

3454

Department of
Mines and Geotechnical Resources
ASSESSMENT REPORT
NO. 3454 MAP

GEOCHEMICAL REPORT ON THE CROWN CLAIM GROUP,

BROOM CREEK (NICOLA M.D.)

50° 120° S.W. (92I/7) 92 I / 7W

TORWEST RESOURCES (1962) LTD. (N.P.L.)

Vancouver, B.C.
December 31, 1971.

J.M. Carr, P.Eng.

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1 Figure 1

2 Figure 2

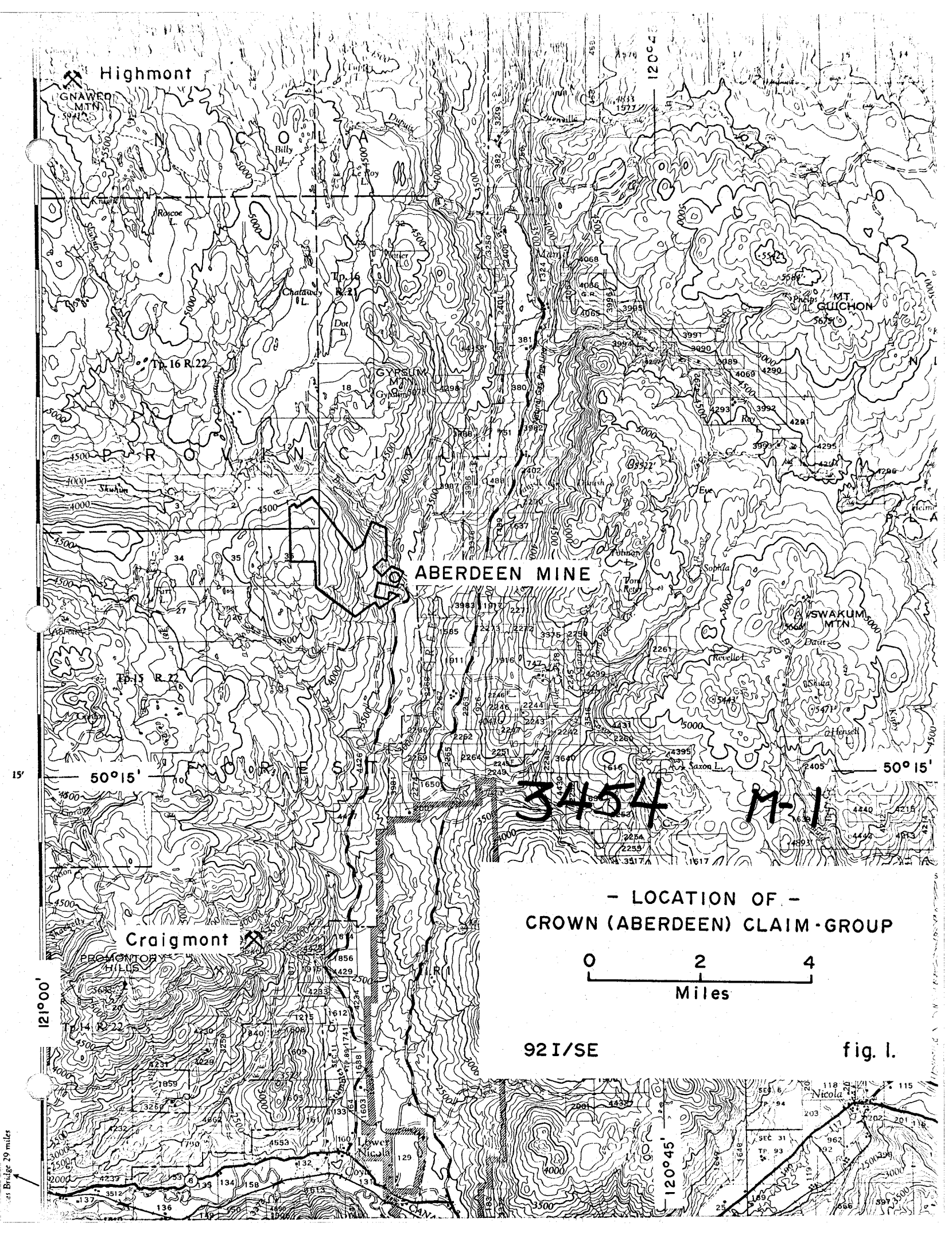
3 Figure 3

Location Map

Topography of Crown (Aberdeen) Group

Geochemical Survey - Crown (Aberdeen)
Claim Group

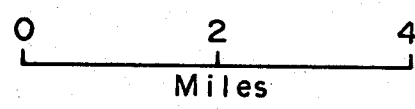
1" = 400' (in pocket)



ABERDEEN MINE

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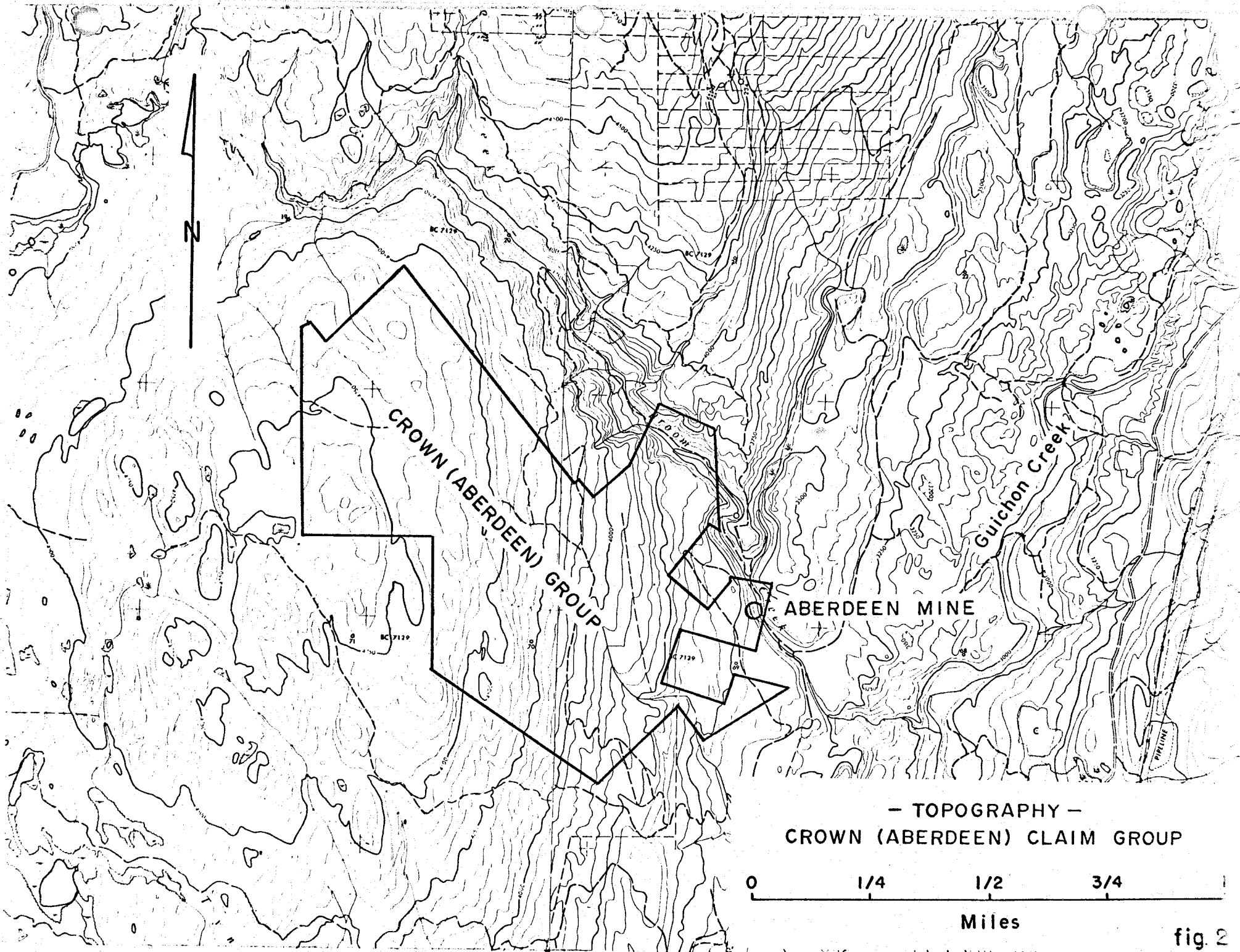
- LOCATION OF -
CROWN (ABERDEEN) CLAIM-GROUP



92 I/SE

fig. 1.

at Bridge 29 miles



— TOPOGRAPHY —
CROWN (ABERDEEN) CLAIM GROUP

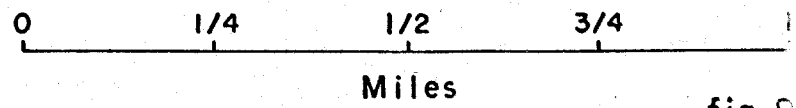


fig. 2

INTRODUCTION

A geochemical soil survey was carried out on the Crown group of 36 recorded claims and on the adjoining Crown-granted mineral claim Lot 960 (Aberdeen) by Torwest Resources (1962) Ltd. from 17 May to 15 June, 1971.

The Crown (Aberdeen) property is 14 miles northward on the Aberdeen road from the Merritt - Spences Bridge highway at Lower Nicola. It lies mainly south of Broom Creek on a fairly steep, heavily timbered hillside facing predominantly eastward towards the valley of Guichon Creek (see Fig. 1). The claims are underlain by rocks of the Guichon Creek batholith (Northcote, K.E. (1968), Bulletin 56, B.C. Dept. of Mines & Petroleum Resources) which elsewhere are known to contain two kinds of copper deposit, namely, large low-grade disseminations and small high-grade lenses. Elevations on the property range from 3,300 feet near the Aberdeen mine at Broom Creek to 4,900 feet on the westernmost claims. The terrain is generally well drained. Glacial till covers much of the property to depths in places exceeding 25 feet. Rock outcrops are mainly restricted to the higher ground and to the incised narrow valley of Broom Creek, where they are partly veneered by local deposits of glacial lake silts. The regional direction of movement of Pleistocene ice sheets at the time of till deposition was from the northwest.

Several small high-grade lenses containing variously chalcopyrite, bornite, pyrite and chalcocite are exposed along Broom Creek. From the largest of these at the Aberdeen mine, some 1,800 tons of ore was shipped earlier in the century. These mineralized lenses all strike north 50 degrees west and dip steeply northeastward, and they apparently represent an en echelon series in a fracture zone whose overall trend is unknown but may be northwesterly and

roughly coincident with Broom Creek. The closest known disseminated copper deposit is on the Vimy property about one-half mile northeast of Broom Creek.

Trenches shown on Fig. 3 were made by General Resources Ltd. in 1962 when the ground was partly covered by the former Rover 8-13 claims (Ann. Report B.C. Minister of Mines & Petroleum Resources, 1962, p.51). These trenches partly failed to reach bedrock at depths of as much as 25 feet. Previous work by Torwest Resources (1962) Ltd. on the Crown claims includes a magnetometer survey and a Ronka EM-16 survey in 1969 (Assessment Reports 1826 and 1923). Later than the soil sampling described herein, two short Packsack diamond drill holes were made on the Crown 23 claim. They intersected reddish-coloured Witches Brook Phase quartz diorite containing minor amounts of malachite on fractures.

FIELD AND LABORATORY PROCEDURES

A total of 462 samples were collected at 200 foot intervals on a previously cut and surveyed grid employing a 400-foot line spacing. The samples were collected with a grubhoe from below the organic layer, commonly at a depth of 6 inches. All samples were placed individually in kraft bags, partly air dried, and shipped to the Barringer Geochemical Laboratory at Pemberton Rd., North Vancouver for determination of total copper content.

At the laboratory the following procedure was used:

1. Sample Preparation

- (a) The wet samples were dried in an oven at 110°C.
- (b) The dried samples were sifted, using 80-mesh sieve. The plus 80-mesh fraction was rejected, and the minus 80-mesh fraction was transferred into a new bag for analysis.

2. Method of Analysis

- (a) 0.5 gm. of the minus 80-mesh samples were weighed out into test tubes.
- (b) 2 ml. of perchloric nitric acid mixture (85% HClO₄ + 15% HNO₃) were added to the samples in test tubes.

- (c) The samples with acid mixture were digested on a sand bath at 160°C for three hours.
- (d) At the end of the digestion period test tubes were removed from the sand bath and cooled for fifteen minutes.
- (e) The volume in each test tube was made up to 10 ml. with de-mineralized water.
- (f) The mixture in the test tubes was capped and shaken vigorously, and then allowed to settle.
- (g) The samples were aspirated in atomic absorption spectrophotometer with proper parameters. The concentration of each element was determined by comparing with a set of known standards.

RESULTS AND CONCLUSIONS

On the basis both of previous experience in this general area and of the results of the present survey (Fig. 3), values of total copper in soil from 0 - 50 ppm are background, those from 50 - 70 ppm are threshold, and those greater than 70 ppm are anomalous. Throughout the survey area a distinct northwest-southeast geochemical grain prevails, which parallels both the direction of glacial transport and the inferred principal fracture direction in bedrock.

Soils in Broom Creek are all anomalous and they may only reflect the presence of additional copper mineralization of the local, high-grade kind already known to exist along this lineament. Elsewhere, the survey area appears divided approximately along Line 60N into northern and southern parts each of different geochemical character. The southern part is characterized by scattered anomalies. Since these anomalies are largely unrelated to swampy areas and mostly possess no rock outcrops, they may provide acceptable targets for further exploration.

The northern part of the area exhibits strip-like anomalies within a threshold environment and, as such, it appears the more promising of the two parts. Further work should aim at determining the presence of widespread, possibly disseminated sulphides in this area, for which a reconnaissance I.P. survey is recommended.

LIST OF CLAIMS AND WORK DISTRIBUTION

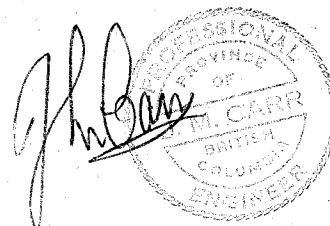
<u>Claim</u>	<u>Mining Div.</u>	<u>Record No.</u>	<u>Present Expiry Date</u>	<u>No. of Years Applied For.</u>
CROWN #1 - 8 inc.	NICOLA	36827-36834	May 10, 1972	1
CROWN #9 -10 inc.	"	48743-48744	Mar.30, 1972	1
CROWN #12 - 29 inc.	"	48745-48762	Mar.30, 1972	1
CROWN #31	"	48763	Mar.30, 1972	1
CROWN #33	"	49080	Apr.19, 1972	1
CROWN #34 - 35	"	49081-49082	Apr.19, 1972	1
CROWN #37	"	39604	Feb.11, 1972	1
CROWN #39	"	39606	Feb.11, 1972	1
CROWN #1 - 3 FR.	"	39608-39610	Feb.11, 1972	1

Certificates of Work applied for as indicated in last column.

CERTIFICATE

I, John M. Carr, do hereby certify that:

1. I am a geologist residing at 3896 Scolton Road, Victoria, British Columbia and employed by the Teck Group of Companies.
2. I am a graduate of the University of Oxford with a B.A. (Hons.) degree in Geology and a D.Phil degree in Geology obtained at the same University.
3. I am a Professional Engineer registered in the Province of British Columbia.
4. I have practised my profession in geology continuously for the past 20 years and since 1955 in British Columbia.
5. Between 17 May and 15 June 1971, I supervised the geochemical work on the property on behalf of Torwest Resources (1962) Ltd.

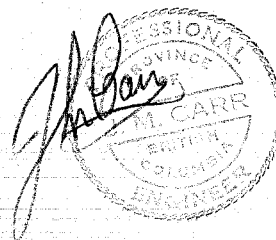
A circular stamp from the Province of British Columbia, Professional Engineer, with the name J.M. Carr in the center. A handwritten signature of John M. Carr is written over the stamp.

John M. Carr
December 31, 1971.

STATEMENT OF COSTS

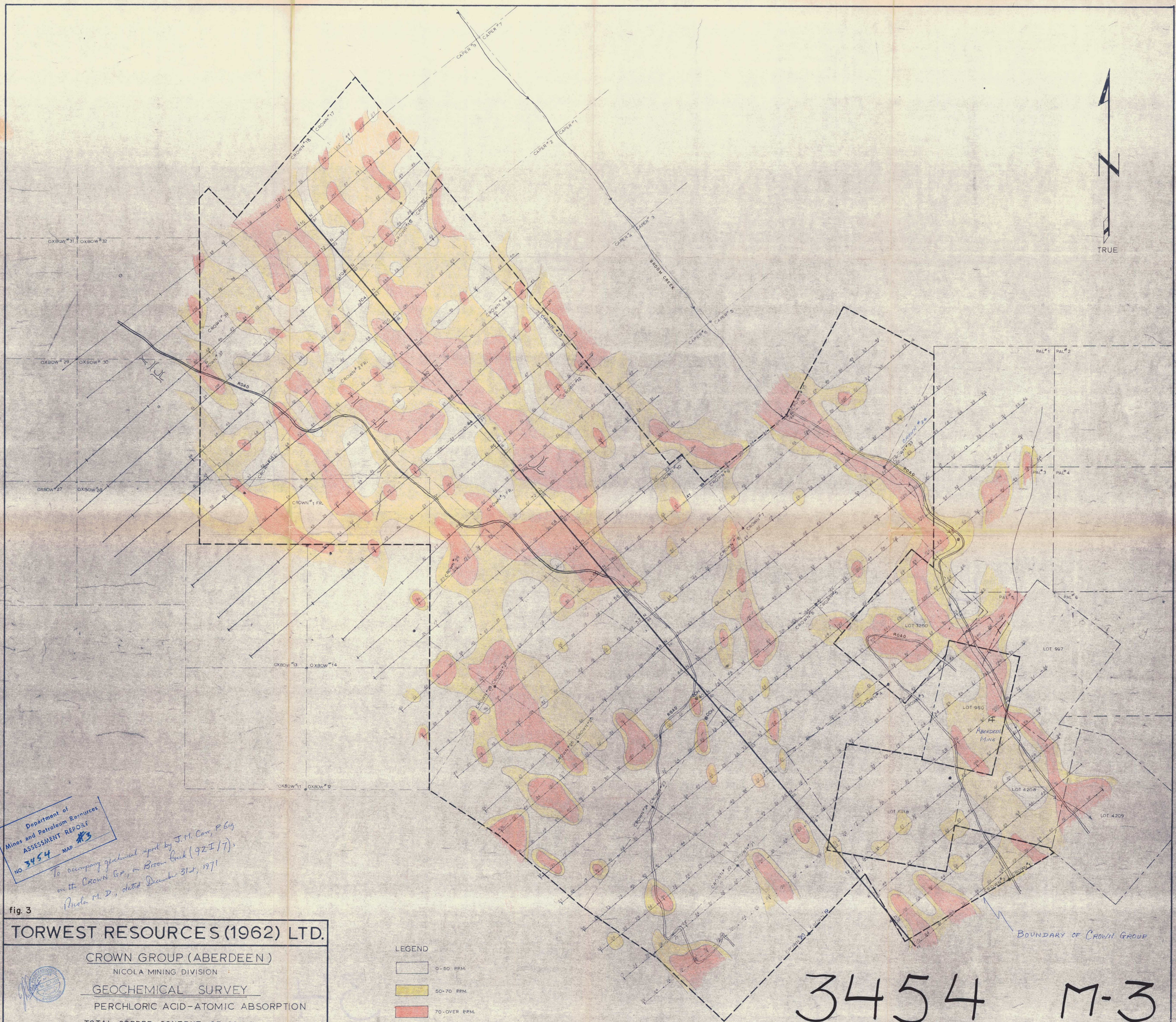
FIELD WAGES:

May 17 - June 15	Lorne McClelland	18 days @ \$30 per day	\$540.00
May 17 - May 31	Bud Johnston	10 days @ \$30 per day	300.00
May 26 - June 7	Garry McPherson	7 days @ \$30 per day	210.00
May 17 - June 15	W.F. Petrie	18 days @ \$40 per day	720.00
June 2	J.M. Carr	1 day @ \$80 per day	<u>80.00</u>
			\$ 1,850.00
GEOCHEMICAL ANALYSES (462 samples @ \$1.20/sample)			554.40
TRANSPORTATION, ETC. ON PROPERTY			400.00
REPORT PREPARATION			<u>350.00</u>
		Total	<u>\$ 3,154.40</u>



Vancouver, B.C.
December 31, 1971.

J.M. Carr, P.Eng.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3454 MAP #3

To accompany geochemical report by J.M. Carr, P. Eng
on the CROWN G.P., on Broom Creek (92I/7),
Nicola M.D., dated December 31st, 1971

fig. 3

TORWEST RESOURCES (1962) LTD.

CROWN GROUP (ABERDEEN)
NICOLA MINING DIVISION

GEOCHEMICAL SURVEY
PERCHLORIC ACID-ATOMIC ABSORPTION
TOTAL COPPER CONTENT OF SOILS

- LEGEND
- 0-50 PPM
 - 50-70 PPM
 - 70-OVER PPM
 - OLD TRENCH
 - 1971 DRILL HOLE
 - CLAIM POST

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