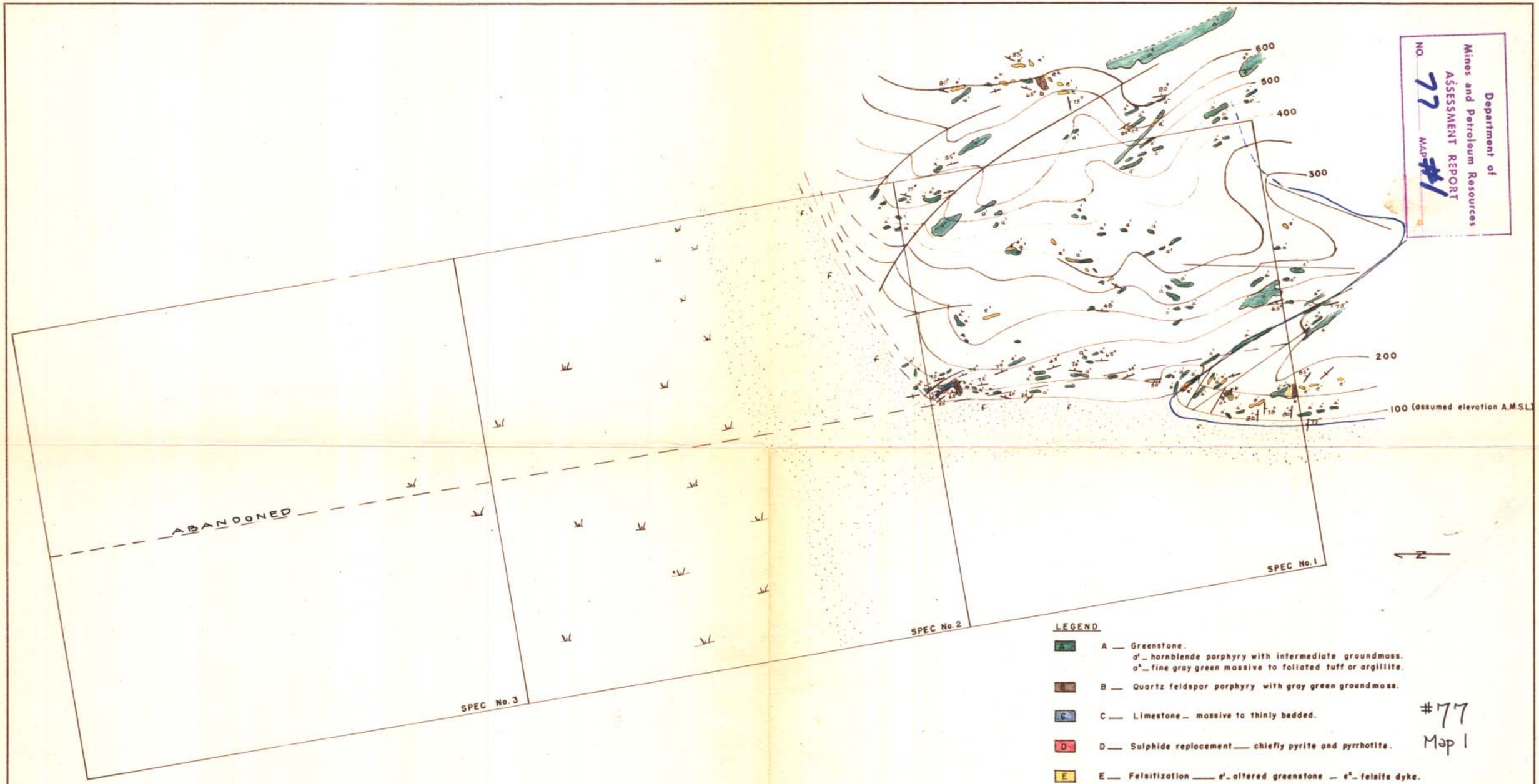
DECLARED before me at Tadanac, in the Province of British Columbia, this 15th day of October, A.D., 1952.

W. T. Irvine

A Commissioner for taking Affidavits within British Columbia.

RECEIVED
OCT 21 1952
MINING RECORDER
ATLIN, B. C.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 77 MAP #1



LEGEND

A — Greenstone.
a¹ — hornblende porphyry with intermediate groundmass.
a² — fine gray green massive to foliated tuff or argillite.

B — Quartz feldspar porphyry with gray green groundmass.

C — Limestone — massive to thinly bedded.

D — Sulphide replacement — chiefly pyrite and pyrrhotite.

E — Felsitization — e¹ - altered greenstone — e² - felsite dyke.

F — Gravel.

#77
Map 1

H. J. Irwin P.Eng.

DRAWN BY J.K.W.		TRACED BY		THE CONSOLIDATED MINING & SMELTING CO. OF CANADA LTD.	PROPERTY: SPEC MINING CLAIMS SCALE 1" = 200'	
REVISED BY	DATE	REVISED BY	DATE			
				AREA: Atlin M. D.	DATE: Oct. '52	PLATE No.

Form 699