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This report has been examined by the
Geological Evaluation Unit and is recom-
mended to the Commission to be consid-
ered as representative work in the amount of

Considered as representative work under
Section 82 of the Yukon Quartz Mining Act.

FREEGOLD PROJECT
GEOCHEMICAL REPORT
GNAT 1-94, 96-102 CLAIMS

MOUNT FREEGOLD AREA

YUKON TERRITORY

NTS 1151/6

Latitude 62°16' North

Longitude 137°07' West

Work done June 20-July 27, 1980

090711

A.R. Archer, B.A.Sc., P.Eng.

January 20, 1981



1015 - 210 WEST HASTINGS STREET
VANCOUVER, B.C. V6B 1L8

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$ 25,689.00

[Handwritten Signature]

~~Resident Geologist or~~
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

[Handwritten Signature]
B. W. BAXTER
Supervising Mining Recorder

[Handwritten Signature]
Commissioner of Yukon Territory

MOUNT FREEGOLD AREA

YUKON TERRITORY

MTS 11516

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INTRODUCTION

In 1975, a low grade gold-silver porphyry occurrence was located in the Mount Freegold area, Yukon, by Discovery Mines Ltd. Exploration that year included a grid soil geochemical survey followed by 4,169 feet of drilling in 9 holes. The program was terminated before the full surface extent of the mineralized area was determined and before the known area had been adequately drill tested.

In 1979, Esperanza Explorations Ltd. staked 99 adjoining Gnat claims and in early 1980 signed a letter of agreement to option the claims covering the gold-silver porphyry occurrence from Discovery Mines Ltd. and contracted Archer, Cathro & Associates Limited to supervise a program of surface exploration. In May, 1980, Esperanza Explorations Ltd. optioned these interests to Arctic Red Resources Corp. which subsequently acquired the remaining claims held by Discovery Mines Ltd. in the Freegold area and an adjoining group of claims controlled by F. Guder, a local prospector.

This report describes the 1980 exploration program, called the Freegold Project, which included grid soil sampling and surface mapping to outline the extent of the gold-silver porphyry target. The program, which lasted from June 20, 1980 to July 27, 1980, was under the supervision of geologist M.P. Phillips and included crew chief J. Dennett and assistants D. Oneschuk, W. Halleran, and M. Gerasimoff, all of Archer, Cathro & Associates Limited.

PROPERTY

The Freegold property consists of 32 leased and 131 unleased mineral claims that form a rectangular block approximately 2.5 miles wide and 4.5 miles long as illustrated on Figure F-1 following page 5. Unoptioned claims within this block are the privately held Pearless claim near the summit of Mount Freegold and the Dart 1-6 claims owned by Noranda Mines Ltd. All claims are recorded in the Whitehorse Mining District as detailed on the following two pages.

CLAIM SUMMARY

Guder Option (22 claims)

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date</u>
Vindicator 1	60422	December 12, 1981
Vindicator 2	60423	December 12, 1981
Excelsior 1	63639	December 12, 1981
Excelsior 2	63640	December 12, 1981
Excelsior 3	63641	December 12, 1981
Liberty	63638	December 12, 1981
Augusta	15494	December 12, 1981
Margarete	15505	December 12, 1981
Shearzone 1	60420	December 12, 1981
Shearzone 2	60421	December 12, 1981
Peerless	15549	December 12, 1981
Goldstar	15519	December 12, 1981
Goldstar Fraction	Y80600	September 6, 1982
Progress 1	73464	December 12, 1981
Progress 2	73465	December 12, 1981
Greenstone 1-4	90465-90468	December 12, 1981
Greenstone 5	91056	December 12, 1981
Greenstone 6 Fraction	Y21094	December 12, 1981
Protection 1	15677	December 12, 1981

Discovery Option (32 claims)

<u>Claim Name</u>	<u>Lease Number</u>	<u>Expiry Date</u>
Mayflower	790	March 19, 1981
Kim Fraction	791	March 19, 1981
Liz Fraction	792	March 19, 1981
Loon Fraction	793	March 19, 1981
Yukonia No.1	794	March 19, 1981
Yukonia No.2	795	March 19, 1981
Yukonia No.3	796	March 19, 1981
Yukonia No.4	797	March 19, 1981
Yukonia No.5	798	March 19, 1981
Yukonia No.6	799	March 19, 1981
Key Fraction	800	March 19, 1981
Pal	801	March 19, 1981
Mona	802	March 19, 1981
Neil	803	March 19, 1981
Baker	804	March 19, 1981
Connie	805	March 19, 1981
Bill Fraction	806	March 19, 1981
Jim	807	March 19, 1981
Goose	808	March 19, 1981

<u>Claim Name</u>	<u>Lease Number</u>	<u>Expiry Date</u>
Mill No.1	809	March 19, 1981
Mill No.2	810	March 19, 1981
Mill No.3	811	March 19, 1981
Donalda No.1	812	March 19, 1981
Donalda No.2	813	March 19, 1981
Donalda No.3	814	March 19, 1981
Donalda No.4	815	March 19, 1981
Donalda No.5	816	March 19, 1981
Donalda No.6	817	March 19, 1981
Donalda No.7	818	March 19, 1981
Donalda No.8	819	March 19, 1981
Donalda No.9	820	March 19, 1981
Donalda No.13	821	March 19, 1981

Esperanza Option (99 claims)

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date</u>
Gnat 1-31	YA24934 -YA24964	February 6, 1983
Gnat 32F-35F	YA24965-YA24968	February 6, 1983
Gnat 38F-39F	YA24969-YA24970	February 6, 1983
Gnat 40-94	YA24971-YA25025	February 6, 1983
Gnat 96-102	YA25026-YA25032	February 6, 1983

LOCATION AND ACCESS

The claims lie within NTS Claim Map Area 1151/6 and are centered at approximately longitude 137°07' west and latitude 62°16' north. Access is by 40 miles of secondary road (Freegold Road) from Carmacks. Carmacks is a small community near the junction of the Klondike and Faro Highways and lies 110 road miles north of Whitehorse.

The Freegold Road is a summer road that is maintained in sporadic fashion by local placer and mining operators. It is presently in poor condition and requires new bridge crossings at Mile 16 and Mile 32. Arctic Red Resources Corp. organized repair of a bridge crossing at Mile 5 in July, 1980. The claims are accessible by a network of 4-wheel drive bulldozer roads extending from an old mine site on the Discovery Mines' claims and from several points along the Freegold Road itself.

The Territorial Government has budgeted \$250,000 toward improvement of the road and bridges in 1981.

HISTORY

Gold-bearing quartz veins were first located at Mount Freegold in 1930 and were being mined in a small way in 1936. The property passed through several hands until it was acquired by Ormsby Mines Ltd. (later reorganized into Discovery Mines Ltd.) in 1960. Discovery Mines Ltd. explored the best vein in the camp (G3 vein) with a low level adit (No. 4 adit) in 1963, constructed a 125 ton mill in 1963 and milled 9,538 tons in 1965-66. Operations were forced to close when recoverable mill grades only reached 25% of the ore reserve grade. No further work was done until 1974 when Discovery conducted a copper-arsenic-zinc grid soil geochemical survey over most of its property. This work located several areas with anomalous arsenic response

and reanalysis of samples for gold, mercury and silver from these areas located several coincident gold anomalies. All anomalies were related to known vein zones, except for a strong gold-arsenic anomaly over a sub-triangular Tertiary quartz-feldspar porphyry breccia complex some 1400 feet long and 1200 feet wide on the eastern side of the claims. A 23 hole (7,848 feet) drill program was directed toward geochemical anomalies in 1975 and of these, 9 holes (4,169 feet) were drilled on the Tertiary complex.

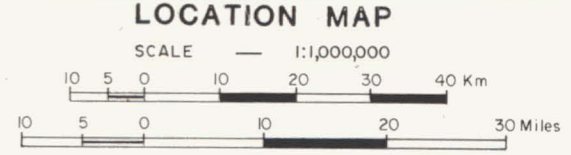
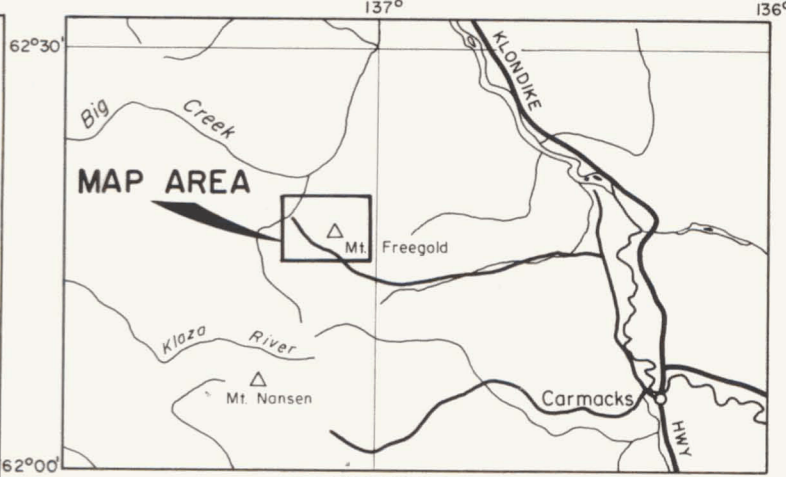
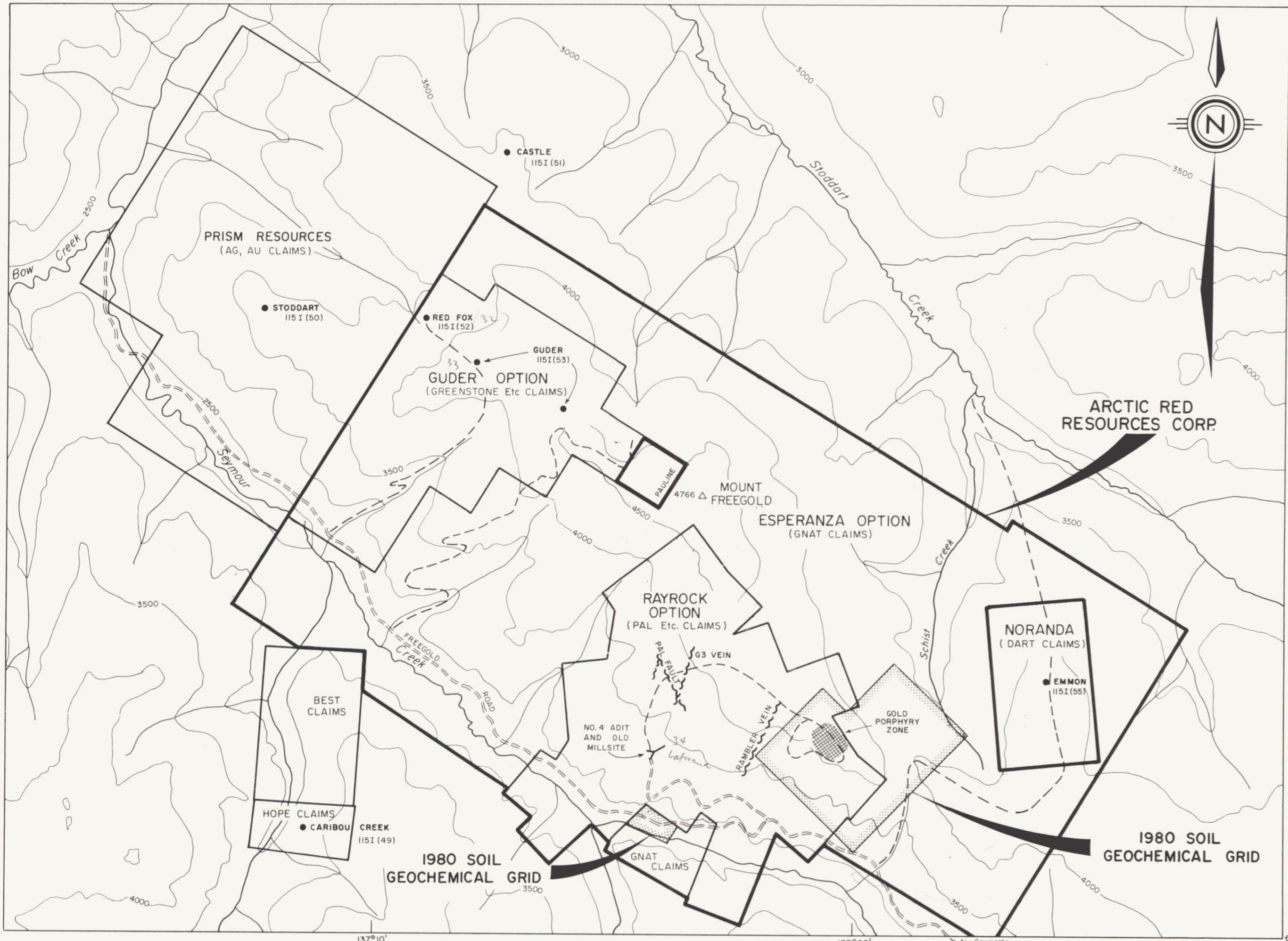
There are several known gold vein occurrences on the Guder option which have been periodically explored since 1930 and several other occurrences are known peripheral to the optioned claims. The locations of these are shown in Figure F1 on the following page and a short discussion of each, taken from the Archer, Cathro Northern Cordillera Mineral Inventory is included as Appendix I.

LOGISTICS

The Freegold Project crew consisted of crew chief J. Dennett and assistants D. Oneschuk, W. Halleran and M. Gerasimoff. Geologist M.P. Phillips provided senior supervision and was responsible for geological mapping. The crew mobilized to the field on June 20 via the Freegold Road and set up a tent camp near the No. 4 adit portal which is the only source of water on the upper slope of Mount Freegold.

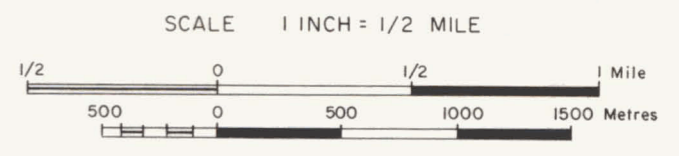
A 4-wheel drive pickup truck was used to transport personnel between the camp and the grid area and a 3/4 ton panel truck was used for transportation between camp and Carmacks or Whitehorse. Travel along the Freegold Road was slow because of poor repair and a collapsed bridge at MP 16 which forced a difficult creek crossing. This crossing was particularly difficult after heavy rains and could not be used by vehicles larger than a pickup even under the best conditions.

The grid geochemical surveys were completed by July 27, at which time the crew demobilized to Whitehorse. Data compilation was started in the Whitehorse office in mid-August. There were no injuries on the job and no days were lost due to weather.



- RED FOX 1151(52) Mineral occurrence name with ARCHER, CATHRO MINERAL INVENTORY reference number
- ==== Secondary road
- 4-Wheel drive road

FIG. F1
 ARCHER, CATHRO & ASSOCIATES LTD
LOCATION PLAN
FREEGOLD PROJECT
ARCTIC RED RESOURCES CORP.
MOUNT FREEGOLD AREA, YUKON



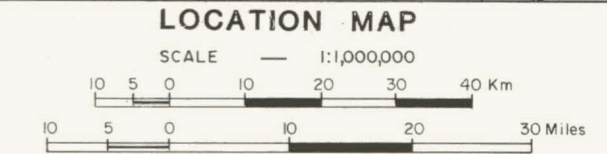
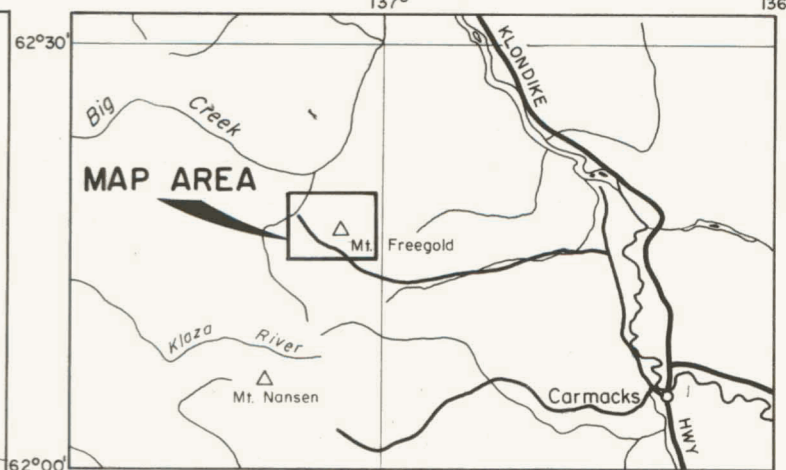
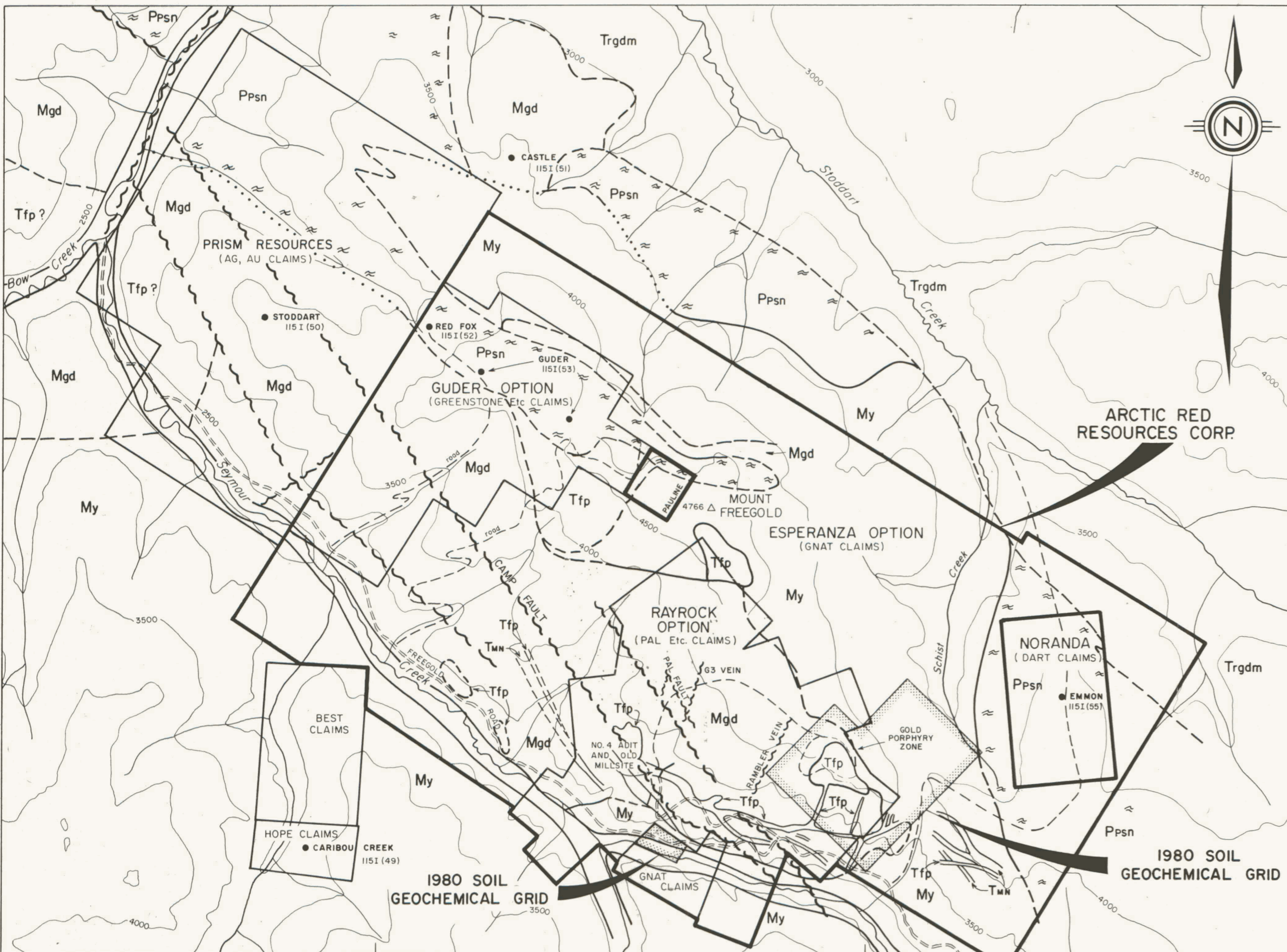
GEOLOGICAL SETTING

General

The Freegold property straddles Mount Freegold which has a northwest-trend and approximately 2,000 feet of relief. It is bounded to the southwest and northeast respectively by the northwest-flowing Seymour and Stoddart Creeks. Mount Freegold lies near the western margin of continental Pleistocene glaciation and has received only minor valley glaciation. Topography is subdued and outcrop is scarce. Surface leaching can be expected to reach depths in excess of 500 feet in strongly fractured areas. South-facing slopes are usually unfrozen and vegetated by poplar and aspen with a poorly developed organic soil cover. North-facing slopes are generally vegetated with spruce, have a well developed moss-covered organic soil, and are permanently frozen to within 12 inches of surface. A layer of fine volcanic ash up to 6 inches thick was deposited approximately 1200 years ago from an explosive event 150 miles to the southwest. Portions of this ash still remain in the soil profile, particularly on the northern slopes. In some cases, solifluction has resulted in the ash layer being repeated between intervening layers of soil.

Rock Units

The oldest rocks in the Mount Freegold area are Paleozoic or older metasediments of the Yukon Metamorphic Complex which occur as roof pendants in a complex series of intrusive units as illustrated on Figure F-2 on the following page. The oldest intrusive is a foliated Triassic hornblende granodiorite which is cut by a coarse-grained syenite which in turn is intruded by unfoliated hornblende granodiorite of Jurassic age. These units are all intruded by small stocks and dykes of feldspar porphyry and andesite of Eocene age that were the feeders for extensive basalt and

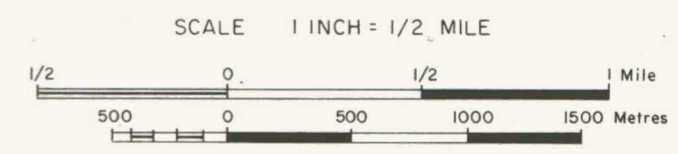


- LEGEND**
- TERTIARY**
 EOCENE (?)
 TMN MOUNT NANSEN GROUP - dark green andesite in dykes and irregular bodies
 Tfp FELDSPAR PORPHYRY - quartz porphyry and felsite in dykes and irregular bodies

- MESOZOIC**
 LOWER AND MIDDLE JURASSIC
 Mgd HORNBLENDE GRANODIORITE
 TRIASSIC (?)
 My SYENITE
 Trgdm HORNBLENDE GRANODIORITE - foliated

- PALEOZOIC**
 UPPER DEVONIAN AND MISSISSIPPIAN
 Ppsn SCHIST-GNEISS UNIT - muscovite quartz biotite schist, quartzite
 ● RED FOX 1151 (52) Mineral occurrence name with ARCHER, CATHRO MINERAL INVENTORY reference number
 == Secondary road
 --- 4-wheel drive road

FIG. F2
 ARCHER, CATHRO & ASSOCIATES LTD
GEOLOGY
FREEGOLD PROJECT
 ARCTIC RED RESOURCES CORP.
 MOUNT FREEGOLD AREA, YUKON



andesite volcanic flows which unconformably overlies older rocks elsewhere in the district. The gold-silver porphyry zone (Tertiary complex) as shown on Figure F2 is an area where the Mesozoic granodiorite and syenites are cut by numerous dykes and/or small bodies of quartz-feldspar porphyry and andesite. This Tertiary activity has been accompanied by weak hydrothermal alteration, brecciation, quartz veining and pyritization in both the quartz-feldspar porphyry and the country rocks. Detailed mapping of this zone using rock chips from soil sample pits and surface float is illustrated on Figure F9 in pocket. A summary description of each unit follows.

Early Paleozoic or Older

Schist Gneiss Unit (EPsn) - this is a sub-unit of the Yukon Metamorphic Complex and consists largely of monotonous muscovite quartz biotite schists and quartzites with occasional thin amphibolite and limy horizons.

Mesozoic

Hornblende Granodiorite (Trqdm) - this is a foliated, light coloured, coarse-grained, equigranular rock ranging in composition from quartz monzonite to quartz diorite. It is often referred to as the Klotassin Batholith and is the most abundant intrusive rock in the Dawson Range. Its most distinguishing feature is its pervasive foliation.

Syenite (My) - grey, coarse grained, melanocratic, porphyritic syenite. It is characterized by coarse (over 1 cm) pink K-feldspar and greenish hornblende phenocrysts.

Hornblende Granodiorite (Mqd) - is a medium grained, equigranular rock with hornblende, occasionally veined by epidote.

Tertiary

Feldspar Porphyry (Tfp) - medium to fine grained quartz porphyry, usually felsic when in dykes and narrow bodies. This has been divided into nine phases for detailed surface mapping.

Mount Nansen Group (Tmn) - dark grey or black weathering, uniformly greenish grey aphanitic and andesite. Locally grades into feldspar porphyry (Tfp).

Structure

The dominant structural element of this district is the Big Creek Fault, of which the Camp Fault and its sub-parallel branches on the Freegold Property form the southeasternmost end. This is a major tectonic feature that can be traced 40 miles northwest to the headwaters of Hayes Creek and projects through to the Mt. Cockfield and Casino porphyry deposits.

GEOCHEMICAL SAMPLING

Technique

The Discovery Mines Ltd. 1974 soil sampling grid over the porphyry gold-silver target was done by uncorrected pace and compass, and located coincident gold, arsenic and silver anomalies open to the northeast and southeast. Samples were taken at 50 foot intervals on lines 400 feet apart.

The 1980 Freegold Project extended the 1974 grid 2,000 feet northeast and 2,000 feet southeast. A transit survey basemap prepared by Discovery Mines Ltd. in 1975 was used as a basemap for the 1980 geochemical work. The 1974 baselines and sample lines were relocated and plotted in their correct location. The two easternmost 1974 baselines (Baseline E and F) were extended 2,000 feet northeast and two new baselines (Baselines G and H) were established by chain and compass to the southeast. All baselines are 1,000 feet apart, strike N45°E, and are marked at 200 foot intervals with 18 inch lath pickets numbered with the north coordinate system used by Discovery Mines Ltd. Soil samples were taken at 100 foot intervals on lines 200 feet apart established by pace and compass between the baselines. New sample lines were

established between the 1974 Discovery grid lines which were spaced 400 feet apart. An 18 inch lath picket, marked with the north coordinate and the distance east or west of the baseline from which the line originated was placed at each soil sample location.

Two other areas were sampled. Soil samples were taken at 400 foot intervals along two sub-parallel 1.5 mile long reconnaissance lines on the Gnat claims north of the main grid area and a 1200 foot wide by 1500 foot long area on the Gnat 34-36 claims, about 3/4 of a mile southwest of the main grid, was soil sampled at a 100 foot by 200 foot spacing.

A total of 810 samples were taken, 731 from the main grid, 47 from the smaller grid to the southwest and 32 from the reconnaissance lines to the north. Each sample was obtained from a B + C soil horizon by digging through surface organics and volcanic ash with a mattock. Samples were fairly easy to obtain on unfrozen south-facing slopes but required pits up to 3 feet deep on frozen north-facing slopes where organic soils are better developed and where volcanic ash layers are often duplicated by solifluction.

Samples were air expressed to Chemex Labs Ltd., North Vancouver, B.C. where they were dried and a -35 mesh fraction screened off and pulverized to a -80 mesh. Each sample was analyzed for gold, arsenic, silver, lead, zinc and copper. Gold analysis was done in parts-per-billion (ppb) by fire assay followed by neutron activation. Arsenic was analyzed in parts-per-million (ppm) using an arsenic-hydride vapour technique while the silver, lead, zinc and copper values in ppm were determined by atomic absorption spectrometry of a nitric-perchloric extraction.

Results

Geochemical results for each element are illustrated on Figures F-3 to F-8 in the pocket. Values obtained from the reconnaissance soil sampling to the north and the smaller grid on the Gnat 34-36 claims are illustrated as inserts on each map. Results are discussed as follows.

Gold - background for gold in the Dawson Range is less than 1 ppb, threshold is around 5 ppb, and values over 20 ppb are considered anomalous. Gold is unusually anomalous on the Freegold grid with nearly all samples exceeding the Dawson Range threshold. Most samples over the Tertiary complex exceed 160 ppb and an area approximately 700 feet by 800 feet in size along the southwestern portion returned values in excess of 320 ppb. There are 47 samples enclosed by the 320 ppb contour and these have an arithmetic average of 1406 ppb or 0.041^{1.28gr/c} oz/ton Au. A cluster of five unconnected single point anomalies in excess of 350 ppb is found in the northern end of the grid.

Only low gold values (9 ppb or less) were obtained from the Gnat 34-36 grid to the southwest while almost half of the samples from the reconnaissance lines to the north returned above threshold values, including one strongly anomalous value of 110 ppb.

Arsenic - background for arsenic in the Dawson Range is around 5 ppm, threshold is approximately 15 ppm and values over 40 ppm are considered anomalous. Arsenic, like gold, is unusually anomalous on the Freegold grid with nearly all samples exceeding the 15 ppm threshold. Most samples over the Tertiary complex exceed 250 ppm arsenic and this highly anomalous response extends beyond to the west and southeast to form an overall area some 2,500 feet long and 1,200 feet wide. Scattered single point anomalies of a similar magnitude are found toward the southeast side of the grid and in the northernmost corner.

All but two samples from the Gnat 34-36 claim grid were below threshold and only one (of 51 ppm) was anomalous. Most samples from the reconnaissance lines to the north exceed threshold and eleven samples (34%) returned anomalous values to a maximum of 120 ppm.

Silver - background for silver in the Dawson Range is less than 0.1 ppm, threshold is about 0.6 ppm and values over 2 ppm are considered anomalous. A silver anomaly exceeding 2 ppm over an area some 1,000 feet long and 700 feet wide is located along the northeast margin of the Tertiary complex. A second anomalous area, some 200 feet wide, is outlined on the southwest edge of the grid and is open in that direction.

All samples from the Gnat 34-36 claim grid returned below threshold values. One sample from the reconnaissance sampling returned a slightly above threshold value of 1.0 ppm.

Lead - background for lead in the Dawson Range is 25 ppm, threshold is about 50 ppm and values over 100 ppm are considered anomalous. Lead is immobile in unglaciated Yukon environments and is usually the best indicator metal for silver occurrences because the anomalies are closer to source. Four areas with lead values in excess of 100 ppm are outlined - two at the eastern edge of the Tertiary complex, one at the southern end and another that is open on the southwestern edge of the grid area.

All samples from the Gnat 34-36 claim grid are below threshold. However, the northernmost reconnaissance sample line returned eight samples above threshold including two consecutive anomalous values of 110 and 275 ppm from samples just outside of the staked area.

Zinc - background for zinc in igneous rocks in the Dawson Range is 50 ppm, threshold is around 100 ppm and values over 200 ppm are considered anomalous. Zinc, like lead, is a good silver indicator but is usually more dispersed due to its greater chemical mobility in unglaciated Yukon terrain. There are four areas with zinc values in excess of 200 ppm and these are approximately coincident with the areas of anomalous lead response. The strongest zinc anomaly is coincident with the strongest lead anomaly but has almost twice the surface area.

Only three samples from the Gnat 34-36 claim grid exceed threshold and none are anomalous. Twelve samples from the northernmost reconnaissance line are above threshold. Three of these are anomalous with the best value being 475 ppm in silt from a small drainage immediately north of the Gnat claim boundary.

Copper - background for copper in the Dawson Range is around 20 ppm, threshold about 50 ppm and values over 150 ppm are considered anomalous. No anomalous values were returned from the main Freegold grid, the Gnat 34-36 claim grid or the reconnaissance lines to the north. Only a few isolated samples from the main grid exceeded threshold.

Discussion & Recommendations

The gold and arsenic soil geochemical response over the Tertiary complex is unusually intense. The arsenic anomaly is more widespread than the more or less coincident gold anomaly and is almost certainly caused by arsenopyrite in veinlets and/or disseminations within and peripheral to the Tertiary complex. As arsenic is geochemically immobile, it probably outlines the limits of this mineralization fairly accurately. The anomalous gold response is more difficult to interpret as core from the 1975 Discovery Mines drilling often returned gold values that were significantly higher or lower than those in the overlying soils. Although there is little information

on gold geochemistry in Yukon, an unpublished survey from a nearby property suggests that gold may accumulate in surface soils in unglaciated areas. If further drilling shows a direct relationship exists between arsenopyrite content and gold values, the arsenic geochemistry may prove the best guide for gold exploration.

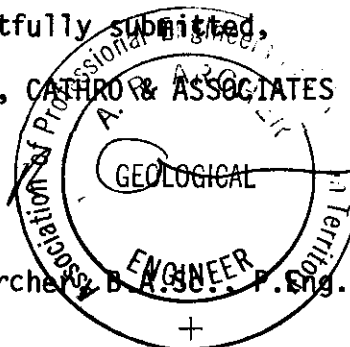
Both silver and zinc exhibit broad, more or less coincident anomalous response centered on the northeastern and southeastern edges of the Tertiary complex and in a third area extending off the southeast margin of the grid, Lead also exhibits anomalous response in these areas but has a better defined, tighter configuration because of its lower geochemical mobility. The most anomalous lead and silver response is from a 200 foot by 400 foot area immediately east of the most silver-rich hole (R75-23) drilled by Discovery Mines. Further drill exploration of silver-rich portions of the Tertiary complex should be guided by the lead geochemistry.

The low copper geochemical response is surprising as limited assaying of the drill core indicates that bedrock grade is in the 200 to 300 ppm copper range. Such total surface leaching of copper is unusual in the Dawson Range and cannot be easily explained.

Further work is justified and should consist of drill exploration of the anomalous area.

Respectfully submitted,
ARCHER, CATHRO & ASSOCIATES LIMITED

B-



A.R. Archery, B.A.S.C. P. Eng.

/gm

APPENDIX 1

**NORTHERN CORDILLERA MINERAL INVENTORY
MINERAL OCCURRENCE DESCRIPTION**

Property Name: Common CARIBOU CREEK Other
Location: Lat. 62°15' Long. 137°11' NTS 115I/6
Metals: Major Gold Minor Silver

Type of Mineral Deposit: Vein

History and Previous Work:

Staked as Dark Moth cl (39046) in April/37 by W. Teare and optioned in 1938 to T.C. Richards and E. Keobke, who built a 350 ft aerial tramway and a 2 ton mill. The mill produced briefly on 14 tons of ore from an opencut and shipped one brick containing 84 oz gold and 20% silver. Restaked by P.F. Guder in Oct/54 as Hope cl (69842) which were explored with hand trenching and optioned in Sept/64 to Peso Carmacks Gold ML, which added the Teare cl (91122).

* Restaked by Guder in Nov/67 as Hope cl (Y21249), which were optioned to
 * R. Granger in 1969-70. Guder performed hand trenching annually until 1974, added Best cl (Y25895) in Sept/68 and Hope cl (Y76048) in July/73 and bulldozer trenched in 1978.

The MJK cl (Y78916) were added to the west in May/74 by the Carmacks Synd (Castlemaine EL, Welcome North ML, W.M. Bath Inv L, and Ventures West Capital L) and optioned to a joint venture between Western ML, Cream Silver ML and Belmoral M which conducted mapping, soil sampling and a magnetic survey later in the year.

Description:

The property is underlain mainly by hornblende syenite and quartz monzonite intruded by Tertiary quartz-feldspar porphyry and overlain by Jurassic Laberge Group sediments. The only mineralization found in the area is the old showing, which consists of rare free gold in a brecciated quartz stockwork zone that strikes northwest and has a width of 10 to 15 ft. The 1938 production was apparently from a small pocket of higher grade. A grab sample of the stockwork zone assayed in 1968 returned trace gold and 0.02 oz/ton Ag. Soil sampling on the MJK claims gave background assays in Au, Sb and Cu.

References:

M220, pp.15-16

P69-55, p.23

MIR, 1974, pp.119-120

ER, Oct/74 by J.R. Deighton for Western ML et al - FFAC

Property Name: Common STODDART Other
Location: Lat. 62°18' Long. 137°10' NTS 1151/6
 * Metals: Major Copper Minor Molybdenum
 * Type of Mineral Deposit: Porphyry

History and Previous Work:

This area was explored intensively by individual prospectors for gold veins in the 1930's. Staked as Low cl (Y40611) in Nov/69 by R. McKamey and optioned in Dec/69 to Samson ML and Monarch Metal ML, which conducted reconnaissance soil sampling. Restaked as the Ag cl (Y75866) and Au cl (Y75938) in July/73 by E.D. Campbell and G.E. Smith and optioned to Prism Res L and Dynasty EL, which conducted grid soil sampling, a mag survey and bulldozer trenching in 1974. Dynasty changed its name to Cyprus Anvil
 * Mg Corp and conducted an IP survey in 1975 before dropping its interest.

Description:

** Minor chalcopyrite, pyrite and a trace of molybdenite occur in two subparallel zones 100 and 500 ft wide within a geochem anomaly 3000 ft by 800 ft that returned values of greater than 100 ppm Cu and 5 to 25 ppm Mo. The mineralization is associated with brecciation and phyllic alteration in a quartz porphyry plug within a quartz monzonite stock. Both zones are leached on surface but average less than 0.1% Cu.

References:

GCNL, 21 Mar, 8 July/74
 MIR, 1975, pp.137-138

Property Name: Common CASTLE

Other

Location: Lat. 62°19'

Long. 137°08'

NTS 115I/6

Metals: Major CopperMinor* Type of Mineral Deposit: UncertainHistory and Previous Work:

Staked as Sun c1 (Y41183) in Dec/69 by Montana ML, which performed geochem sampling in 1970. Restaked as Car c1 (Y78678) in May/74 by the Carmacks Synd (Castlemaine EL, Welcome North ML, W.M. Bath Inv L, and Ventures West Capital L) and optioned to a joint venture between Western ML, Cream Silver ML and Belmoral ML, which conducted soil geochem and magnetic surveys later in the year.

Description:

The claims lie on the northern flank of a large 300 gamma aeromag anomaly that is associated with a contact between metasediments of the Yukon Metamorphic Complex and syenite and granodiorite intrusions. Montana reported anomalous geoc results but no further work was done. The 1974 program outlined a zone of kaolinization and silicification in granodiorite, surrounded by a halo of quartz veining containing pyrite and minor chalcopyrite.

References:

GCNL, 22 Oct/70

MIR, 1974, pp.117-118

* ER, Oct/74 by J.R. Deighton for Western ML et al - FFAC

REVISED 1977

Property Name: Common RED FOX

Other

Location: Lat. 62°18'

Long. 137°09'

NTS 115I/6

Metals: Major Silver, Lead, GoldMinor Zinc, CopperType of Mineral Deposit: VeinHistory and Previous Work:

Staked as the Red Fox cl in 1931 and later as the Vindicator cl (60422) in July/51 by P.F. Guder who performed hand trenching, pitting, and bulldozer trenching at intervals through to 1968. The showing was optioned in 1969 by Yukon Revenue ML, which conducted more mapping and sampling and in 1973 by Prism Res L, which did limited surface work before transferring the option to Dynasty EL. Dynasty completed grid soil sampling, mag surveys, bulldozer trenching and 4 drill holes (1042 feet) in 1974.

Description:

An east trending quartz vein cuts Yukon Group metamorphic rocks and has been traced about 100 feet. It contains lenses of galena with minor sphalerite and chalcopryrite that vary in width from a few inches to 1.5 ft. A sample of massive galena assayed 130.0 oz/ton Ag, 62.0% Pb and 0.03% Zn. According to the G.S.C. P.H. Sevensma reported that a band of galena 6 to 8 inches wide assays 171 oz/ton Ag and 70% Pb. The vein follows a porphyry dike and may be an extension of the Guder vein system to the southeast. The Dynasty work was directed toward an extension of gold-magnetite skarns traced west from the Guder occurrence. No significant mineralization was obtained in the drill holes.

References:

M 214, p.17

P69-55, p.23

ER, June/73 by P.H. Sevensma for Prism Res L, reported in GCNL, 6 July/73

MIR, 1974, pp.115-116

* Property Name: Common GUDER Other Gold Star

Location: Lat. 62°17' Long. 137°08' NTS 1151/6

Metals: Major Gold, Silver Minor Copper, Lead, Zinc, Molybdenum

Type of Mineral Deposit: Skarn, Vein

History and Previous Work:

The original discovery in the Mt. Freegold area was made by P.F. Guder in 1930 on the Augusta cl (15494), followed by discoveries on the adjoining Peerless, Gold Star and Margarete cls. Guder explored by hand pits and shallow shafts until 1959, when Conwest, under option, drilled 10 holes (1014 ft) in the Main vein and performed bulldozer trenching in 1964 on the Old cl (86086). Guders claims (Gold Star Group) were optioned in 1969 to Yukon Revenue ML, which conducted bulldozer trenching and mapping, and in 1973 to Prism Res. L, which did a magnetometer survey & staked an additional 100 claims-PFG, AG, etc. (Y75468) in June-Sept. Prism transferred the option early in 1974 to Dynasty EL, which explored by grid soil sampling, magnetic survey, bulldozing and four drill holes (1100 ft) later in the year.

Description:

The main vein system follows a series of porphyry dikes which cut chlorite schist and gneiss of the Yukon Group. It dips 80° south and has been traced in an easterly direction for 2500 feet. The mineralized zones are irregular quartz veins from a few inches to 4 feet wide containing disseminated pyrite, chalcopyrite and arsenopyrite. Surface samples collected from trenches east of the Margarete shaft assay 3.2 to 4.6 oz/ton Au and 10.6 to 19.4 oz/ton Ag across widths of 12 to 18 inches. The drill intersections in this vicinity ranged from 0.34 to 0.01 oz/ton Au across 4.0 to 8.5 ft with core recovery between 10 and 70%.

On the Augusta claims at the east end of the vein, 1800 ft. from the Margarete shaft, a lens of magnetite with minor hematite, pyrite, chalcopyrite, and gold occurs in actinolite-garnet-epidote skarn. The lens is 300 ft long and reaches a width of 27 ft. A grab sample is reported to have assayed 0.32 oz/ton Au and 1.2 oz/ton Ag. Gold occurs as fine disseminations in surface limonite but quickly diminishes at depth. About 1800 ft. southwest of the Margarete shaft in Cabin Gulch, the Cabin Vein has been exposed in a couple of pits. Yukon Revenue obtained grab samples of quartz which assayed 0.4 oz/ton Au and 5.48 oz/ton Ag, and 0.46 oz/ton Au and 0.6 oz/ton Ag.

According to Sevensma, a breccia zone and a bleached syenitic intrusion lies between these three showings at the head of Cabin Gulch. A trace of tourmaline, pyrite and molybdenite is reported to be present.

The Dynasty bulldozing and drilling was directed toward the gold-magnetite skarn and obtained disappointing results. The good surface grades appear to result from residual surface enrichment.

References:

ML89, pp 53-54

P214, pp 17-18

P68-68, p.35

ER, June/73 by P.H. Sevensma for Prism Res L, reported in GCNL, 6 July/73

* MIR, 1974, pp.115-116

Property Name: Common EMMON Other

Location: Lat. 62°17' Long. 137°03' NTS 1151/6

Metals: Major Antimony, Gold Minor Silver

Type of Mineral Deposit: Vein

History and Previous Work:

Discovered by T. Bee and W. Renworth prior to 1935 and explored by hand trenching. In Sept/36, American Yukon Mg : CL sank a 92 ft shaft, from which two cross-cuts (27 ft and 50 ft) were driven. Restaked as Bill, Joe and Tie cl(86804) Oct/64 by Peso Carmacks Gold ML; and as Free cl(Y44182) in Dec/69 by Tanzilla EL, which conducted mapping, geochem sampling and trenching in 1970.

Restaked as GM cl(Y77230) in Sept/73 by M. Cloutier and sold to a private company Mount Free Gold ML. After a proposed merger with Frontier EL fell through, the property was optioned to Norwich Res L, which added the Gold cl (Y78108) in March/74 and conducted line cutting and a small grid soil sampling program later in the year.

**

Restaked as Dart cl (YA23829) in Oct/78 by Noranda, which explored with EM and geochem surveys in 1979.

Description:

The American Yukon showing is a quartz vein, containing stibnite and pyrite, found in a northwest trending zone, more or less parallel to the schistosity in Cambrian or older Yukon Group gneisses. Gold assays from underground workings were apparently erratic. A second vein, called the Whale showing, occurs in an easterly trending quartz-feldspar porphyry dike that has been brecciated and cemented with calcedonic quartz.

The 1970 geochemical program outlined three copper-antimony anomalies and one copper-molybdenum anomaly. Grab samples from trenches on the American-Yukon vein assayed up to 0.7 oz/ton Au, 0.16 oz/ton Ag and 3.6% Sb. A grab sample from the Whale vein assayed 0.005 oz/ton Au and 0.04 oz/ton Ag. One of the copper-antimony anomalies was associated with brecciated and limonitic rhyolite or porphyry about 1.5 miles south of the Whale showing.

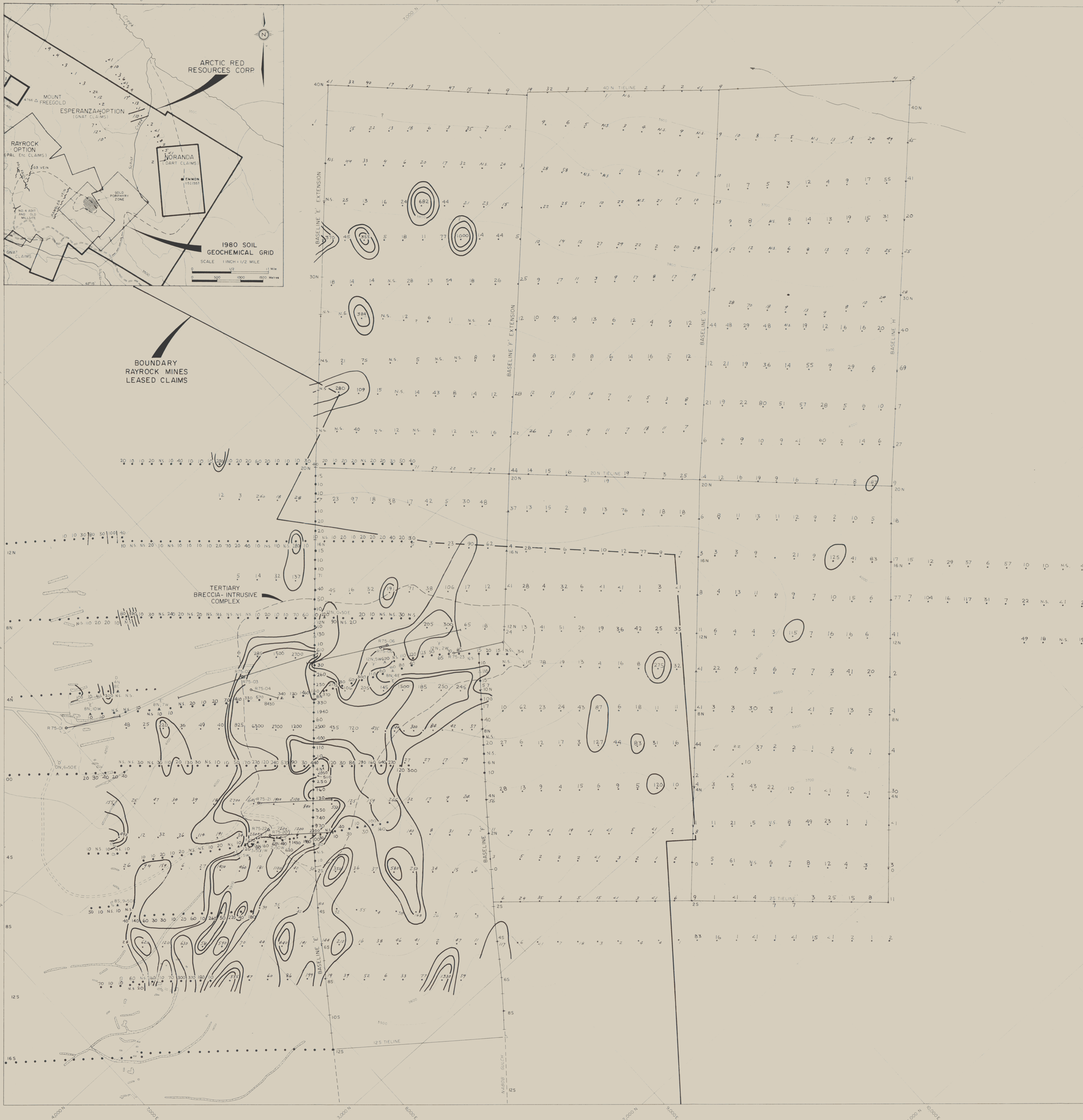
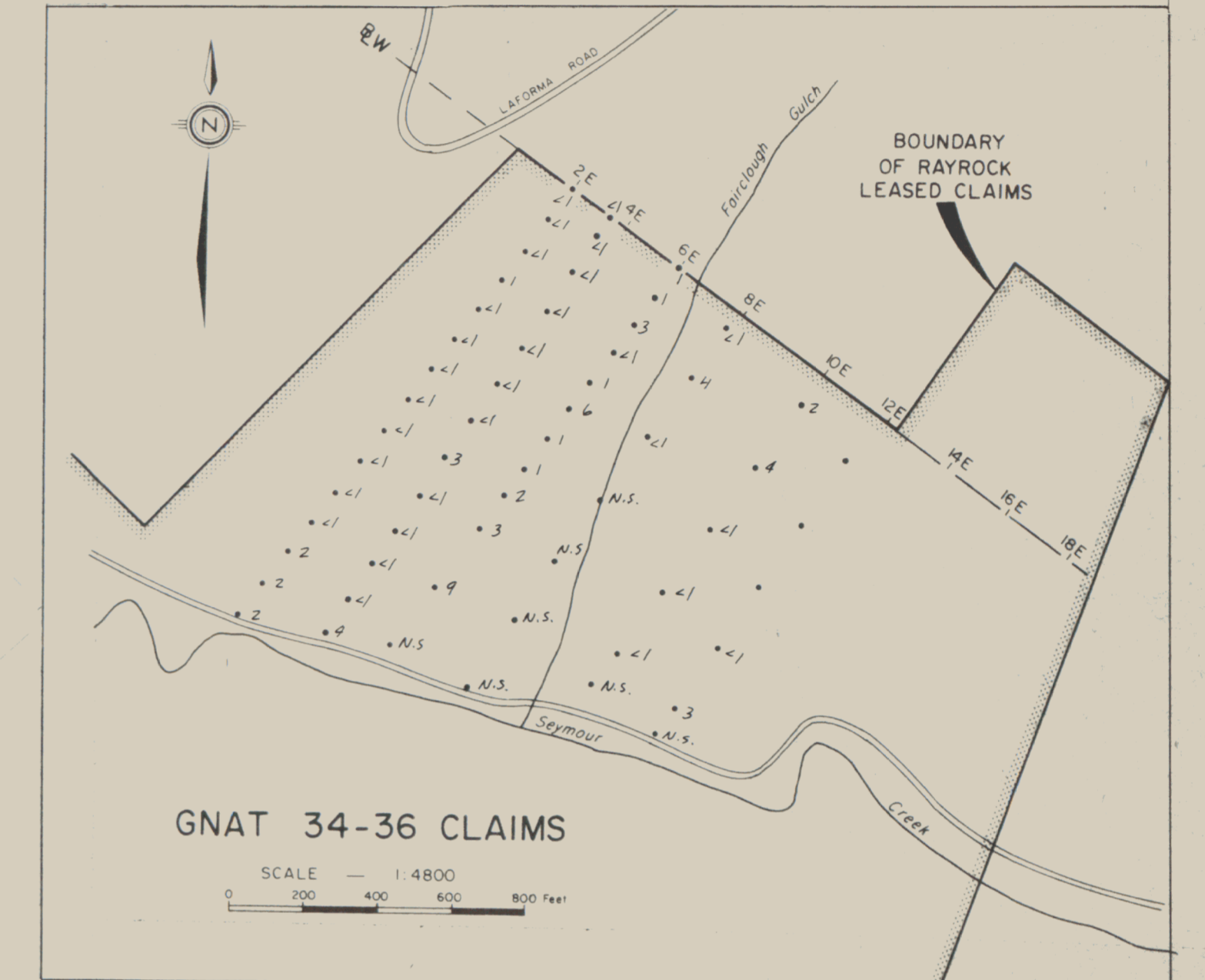
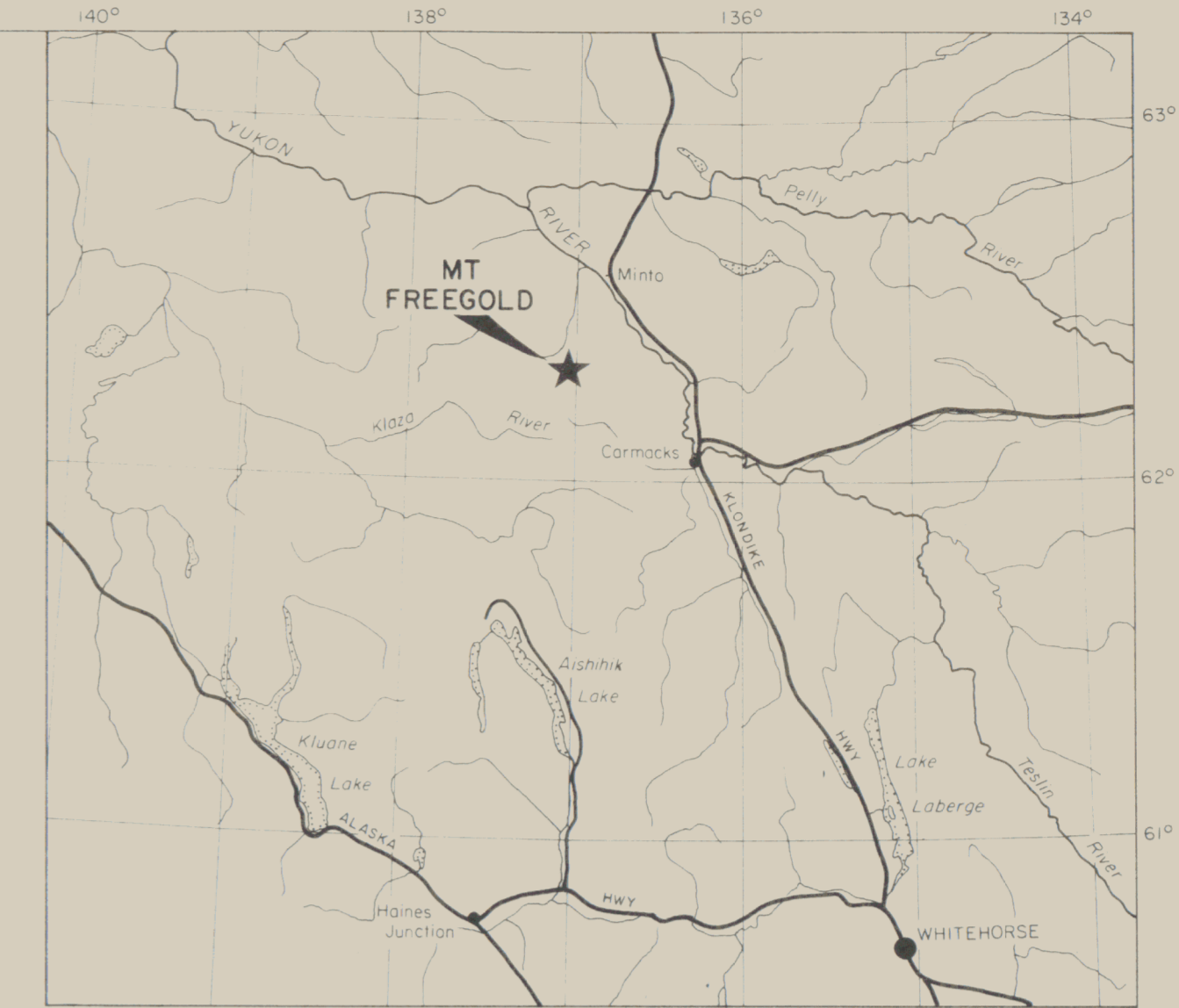
References:

M 209, pp 10-11

M 214, pp 19-20

MIR, 1969-70, pp 78-79

ER, Nov/70 by D.C. Findlay for Tanzilla EL - FFAC



- LEGEND**
- 240 gold in ppb - RAYROCK MINES 1974-1975
 - 240 gold in ppb - 1980 SURVEY
 - R75-02 RAYROCK 1975 DRILL HOLE
 - bulldozer trench
 - ==== 4-wheel drive road
- CONTOUR INTERVAL**
- 80 ppb - 160 ppb
 - 160 ppb - 320 ppb
 - > 320 ppb

FIGURE F3

ARCHER, CATHRO & ASSOCIATES LTD.

GOLD GEOCHEMISTRY

FREEGOLD PROJECT

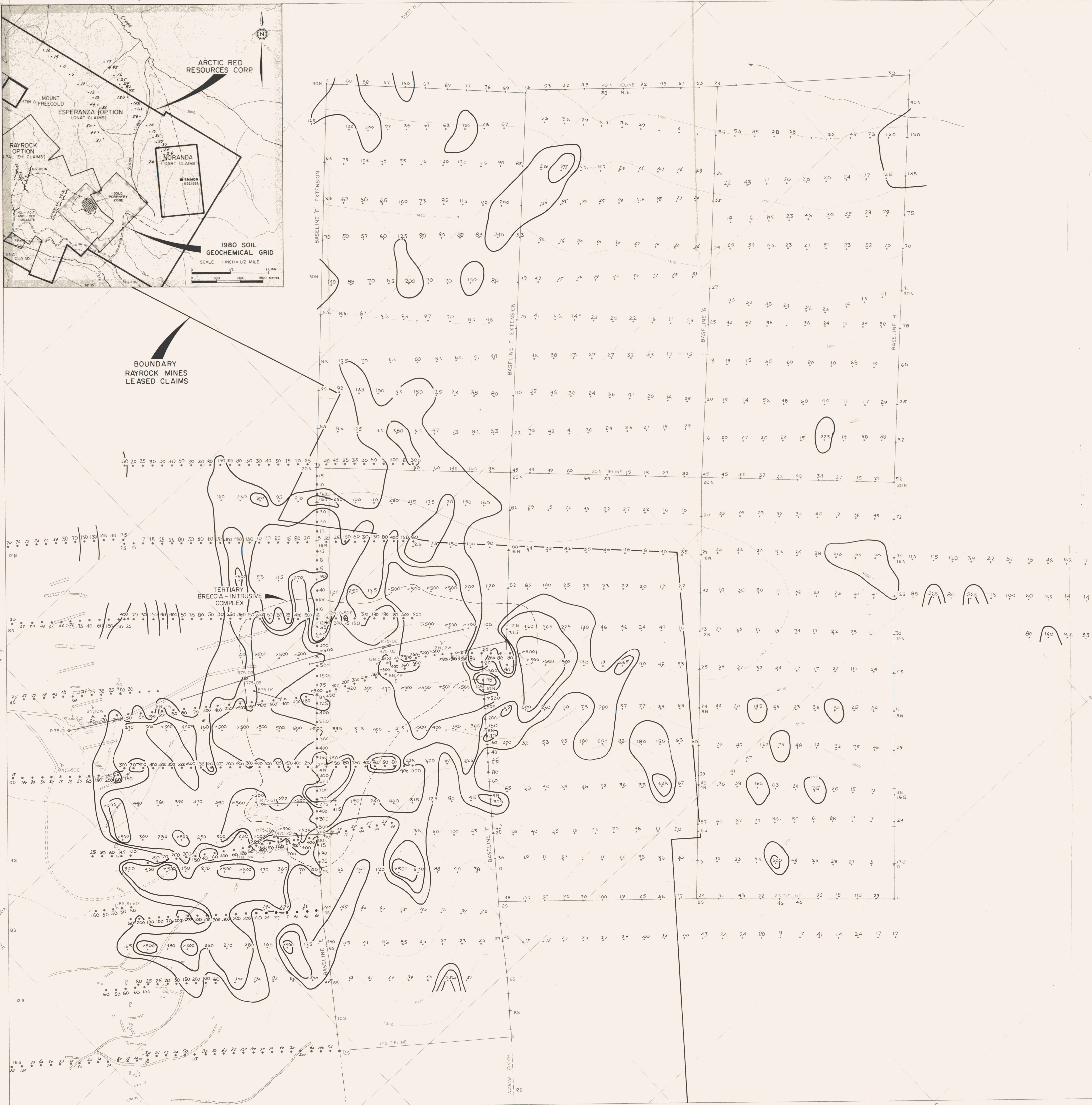
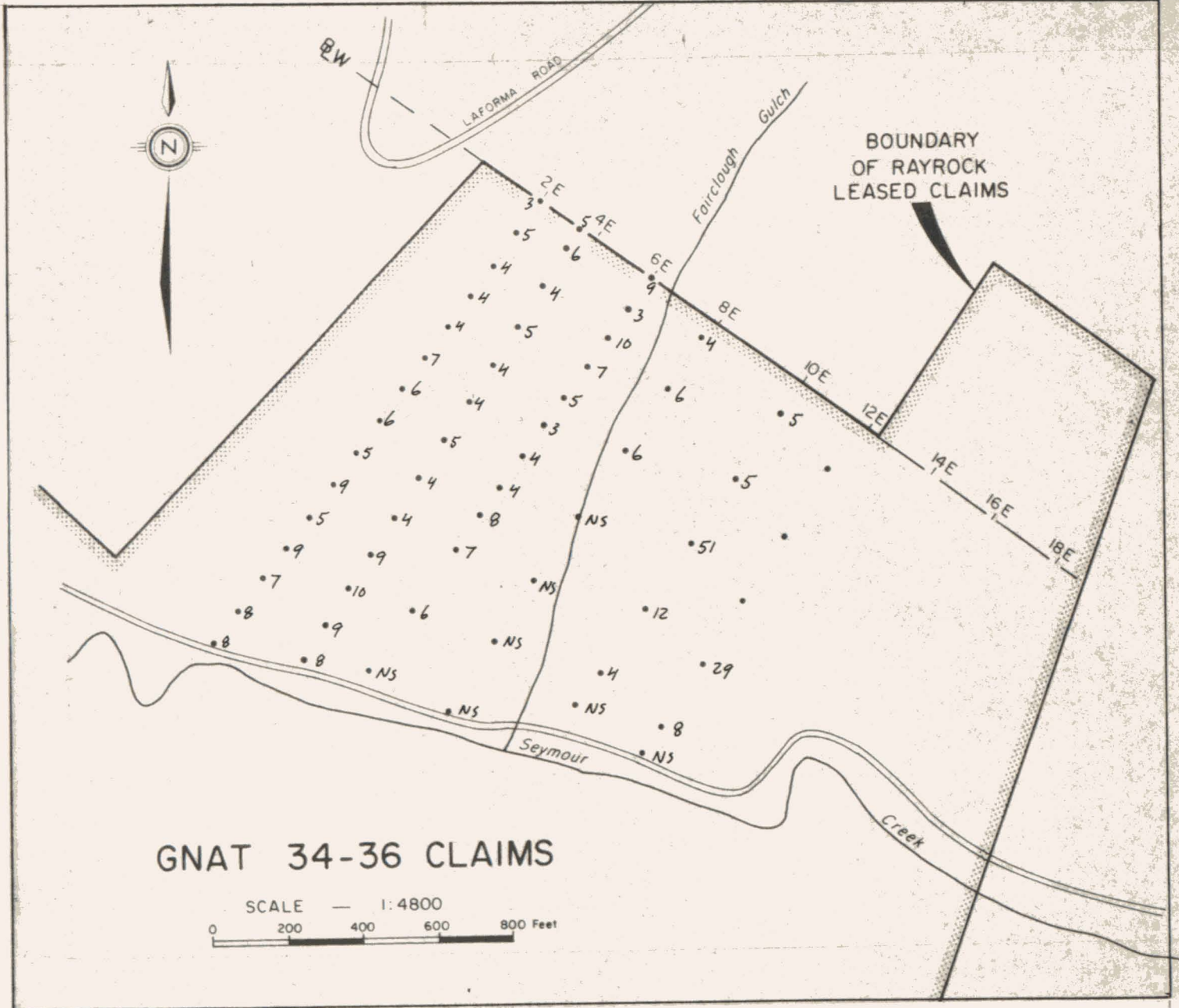
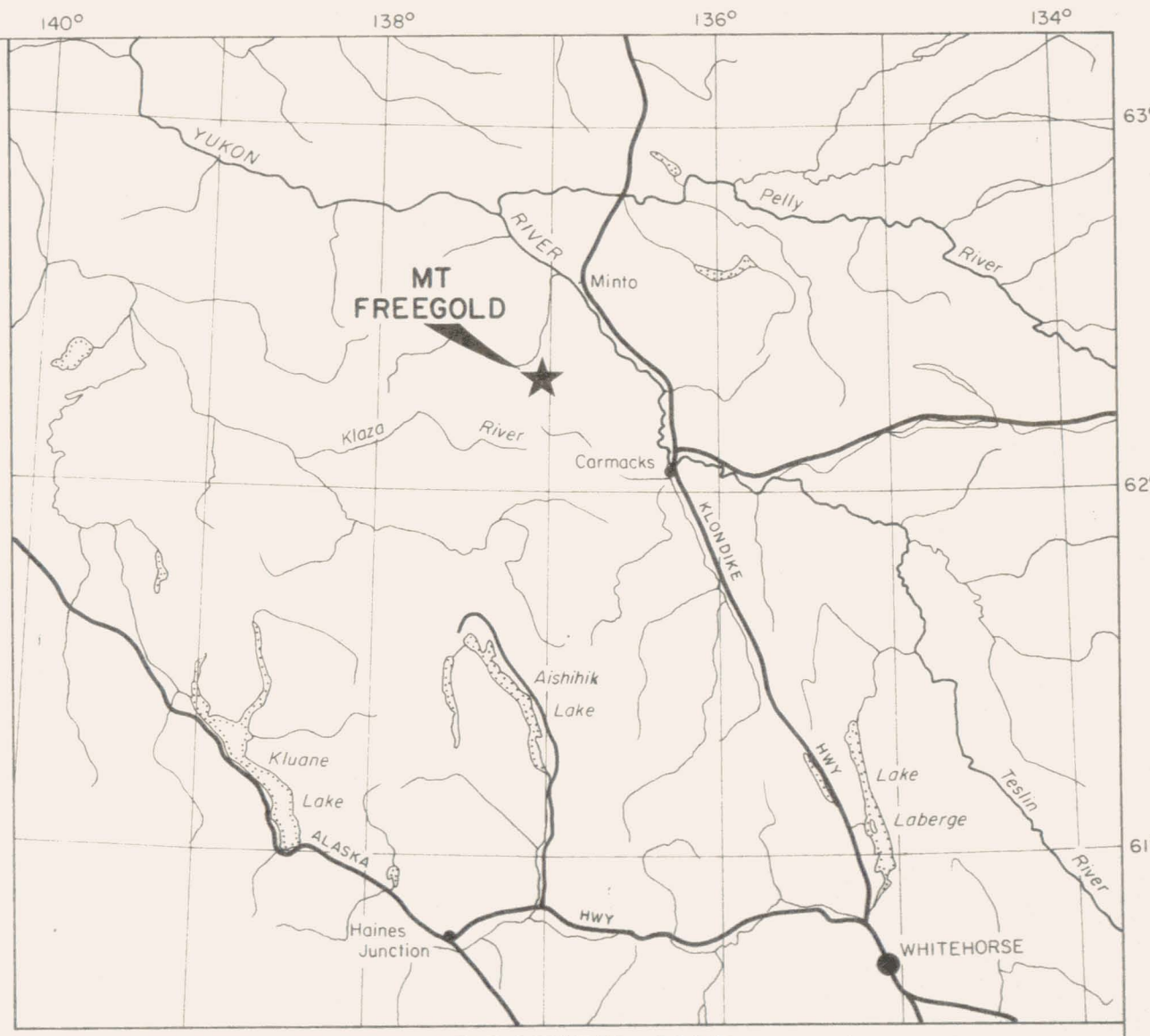
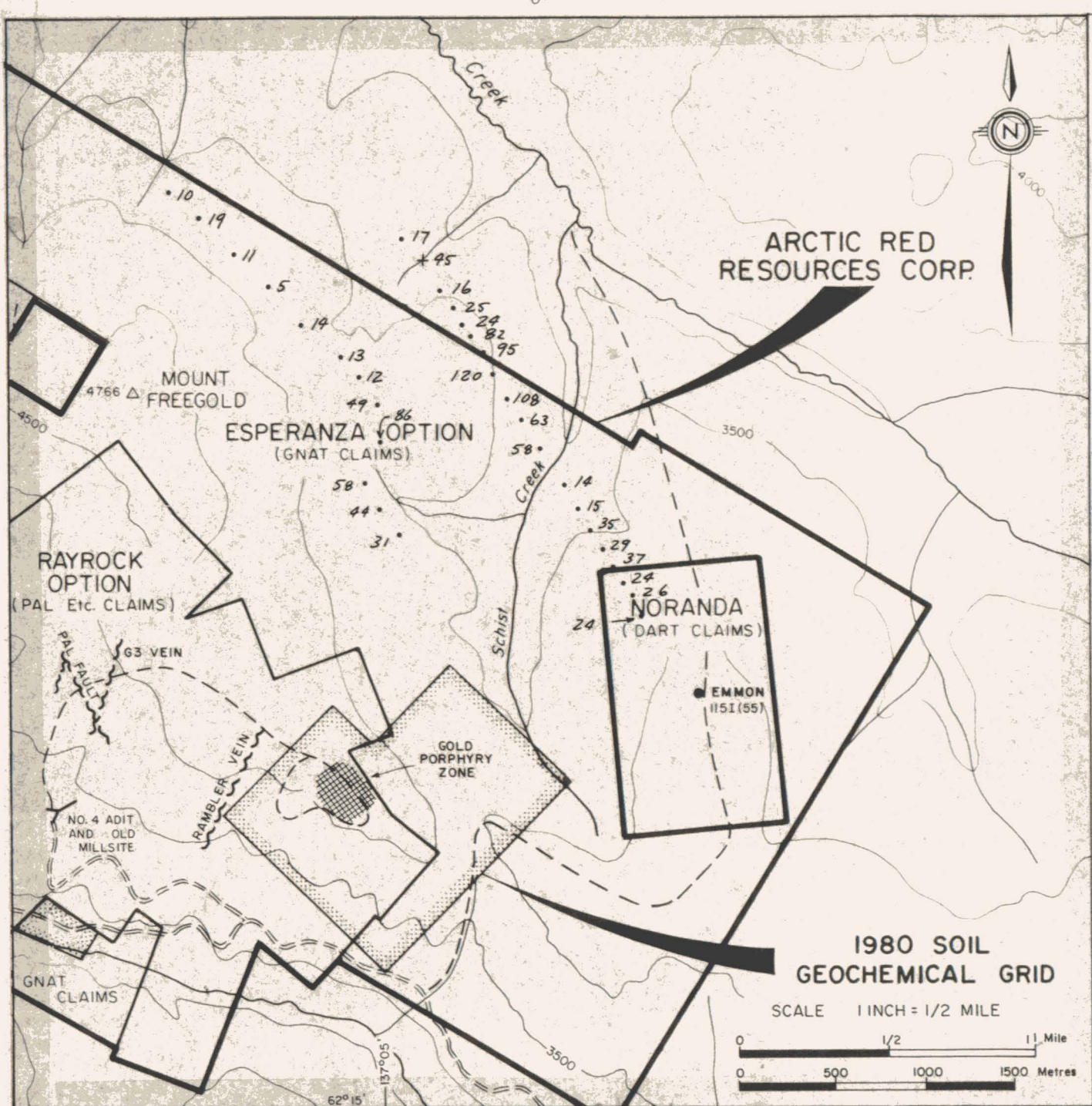
ARCTIC RED RESOURCES CORP.

MOUNT FREEGOLD AREA, YUKON

SCALE 1 inch = 200 Feet

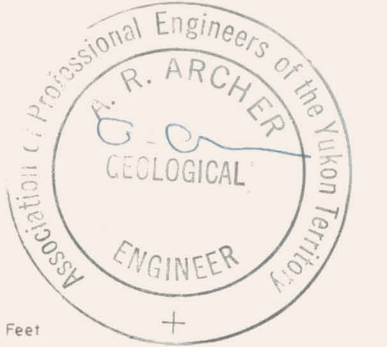
JAN 20 1980

to accompany report dated



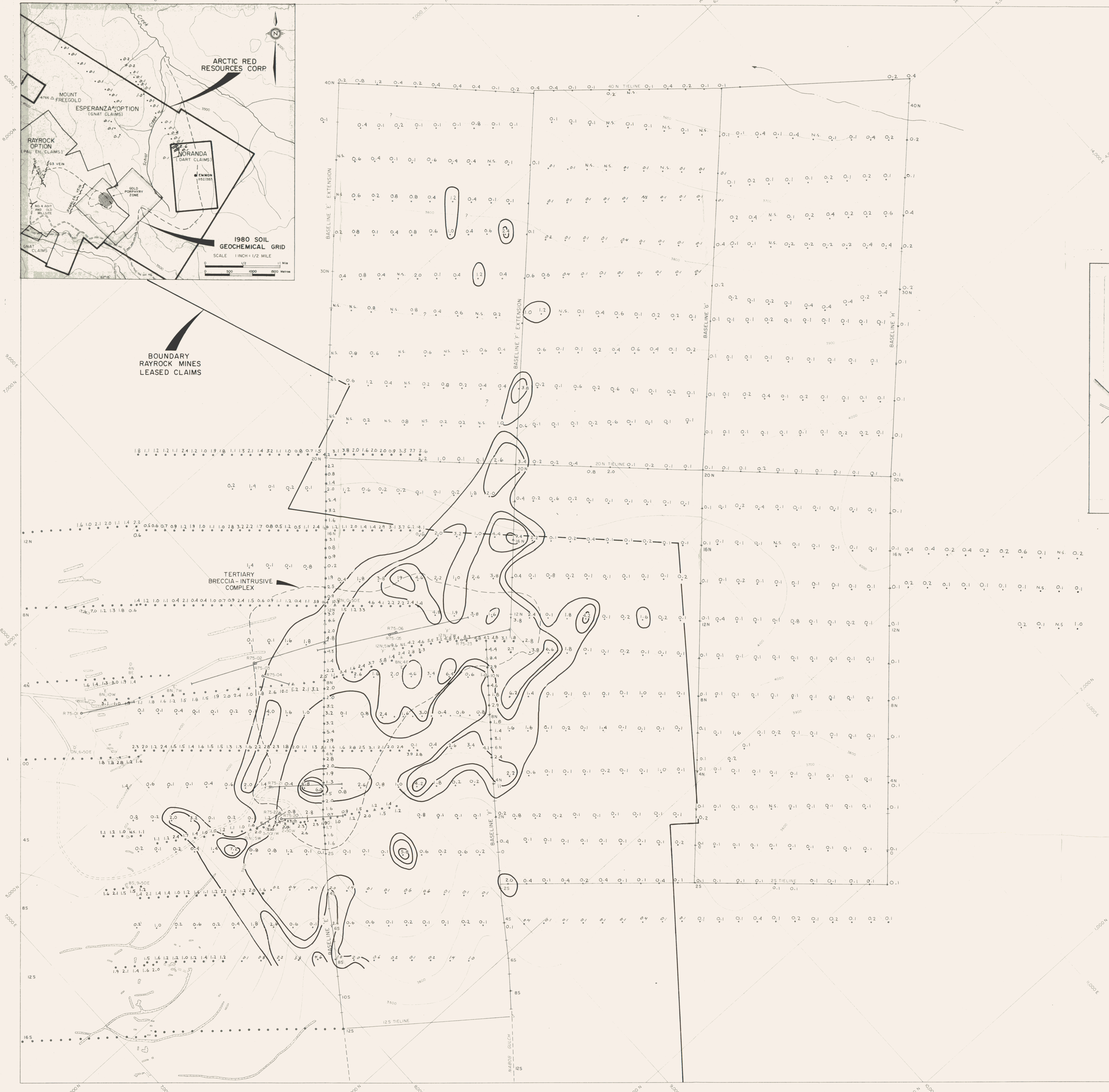
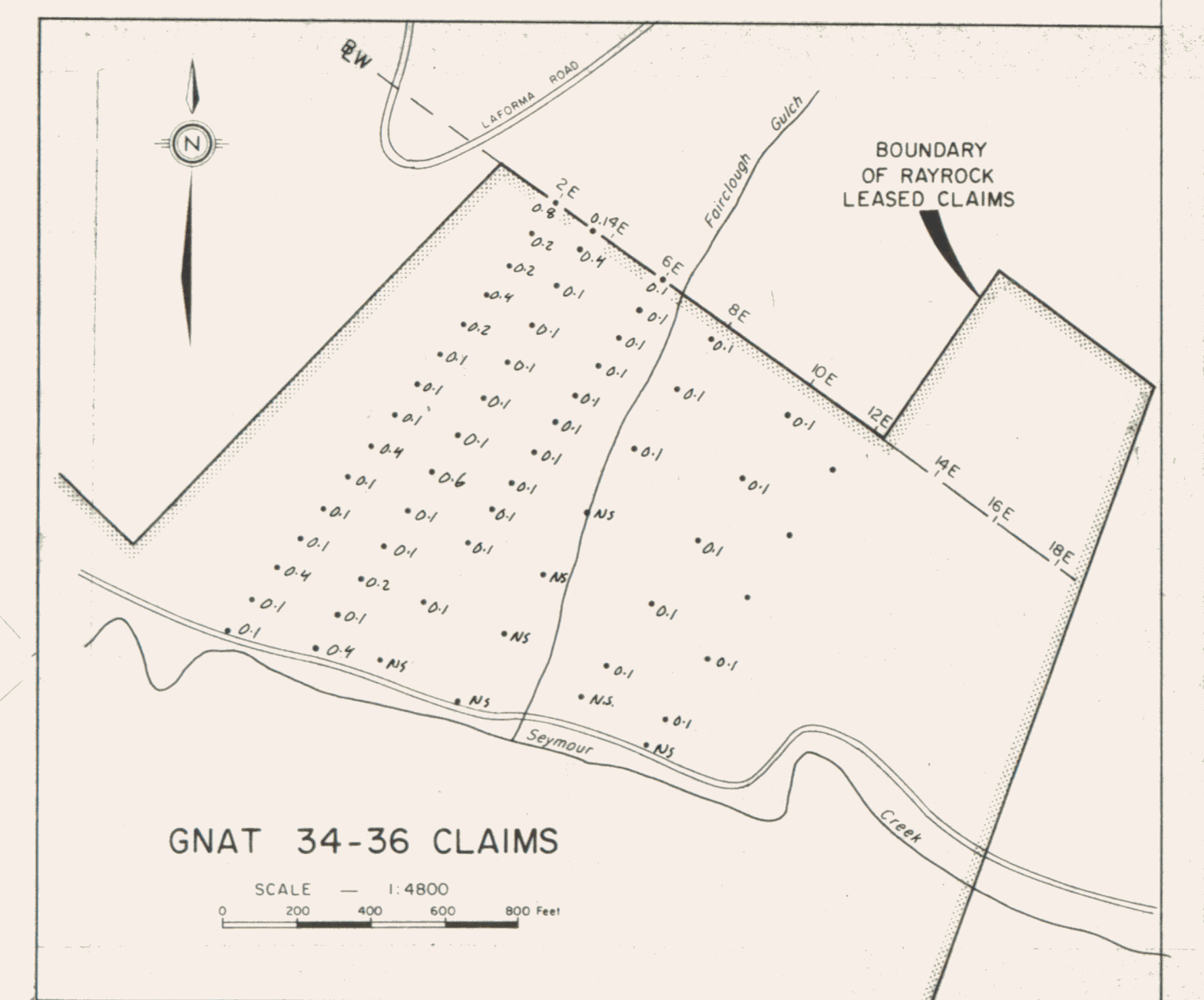
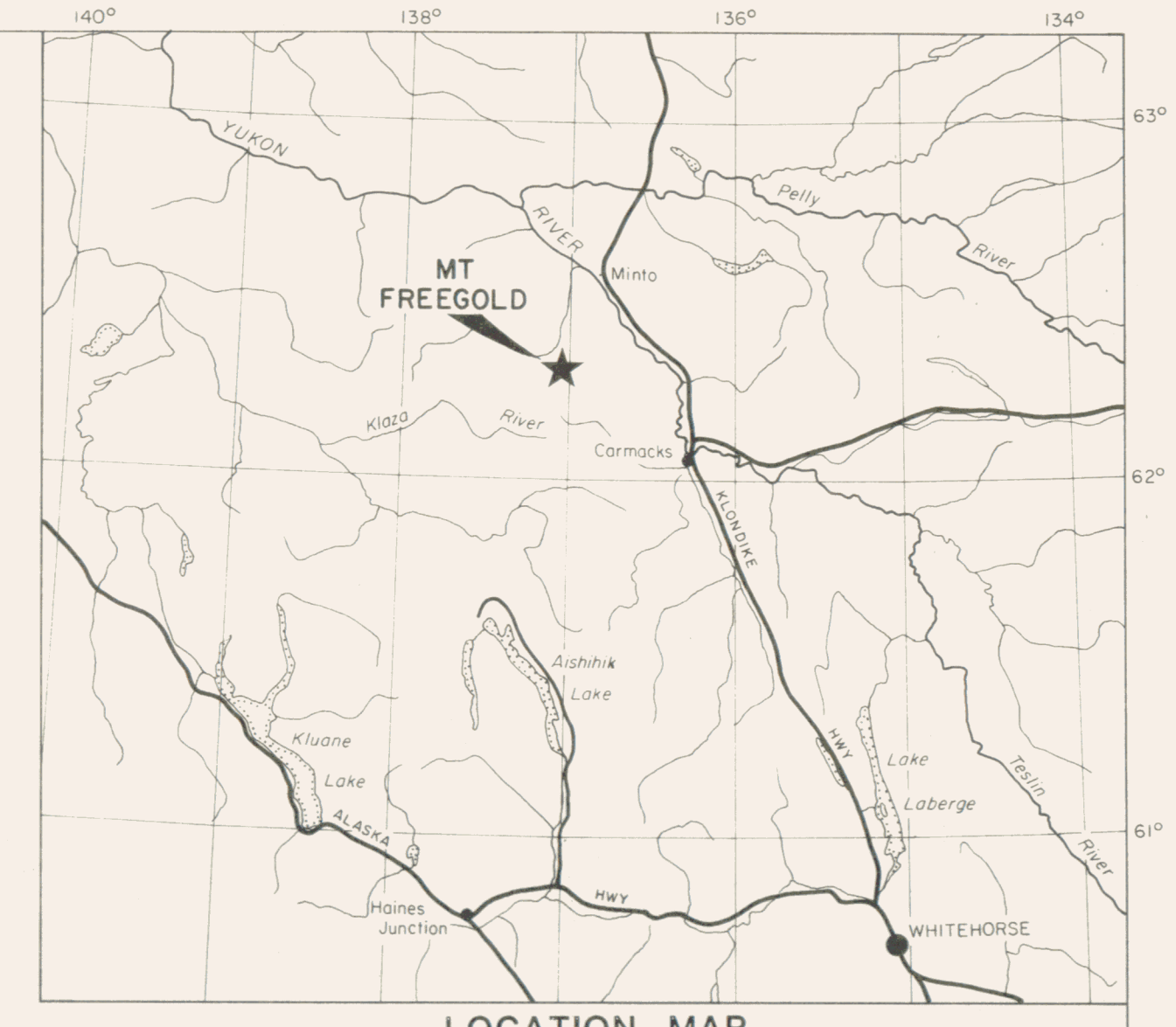
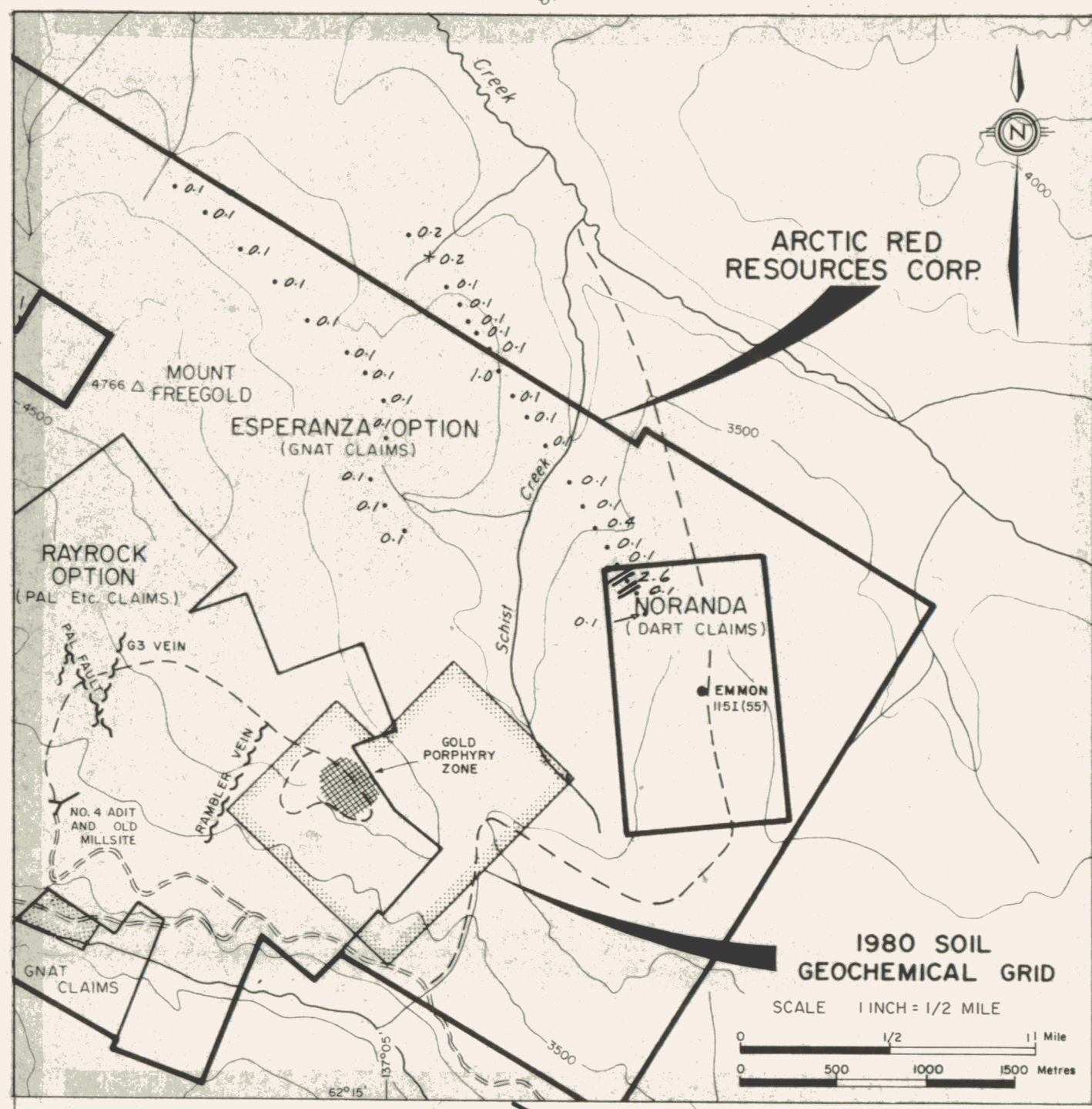
- LEGEND**
- 360 arsenic in ppm - RAYROCK MINES 1974-1975
 - 260 arsenic in ppm - 1980 survey
 - R75-02 RAYROCK 1975 drill hole
 - buildozer trench
 - ==== 4-wheel drive road
- CONTOUR INTERVAL**
- 125-250 ppm
 - 250-500 ppm
 - >500 ppm

FIGURE F4
ARCHER, CATRO & ASSOCIATES LTD
ARSENIC GEOCHEMISTRY
FREEGOLD PROJECT
ARCTIC RED RESOURCES CORP
MOUNT FREEGOLD AREA, YUKON



JAN 20 1987

To accompany report dated

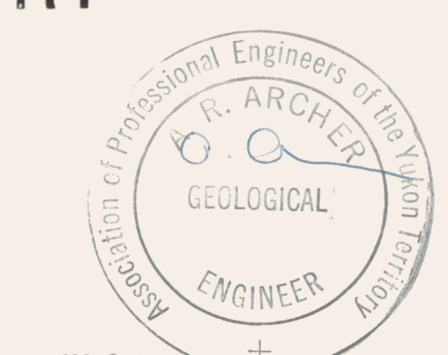


LEGEND

- 74 silver in ppm - RAYROCK MINES 1974-1975
 - 78 silver in ppm - 1980 survey
 - R75-02 RAYROCK 1975 drill hole
 - bulldozer trench
 - ==== 4-wheel drive road
- CONTOUR INTERVAL ***
- 1-2 ppm
 - 2-4 ppm
 - 4-8 ppm
 - > 8 ppm

*note: RAYROCK MINES silver values are not used during contouring as they are obviously incorrect

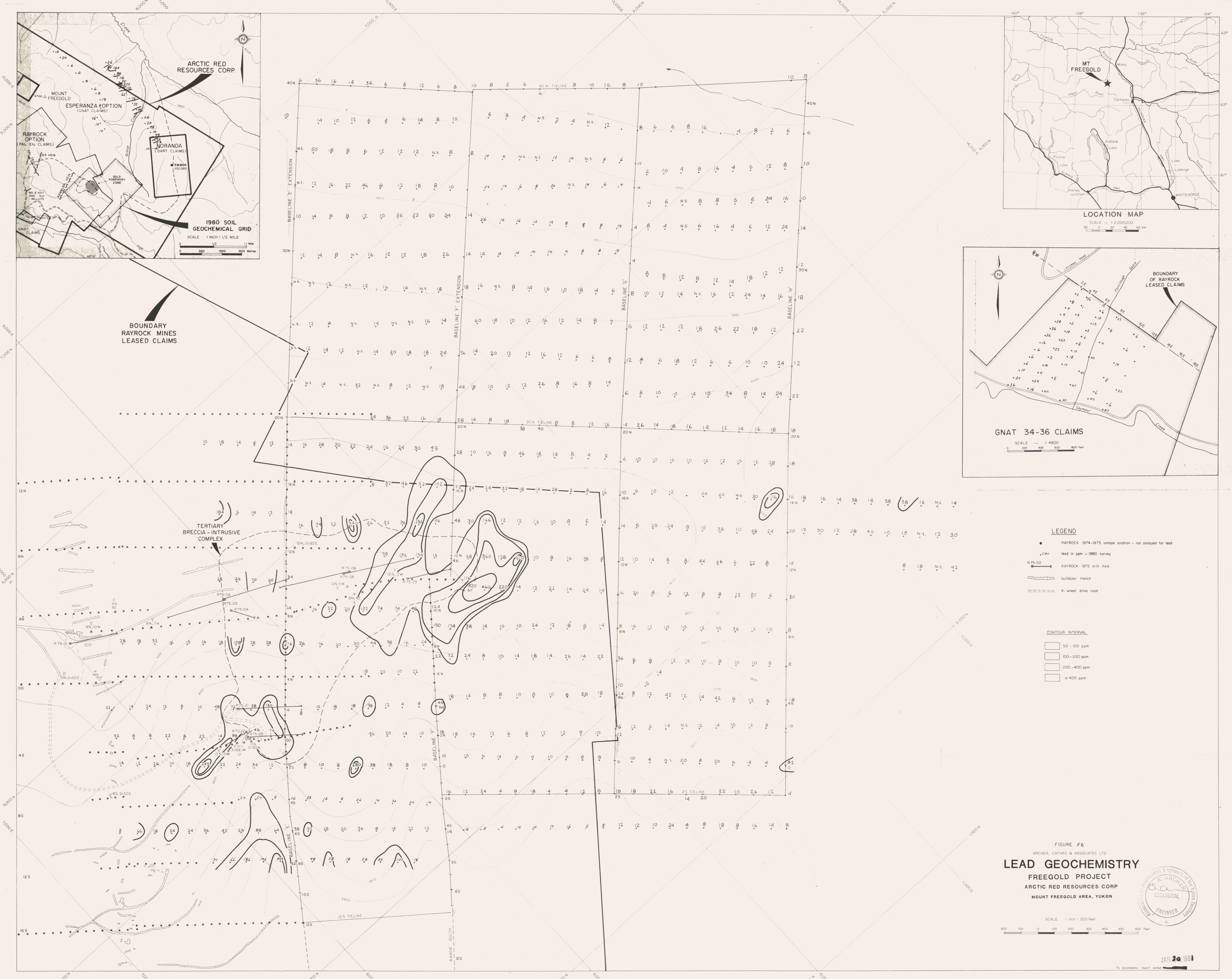
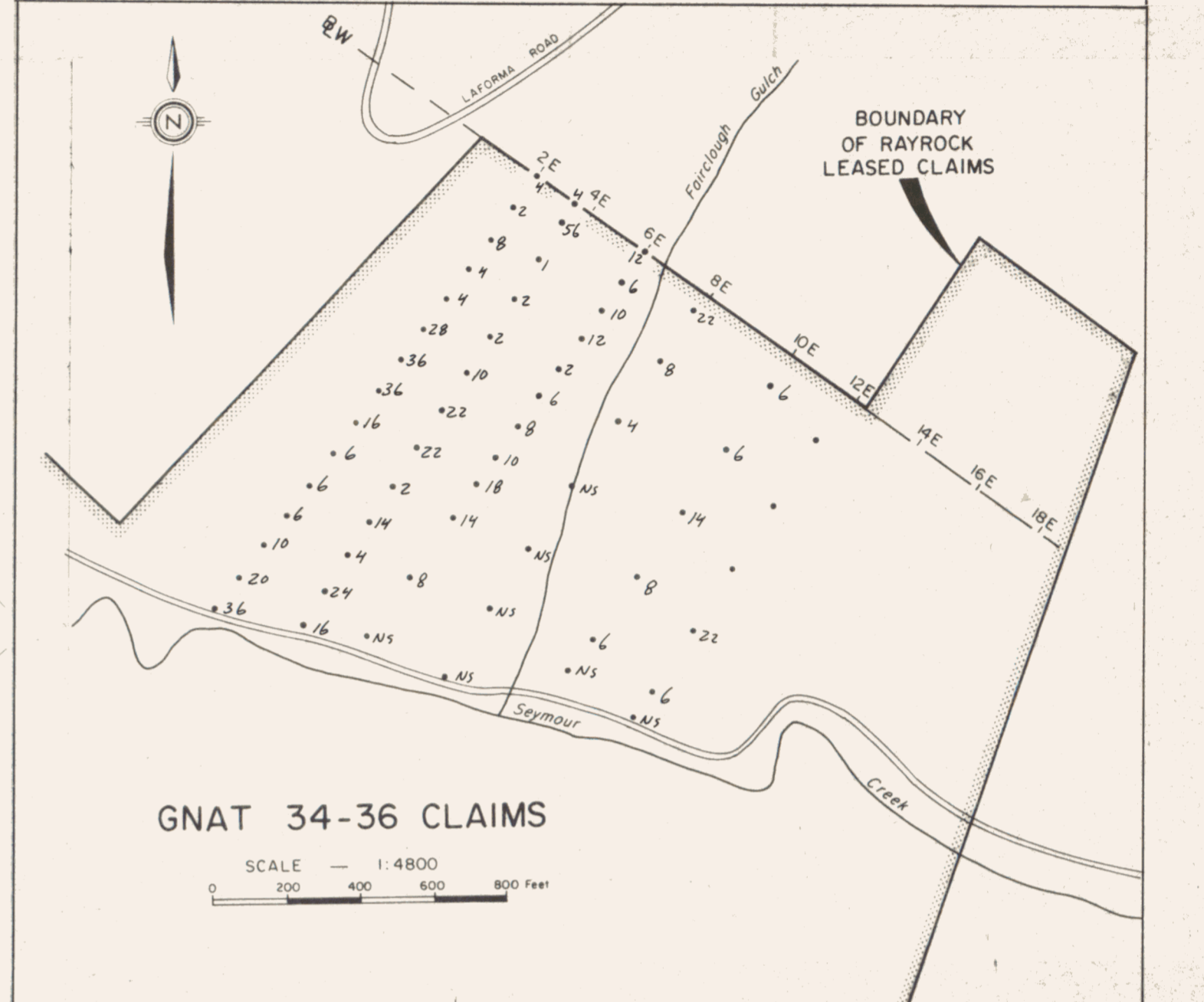
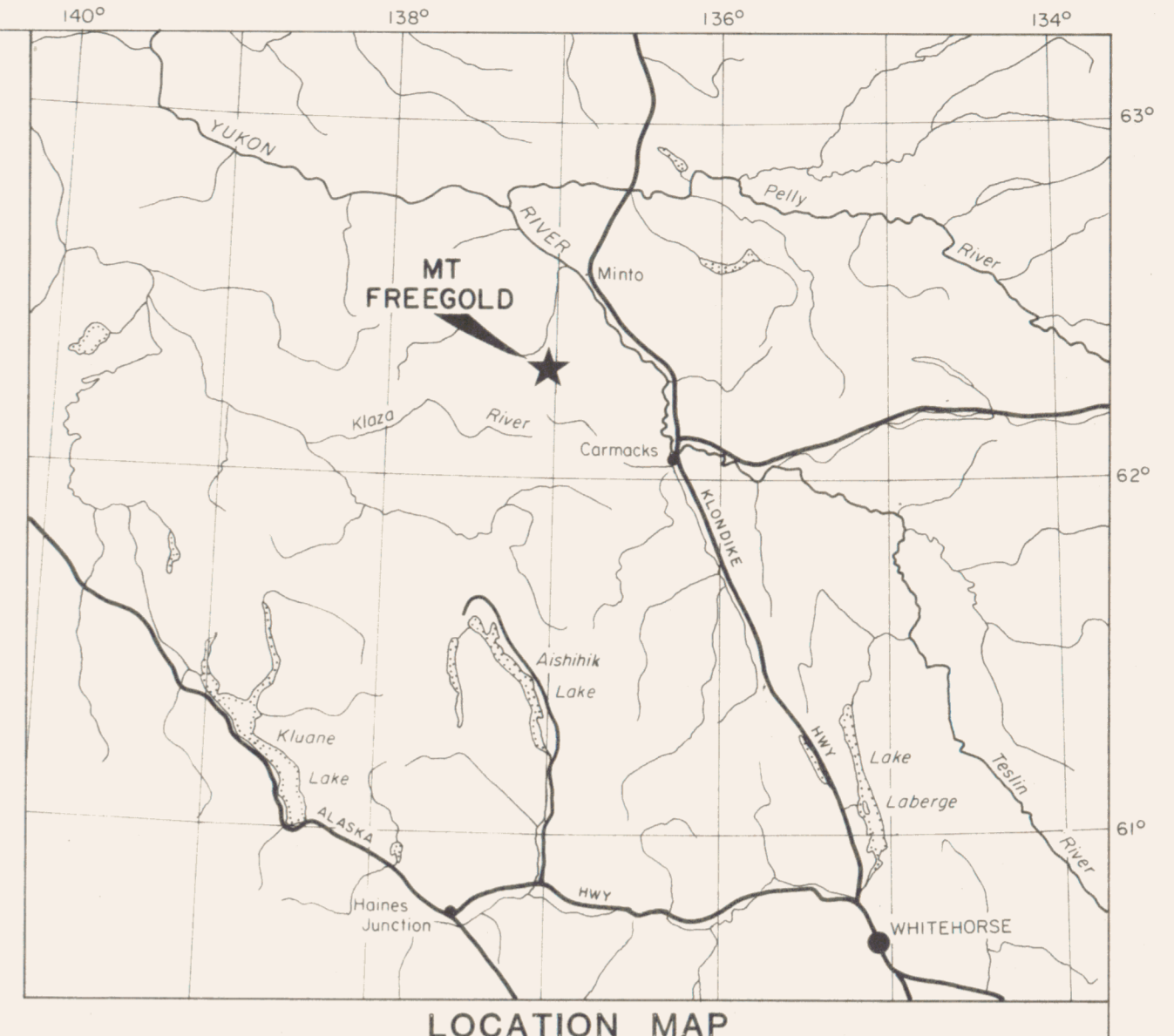
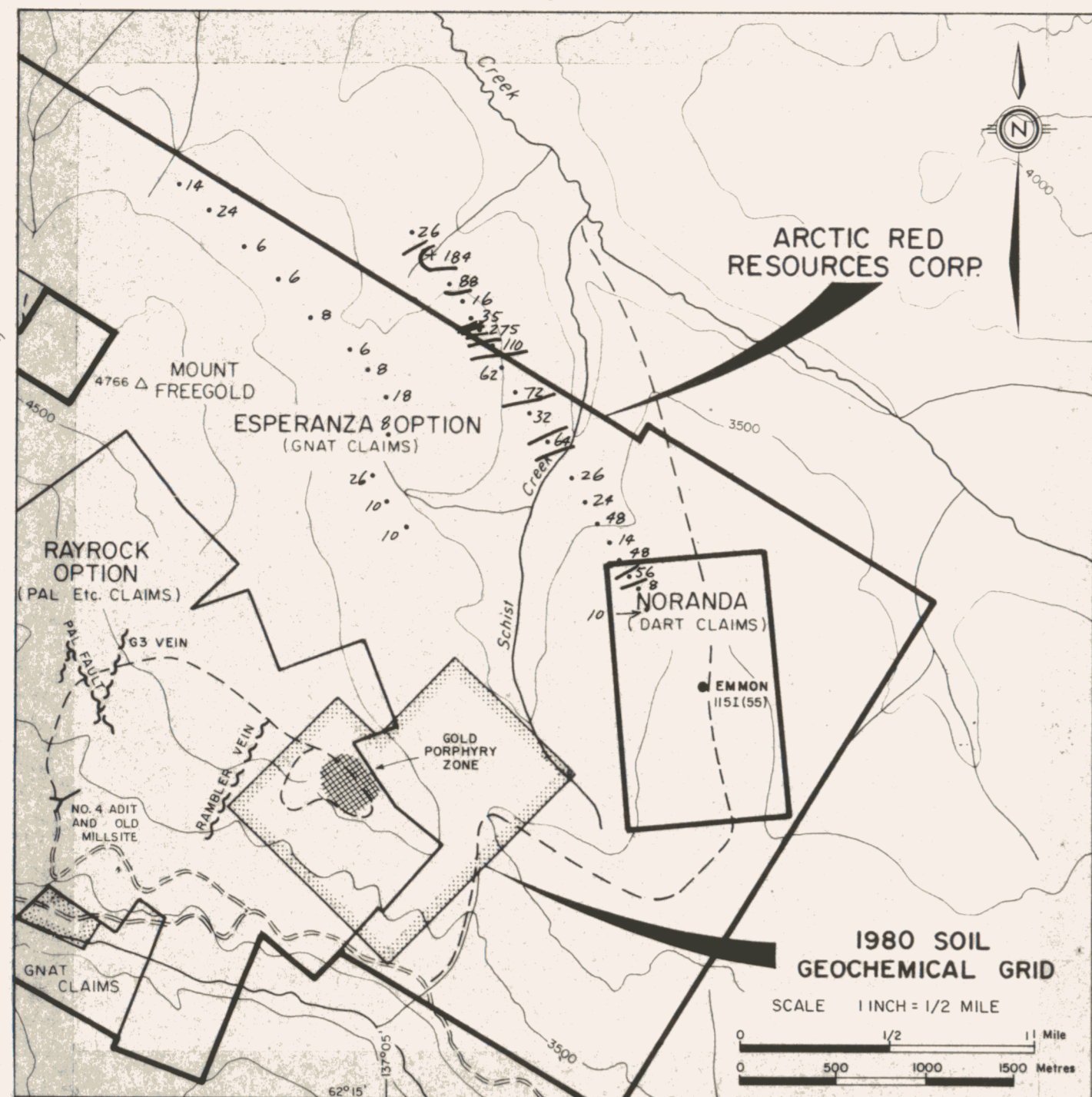
FIGURE F5
 ARCHER, CATHRO & ASSOCIATES LTD
SILVER GEOCHEMISTRY
 FREEGOLD PROJECT
 ARCTIC RED RESOURCES CORP
 MOUNT FREEGOLD AREA, YUKON



SCALE 1 inch = 200 Feet
 0 100 200 300 400 500 600 Feet

JAN 20 1981

To accompany report dated



LEGEND

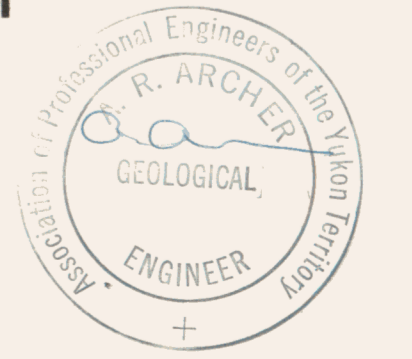
- RAYROCK 1974-1975 sample location - not assayed for lead
- ▲ lead in ppm - 1980 survey
- R75-02 RAYROCK 1975 drill hole
- bulldozer trench
- 4-wheel drive road

CONTOUR INTERVAL

- 50-100 ppm
- 100-200 ppm
- 200-400 ppm
- >400 ppm

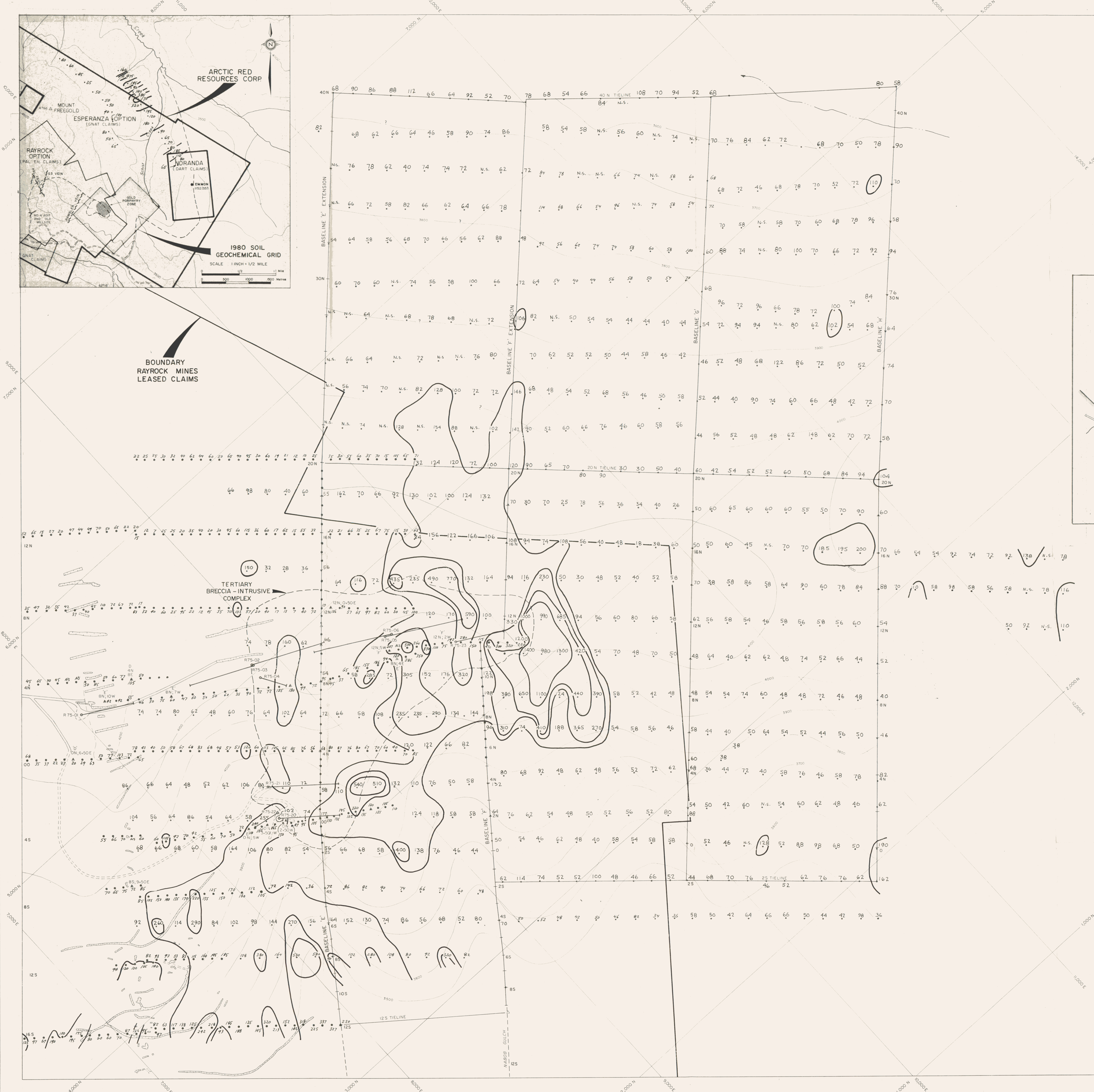
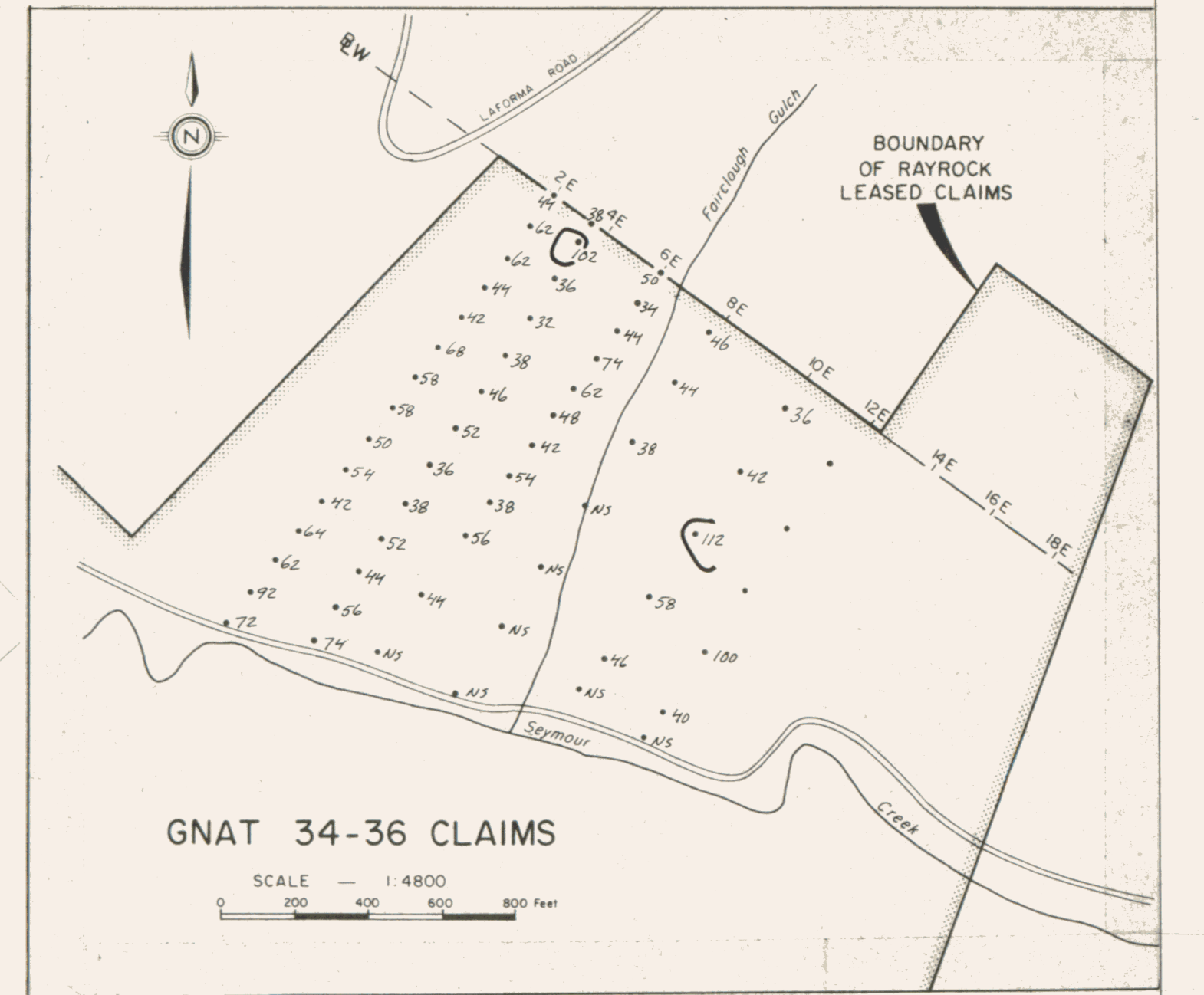
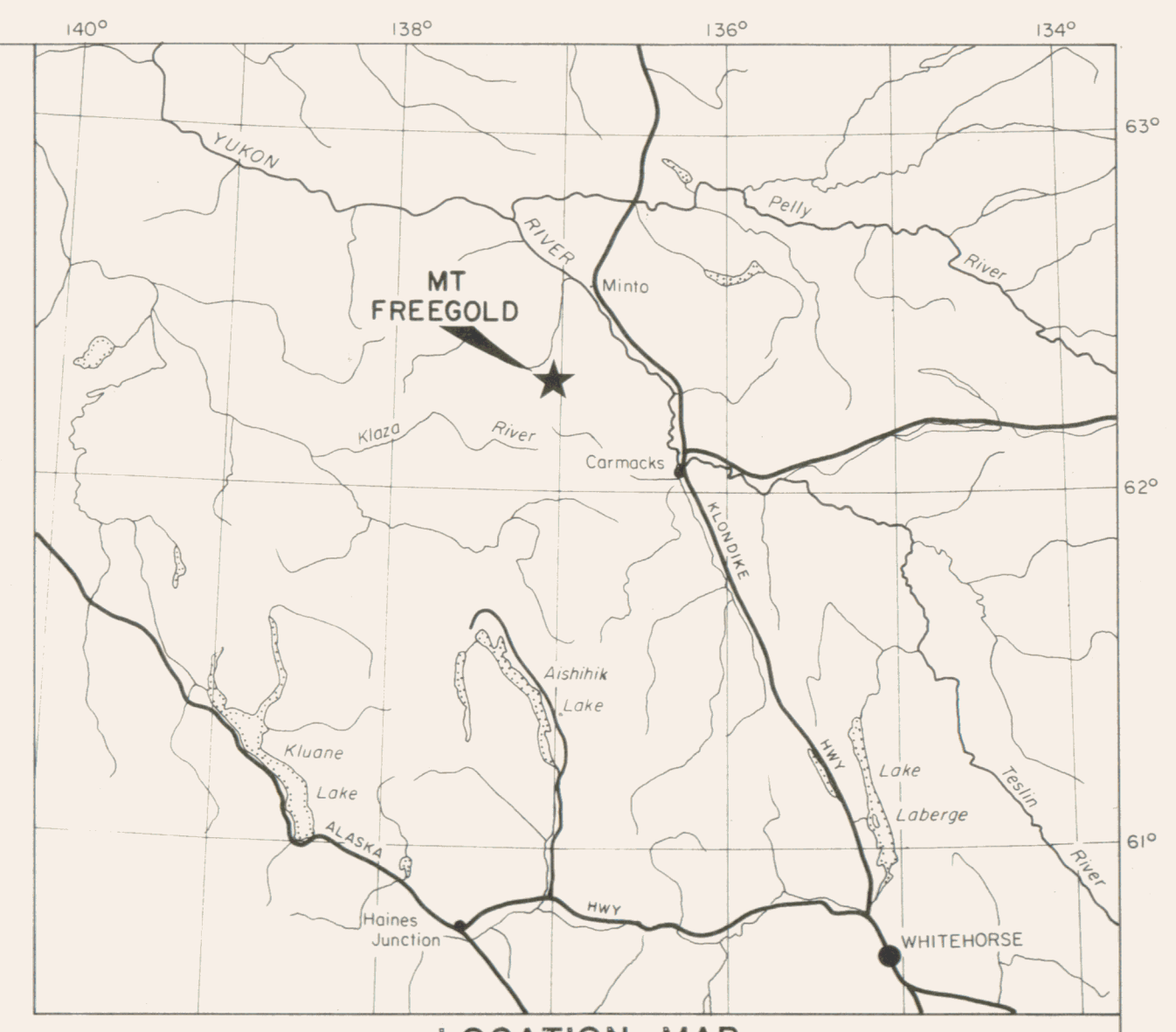
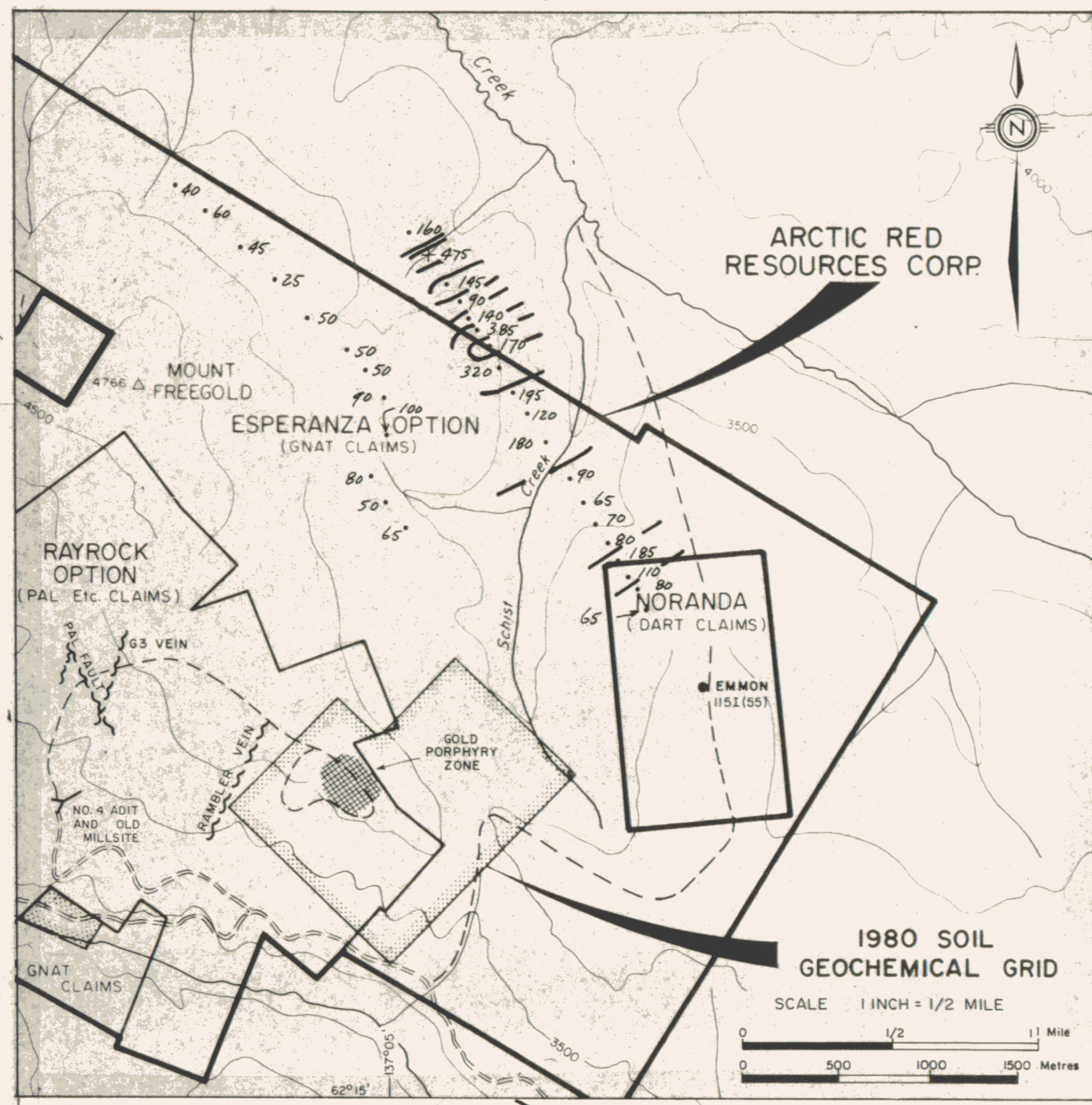
FIGURE F6
 ARCHER, CATHRO & ASSOCIATES LTD
LEAD GEOCHEMISTRY
FREEGOLD PROJECT
 ARCTIC RED RESOURCES CORP
 MOUNT FREEGOLD AREA, YUKON

SCALE 1 inch = 200 Feet



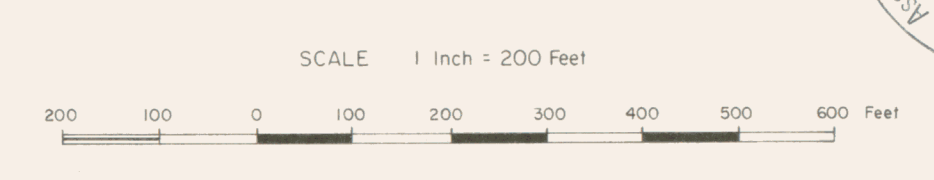
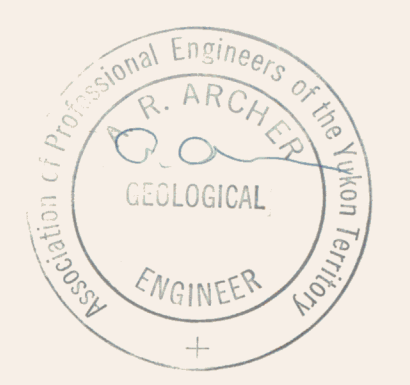
JAN 20 1981

To accompany report dated

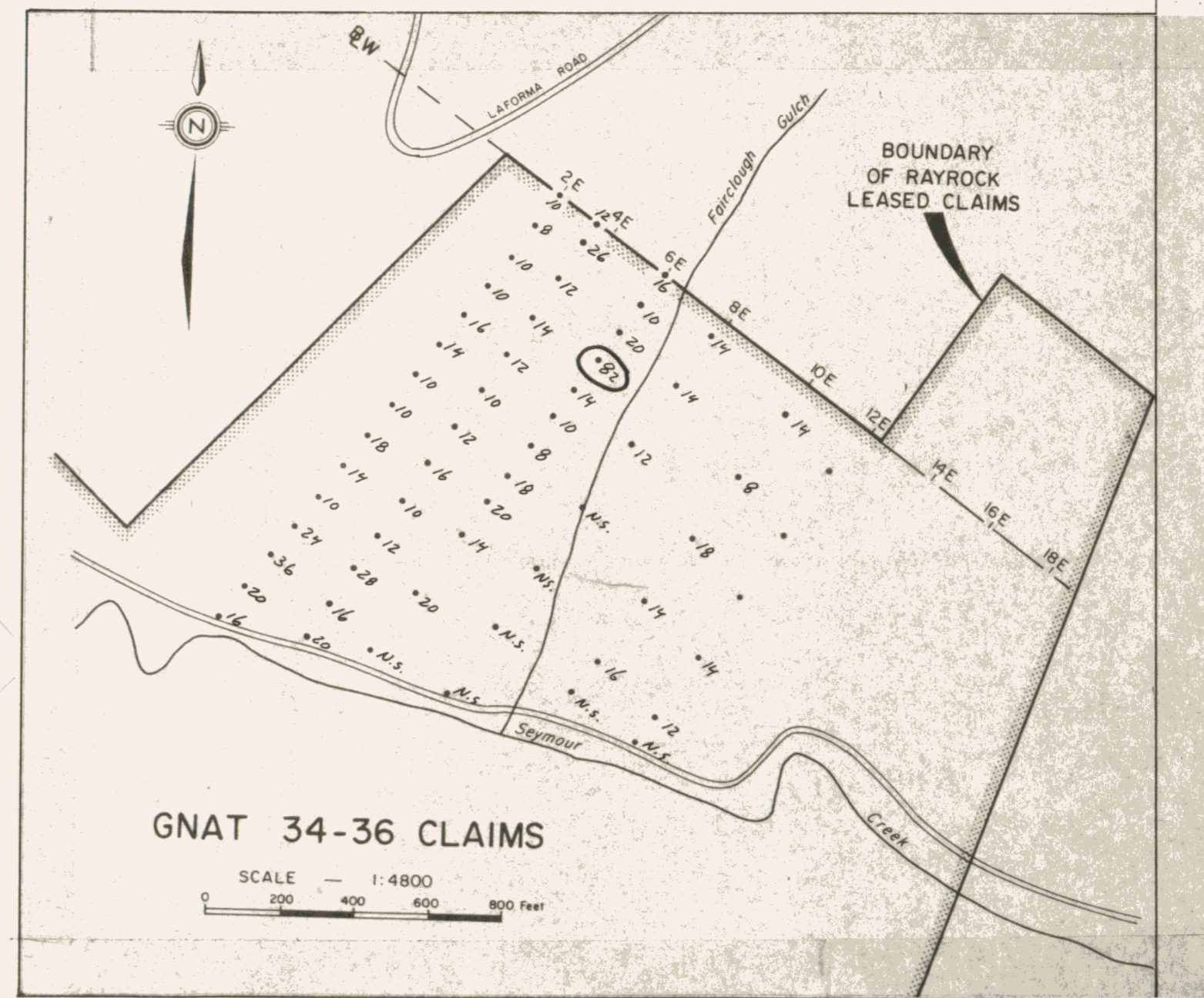
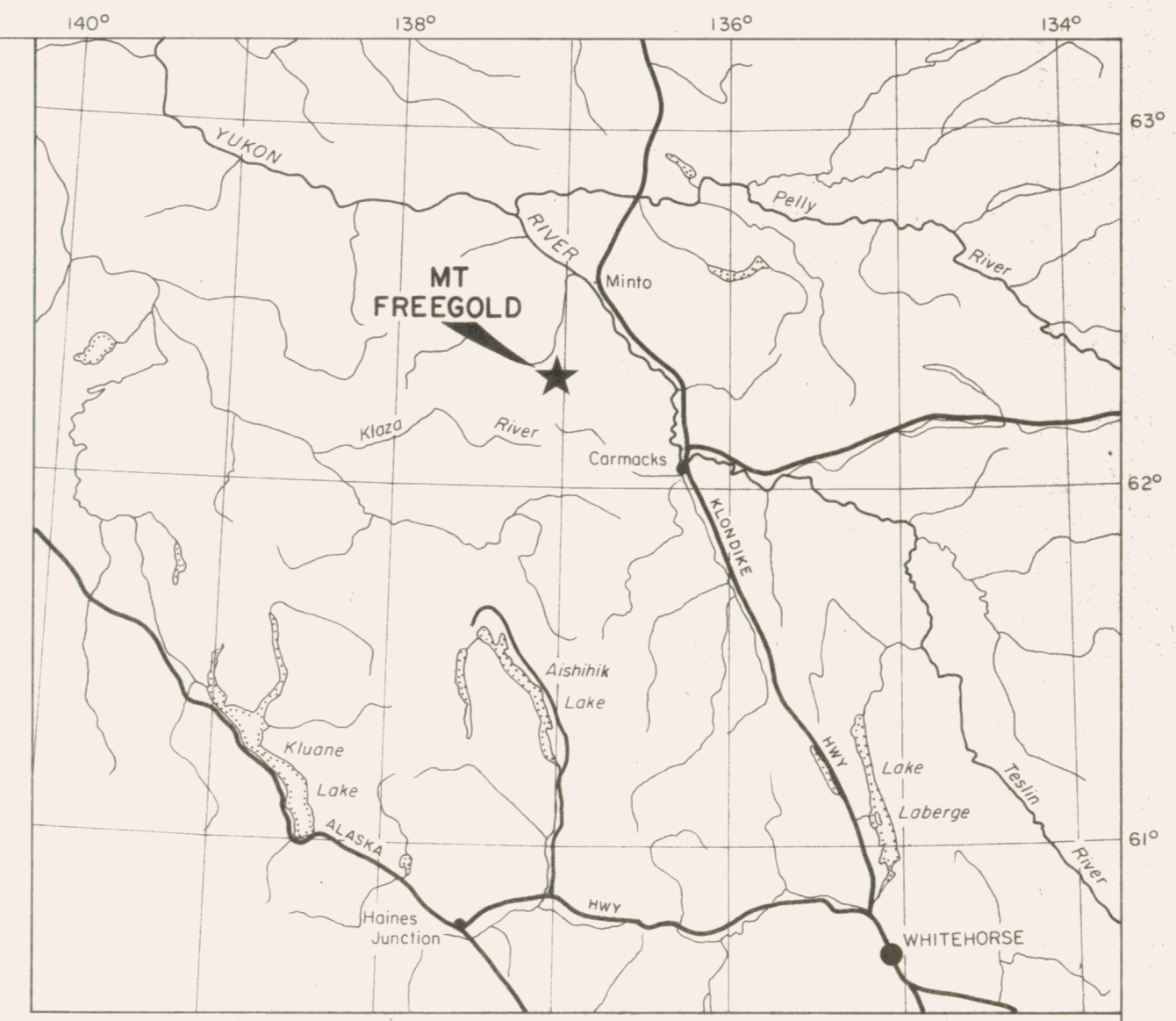
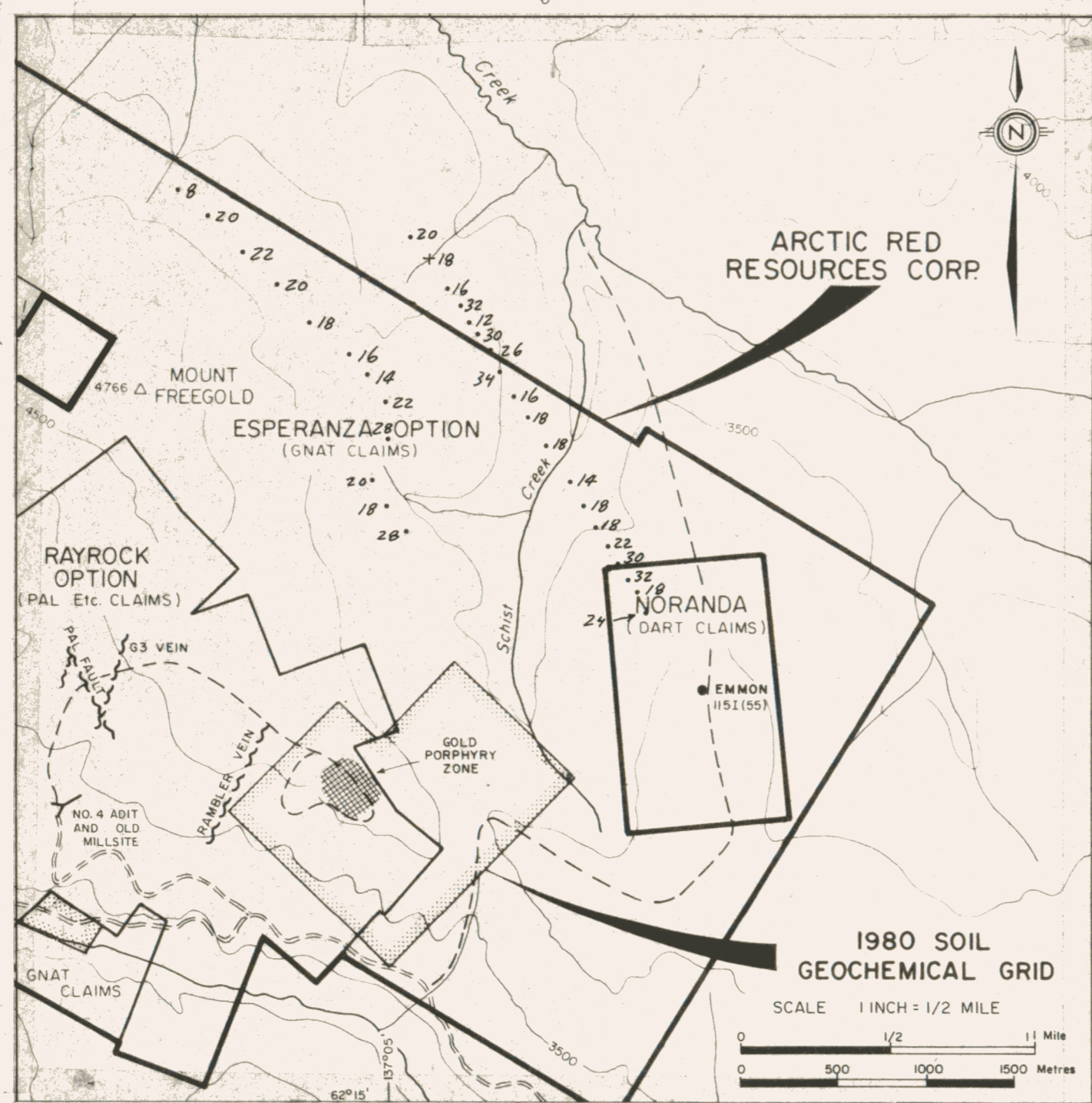


- LEGEND**
- 220 zinc in ppm - RAYROCK MINES 1974-1975
 - 160 zinc in ppm - 1980 survey
 - RTS-02 RAYROCK 1975 drill hole
 - bulldozer trench
 - ==== 4-wheel drive road
- CONTOUR INTERVAL**
- 100-200 ppm
 - 200-400 ppm
 - 400-800 ppm
 - >800 ppm

FIGURE F 7
 ARCHER, CATRO & ASSOCIATES LTD
ZINC GEOCHEMISTRY
FREEGOLD PROJECT
 ARCTIC RED RESOURCES CORP
 MOUNT FREEGOLD AREA, YUKON

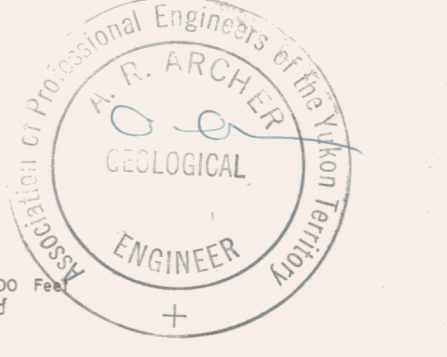
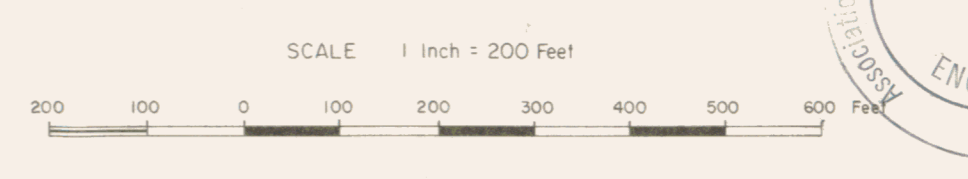


JAN 20 1981
 To accompany report dated _____



- LEGEND**
- 75 copper in ppm - RAYROCK MINES 1974-1975
 - 35 copper in ppm - 1980 survey
 - R75-02 RAYROCK 1975 drill hole
 - bulldozer trench
 - ==== 4-wheel drive road
- CONTOUR INTERVAL
 75-150 ppm

FIGURE F8
 ARCHER, CATHRO & ASSOCIATES LTD.
COPPER GEOCHEMISTRY
 FREEGOLD PROJECT
 ARCTIC RED RESOURCES CORP.
 MOUNT FREEGOLD AREA, YUKON



JAN 20 1981
 To accompany report dated

