PRELIMINARY EXPLORATION REPORT

TRIX 1 - 4 CLAIMS

GRANT NUMBERS YA 31499 - YA 31502

NTS 116B7

64°27'N 138°40'W

DAWSON MINING DISTRICT

Author: J. Biczok

Owner: Noranda Mines Limited
Mattagami Lake Exploration Limited

Supervisor: W. Mercer

Date: August 1979

Work Dates: 18th to 21st June 1979

090523

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

$ 3,213.85

J a Morin

Resident Geologist or
Resident Mining Engineer

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

B. R. BAXTER
Supervising Mining Recorder

for Commissioner of Yukon Territory

CONTENTS

SUMMARY

The TRIX 1 - 4 claims were staked in 1978 to cover an area of skarn within the Tombstone batholith. Mineralization consists of anomalous uranium contents associated with fluorite veinlets and sulphide veinlets consisting of pyrite, chalcopyrite, arsenopyrite and stibnite. Economic potential appears to be minimal.

LOCATION AND ACCESS (Figure 1)

The TRIX claims are located 2 1/2 miles north of Mount Tombstone in the Tombstone Range. The area is very rugged and access is only by helicopter. It is not possible to pass from the west to the east side of the property on the ground without climbing equipment. Generally the area is around 6500 ft. above sea level.

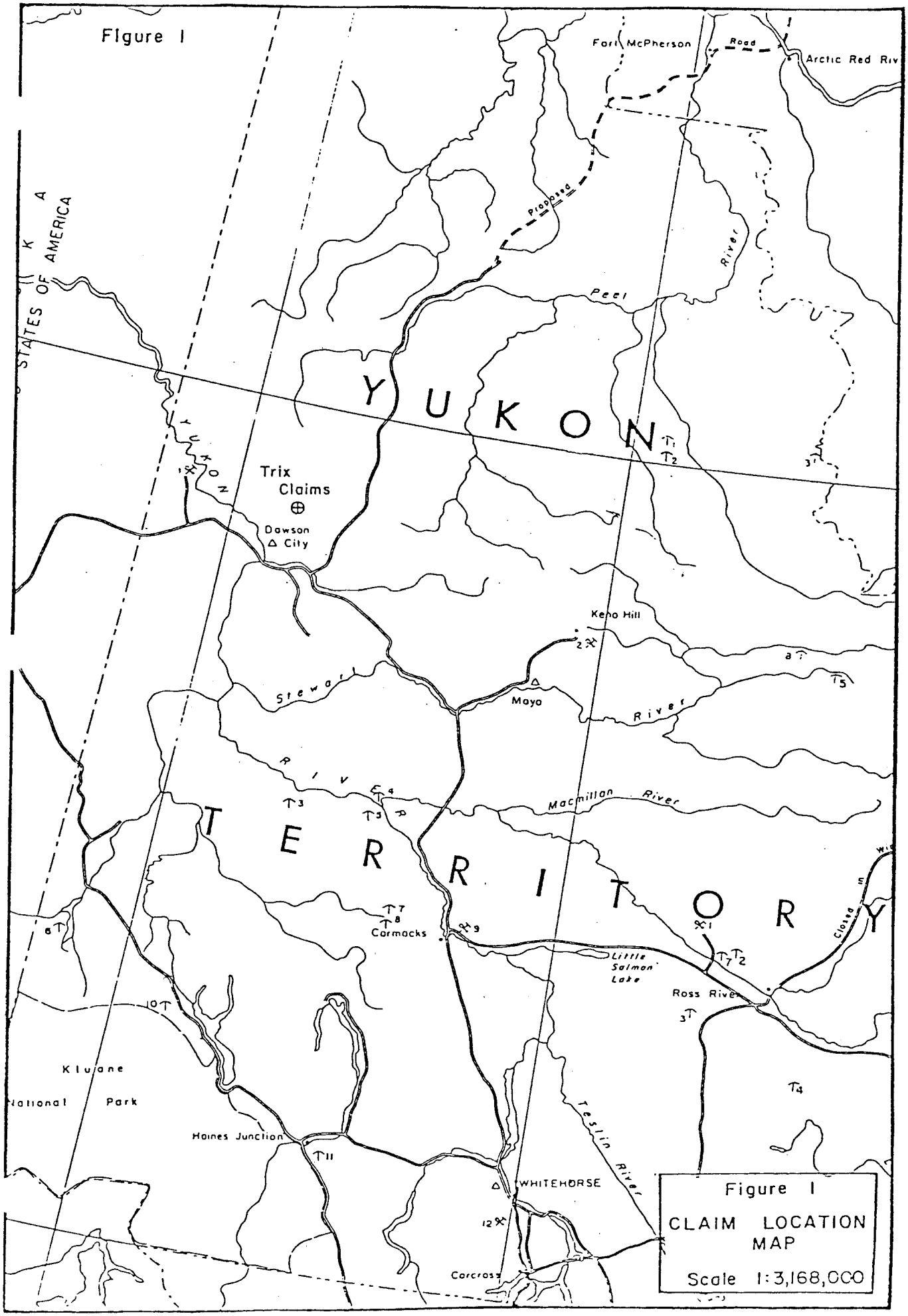


Figure 1
Fort McPherson
Road
Arctic Red Riv
Peel River
Klondike Highway
STATES OF AMERICA
YUKON
TERRITORY
Trix Claims
Dawson City
Keno Hill
Mayo
Stewart River
Macmillan River
Carmacks
Little Salmon Lake
Ross River
Closed
Kluane National Park
Haines Junction
WHITEHORSE
Teslin River
Carcross
Figure 1
CLAIM LOCATION MAP
Scale 1:3,168,000

HISTORY OF STAKING

The claims were staked on July 26, 1978, following the identification of possible mineralization in a xenolith of Permian limestone within the northwest portion of the Cretaceous Tombstone syenite intrusion. Figure 2 shows claim location details and the regional geology.

The claims were recorded on August 4th, 1978, in Dawson City.

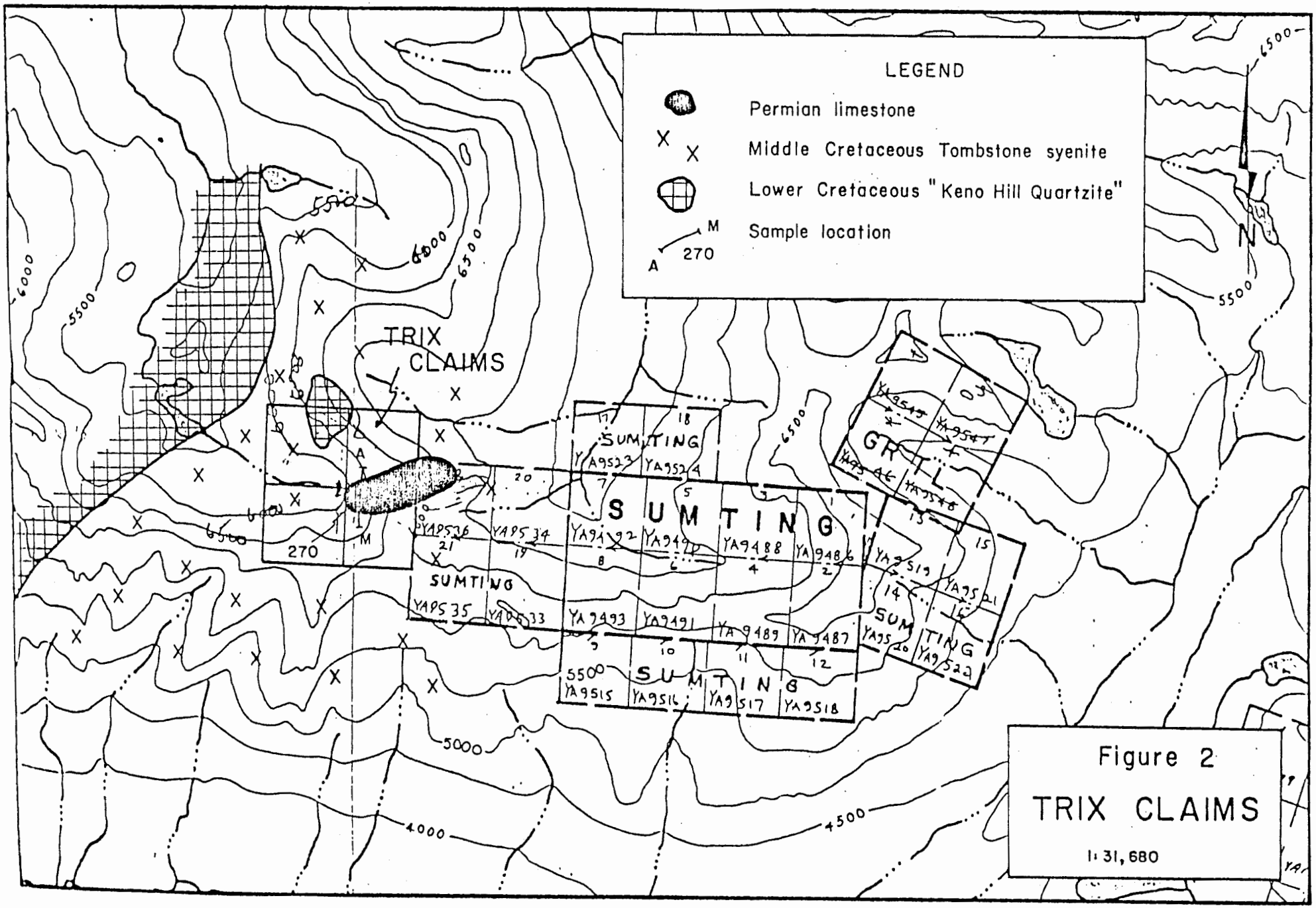


Figure 2

TRIX CLAIMS

1: 31,680

GENERAL GEOLOGY (Table 1, Map 1)

The TRIX claims are located in the Tombstone Range 60 km northeast of Dawson City, Yukon. They are entirely within the Tombstone syenite intrusion and cover a large xenolith of the Permian Tahkandit limestone as well as a portion of a larger xenolith (pendant ?) of Keno Hill quartzite.(see Map 1).

The Tombstone intrusion consists almost entirely of various porphyritic to equigranular syenites cut by minor dikes of diorite and granite. In the area of the TRIX claims the intrusion consists mainly of medium to coarse grained porphyritic hornblende syenite with potassium-feldspar phenocrysts up to 2 cm. and frequently flow aligned and hornblende phenocrysts up to 4 mm. Fine grained, equigranular white granitic dikes are locally common and one diorite dike, 1 m wide and containing trace molybdenite, was found cutting the Keno Hill quartzite.

The Keno Hill quartzite is a lower Cretaceous sequence of thinly bedded pyritiferous argillaceous to clean quartzites, argillites and shale. It crops out over an area several kilometers long and more than 1 kilometer wide. The interior portion of this xenolith seems relatively unrecrystallized, many beds are still quite porous, however, the outer margins are quite hornfelsic. From the exposures visible in a ravine northeast of the claims, it appears that the quartzite is continuous from the east side of Blackstone Creek to the TRIX 2 claim. The central portion is covered by a subhorizontal syenite dike which dips gently to the east.

TABLE I

Table of Formations

PERIOD	FORMATION	LITHOLOGY
Middle Cretaceous	Tombstone Batholith	Syenite, monzonite, quartz monzonite
Lower Cretaceous	Keno Hill Quartzite	Orthoquartzite
Permian	Tahkandit Formation	Limestone, skarn

SKARNIFICATION

The Permian Tahkandit limestone occurs as a large xenolith, 800 m x 100 m, exposed on both sides of a steep sided ridge. The limestone is white, grey or blue in colour, generally medium to coarsely crystalline, and thinly bedded with beds averaging 3-5 cm. Beds are roughly vertical and strike at 065^{o}.

Skarnification and mineralization on the west side of the ridge have been described previously (F. Morra and J. Biczok, 1978) and no new observations were made during this examination. Skarnification is much more intense on the east side of the ridge. It is accompanied by, or may have been produced largely as a result of, microcline veining. Several veins of coarse grained-pegmatitic microcline were found in the most extensive skarn zone. The major minerals present in this zone (garnet $\pm$ actinolite $\pm$ diopside $\pm$ tremolite (?)) frequently occur in fine bands, less than 2 cm, parallel to the microcline, veins. No significant skarnification was found away from the microcline veins, even where the limestone was in direct contact with the syenite. No microcline veins have been found on the west side of the ridge, however, the skarnification is much less intense there and may have been aided by volatiles associated with a flourite vein.

The major skarn zone, occurring on the NE margin of the limestone, is approximately 10 m wide. It consists predominantly of massive, intensely zoned garnets up to 2 cm across. These are cut by veins and/or bands of actinolite $\pm$ tremolite (?) $\pm$ diopside $\pm$ calcite $\pm$ quartz $\pm$ stibnite. Actinolite and tremolite crystals reach 15 cm in length and frequently occur as rosettes. Diopside crystals average 5 mm in length, calcite crystals reach 4 cm in width and stibnite flakes reach 1 1/2 cm, occurring occasionally as roses. While quartz crystals generally are less than 2 cm

in length, one euhedral crystal was found which is 30 cm x 20 cm and weighs 60 pounds.

MINERALIZATION

During brief work in 1978 it was found that the limestone is cut by irregular veins of fluorite, calcite and various sulphides. A fluorite vein up to 5 cm side cuts the zone of skarnification, subparallel to the skarn-syenite contact. This vein gave radiometric readings of 1000 to 2500 cps (GRS 101 scintillometer) and was the only radioactive area found within the xenolith. The feature of the most economic significance is the presence of irregular, sulphide veins up to 50 cm wide. The veins appear to have been introduced as hydrothermal solutions along with coarsely crystalline calcite (crystals up to 10 cm wide) which cross cuts the finer recrystallized limestone. The sulphides consist primarily of locally euhedral pyrite with lesser amounts of chalcopyrite, galena, molybdenite and a fine grained grey metallic mineral, probably arsenopyrite. The veins are exposed at an elevation of 1850 m (6100') on the eastern side of a very steep walled cirque.

Helicopter reconnaissance did not reveal any veins at higher elevation on this side of the ridge, however, several large gossans were observed on the opposite side. These are inaccessible without climbing equipment. Below the veins, the outcrop is covered by ice and talus.

The only new mineralization found in 1979 associated with the limestone consists of several stibnite bearing veins. Although these reach impressive concentrations locally, the veins are too narrow (less than 4 cm) and too widespread to be of economic significance. No sulphide veins like those found on the west side, were found. Gossanous zones which were accessible, proved to be pyritiferous quartzite. Previous analyses of rocks from this limestone and associated skarns revealed no economic concentrations of any elements.

A 3 meter wide dike found cutting the Keno Hill Quartzite resembles the pseudoleucite tingauite, a phase of the intrusion which is associated with significant uranium occurrences. Unfortunately, it is not overly radioactive, giving only 150 cps on a GRS 101.

CONCLUSIONS

Although impressive local concentrations of sulphides - pyrite, chalcopyrite, stibnite - were located, these occurrences are of a limited size. There is very little potential for economic mineralization on the TRIX claims and no further work is recommended.

ANALYSES

A number of rock samples were sent for analysis and the results are given in Table II. Sample locations are plotted on Map 2.

As can be seen from the analyses, no potentially economic mineralization is present on the property.

TABLE II

ROCK ANALYSES

Sample #	ppm Cu	ppm Zn	ppm Mo	ppm W	ppm U
129-02-R-2A	97	81	5	8	5.0
3	10	39	4	L2	1.1
4	6	47	7	4	7.0
5	9	65	4	2	1.3
6	9	34	3	4	2.8
7	29	18	4	4	0.7
9A	8	5	6	L2	L0.1
9B	5	20	5	12	4.6
9C	252	104	12	4	3.1
10A	5	10	4	7	4.0
10B	8	42	3	L2	0.8
10C	18	46	7	3	4.4
10D	5	43	3	6	10.0
11	4	20	2	L2	12.0
13A	4	27	4	2	6.5
13B	29	23	12	6	1.9
13C	6	4	8	L2	L0.1
14	6	15	5	L2	L0.1
15	5	11	5	L2	1.8
16	8	10	10	L2	1.8
17	47	52	4	L2	0.2
18	5	16	8	2	2.7

L = less than

CERTIFICATE

I, John Biczok, of Edmonton, Province of Alberta, do hereby certify that:

1. I am a geologist residing at #5, 10556 - 80 Avenue, Edmonton, Province of Alberta.
2. I am a graduate of Lakehead University, Ontario with a H. B.Sc. (1976) in geology and am presently completing an M.Sc. at the University of Manitoba, Winnipeg.
3. I have been practising my profession since 1973 and am at present Exploration Geologist with Mattagami Lake Exploration Limited in Edmonton.
4. I was party chief for the crew that conducted the work in this report and the report is correct to the best of my knowledge and ability.

Dated: Nov. 12, 1979

John Biczok

John Biczok, H. B.Sc.

CERTIFICATE

I, William Mercer, of the City of Edmonton, Province of Alberta, do hereby certify that:

1. I am a geologist residing at 6814 - 110 Street, Edmonton.
2. I am a graduate of Edinburgh University, Scotland, with a B.Sc. Hons (1968) in geology and McMaster University, Ontario, with a Ph.D. (1975) in geology.
3. I have been practicing my profession since 1974 and am at present District Geologist for Mattagami Lake Exploration Limited in Edmonton.
4. I am a fellow of the Geological Association of Canada and a member of the Society of Economic Geologists and the Canadian Institute of Mining and Metallurgy.
5. I supervised the work that is described in this report.

Dated: 12 November 1979

W. Mercer, Ph.D.

MAP I

PRELIMINARY GEOLOGY

TRIX 1-4 CLAIMS

TRIX

LEGEND

- mountain ridges
- streams
- geologic contacts
- bedding
- flow foliation
- shear foliation

MINERAL OCCURRENCE

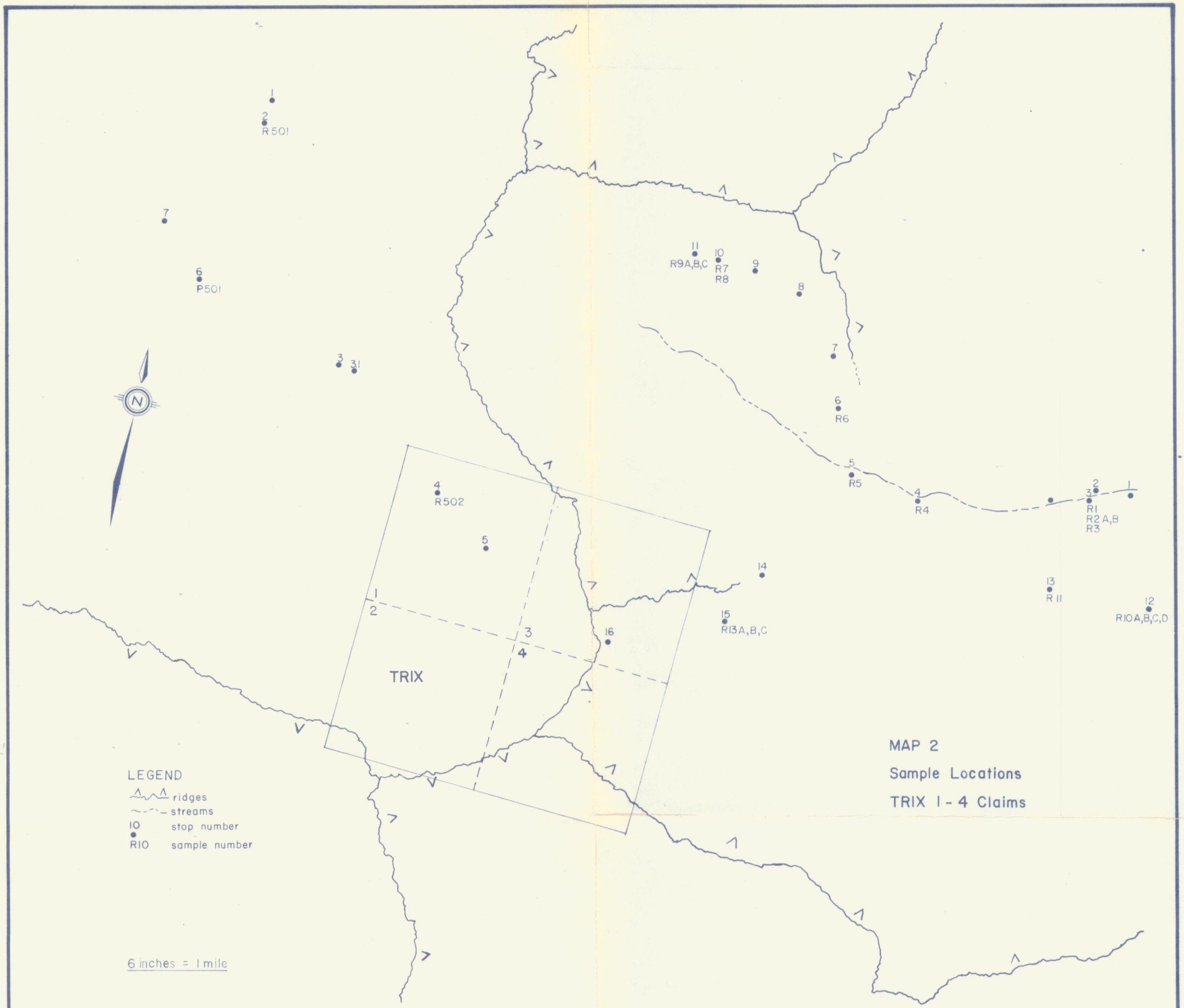
Mo	molybdenite
Sb	stibnite

6 inches = 1 mile

3 TOMBSTONE STOCK
3a, hornblende syenite; 3b, biotite diorite
3c, porphyritic monzodiorite; 3d, mafic hornblende syenite

2x KENO HILL QUARTZITE
2a, quartzite, argillaceous and calcareous quartzite, minor shale
2b, argillite, garnetiferous argillite, minor quartzite

TAHKANDIT FORMATION
white to grey limestone. Heavily skarnified along margins


1
2
R501
7
6
P501
3
31
4
R502
5
1
2
3
4
TRIX
11
R9A,B,C
10
R7
R8
9
8
7
6
R6
5
R5
4
R4
2
3
R1
R2A,B
R3
1
14
15
R13A,B,C
16
13
R11
12
R10A,B,C,D
N
LEGEND
ridges
streams
10 stop number
R10 sample number
6 inches = 1 mile
MAP 2
Sample Locations
TRIX 1 - 4 Claims