ARCHER, CATHRO
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CONSULTING GEOLOGICAL ENGINEERS

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091802

GEOCHEMICAL AND GEOLOGICAL REPORT

on the

NAT 1-29 AND 30F-33F CLAIMS

MT. FREEGOLD, Y.T.

091802

WHITEHORSE MINING DISTRICT

NTS 115I/6

LATITUDE 62°16'N; LONGITUDE 137°04'W

by

R.J. CATHRO, B.A.Sc., P.Eng.

J.T. Dennett, Dip. Geol., BSc.

Work performed June 13 and between August 15 and 26, 1985

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 $ 6,600 .

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

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FIGURE

INTRODUCTION

The Nat 1-29 claims were recorded on June 5, 1985 by Nordac Mining Corp. and Permian Resources Ltd. The Nat 30F-33F claims were added in August, 1985.

The 1985 exploration was performed on June 13 and between August 15 and 26 by Archer, Cathro & Associates (1981) Limited on behalf of Nordac Mining Corp. and Permian Resources Ltd. The work consisted of linecutting, bulldozer trenching, prospecting, geological mapping and soil geochemical surveys. Personnel consisted of geologists J.T. Dennett and R.C. Carne and student assistants P. Gilchrist and K. Capnerhurst.

CLAIM STATUS

The claim block consists of 29 full and 4 fractional claims recorded in Whitehorse Mining District as follows:

Claim Name	Tag Numbers	Expiry Date
Nat 1-29	YA86843-YA86871	June 5, 1986
Nat 30F-33F	YA93013-YA93016	August 12, 1986

LOCATION AND ACCESS

The Nat 1-29 and Nat 30-33F claims are located at latitude 62°16'N and longitude 137°04'W on NTS map sheet 115I/6, 65 km by all-weather road northwest of Carmacks, Y.T. They are situated on the northeast slope of Mt. Freegold at the southeast end of the Dawson Range porphyry belt (see Figure 1).

The 1985 program was conducted from a temporary tent camp at the former LaForma Mine, which is situated about 2.5 km by 4-wheel drive road from the claims.

WORK PERFORMED

Work on the Nat claim group in 1985 included 295 m of linecutting and 650 m of bulldozer trenching. During property traverses and from bulldozer trenches, 205 soil samples, 4 rock samples and 3 silt samples were collected. Sample sites were marked with orange flagging and are shown with claim locations on Figure 1.

Soil and silt samples were pulverized to approximately -100 mesh and analyzed by fire assay followed by neutron activation analysis for gold. Rock samples were crushed and pulverized to approximately -100 mesh and analyzed by the same method. All analyses were performed by Chemex Labs Ltd., North Vancouver, B.C.

GEOLOGY

Regional

Mt. Freegold, which lies at the southeast end of the Dawson Range, is underlain by a complex series of intrusive units from mid-Cretaceous to Paleozoic in age. These are intruded by small stocks and dykes of feldspar porphyry and andesite of mid-Cretaceous age that were the feeders for extensive basalt and andesite volcanic flows that unconformably overlie older rocks elsewhere in the district. This area lies on the southeastern edge of the Klotassin Batholith (locally the Granite Mountain Batholith), which is the most abundant intrusive rock in the Dawson Range.

The dominant structural element of the district is the Big Creek Fault, which has numerous subparallel northwest-trending branches.

Property

As shown on Figure 1, the claims cover an area of undifferentiated schists and gneisses that lie southwest of the Granite Mountain Batholith. The batholith is composed of foliated biotite-hornblende granodiorite. An extension of the northwest-trending Big Creek lineament forms the southwest contact between the schist-gneiss unit and a Jurassic syenite body. At the southwest border of the Nat claims, the syenite contacts porphyritic biotite-hornblende granodiorite. These two units are intruded by a younger feldspar porphyry breccia complex immediately south of the claims.

Two bulldozer trenches at the southwest end of the property expose biotite-hornblende granodiorite, syenite and porphyritic rhyodacite, which are intruded by quartz-feldspar porphyry.

Feldspar porphyry intrusions are exposed in old hand pits at two locations on the Nat claims. However, their extent is unknown as vegetation cover almost completely obscures bedrock exposures.

GEOCHEMISTRY

Fourteen out of 212 samples were found to contain greater than 50 ppb gold, which is regarded as strongly anomalous for the region. The results are plotted on Figure 1.

RECOMMENDATIONS

Significant gold values in soil and the close proximity to the Antoniuk gold deposit on the adjoining Donalda claims justifies further exploration of the Nat claims. A program of soil geochemistry and mapping on an established grid and subsequent trenching is recommended.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

/mc

J.T. Dennett, Dipl.T., B.Sc.

R.J. Cathro, B.A.Sc., P.Eng.

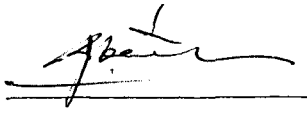
APPENDIX

Author's Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, Robert J. Cathro, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia, and residential address in West Vancouver, British Columbia, do hereby declare:

1. I am a 1959 graduate of the University of British Columbia in geological engineering.
2. I have been engaged in geological engineering for over 25 years, the past 17 of which have been as a consultant.
3. I am a registered professional engineer in British Columbia and in Yukon Territory.
4. I have supervised the work described in this report.



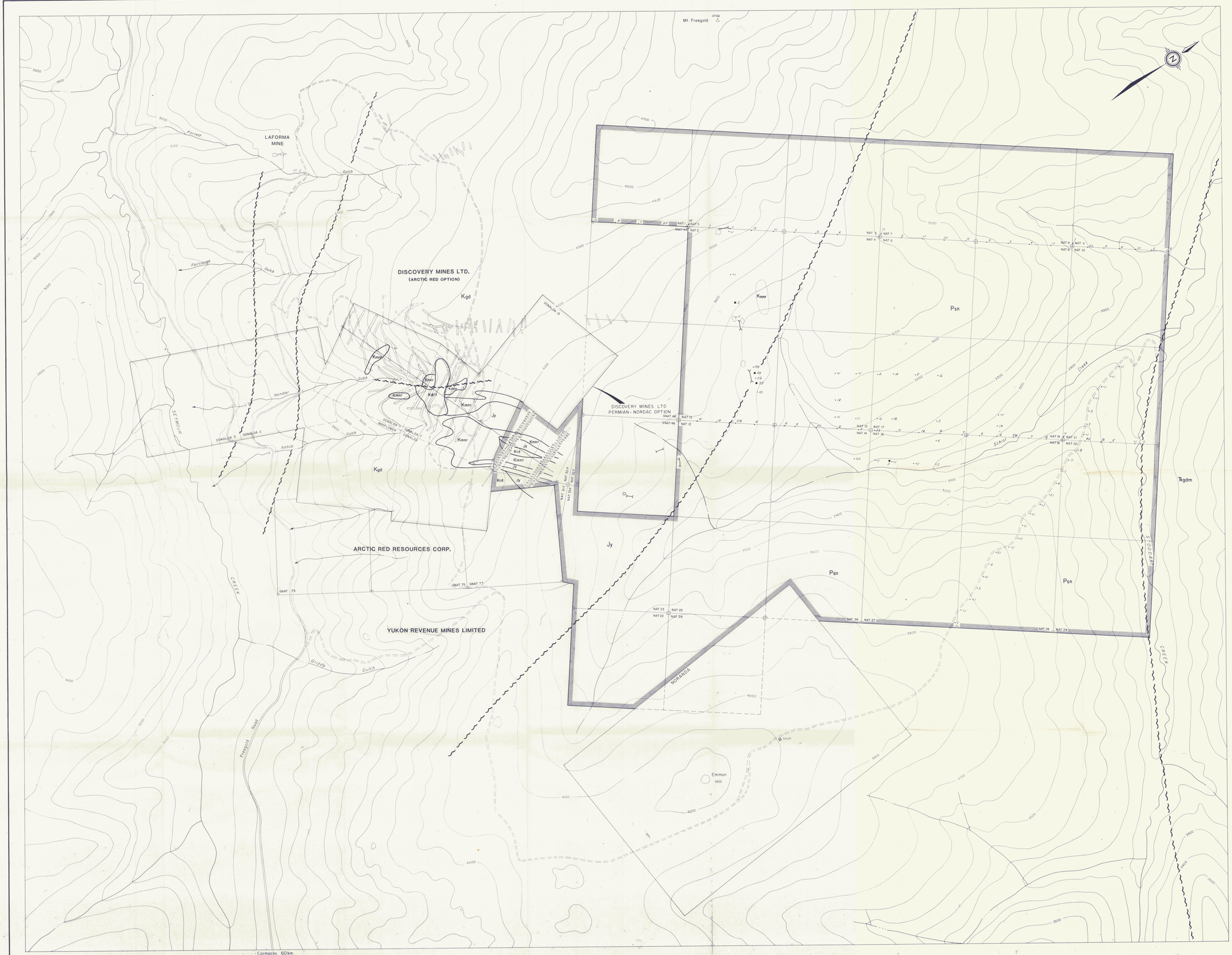
Robert J. Cathro, B.A.Sc., P.Eng.

STATEMENT OF QUALIFICATIONS

I, Jack T. Dennett, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia, and residential address in Vancouver, British Columbia, hereby certify that:

1. I graduated from the University of British Columbia in 1984 with a B.Sc. majoring in Geological Sciences.
2. I am a member of the Geological Association of Canada.
3. From 1984 to present, I have been actively engaged as a geologist in mineral exploration in British Columbia and Yukon Territory and am presently employed with Archer, Cathro & Associates (1981) Limited.
4. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.

Jack T. Dennett, B.Sc.



LEGEND

- All-weather road
- 4-wheel drive road
- Bulldozer trench (to bedrock)
- Bulldozer trench (overburden)
- Hand trench
- Geological boundary
- Fault
- .25 × ■ Sample location (soil, silt, rock) with Au in ppb
- Outcrop

GEOLOGY

MID-CRETACEOUS

Mount Nansen Group

- Kdrt — Heterolithic breccia and tuff, contains fragments of Kmnr, Kgd and Jy
- Kmnr — Quartz-feldspar porphyry (rhyodacite composition)
- Kgd — Casino Granodiorite: porphyritic biotite granodiorite
- Krd — Porphyritic rhyodacite

JURASSIC

- Jy — Big Creek Syenite: hornblende syenite

UPPER TRIASSIC

- Trgdm — Granite Mountain Batholith: foliated biotite-hornblende granodiorite

PALEOZOIC ?

- Psn — Undifferentiated schists, gneisses, amphibolites, marbles and/or quartzites

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GEOLOGY AND GEOCHEMISTRY

NAT CLAIM GROUP

MT. FREEGOLD, Y.T.

PERMIAN RESOURCES LTD. AND NORDAC MINING CORP.

NTS 115I/6

SCALE 1:5000

To accompany report dated February, 1985