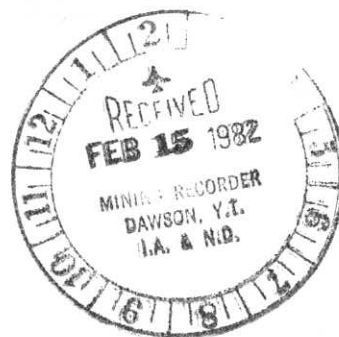


RIKI 1-24 CLAIMS  
GEOLOGY AND GEOCHEMISTRY, 1981



DAWSON MINING DISTRICT  
NTS: 116B/9  
LATITUDE: 64°30'N  
LONGITUDE: 138°24'W



AUTHOR: J. BICZOK  
OWNER: MATTAGAMI LAKE EXPLORATION LIMITED  
DATE: JANUARY 1981

*Handwritten signature/initials*

090982

This report has been prepared by  
the Geological Survey Unit  
under Section 10 of the Quartz  
Mining Act and the same as  
represent the cost of the amount  
of \$ 2400—.

*P. W. Watson*

*for* Regional Director of Mineral and  
Geological Survey, Commissioner  
of Yukon Territory.

ABSTRACT

The RIKI 1-24 claims, wholly owned by Mattagami Lake Exploration Limited, are located 71km northeast of Dawson City, Yukon. They are underlain by Ordovician to Cretaceous clastic metasedimentary rocks intruded by numerous Cretaceous syenite/monzonite stocks. Geochemical anomalies (Cu-Zn) on a stream draining the claims appear to be due to groundwater dissolution of pyrite in a Jurassic Schist. This produces acid water which leaches metals from the local strata, generating inconsequential anomalies. No further work is recommended on the claims.

## TABLE OF CONTENTS

	<u>Page</u>
Abstract	i
Chapter One: Introduction	1
1-1: Location and Access	1
1-2: History of the Claims	1
1-3: Work Program	1
Chapter Two: Geology	5
2-1: Introduction	5
2-2: Description of Units	5
Chapter Three: Geochemistry	8
3-1: Stream Geochemistry	8
3-2: Rock Geochemistry	10
Chapter Four: Discussion and Recommendations	11
Statement of Costs	12
Certificate of Qualifications	13

## LIST OF FIGURES

Figure 1: Location Map	2
2: Claim Map	3

## LIST OF TABLES

Table 1: Table of Formations	6
2: Geochemical Analyses (Stream Samples)	9
3: Geochemical Analyses (Rock Samples)	10

## CHAPTER ONE: INTRODUCTION

### 1-1: Location and Access

The RIKI 1-24 claims are situated 71km northeast of Dawson City, Yukon at 64°30'N, 138°24'W on NTS mapsheet 116B/9 (Figures 1 and 2). They are 8km west of North Fork Pass (km 76) on the Dempster Highway, 19km east of the company's MARN claims and 6km east of the company's TAK claims. Access was by helicopter from a camp near the TAK claims. In the future, if the property warrants it, camp could easily be established on the property or a road built to it from the Dempster Highway. The wide, flat-bottomed Tombstone valley connects the property with the highway whereas the upper reaches of the East Blackstone River valley connects the area immediately north of the claims with the highway.

### 1-2: History of the Claims

The claims were staked on July 16, 1980 by company personnel and recorded August 4, 1980. Grant numbers are YA 52846 to YA 52869. This report represents the initial assessment work carried out on the property. The claims were staked to cover the presumed source of a significant GSC Cu-Zn stream sediment anomaly, subsequently confirmed by the company's brief geochemical survey.

### 1-3: Work Program

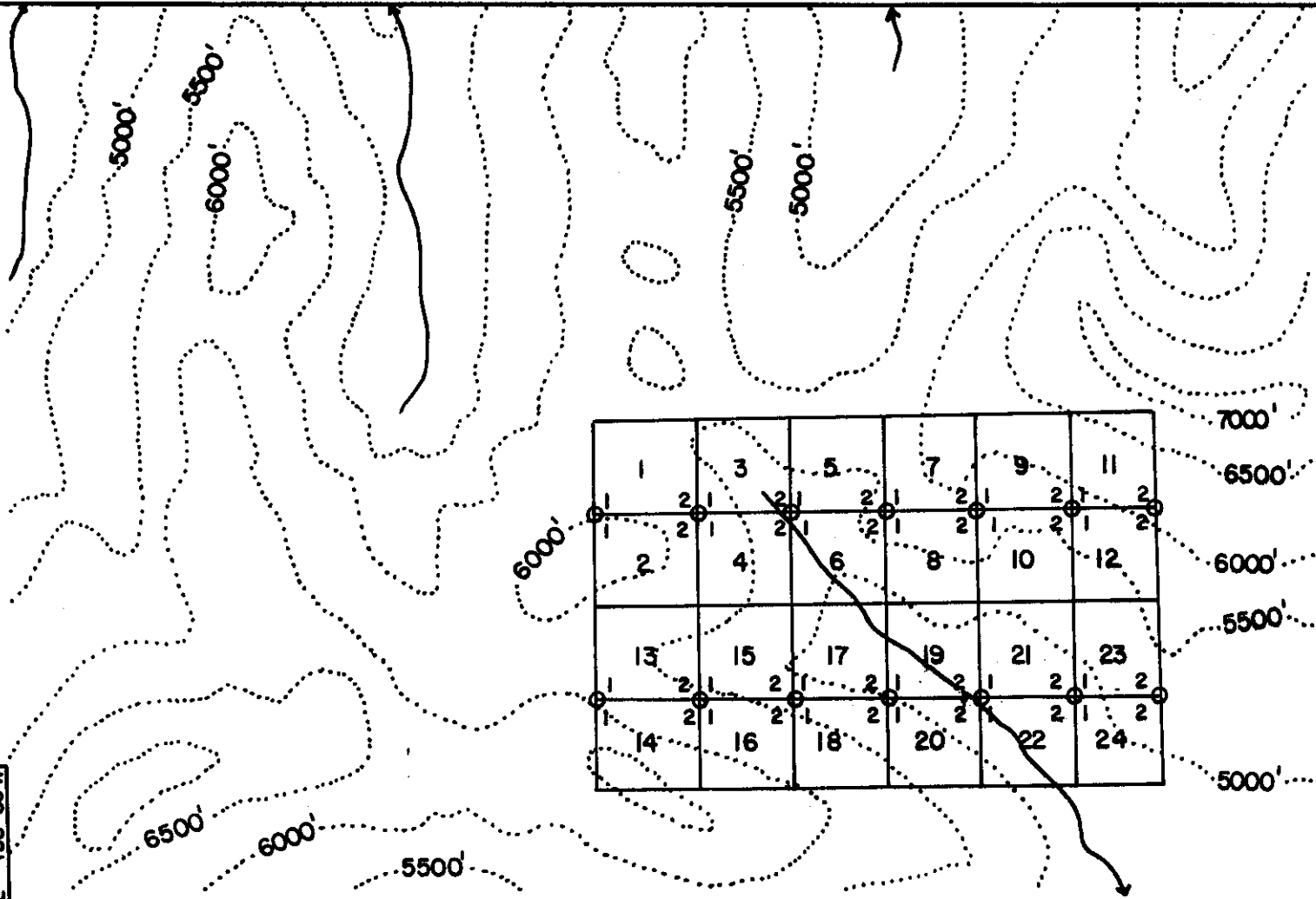
A total of six mandays were expended conducting geological mapping of the property and collecting stream and rock samples. The following personnel were





LAT. 64° 30' N

LONGITUDE 139° 30' W



0 0.5 1.0 mile

CLAIM MAP SHEETS 116B-8., 116B-9

Mattagami Lake Exploration Limited.

YUKON MOLYBDENUM PROJECT.

FIGURE 2

Riki 1-24 Claims

Staked 16th July 1980

involved in the work:

J. Biczok	Party Chief
P. Wagner	Senior Assistant
S. Wiecek	Senior Assistant
K. Hyndman	Junior Assistant
B. Lockhart	Junior Assistant
K. Anderson	Junior Assistant
K. Tomlinson	Junior Assistant
D. Brierly	Pilot
J. MacDonald	Cook

The base camp for this project was situated on the nearby TAK claims. Helicopter support was provided by a Jet Ranger 206B on contract to the company from Buffalo Airways Ltd. of Ft. Smith, N.W.T. Mapping was conducted at a 1:10,000 scale using enlargements of topographic maps and airphotographs. URTEC scintillometers were carried by crew members on all traverses in this area.

## CHAPTER TWO: GEOLOGY

### 2-1: Introduction

The RIKI claims lie within an east-trending belt of Ordovician to Cretaceous, largely clastic, metasedimentary rocks stretching from Dawson City to the east of Keno Hill. Three formations of this belt are present in the

RIKI area:

- 1) an Ordovician-Silurian, or possibly Devonian, shale/argillite sequence, equivalent to the Road River Formation or the Canol Formation/Black Clastic Unit,
- 2) the Jurassic "Lower Schist" and,
- 3) the Keno Hill Quartzite (Table 1, Map 1).

All are intruded by small stocks of a Cretaceous syenite-monzonite suite.

All strata are generally east-trending and dip mainly to the north. However, this may be due to distortion of the beds during intrusion of the large stock since strata outside the RIKI area generally dip to the south.

Geologic mapping during this program was somewhat cursory, more attention was given to prospecting. Undoubtedly contacts between formations would be revised during any future mapping.

### 2-2: Description of Units

The oldest strata in the map area are black shale and argillite, with minor interbedded quartzite, northeast of the claim block. These probably belong to the Devonian "*Black Clastic Unit*" although they may be members of the Ordovician-Silurian *Road River Formation*. In the limited area examined they consist of poorly bedded grey-black argillite and graphitic shale, with minor interbedded quartzite and chert.

TABLE ONE: Table of Formations

Period	Formation	Description
CRETACEOUS	4. Syenite/Monzonite	Generally as small stocks, minor dykes. Commonly K-feldspar and hornblende porphyritic.
	3. KENO HILL QUARTZITE	Thick sequence of massive quartzite with minor phyllite and slate partings.
JURASSIC	2. LOWER SCHIST	Contorted, sheared unit of dark grey phyllite and slate, commonly graphitic quartzite and minor shale.
ORDOVICIAN- SILURIAN or DEVONIAN	1. "BLACK CLASTIC UNIT" Possibly ROAD RIVER FORMATION	Black shale, argillite, minor quartzite.

Overlying the black clastic sequence is the Jurassic "*Lower Schist*" Formation. This is also a largely clastic unit but consists of dark grey phyllite and slate, commonly graphitic, with minor interbedded quartzite and shale. Locally the quartzite is pyritic and all strata are commonly contorted.

The youngest formation exposed is the *Keno Hill Quartzite*, a thick sequence of massive quartzite with minor slate and phyllite, generally as partings.

Intruding all formations are a number of small Cretaceous syenite-monzonite stocks and dykes. These range from 300m to 2.0km in diameter and are generally round in outline although this impression may be due to the incomplete mapping. The syenite is commonly porphyritic with K-feldspar and hornblende phenocrysts up to several centimetres in length. The groundmass is medium-grained, mesocratic and contains very little quartz. Outcrops are dissected by numerous joints and large cliffs are common within the largest stock.

TABLE TWO: RIKI Stream Sample AnalysesSilt Samples (all values in ppm)

Sample Number	Cu	Pb	Zn	Ag	Mo	Ba	U
81-172-S-502	48	210	28	0.2	6	-	-
GSC- 1048	84	9	230	0.1	10	1300	9.6
1050	140	14	640	1.0	21	1620	7.1
1051	134	15	620	0.6	20	1620	7.3
1075	94	22	390	0.4	9	1400	5.8

Water Samples (all values in ppb)

Sample Number	Cu	Pb	Zn	U	F	pH
81-172-W- 502	<10	<20	20	1.9	40	6.83
2500	<10	<20	<10	<0.02	30	6.56
2501	<10	<20	<10	0.02	30	6.61
2502	<10	<20	<10	0.24	10	6.61
2503	<10	<20	20	<0.02	20	6.72
2504	<10	<20	230	0.20	40	3.67
GSC- 1048	-	-	-	0.10	68	6.40
1050	-	-	-	0.02	108	7.60
1051	-	-	-	0.02	112	7.60
1075	-	-	-	0.02	90	7.20

## 3-2: Rock Geochemistry

Only four rock samples were analysed and none contained anomalous levels of any element (Table 3). No mineralization was visible in any of these samples although two (R-514, 515) generated slightly anomalous levels of radioactivity - about 700-800 c.p.s.

TABLE 3: Rock Sample Analyses and Descriptions (in ppm, except Au in ppb)

Sample Number	Cu	Pb	Zn	Ag	Mo	U	Au
81-172-R- 514	4	40	75	0.4	3	5.6	<5
515	2	8	20	<0.1	2	3.2	<5
516	20	8	60	0.2	5	0.4	<5
1003	26	2	55	0.2	6	-	<5

Sample Number	Rock Description
81-172-R- 514	K-Feldspar porphyritic syenite
515	Hornblende porphyritic syenite
516	Syenite with thin red-brown fracture coatings
1003	Syenite with minor amounts of unknown green mineral

#### CHAPTER FOUR: DISCUSSION AND RECOMMENDATIONS

No visible mineralization was encountered in the RIKI area. Anomalous Cu-Zn levels in a stream draining the claims are probably due to acid groundwater, generated by the dissolution of pyrite, leaching metals from the underlying strata. Therefore no further work is recommended on the claims.

Respectfully submitted,

J. Biczok

JB/sal

STATEMENT OF COSTSWages

J. Biczok, Report Writing,	2 days	x \$ 75.00 =	\$ 150.00
P. Wagner, Geological Mapping,	1 day	x \$ 79.33 =	79.33
S. Wiecek, Geological Mapping,	1 day	x \$ 56.37 =	56.37
K. Tomlinson, " "	1 day	x \$ 45.93 =	45.93
K. Hyndman, " "	1 day	x \$ 42.17 =	42.17
B. Lockhart, " "	1 day	x \$ 52.19 =	52.19
K. Anderson, " "	1 day	x \$ 50.10 =	50.10
J. MacDonald, Cooking,	1 day	x \$ 70.00 =	<u>70.00</u>

\$ 560.09

Drafting

2 days x \$ 75.00 =	\$ 150.00
Photographic Enlargement =	<u>112.54</u>

262.54

Camp Supplies

165.15

Expeditor's Fees

30.00

Truck Rental

152.61

Hotel Accomodation

53.95

Assays

25.00

Groceries

120.00

<u>Helicopter Charter</u>	7.2 hours x \$ 350.00/hour	2,520.00
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2,520.00

Helicopter Fuel396.00

TOTAL COSTS

\$ 4,271.68

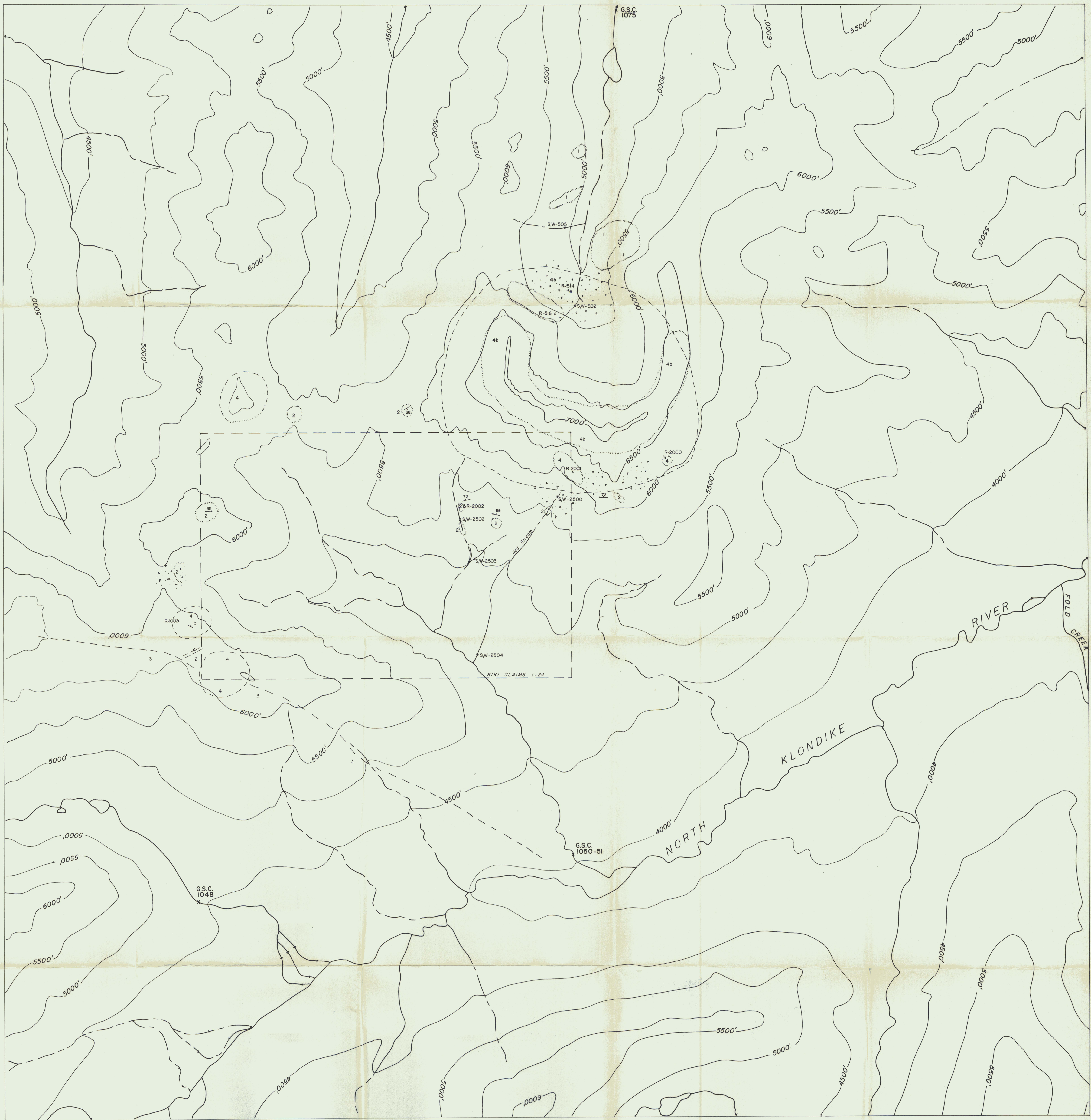
CERTIFICATE

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

1. I am a geologist at 8615 - 64 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 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: \_\_\_\_\_

\_\_\_\_\_  
John Biczok, H.B.Sc.



**LEGEND**

**CRETACEOUS**

- 4 Hornblende + Biotite Syenite
  - a. K. Feldspar Porphyritic
  - b. Biotite Porphyritic
- 3 Keno Hill Quartzite  
massive quartzite, minor slate & phyllite

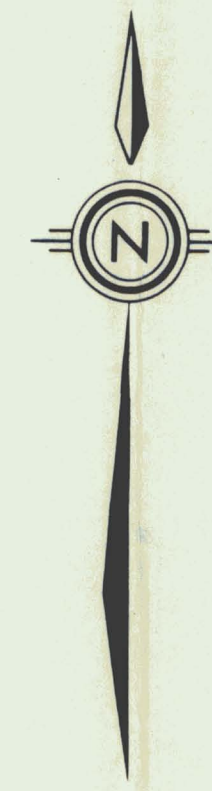
**JURASSIC**

- 2 Lower Schist  
dark gray phyllite, slate, commonly graphitic,  
quartzite, minor shale.

**ORDOVICIAN - SILURIAN**

- 1 Black Clastic unit, possibly Canal or  
Road River Formation equivalent.  
Black shale, argillite, minor quartzite.

- 4 Outcrop & rock type
- - - Inferred geological boundary
- ~ ~ ~ Foliation
- Bedding or flow banding in an intrusive
- R-514 x Rock sample location & number
- S.W.-2504 x Silt & water sample location & number
- • • Talus



MATTAGAMI LAKE EXPLORATION LIMITED.  
WESTERN FIELD OFFICE  
EDMONTON, ALBERTA.  
YUKON RIKI PROJECT 09082  
GEOLOGY MAP

SCALE OF METRES  
0 100 500 1000 metres

DRAWN BY: D.R.BULL.  
DATE: OCTOBER 1981