

THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA LIMITED  
TRAIL, B.C.

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GEOLOGICAL REPORT ON DIEF CLAIM GROUP  
OSOYOOS M.D.

406  
04

Claims reported on for record of assessment work:

<u>Claim</u>	<u>Record No.</u>	<u>Tag No.</u>
Dief No. 1	8093	313427
Dief No. 2	8094	313428
Dief No. 3	8095	313429
Dief No. 4	8096	313430
Dief No. 5	8097	313431
Dief No. 6	8098	313432
Dief No. 8	8100	313434
Dief No. 10	8102	313436
Dief No. 12	8104	313438

Location: 10 miles NNW of Keremeos, S.W. Quadrant 49° N, 119° W.

Dates between which work was done: October 31 to Nov. 9, 1961.

P. I. I.

THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA LIMITED  
TRAIL, B.C.

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GEOLOGICAL REPORT ON DIEF CLAIM GROUP  
OSOYOOS M.D.

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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 406 MAP.....

THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA LIMITED  
TRAIL, B.C.

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GEOLOGICAL REPORT ON DIEF CLAIM GROUP  
OSOYOOS M.D.

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Geological mapping was done on these nine claims with a direct field expenditure of \$1,125. This report, with accompanying maps and statement of expenditures, is hereby submitted to record the required assessment work.

INTRODUCTION

General

Geological mapping was done on Dief claims Nos. 1 - 6 inclusive and Nos. 8, 10 and 12 in the Osoyoos Mining Division during the period October 31st to November 9th, 1961 (inclusive). The mapping was done by plane table for the most part, but areas considered to contain few or no outcrops were mapped by chain and compass traverses tied into the plane table stations. The plane table was oriented by compass and the base elevation established by aneroid from a bench mark near Keremeos.

The work was done under the direct supervision of J. Richardson, a Cominco Senior Exploration Geologist and a registered B.C. Professional Engineer. The remainder of the crew consisted of T.W. Muraro (U.B.C. 1956), a Cominco Exploration Geologist, and A.B. Mawer, a Cominco Exploration Technician. The two above-mentioned geologists carried out the mapping and Mawer operated the plane table.

Location and Access

The claims are situated in the Osoyoos Mining Division (S.W. Quadrant  $49^{\circ}$  N,  $119^{\circ}$  W), about 10 miles west-north-west of the village of Keremeos. The group lies between the main fork and a south fork of

Olalla Creek at elevations ranging from 3,600' to 5,000'. Access to the property is by means of a truck road leading westerly from Highway No. 3 at the hamlet of Olalla for a distance of six miles.

#### GENERAL GEOLOGY

The claim area is, for the most part, drift covered. A fair number of outcrops are present as bluffs and ridges on the northern claims, but the southern claims, traversed by the south fork of Olalla Creek are almost devoid of outcrop. Elsewhere outcrops are scarce, occurring in small ridges, or more frequently, in road cuts.

The claims are underlain by rocks of the Shoemaker formation of Permian or Lower Triassic age. This formation consists essentially of chert and tuff members and volcanics of doubtful origin.

Jasper and massive and thin-bedded cherts predominate in the vicinity of the showings. One thousand feet west of the showings massive pyroclastics (acid to intermediate) strike northward and dip west at low angles.

Thin-bedded cherts with argillaceous and tuffaceous partings extend 1,500' east of the showings. Fracturing, minor folds and faults occur throughout this area but a general northerly strike and east dip is maintained. Most of the minor folds plunge 10° to 30° at N 15° E.

From 1,500' to 3,000' east of the showings, approximately equal amounts of chert and tuffaceous rocks are exposed in a structurally complex area.

#### MINERALIZATION

Primary manganese ore occurs in a zone up to 40' wide within the top or eastern side of a massive jasper unit. The jasper is approximately 100' wide and is developed at the top of a section of massive light grey chert. To the east the jasper is terminated abruptly by a bedded fault against thin-bedded, olive-green tuffs and cherts. These rocks, which form the immediate hangingwall of the mineralized zone, contain numerous shear directions, minor faults and folds.

The western edge of the jasper zone is not well defined but appears to grade to a sporadic development of jasper in massive chert.

The upper 10' to 40' of jasper contains bedded lenses and layers of braunite and/or composite layers of braunite and rhodocrosite up to several feet thick. Numerous bedded layers of hematite one-half to two inches thick also occur in the jasper.

Secondary manganese oxide commonly occurs on fracture surfaces of tuffs and cherts away from the showings. However, all the primary manganese mineralization appears to be associated with massive jasper, particularly where layers of free hematite are present.

The hangingwall of the jasper zone has been explored for a strike length of 500' and it extends beyond our claims to the northwest.

Primary manganese mineralization has not been located south-east of the small adit at the south end of the open-cuts on Dief No. 2 claim. It is possible that the area of heavy talus here covers the downhill (southeastern) extension of the mineralized zone.

#### ATTACHMENTS:

- (1) Geological Plan, 1" = 100' (2 sheets).

- (2) Location Plan
- (5) Statement of Expenditures
- (4) Statutory Declaration relating to expenditures.

Report by:

J. Richardson  
J. Richardson  
Professional Engineer

JR:mc  
Exploration Office, Western District  
March 8, 1962

Distribution: Mining Recorder (Penticton) (2)  
Exploration Division (1)  
Western Exploration (2)

CANADA  
PROVINCE OF BRITISH COLUMBIA  
TO WIT:

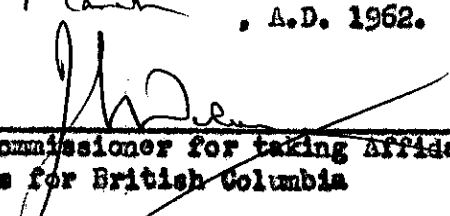
STATUTORY DECLARATION RELATING TO EXPENDITURES ON A GEOLOGICAL SURVEY OF CERTAIN MINERAL CLAIMS THE PROPERTY OF THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA LIMITED

I, JAMES RICHARDSON, Professional Engineer, of the City of Trail, in the Province of British Columbia, DO SOLEMNLY DECLARE:

1. That I am the person who prepared a geological report as the result of surveys carried out of certain mineral claims, the property of The Consolidated Mining and Smelting Company of Canada Limited, situated in Osoyoos Mining Division.
2. That copies of the said report are being filed with the Mining Recorder in Penticton.
3. That attached hereto and marked with the letter "A", upon which I have signed my name at the time of declaring hereof, is a statement of expenditures incurred in connection with the geological survey of the said claims showing in addition the dates during which those making the said survey performed their work.

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 the Municipality of Tadenac, in the Province of British Columbia, this 12<sup>th</sup> day of March, A.D. 1962.

  
A Commissioner for taking Affidavits for British Columbia



**THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA LIMITED**  
**TRAIL, B.C.**

---

**1961 GEOLOGICAL MAPPING EXPENDITURES**  
**DIEF CLAIM GROUP - OSOYOOS M.D.**

WAGES

1 Senior Geologist (J. Richardson) for 10 days (31 Oct. - 9 Nov./61) @ \$35/day -	\$ 350
1 Exploration Geologist (T. W. Mirare) for 10 days (31 Oct. - 9 Nov./61) @ \$25/day -	250
1 Exploration Technician (A. B. Mauer) for 10 days (31 Oct. - 9 Nov./61) @ \$15/day -	<u>150</u>
	\$ 750

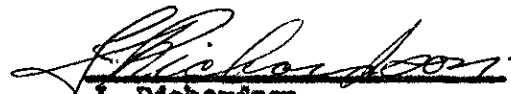
TRANSPORTATION

1 Panel Truck - 825 miles @ 20¢/mile -	\$ 165
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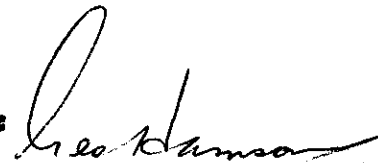
ROOM & BOARD

30 man-days @ \$7/man-day -	<u>\$ 210</u>
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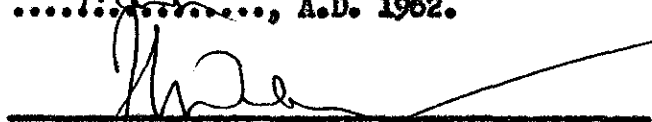
TOTAL \$1,125

  
J. Richardson,  
Professional Engineer.

Endorsed by:

  
Geo. Hanson,  
Branch Accountant.

This is Exhibit "A" to the Statutory  
Declaration of J. Richardson, declared  
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....., A.D. 1962.

  
~~Notary Public in and for the Province  
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GEOLOGICAL REPORT ON DEEP CLAIM GROUP  
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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 406 MAP \_\_\_\_\_

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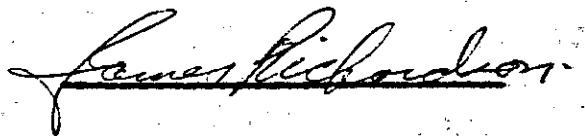
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ROOM & BOARD

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TOTAL \$1,125

  
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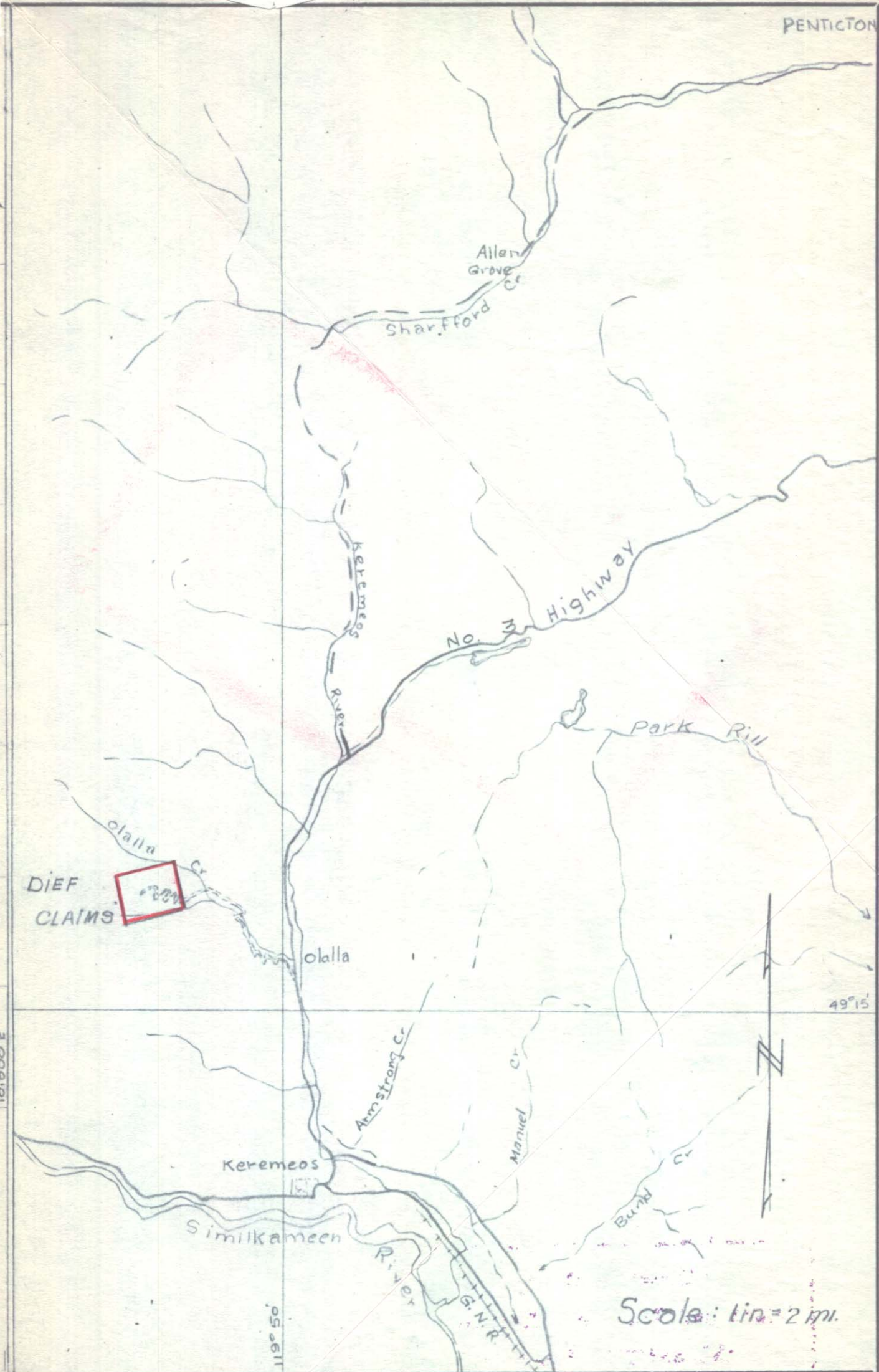
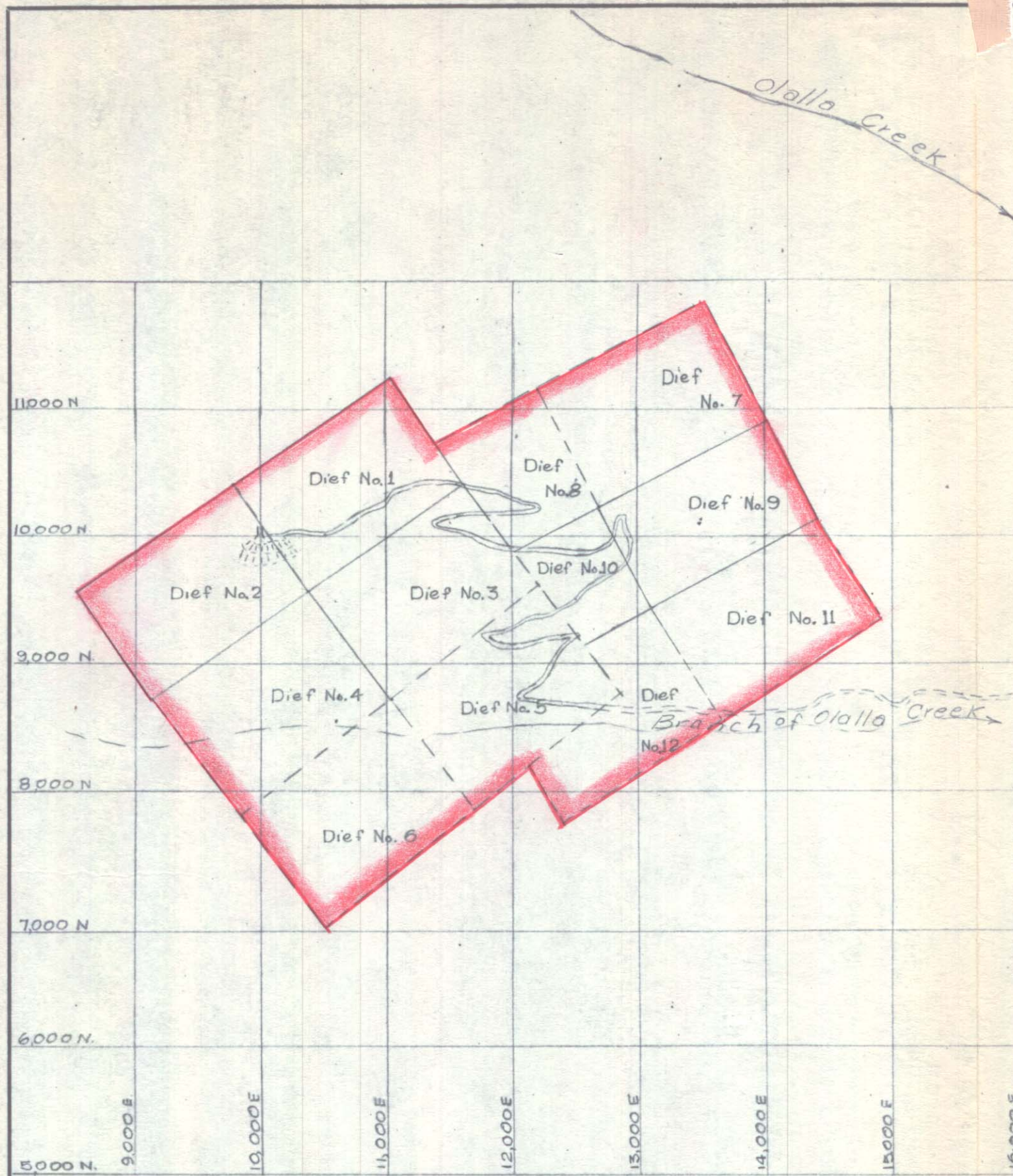
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Branch Accountant.

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....., A.D. 1962.

  
A Notary Public in and for the Province  
of British Columbia.

Commissioner for taking  
Affidavits for British Columbia



Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. **406** MAP **1**

Scale: 1 inch = 1000 ft

(MI)

**406**

The Consolidated Mining and Smelting Company of Canada Limited.

DRAWN BY: ABM		TRACED BY: ABM.	
REVISED BY	DATE	REVISED BY	DATE

*Richardson*  
Prof. Engineer

DIEF CLAIMS  
Location Map  
Olalla B.C. Osoyoos M.D.

SCALE: As shown | DATE: March 5, 1962 | PLATE:

Dief No. 8

GROUND HELD  
BY  
B.C. MANGANESE

Dief No. 1

Dief No. 2

Dief No. 3

Dief No. 4

Dief No. 5

Dief No. 6

406

LEGEND

- 8 CHERT: massive, cream to light grey, dark blue grey, vitreous; hematite alteration, thin on fracture surfaces, no fine jasper
- 7 CHERT: thin bedded 1/4" to 3/8" beds, white, cream, dark grey; minor ferruginous or argillaceous partings in places; hematite alteration; Mn stained
- 6 JASPER: hematite red; mainly massive, some thin bedded, mostly fractured; Mn mineralization; hematite, rhodanite, rhodochrosite
- 5 TUFF: massive, green to grey, brown weathering, granular probably welded tuff, calcareous in places
- 4 TUFF: thin bedded, fine grained, conchoidal shered, some more thin bedded chert, calcareous in places
- 3 ACID PYROCLASTIC: massive accumulation of acid (hyalitic?) fragments 1/4" and less, shered
- 2 LIMESTONE: fine grained, blue grey; very little apparent recrystallization
- 1 DYKES: includes diabase, aegirite leucopyroxenes and fine grained syenitic types

Colors very similar may be interchanged

map 3 → 1  
Kamboc

SYMBOLS

- Bedding, top unknown
- Axes of minor folds
- Faults
- Schistosity or shearing at fracture cleavage
- Shearing or cleavage parallel to bedding
- Geological contact
- Proposed drill hole

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 406 MAP 2

The Consolidated Mining and Smelting Company of Canada Limited

DRAWN BY: TMM	TRACED BY:
REVISED BY:	DATE:
REVISED BY:	DATE:

OLALLA MANGANESE  
GEOLOGICAL PLAN  
SHEET 1  
Richardson  
Engineer

SCALE: 1" = 100' DATE: DEC '61





Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 406 MAP 3

406  
115

Geology and mapping by J. Richardson, T.W. Muraro and A.B. Mower  
For legend see Sheet 1

The Consolidated Mining and Smelting Company of Canada Limited			
DRAWN BY: T.W.M.		TRACED BY: A.B.M.	
REVISED BY	DATE	REVISED BY	DATE
OLALLA MANGANESE		GEOLOGICAL PLAN	
SHEET 2		SCALE: 1 in. = 100 ft	
DATE: Dec/61		PLATE:	