ARCHER, CATHRO
& ASSOCIATES (1981) LIMITED
CONSULTING GEOLOGICAL ENGINEERS

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NAT JOINT VENTURE

GEOLOGICAL AND GEOCHEMICAL REPORT

NAIAD 1-16 CLAIMS
(YA62141-YA62156)

DECEMBER, 1982

Claim Sheet 105D/3

Latitude 60°01'N; Longitude 135°27'W

W.D. Eaton, B.A., B.Sc.

Work done on August 13, 1982

091434

BOX 4127, 3125 THIRD AVENUE, WHITEHORSE, Y.T. Y1A 3S9

(403) 667-4415

This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 2,400 —

P Watson

for Regional Manager, Mapping and Geological Services for Commissioner of Yukon Territory.

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INTRODUCTION

The Naiad claims were staked in 1981 to cover an area of anomalous silver and lead soil geochemistry associated with minor, mineralized vein float. Two float specimens from unknown sources returned silver values of 16.62 and 4.52 oz/ton while samples of quartz-carbonate vein float near outcrop assayed up to 0.55 oz/ton Ag with 0.71% Pb. Lead and silver values up to 520 and 2.3 ppm, respectively, were obtained from soils over a distance of 2000 m.

Exploration in 1982 was limited to four mandays of geological mapping, prospecting and additional geochemical sampling to determine the source of the metals and evaluate the possibility of a bulk-tonnage silver system associated with a Tertiary volcanic caldera.

PROPERTY, LOCATION AND ACCESS

The Naiad property consists of 16 contiguous mineral claims recorded in the name of Archer, Cathro & Associates (1981) Limited in the Whitehorse Mining District as follows:

Claim Name	Grant Numbers	Expiry Date
Naiad 1-16	YA62141-YA62156	19 February, 1984

The claims are located at latitude 60°01'N and longitude 135°27'W on NTS claim sheet 105D/3, about 80 km south of Whitehorse. Access in 1982 was by helicopter from Whitehorse, although the secondary Wheaton River road extends to within 30 km of the claims.

There is no record of previous staking in the area.

PHYSIOGRAPHY AND GLACIATION

The property lies near the head of Boudette Creek in an area of deeply incised, glacially-scoured valleys and rugged peaks. Elevations rise to 2450 m from an average of 1200 m on valley floors. South-facing slopes are characterized by closely-spaced cirques, some of which are occupied by glaciers.

Pleistocene glaciation reached elevations of some 2000 m in this region, covering all but the highest peaks. Deglaciation is recorded by U-shaped valleys, often filled with thick glacial deposits and terminal moraines, and by lateral moraines and terraces.

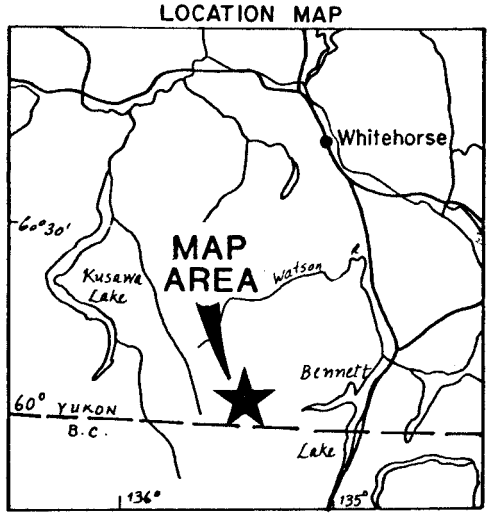
Soil development ranges from poor to almost non-existent. Post-glacial drainage has incised deep cuts into the plateau and these cuts and the valley walls provide an excellent cross-section of geology. Although most hillsides are covered in talus, outcrops are found on about 50 percent of the property. Erosion is rapid through a combination of frost action and spring flooding. Snow conditions preclude exploration until about late June. Almost all of the area is unvegetated.

GEOLOGY

Geological Setting

The Näiad property lies within the Coast Plutonic Complex, near the north-western margin of the Bennett Lake Caldera (Lambert, 1974). Rhyolite ring dykes marking the edge of the caldera outcrop 1 km northwest of the property, as shown on Figure N1 on the following page. Although the Näiad claims themselves are underlain by Cretaceous(?) plutonic rocks, pre-dating caldera formation, felsic

LOCATION MAP



SCALE – 1:2,000,000

20 0 10 20 40 60 80 Km

10 0 10 20 30 40 50 Miles

LEGEND

TERTIARY

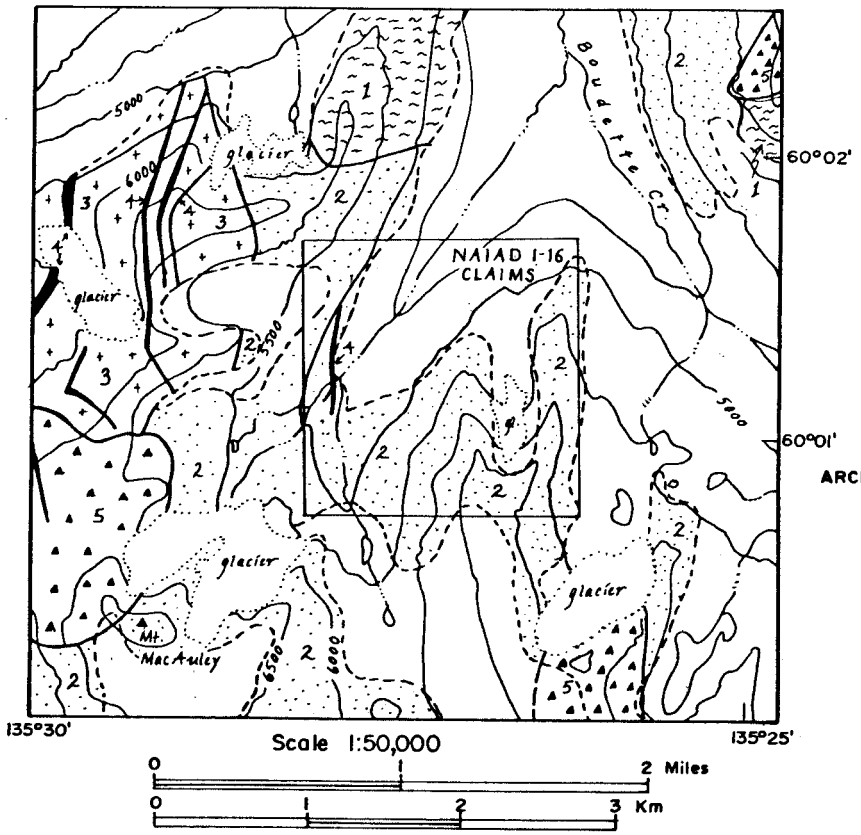
- 5 — MT SKUKUM GROUP rhyolite and andesite flows and pyroclastics
- 4 — rhyolite and andesite dykes
- 3 — granite

CRETACEOUS (?)

- 2 — quartz monzonite - diorite

PRE-CRETACEOUS

- 1 — undifferentiated metamorphic rocks



Scale 1:50,000

0 2 Miles

0 1 2 3 Km

Figure N1

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GEOLOGY

NAIAD PROPERTY

NAT JOINT VENTURE

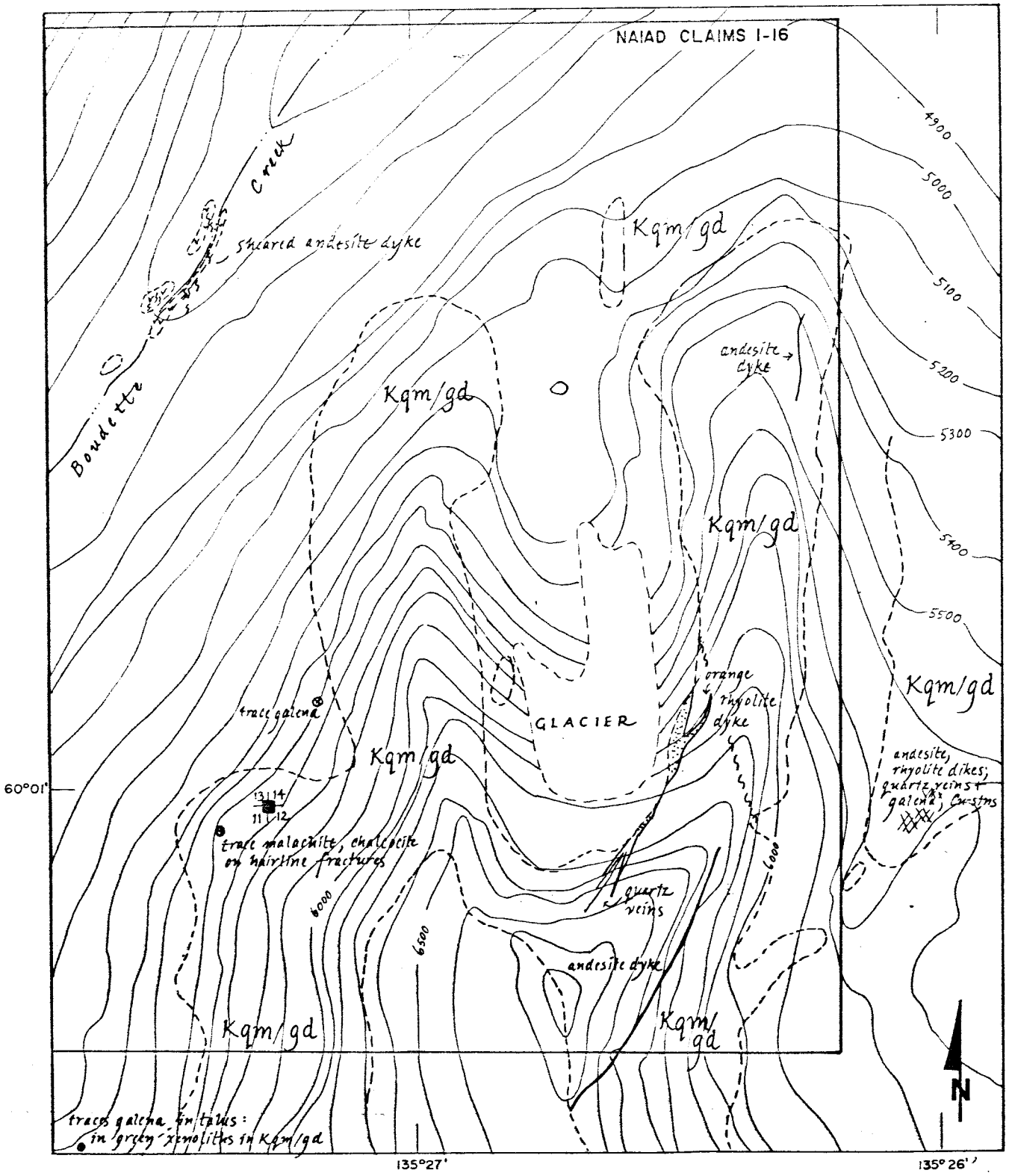
To accompany report dated December, 1982

volcanic and volcaniclastic rocks of the Eocene Mt. Skukum Group, which filled the caldera, outcrop on the ridge immediately south of the claims. Here, they consist of a polymitic volcanic breccia containing clasts of several texturally distinct rhyolites and also quartz monzonite and granodiorite derived from pre-Eocene basement. This breccia is cut by butterscotch-coloured, unmineralized chalcedony veins.

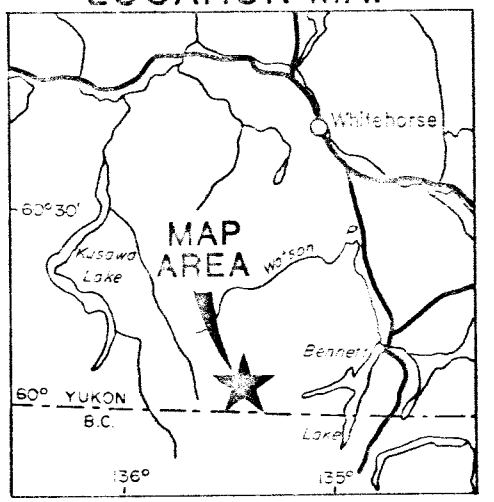
Property Geology

The geology of the Naiad property is shown on Figure N2, on the following page. Most of the area is underlain by equigranular granodiorite or quartz monzonite (Kqm/gd) which contains 20 percent quartz, 10 to 30 percent mafic minerals (hornblende much greater than biotite), and two feldspars. These rocks are unaltered except for chlorite after mafic minerals. Dark green metavolcanic xenoliths are abundant in places.

Several types of dykes cut the Kqm/gd unit including andesites, rhyolites and aplites. Except for the aplites, they may all be feeders to the Mt. Skukum Group. The rhyolites and andesites are generally aphanitic to fine-grained, massive or flow-banded with sparse phenocrysts, but one rhyolite dyke in the valley of Boudette Creek is a crowded quartz-orthoclase porphyry. This dyke may be one of the ring dykes surrounding the caldera.



LOCATION MAP



SCALE – 1:2,000,000

20 0 10 20 40 60 80 Km

10 0 10 20 30 40 50 Miles

LEGEND

CRETACEOUS

Kqm/gd — Quartz monzonite and/or granodiorite

--------- Limit of outcrop

Figure N2

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GEOLOGY

NAIAD DETAIL

NAT JOINT VENTURE

SCALE – 1:10,000

200 100 0 100 200 300 400 500 600 Metres

200 100 0 100 200 400 600 Yards

To accompany report dated Dec./82

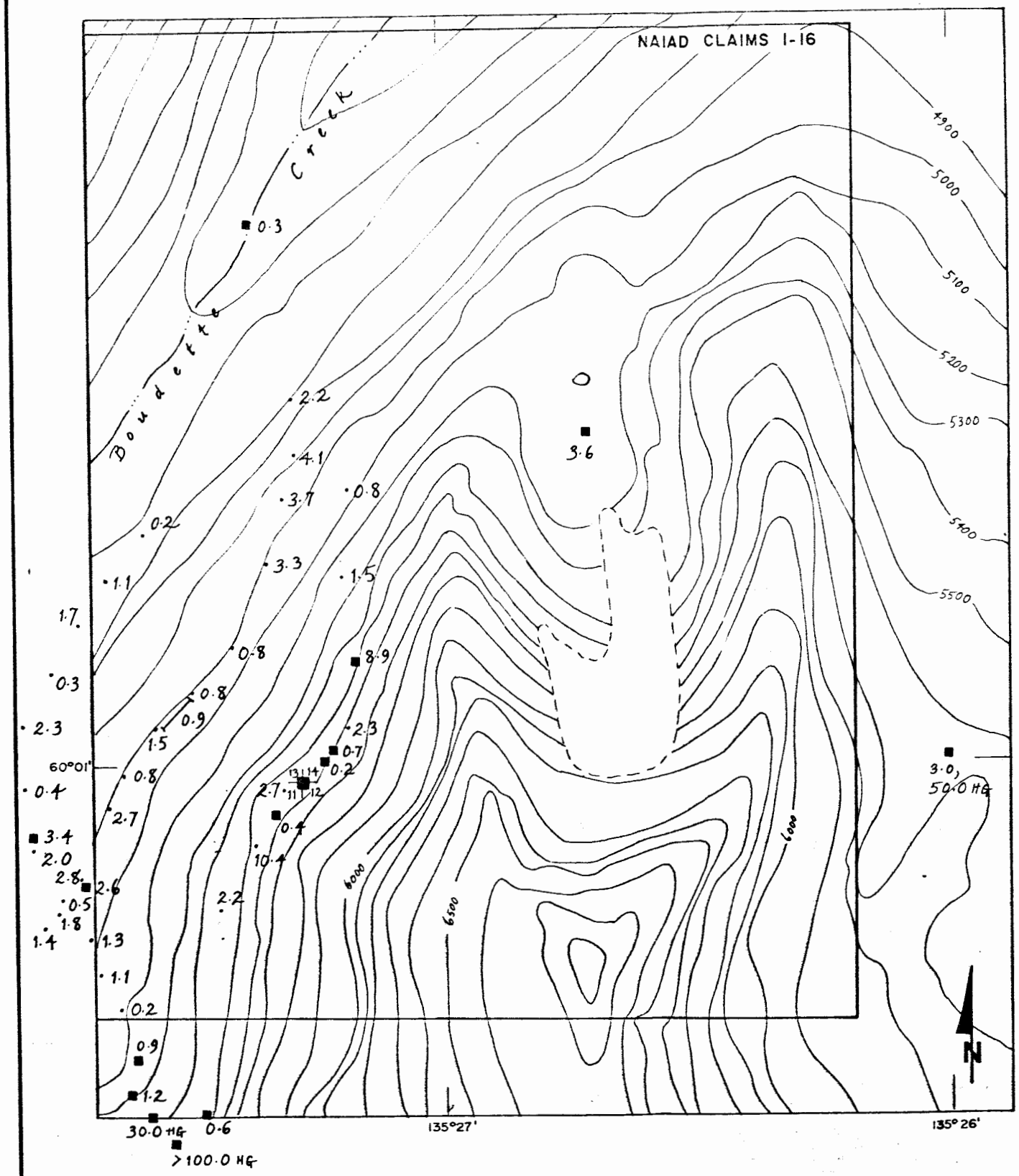
GEOCHEMISTRY

A total of 37 soil samples and 25 reconnaissance chip samples and representative rock samples were taken, most of them on the slopes immediately east of Boudette Creek. Results for silver and lead are plotted on Figures N3 and N4 following this page. Silver values in soils typically range from 0.8 to 2.6 ppm, with a few higher values up to 10.4 ppm, while lead values commonly exceed 200 ppm, ranging up to 570 ppm. With the exception of a few mineralized specimens, silver and lead values in the rocks are generally less than those in soils. Representative specimens and chip samples from a variety of rock types returned 0.4 to 1.2 ppm Ag with 25 to 107 ppm Pb. The highest rock values were obtained from a copper-stained quartz vein with a trace of galena which assayed 50.0 ppm Ag and greater than 10,000 ppm Pb, and a chlorite- and epidote-altered xenolith containing minor galena and chalcocite which assayed greater than 100 ppm Ag and 10,000 ppm Pb. Such rocks are volumetrically insignificant in the area.

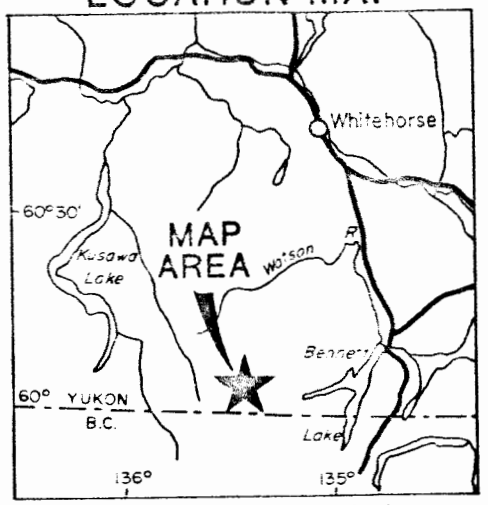
DISCUSSION

Prospecting and mapping on the Naiad property in 1982 has shown anomalous silver and lead soil values are related to traces of galena occurring in quartz veins and mafic volcanic xenoliths which are widely scattered over a 1.5 sq km area. No stockworks or extensive areas of disseminated mineralization were found.

Soil samples taken east of Boudette Creek produced somewhat higher lead and silver values than most rock samples taken from outcrops above them. However, several weakly mineralized xenoliths occur in the area and it is probable that the concentration of lead in soil is related to preferential weathering of fine-grained galena after these rocks break into coarse talus along mineralized, hairline fractures.



LOCATION MAP



SCALE – 1:2,000,000

20 0 10 20 40 60 80 Km

10 0 10 20 30 40 50 Miles

LEGEND

- 1.6 soil sample
- 1.6 rock sample
- HG 50.0 selected rock specimen
- 1.6 reconnaissance chip sample

} Ag in ppm

Figure N3

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Ag GEOCHEMISTRY

NAIAD DETAIL

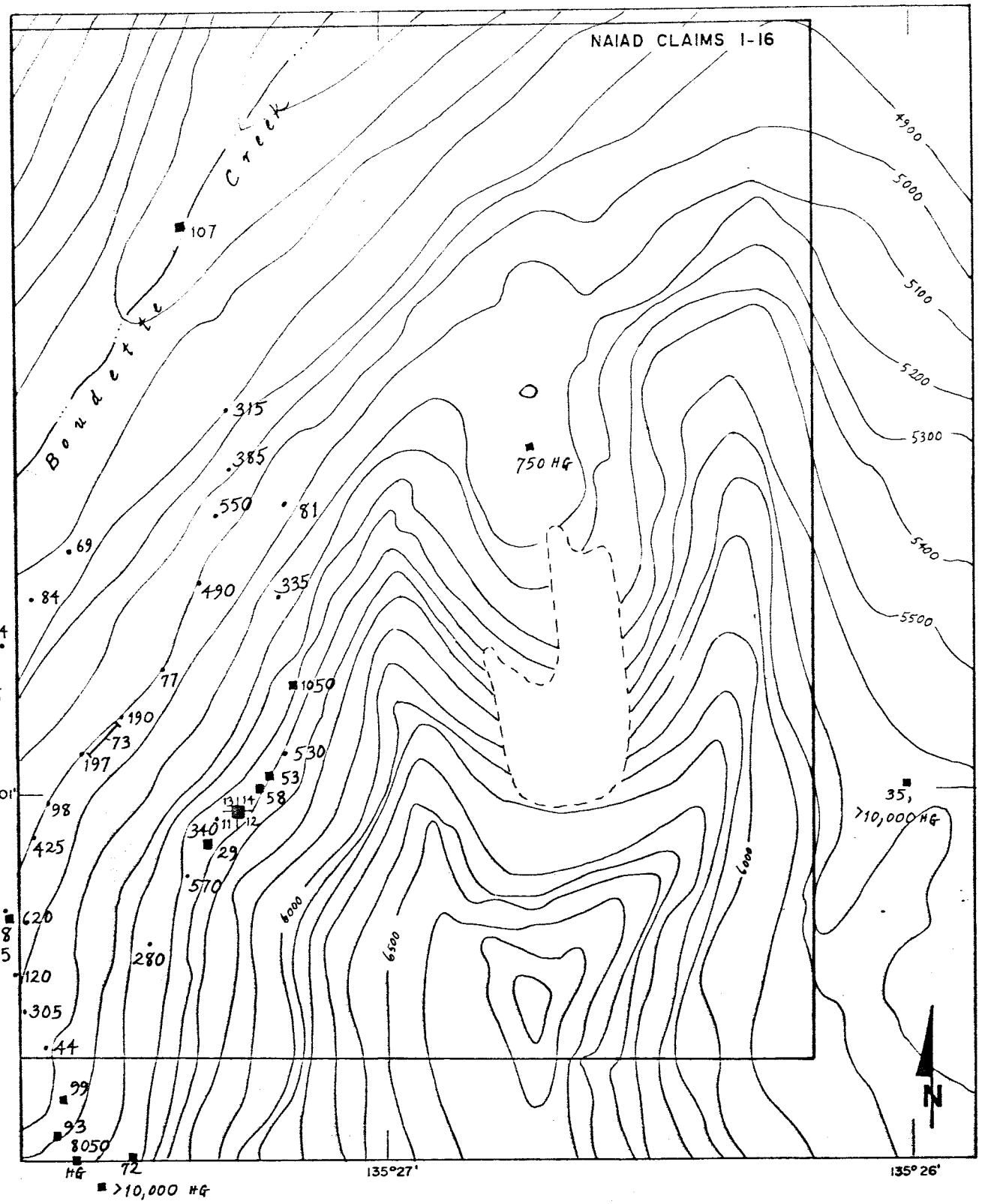
NAT JOINT VENTURE

SCALE – 1:10,000

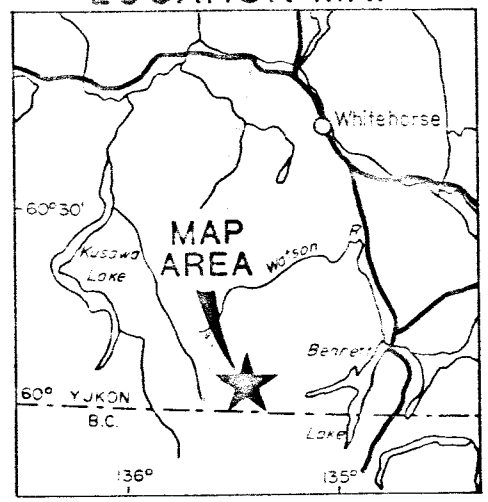
200 100 0 100 200 300 400 500 600 Metres

200 100 0 100 200 400 600 Yards

To accompany report dated Dec./82



LOCATION MAP



SCALE – 1:2,000,000

20 0 10 20 40 60 80 Km

10 0 10 20 30 40 50 Miles

LEGEND

- • 180 soil sample
- ■ 180 rock sample
- ■ 8000 HG selected rock specimen
- 180 reconnaissance chip sample

} Pb in ppm

Figure N4

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

Pb GEOCHEMISTRY

NAIAD DETAIL

NAT JOINT VENTURE

SCALE – 1:10,000

200 100 0 100 200 300 400 500 600 Metres

200 100 0 100 200 400 600 Yards

To accompany report dated Dec./82

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

W. Douglas Eaton, B.A., B.Sc.

/mc

APPENDICES

APPENDIX I - STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, W. Douglas Eaton, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia, and residential address in Burnaby, British Columbia, do hereby declare:

1. I graduated from the University of British Columbia in 1980 with a B.Sc. and am currently enrolled in a M.Sc. majoring in Geological Sciences.
2. From 1971 to the present, I have been actively engaged in mineral exploration in British Columbia and Yukon Territory and on June 1, 1981, became a partner in Archer, Cathro & Associates (1981) Limited.
3. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.

W. Douglas Eaton, B.A., B.Sc.

APPENDIX II - PERSONNEL

Name	Address	Position
J. Nelson	2980 West 8th, Vancouver, B.C.	Geologist
D. Eaton	6108 Burns Street, Burnaby, B.C.	Geologist
A. Reid	151 Goulburn Road, Ottawa, Ontario	Student Assistant
L. Cymbalisty	1602 #5 Morey Road, Nanaimo, B.C.	Student Assistant

APPENDIX III - ANALYTICAL TECHNIQUES

PREPARATION

All soil samples were dried and sieved through an ASTM 35 mesh screen (0.50 mm). The minus 35 mesh fraction was then pulverized and homogenized in a ring grinder to approximately minus 100 mesh (0.15 mm). For drill core and grab and chip rock samples, the entire sample was crushed and split. A sub-sample was then pulverized in a ring grinder to approximately minus 100 mesh.

ANALYTICAL TECHNIQUES

Silver and lead were analyzed using a perchloric-nitric acid extraction followed by atomic absorption spectrometry.

APPENDIX IV - REFERENCES

REFERENCES

- Lambert, M.B., 1974; The Bennett Lake Cauldron Subsidence Complex, British Columbia and Yukon Territory, Geol. Surv. Can., Bull. 227