

168

NORANDA EXPLORATION COMPANY LIMITED

Geological and Aeromagnetic Surveys

of the

Alocin Chrome Groups' A and B

Headwaters of Nicola River, 22 miles west

of

Vernon, B.C.

50° 119° East

In Nicola Mining Division

Including the Following Mineral Claims

Eve 1	4360	Horne	1012
" 2	4361		
" 3	4362	Lorna	1013
" 4	4363		
		Ann	1014
Robbie 1	4344		
" 2	4345	Amy	1066
" 3	4346		
" 4	4347	Louise	1067
" 5	4348		

M.M. Menzies, P. Eng.  
July/September - 1956

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#1 1 Geological Map      Scale 1" - 1000'

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NORANDA EXPLORATION COMPANY LIMITED

Cost of Geological and Aeromagnetic Surveys  
of the  
Alocin Chrome Groups' A and B  
Greenwood, B.C. - 1957

Technical:

Contract price of Aeromagnetic and aerophotographic  
surveys \$1850.00

Professional Engineering:

Supervisory, field, drafting  
15 days @ \$35.00/day - \$ 525.00

Labor:

Mapping assistant, and line cutting  
35 man days @ \$15.00/day - \$ 525.00  
Total cost-----\$2900.00

Cost Proportions:

Group A - (Eve 2 & 4, Louise, Amy, Ann, Lorna, Horne,  
Robbie 1) \$800.00

Group B - (Robbie 2-5) \$400.00

Total-----\$1200.00

*M. M. Menzies*

NORANDA EXPLORATION COMPANY LIMITED

Geological and Aeromagnetic Surveys

of the

Alocin Chrome Group's A and B

Introduction:

The Alocin Chrome property was presented to the writer for examination by R. Bechtel, Penticton, during the summer of 1955 and an examination was made on the 12th of October. An option was taken on the property the following spring with the intention to prospect the Alocin serpentine belt and, if results were favorable, to carry out a more detailed programme. Trail work and prospecting was begun in August and by the end of September several miles of trail had been cut, and 4 miles of the main serpentine belt prospected and mapped at a scale of 1000 feet to the inch. Work was discontinued due to increasingly poor fall weather conditions.

Description:

The Alocin Chrome property lies 22 miles west of Vernon, B.C., at the headwaters of the Nicola River. Elevations on the main serpentine belt range from about 5000 to 5200 feet. While relief of the surrounding country is not great, peaks and ridges rising 500 feet or more above narrow creek beds give the terrain a rugged aspect. Flat, swampy land borders the lakes and streams and the area is covered by a moderate to heavy growth of small timber. Annual precipitation is

very heavy with a comparatively short working season extending from about June 1st to October 1st.

The property may be reached by car along the Bear Lake logging road and thence by foot or horse along a poor 12-mile pack-trail to the Alocin Syndicate cabin near Eileen Lake. An alternative is to fly into Echo Lake, a small body of water lying between Barton Hill to the west and Dome Peak to the east (See G.S.C. preliminary map 48-4A, Salmon Arm), from which the cabin may be reached along the 7-mile southerly trending pack-trail cut out last summer. As the lake is small, only a high performance aircraft can be used.

Geology:

The Alocin Chrome serpentine belt was mapped by H.M.A. Rice in 1945-46 at a scale of 1 inch to 2 miles and is in the southwest corner of his G.S.C. Salmon Arm Area, Preliminary Map 48-4A.

Three distinct rock types were recognized in the area mapped this summer by the writer at a scale of 1 inch to 1000 feet. Variations in each were also noted.

The oldest rocks, named the "Ida Group" by Rice, are andesites interbedded with tuffaceous argillites. Both are schisted with the nearly vertical planes of schistosity striking approximately north 25 degrees west. Despite their schistose character, these rocks are tough and locally silicified.

The "Ida Group" forms the eastern boundary of the serpentine and surrounds the south end of the belt where it splits into two diverging arms. Strong silicification of the volcanics and sediments has occurred in the "V" thus formed.

The serpentine belt, the alteration product of a peridotite or pyroxinite intrusion, is at least 8 miles in length and its remarkably uniform strike conforms with the planes of schistosity in the "Ida Group". The serpentine is a light chocolate colour, very fine grained, and in part shows a steeply dipping, closely spaced slate-like cleavage or jointing which also parallels the general trend of the country. It has formed pronounced ridges on which much rock is exposed but considerable portions of the belt are obscured by a thick mantle of soil. The main chromite occurrences are on the Horne claim near the property cabin. Here a few small lenses, the largest several feet in length, and some sparse and erratic disseminations of chromite can be found. Elsewhere, small nodules of chromite were discovered in several widely scattered localities but disseminated mineralization was not observed.

A granitic intrusion is in contact with the westerly boundary of the serpentine except at the extreme south end of the belt. This granitic rock is classified as "Coast Intrusions" of Jurassic or later age. A marked and uniform

increase in grain size is noted from its fine-grained contact with the serpentine to the coarse-grained texture found 3 or 400 feet to the west. Phases of the intrusion vary from a gabbro on the Horne claim to a diorite, quartz diorite, or even a granodiorite elsewhere. It invariably has a fresh appearance.

Two gabbroic dykes, obviously related to the main granitic intrusion, cut the serpentine on the Horne claim in the immediate vicinity of the chromite occurrences. A genetic relationship between the chromite and "Co<sup>a</sup>st Intrusions" is probable.

#### Former Work:

The Alocin Syndicate made several small open-cuts, mainly on the Horne chromite showings, and prospected the south half of the serpentine belt.

#### Reasons for Survey:

While it was recognized that the known chromite occurrences did not warrant diamond drilling or extensive surface work the large size of the serpentine belt and the high quality of ore specimens analyzed justified a preliminary mapping and prospecting programme.

#### Details of Seasons Work:

Because of the difficulty of access and supply much

time was necessarily expended on cutting a fairly good 7-mile pack-trail northward from the cabin to Echo Lake. Servicing by aircraft was thus made possible.

To facilitate mapping and prospecting an excellent base-line, chained at 100 foot intervals, was cut at a bearing of north  $23\frac{1}{2}$  degrees west from Cameo Lake in the south to the top of a prominent serpentine ridge 4 miles to the north. All of the numerous serpentine exposures in the 4-mile section of the belt were carefully prospected. Mapping at 1 inch to 1000 feet was carried along lines normal to the base-line at intervals of 1000 feet in the south and 1500 feet in the north. Traverses were controlled by pace and compass.

Observations:

1. The main serpentine belt is approximately 8 miles in length and has an average width of about 1000 feet.
2. The Horne chromite showings are cut by two gabbroic dykes and thus a genetic relationship between the "Coast Intrusion" immediately to the west and the chromite is probable.
3. Despite the high quality of analyzed chrome ore specimens, known showings do not justify diamond drilling or extensive surface work.
4. The sparse and erratic character of chromite dissemination



found on the Horne claim and the apparent total lack of it elsewhere gives little hope for a large tonnage low-grade operation.

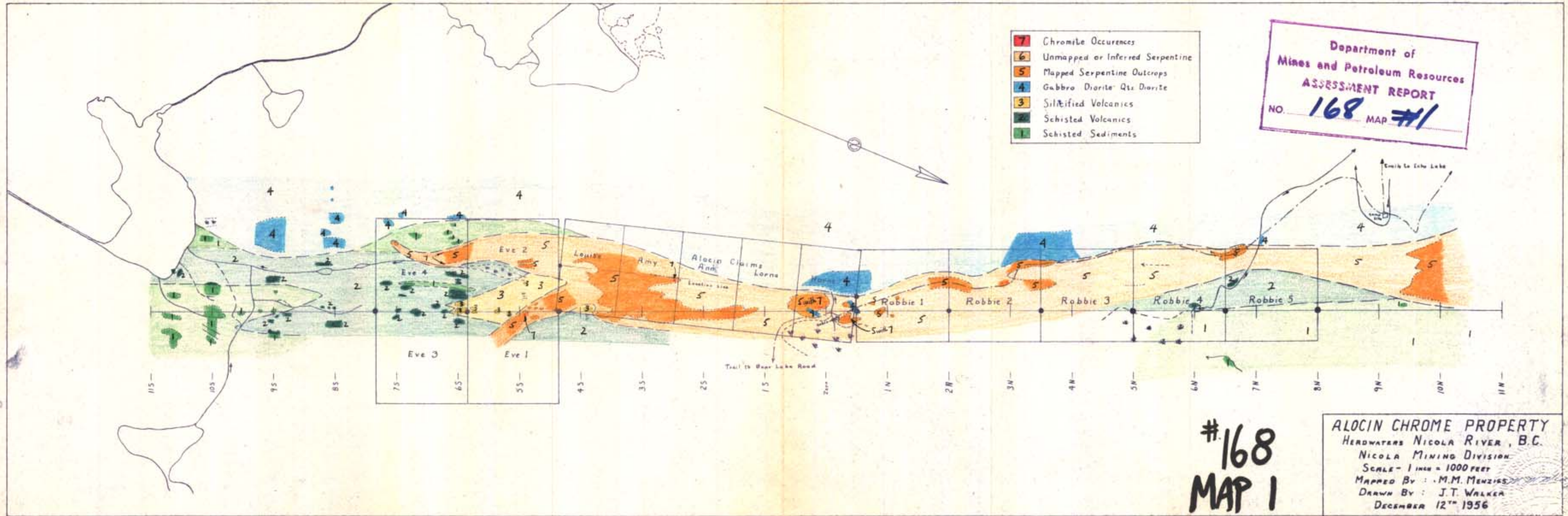
5. Prospecting of the north half of the main belt and other serpentine intrusions in the area should be carried on.
6. A study of the costs of a gravimetric survey should be made as this is probably the only geophysical method capable of aiding in the finding of commercial chromite deposits in this area.

Respectfully submitted,

*M M Menzies*

Morris M. Menzies, P. Eng.





- 7 Chromite Occurrences
- 6 Unmapped or Inferred Serpentine
- 5 Mapped Serpentine Outcrops
- 4 Gabbro Diorite Qtz Diorite
- 3 Siltified Volcanics
- 2 Schisted Volcanics
- 1 Schisted Sediments

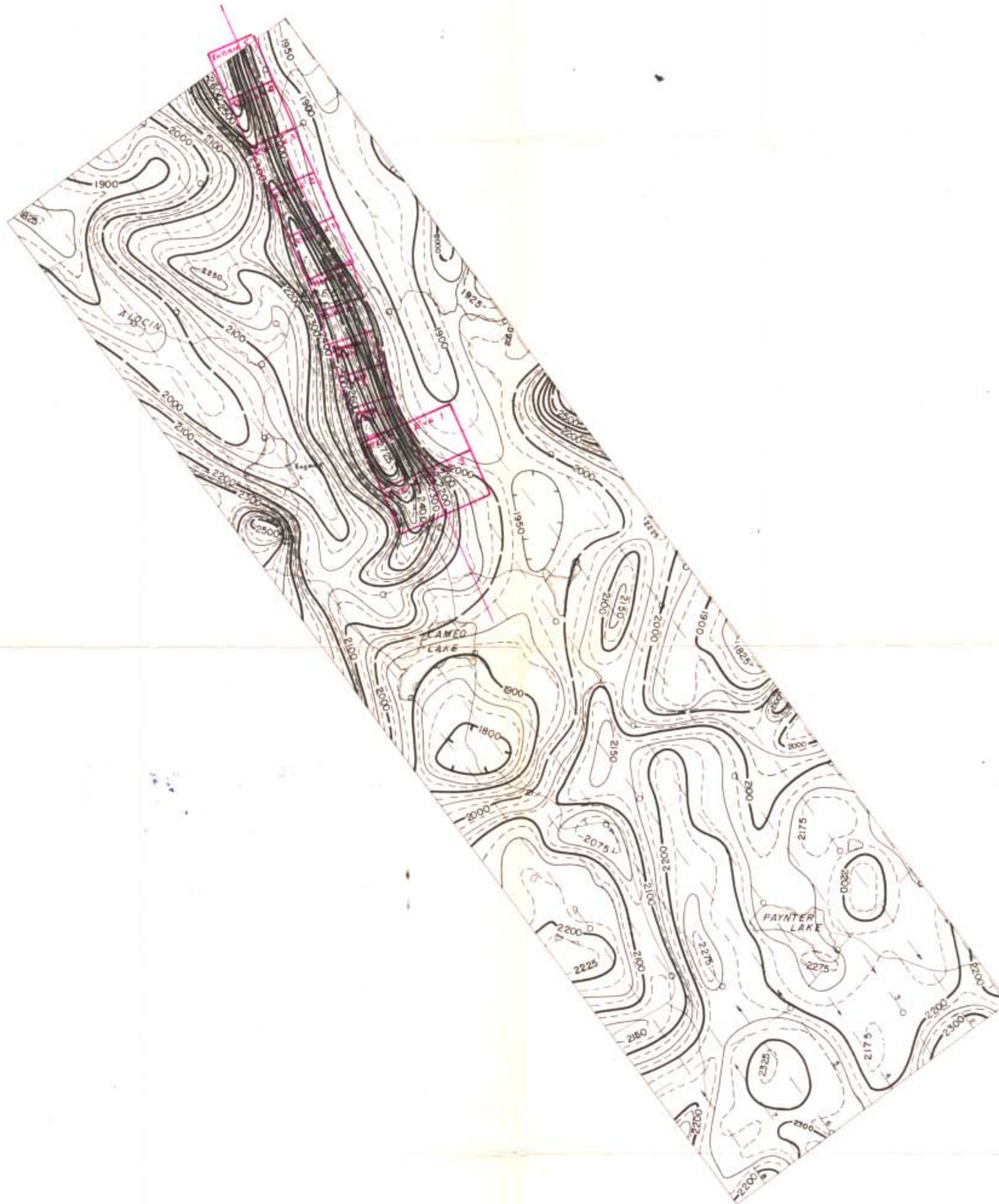
Department of  
 Mines and Petroleum Resources  
**ASSESSMENT REPORT**  
 NO. **168** MAP **#1**

#168  
MAP 1

**ALOCIN CHROME PROPERTY**  
 HERDWATERS NICOLA RIVER, B.C.  
 NICOLA MINING DIVISION  
 SCALE - 1 inch = 1000 FEET  
 MAPPED BY : M.M. MENZIES  
 DRAWN BY : J.T. WALKER  
 DECEMBER 12<sup>TH</sup> 1956



NORANDA MINES LIMITED  
 AIRBORNE GEOPHYSICAL SURVEY  
 MAGNETOMETRIC MAP



Flown and Compiled in JULY - AUGUST 1956

Produced in Canada by AEROMAGNETIC SURVEYING LIMITED

#168  
 MAP 2

CONTOUR INTERVAL..... 25 GAMMA  
 MEAN FLIGHT LINE SPACING..... 1320 FEET  
 MEAN TERRAIN CLEARANCE..... 500 FEET  
 500 GAMMA CONTOUR.....  
 100 GAMMA CONTOUR.....  
 50 GAMMA CONTOUR.....  
 25 GAMMA CONTOUR.....  
 MAGNETIC LOW.....  
 RADIOMETRIC ANOMALY.....  
 FIDUCIAL POINTS.....  
 FLIGHT LINES..... 1 TO 8

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 168 MAP #2

CAMEO LAKE B.C.

SCALE  
 2640 FEET TO 1 INCH



*Handwritten signature or stamp*