URANGESELLSCHAFT CANADA LIMITED

REPORT ON GEOLOGICAL MAPPING AND RADIOMETRIC SURVEYS

BETA CLAIM GROUP

(YA-10079 to YA-10104)

NTS 116B-7, Latitude 64°25', Longitude 138°31'

August 5 to August 30, 1977

February 1, 1978

John A. Brophy

090275

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work to the amount of $ 8727.55

Resident Geologist or
Resident Mining Engineer

Considered as representation work under Section 58 (4) Yukon Quartz Mining Act.

E. R. BAXTER
Supervising Mining Recorder

for Commissioner of Yukon Territory

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i. SUMMARY

On the Beta claim group, radioactive mineralization consisting dominantly of thorium is found in dikes or dike-like segregations of pink alkali granite within a host rock of coarse-grained pink granite.

Detailed work was conducted on one 10-foot wide radioactive dike which was traced over a strike length of 750 feet. Five representative samples from the dike were found to contain from 0.11 to 0.31 lbs U/ton. Two of these samples were analyzed for thorium and were found to contain 1.7 to 2.0 lbs Th/ton. Spectrometer surveys confirmed that thorium was always more abundant than uranium in the dike.

Within glacial moraine several boulders were located which contained a surficial veneer of radioactive mineralization. One of these contained 0.39 lbs U/ton and 22.36 lbs Th/ton. The host rock was pink granite, and the mineralization has not been traced to source.

Elsewhere on the property, mineralized float was found which contained molybdenite and chrysocolla. No in-situ copper or molybdenum minerals were located.

At another locality, a uranophane(?) stain was observed on a rock face of porphyritic syenite.

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ii. CONCLUSIONS

Radioactive mineralization on the Beta claim group is mostly attributable to thorium. Thorium mineralization is found in pink dikes of alkali granite, although further mineralization might be associated with joint surfaces of pink porphyritic syenite as evidenced by boulders in float containing a surficial veneer of radioactivity.

Other minerals of possible economic significance found in float include molybdenite and chrysocolla. The molybdenite occurs on a planar surface and is probably related to joints along which there is some evidence of movement. The chrysocolla appears to be associated with grey syenite.

The significance of uranophane(?) staining at one locality has not been determined.

iii. RECOMMENDATIONS

Further prospecting is warranted to locate the source of molybdenite and chrysocolla float and to evaluate the significance of uranophane(?) staining which was found at one locality.

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1. INTRODUCTION

A uranium exploration programme was conducted by Urangesellschaft Canada Limited (UG Canada) between August 5 and August 30, 1977, over the Beta group of claims in the Tombstone area of the Yukon. The claims were staked in April 1977 on the basis of anomalous uranium in stream waters as reported by the Geological Survey of Canada (GSC) in Open File 388, Part 2.

Grid scintillometer surveys, geological mapping and prospecting were conducted to evaluate the property. Some spectrometer surveys were conducted over a radioactive dike which was examined in detail. A list of personnel involved in the project is shown in Appendix 1. The specifications for the scintillometers and spectrometers used in the surveys are shown in Appendix 2.

2. PROPERTY LOCATION AND DESCRIPTION

The Beta claim group consists of 26 contiguous claims with tag numbers YA-10079 to YA-10104 inclusive.

Claim	Tag #	Claim	Tag #
Beta 1	YA-10079	Beta 14	YA-10092
Beta 2	YA-10080	Beta 15	YA-10093
Beta 3	YA-10081	Beta 16	YA-10094
Beta 4	YA-10082	Beta 17	YA-10095
Beta 5	YA-10083	Beta 18	YA-10096
Beta 6	YA-10084	Beta 19	YA-10097
Beta 7	YA-10085	Beta 20	YA-10098
Beta 8	YA-10086	Beta 21	YA-10099
Beta 9	YA-10087	Beta 22	YA-10100
Beta 10	YA-10088	Beta 23	YA-10101
Beta 11	YA-10089	Beta 24	YA-10102
Beta 12	YA-10090	Beta 25	YA-10103
Beta 13	YA-10091	Beta 26	YA-10104

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The claims are located in west-central Yukon Territory in NTS 116B-7 (Fig.1) at latitude 64°25' and longitude 138°31' (Fig.2).

The claims are situated in the Ogilvie Mountains and lie entirely above tree line at elevations between 4600 and 7000 feet. The claim group is centred over a cirque which opens northwestwards onto the Tombstone River Valley. The walls of the cirque are precipitous and parts of the claim group are inaccessible. Deposits of alpine glaciation including moraine and boulder glaciers cover the floor of the cirque to an uncertain depth.

3. ACCESSIBILITY AND CLIMATE

The Beta claims are situated 32 miles northeast of Dawson City and are accessible by helicopter from that community. The Dempster Highway is located 9 miles east of the claim group. The climate of the area is continental, with short, warm summers and long, cold winters. Exploration on the Beta claim group was discontinued by August 30 due to snow conditions which made traversing hazardous.

4. PREVIOUS WORK

No signs of previous exploration activity were observed on the Beta claim group. The Geological Survey of Canada has conducted investigations in the region which are described in the following publications:

GSC Memoir 364: "Geology of Nash Creek, Larsen Creek and Dawson Map Areas, Yukon Territory" by L.H. Green, 1968

GSC Bulletin 180: "Stratigraphy and Structure of the Keno Hill Quartzite in Tombstone River - Upper Klondike River Map Areas, Yukon Territory" by D.J. Tempelman-Dluit, 1970

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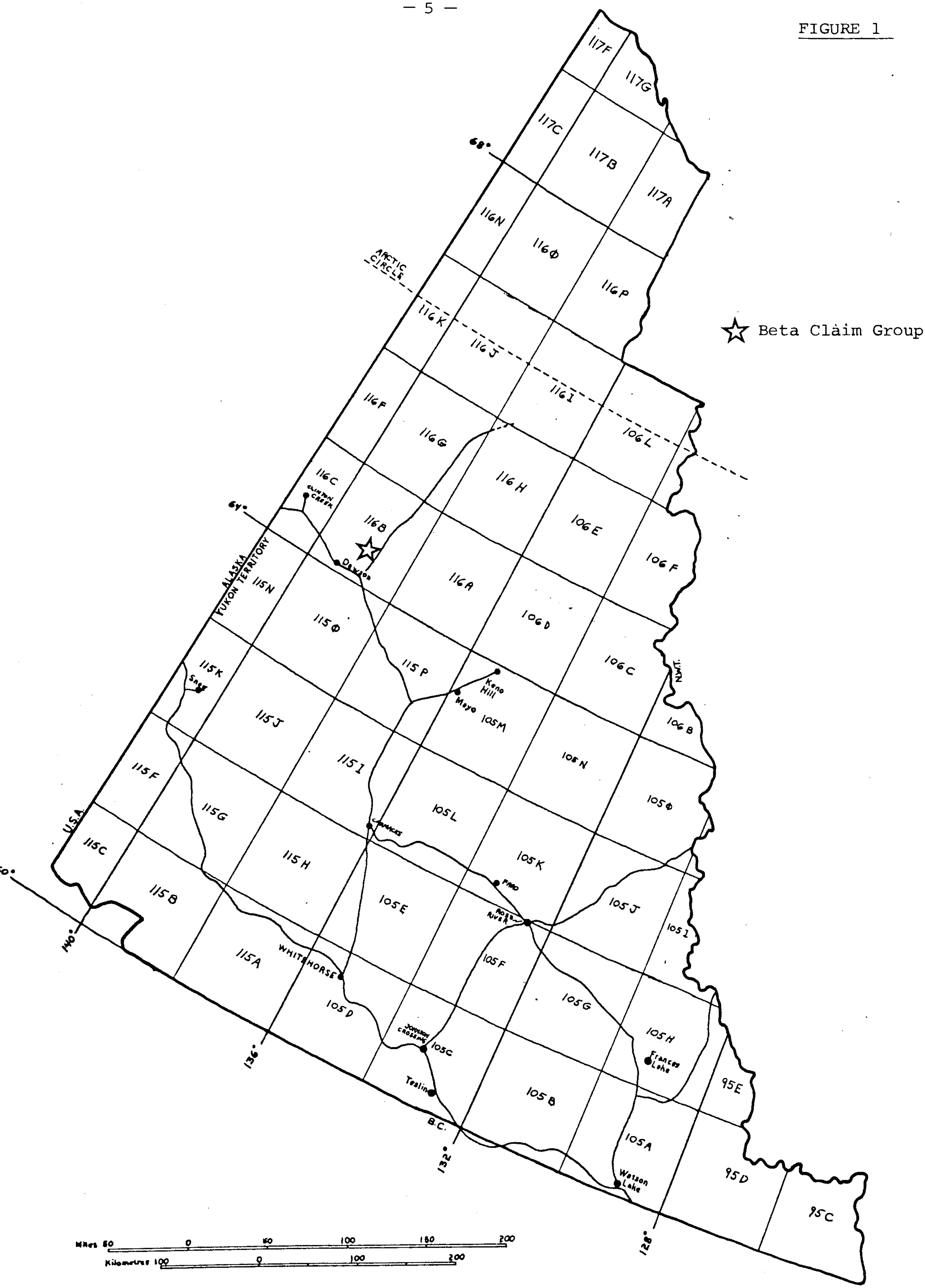
FIGURE 1


Beta Claim Group
117F
117G
117C
117B
117A
68°
116N
116O
116P
ARCTIC CIRCLE
116K
116J
116I
116F
116G
116H
106L
116C
CLINTON CREEK
64°
116B
Dawson
106E
106F
ALASKA
YUKON TERRITORY
115N
116A
115O
106D
115K
Sage
115P
Keno Hill
Mayo
105M
106C
N.W.T.
115J
106B
115F
115I
105N
105O
U.S.A.
115G
105L
Carmacks
115C
115H
105K
Faro
60°
115B
105E
Ross River
105J
140°
105I
115A
WHITEHORSE
105F
105D
105G
Johnson Crossing
105C
105H
136°
Frances Lake
Teslin
105B
95E
B.C.
105A
132°
Watson Lake
95D
95C
128°
Miles 50
0
50
100
150
200
Kilometres 100
0
100
200

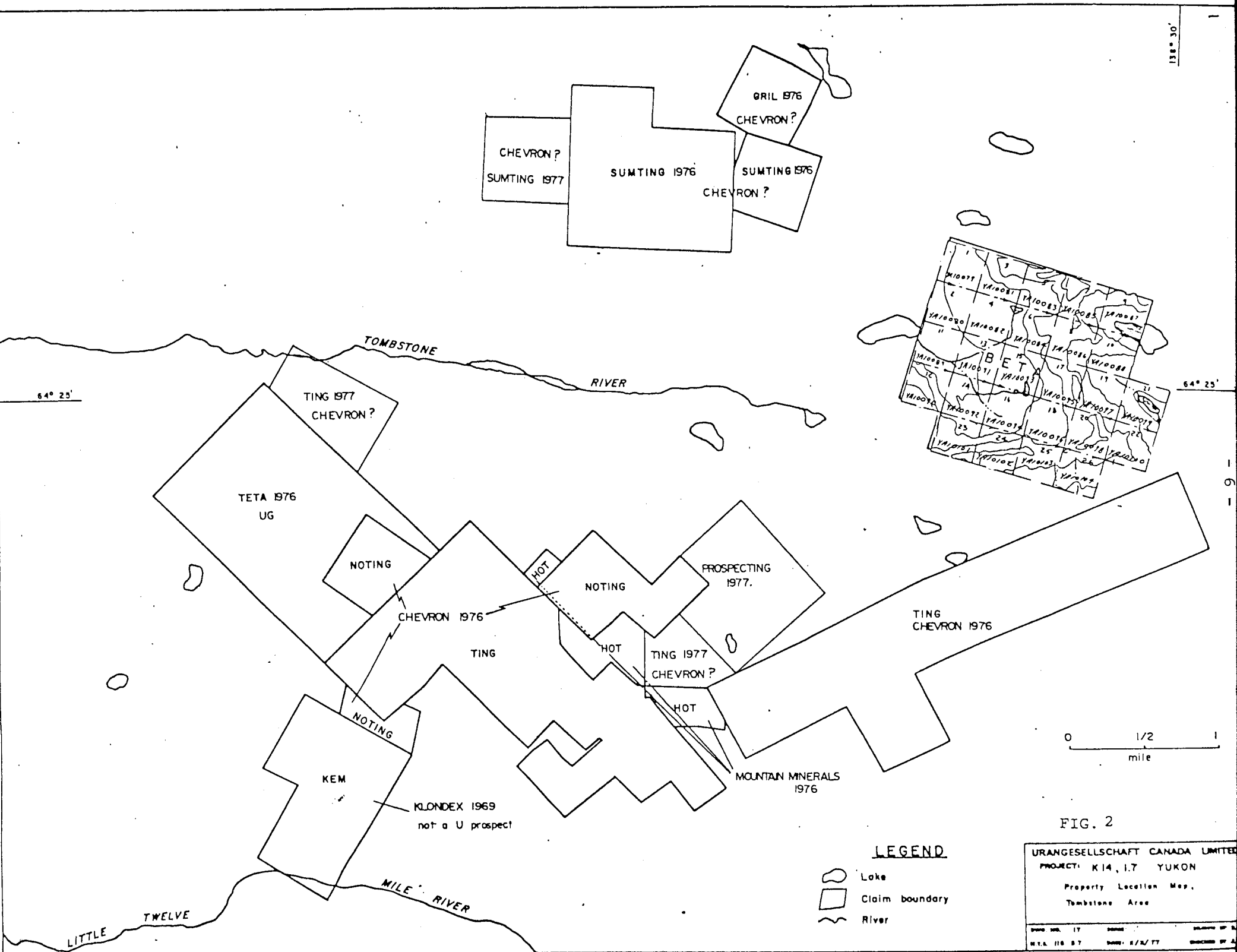

138° 30'
GRIL 1976
CHEVRON?
CHEVRON?
SUMTING 1977
SUMTING 1976
SUMTING 1976
CHEVRON?
TOMBSTONE
RIVER
64° 25'
64° 25'
TING 1977
CHEVRON?
TETA 1976
UG
NOTING
CHEVRON 1976
TING
HOT
NOTING
PROSPECTING
1977.
HOT
TING 1977
CHEVRON?
HOT
TING
CHEVRON 1976
NOTING
KEM
KLONDEX 1969
not a U prospect
MOUNTAIN MINERALS
1976
MILE
RIVER
TWELVE
LITTLE
B E T A
0
1/2
1
mile
LEGEND
Lake
Claim boundary
River
URANGESELLSCHAFT CANADA LIMITED
PROJECT: K14, 17 YUKON
Property Location Map,
Tombstone Area

FIG. 2

GSC Report of Activities 77-1B: "Geochemical Distribution of Uranium, Tungsten and Molybdenum in the Tombstone Mountains, Batholith, Yukon" by W.D. Goodfellow and I.R. Jonasson, 1977

GSC Open File 388 and 418: Results of "Uranium Reconnaissance Program" Surveys.

5. REGIONAL GEOLOGICAL SETTING

The Beta claim group is located in a southeast portion of the Tombstone Stock, an alkali syenite intrusion of Middle Cretaceous age (Fig.3). The stock intrudes a northeasterly trending belt of Mesozoic sediments and volcanics dominated by a Lower Cretaceous succession of ortho-quartzites known as the "Keno Hill Quartzite." Diabase and gabbro sills are commonly found in the succession and are thought to represent one sill tectonically repeated by folding and thrust faulting which occurred prior to the emplacement of the pluton. The regional geology in the vicinity of the Tombstone Stock is shown on Fig.4.

6. EXPLORATION PROCEDURE AND LOGISTICS

a) A 6000 foot baseline was chained along the length of the cirque from which anomalous uranium in stream waters was reported by the GSC.

b) Crosslines were established at 400 foot intervals along the base-line. The resulting grid is shown on Drawing 9.

c) Total count scintillometer readings were recorded at 100 foot intervals along the grid.

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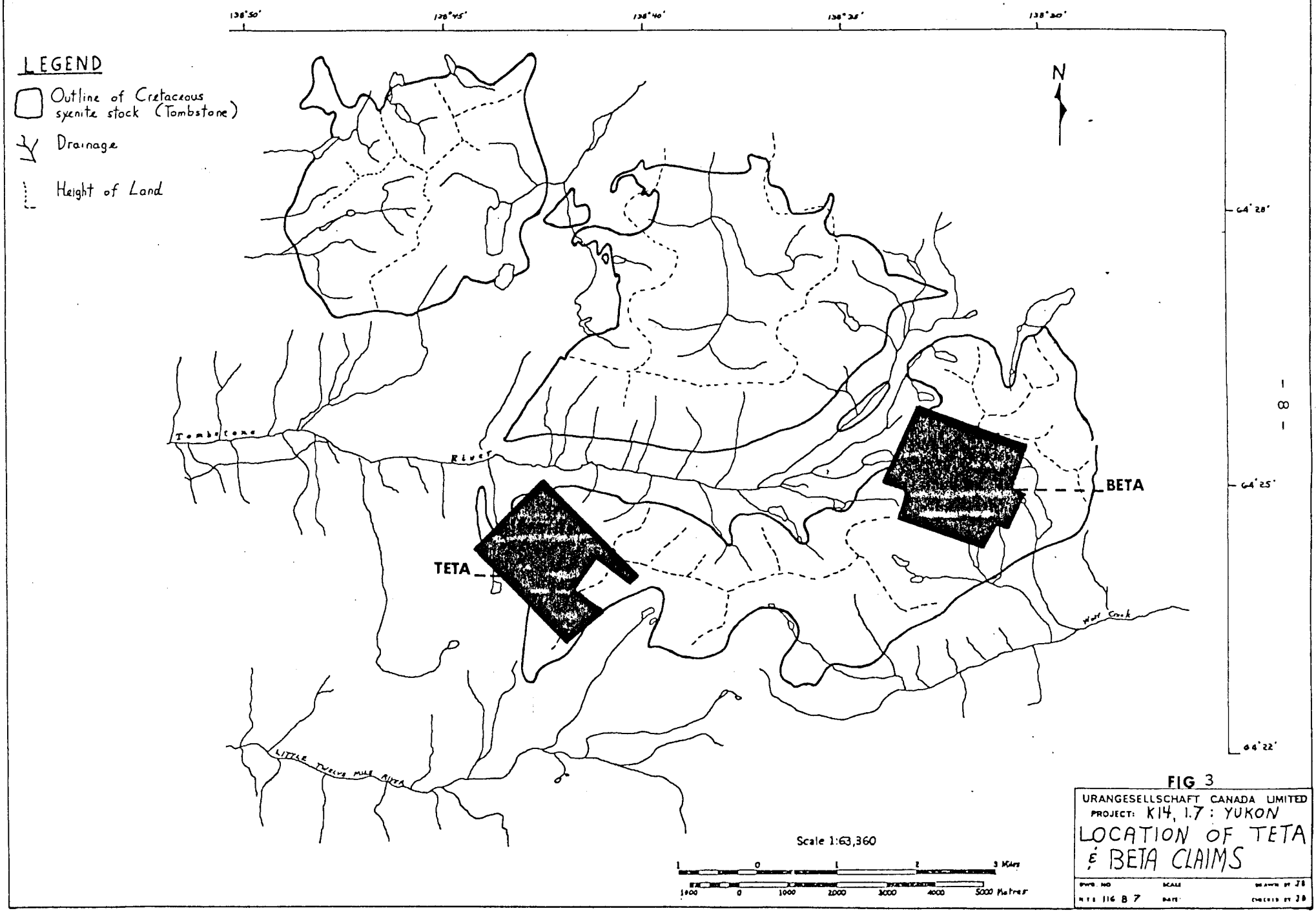


FIG 3

URANGESELLSCHAFT CANADA UMITED

PROJECT: K14, 1.7 : YUKON

LOCATION OF TETA & BETA CLAIMS

DWG. NO: NTS 116 B 7

SCALE:

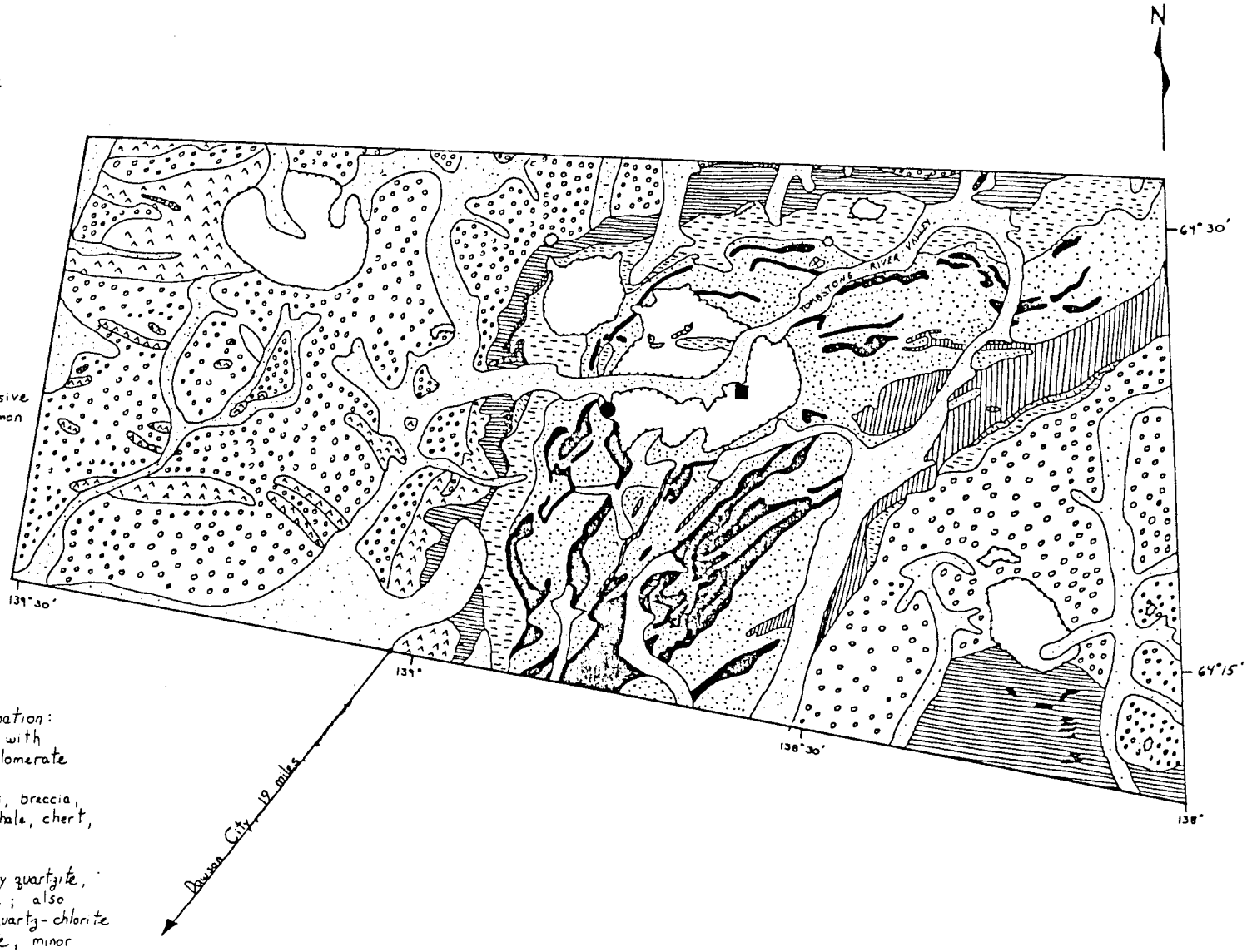
DRAWN BY: JB

DATE:

CHECKED BY: JB

LEGEND

- Quaternary: Unconsolidated glacial and fluviatile deposits
- Cretaceous: Medium grained to porphyritic hornblende ± hornblende/biotite syenite
- Cretaceous: Biotite-granodiorite and biotite-quartz monzonite
- Mesozoic: Diorite and Gabbro
- Mesozoic: Shale and thin bedded siltstone, commonly limy
- Mesozoic: Keno Hill Quartzite: massive quartzite, minor slate and phyllite, common graphitic, argillaceous quartzite
- Jurassic: Lower Schist division: predominantly dark grey argillite, slate, and phyllite.
- Permian: Limestone with some chert
- Triassic: Platey, black limy shale and limestone
- Ordovician ± Silurian: Road River Formation: mainly black chert and black argillite with minor quartzite and quartz pebble conglomerate
- Precambrian ±/or later: volcanic rocks, breccia, tuff, agglomerate; minor interbedded shale, chert, siltstone, and sandstone
- Precambrian ±/or Cambrian: Mainly gritty quartzite, sandstone, and quartz pebble conglomerate; also shale, slate, schistose quartzite, quartz-chlorite schist, quartz-mica schist and phyllite, minor limestone and black chert



● Teta Claim Group

■ Beta Claim Group

Scale 1:250,000

0 4 8 12 16 Kms

after Green, 1968, GSC map 1284-A

Figure 4

URANGESELLSCHAFT CANADA LIMITED
PROJECT: K-14,1.7

Regional Geology

d) Surficial and bedrock geology was mapped.

e) Detailed geological mapping and radiometric surveys were conducted over accessible portions of a radioactive dike.

Pacing, compass resections and altimeters were used for ground control. Base maps were 1:10,000 scale blow-ups of 1:50,000 scale contour maps.

A Jet Ranger 206-B jet helicopter was chartered on a casual basis from Trans North Turbo Airlines in Dawson City for mobilization, demobilization and transportation of personnel to remote parts of the claim group. Camp provisions were purchased from the DCW general store in Dawson City and delivered by helicopter.

7. SURFICIAL GEOLOGY, BETA CLAIM GROUP

Drawing 10 shows the surficial geology of the Beta claim group and is a compilation derived from ground work and air photo interpretation. Surficial deposits include moraine, boulder glaciers, and scree. All the deposits consist of angular to sub-angular boulders which vary considerably in size, although most boulders range between 1/2 and 3 cubic feet. The overall sorting of the deposits is poor, but increases from boulder glaciers to scree to moraine. The boulders tend to be sub-equant to slightly slabby.

Scree deposits are thin on moderate slopes but are considerably thicker at the base of steeper cliffs. The depth of moraine, the most extensive surficial deposit, has not been ascertained. It may achieve depths of up to 100 feet at the back wall of the cirque.* Boulder glaciers do not appear to be thicker than 50 feet.

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*) Personal communication, Dr. O. Hughes, GSC Calgary

8. BEDROCK GEOLOGY, BETA CLAIM GROUP

A geological mapping of the Beta claim group is shown on Drawing 11. The various units listed in the Table of Formation (Table 1) are described below:

8.1 Unit 4

Unit 4 is a pink alkali granite forming steeply dipping dikes or dike-like segregations within syenite in the north-central portion of the property. Dikes seldom exceed fifteen feet in width and have been traced over distances of 750 feet. Trends vary from northeast to east-southeast. Invariably the rocks are anomalously radioactive or contain a high radioactive background. Commonly, smaller segregations of this material are found over areas measuring several square feet. Unit 4 is distinguishable from adjacent syenites by the presence of anhedral smoky quartz (10 - 20%). The remainder of the rock consists of medium to coarse-grained, subhedral to anhedral and commonly porphyroblastic alkali feldspar (60 - 80%) and mafics (10 - 20%).

8.2 Unit 3

Unit 3 is a white alkali granite. It is found in the western part of the property and is commonly medium-granied, phaneritic and equigranular. It contains 60 - 80% white, anhedral to subhedral alkali feldspar, 15 - 30% glassy quartz, and 10 - 15% subhedral to anhedral mafic minerals. Occasionally, pink and/or porphyritic varieties of this unit can be found. Structural elements within this unit consist of north-northeast and east-southeast trending vertical to subvertical joints. The easterly trending joints sometimes show signs of movement as evidenced by slickensides. Hydrothermal activity along these fault-joints is indicated by crystallization of minerals such as molybdenite and green mica along joint surfaces.

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TABLE 1

TABLE OF FORMATIONS

Middle Cretaceous	U4: pink alkali granite dike U3: white alkali granite U2a: pink porphyritic syenite U2b: grey porphyritic syenite U2c: mafic syenite U2d: "pegmatitic" porphyritic syenite
Mesozoic	U1a: metadiorite(?) inclusions U1b: quartzite and calc silicate (± skarn) inclusions

The contact between this unit and unit 2 (described below) was not actually observed, but is thought to be sharp, as a transition between quartz-rich and quartz-deficient rocks occurs within a 200 foot interval at one locality.

8.3 Unit 2

Unit 2 is the most extensive unit on the property. It consists of various types of syenite, most of which are porphyritic and most of which have the approximate composition:

orthoclase:	60 - 80%
amphiboles and/or pyroxenes:	10 - 30%
quartz:	0 - 5%
plagioclase:	10%(?)
accessories: (magnetite, hematite, garnet, fluorite)	0 - 5%

Orthoclase is tabular, subhedral to euhedral, and commonly porphyritic. Carlsbad twins could be observed on coarser lathes. Mafics and plagioclase(?) are anhedral and interstitial to the orthoclase. Much of the syenite contains sufficient iron to deflect the compass needle considerably. In some localities, quartz in excess of 10% was recorded.

The syenite has been divided into the following sub-units for mapping purposes. All contacts between these sub-units are gradational and somewhat arbitrary.

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Unit 2a: pink to greyish pink, medium-grained to coarse-grained porphyritic syenite with less than 20% mafics

Unit 2b: grey to pinkish grey, medium-grained to coarse-grained porphyritic syenite with less than 20% mafics

Unit 2c: vari-coloured porphyritic syenite with more than 20% mafics

Unit 2d: vari-coloured "pegmatitic" porphyritic granite with crystals of orthoclase exceeding 1 cm in length

Phaneritic and pegmatitic (non-porphyritic) phases are locally important. Unit 2b often contains hematite. All units commonly contain magnetite. Unit 2d often has zoned orthoclase phenocrysts with grey-blue cores and pink rims. Joints in the syenite trend NNE and SSE and generally dip steeply.

8.4 Unit 1

Unit 1a: meta-diorite(?); a fine-grained, mafic rock seen as isolated xenoliths within unit 3 and also as mappable-size inclusions

Unit 1b: various small inclusions of older Mesozoic sediments, commonly gossaned quartzite or calc-silicate rocks; little assimilation with the intrusion is evident

The above descriptions are based on megascopic examination of the rocks as thin sections were not available at the time of this writing.

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9. GRID RADIOMETRIC SURVEYS AND ROCK GEOCHEMISTRY

Drawing 12 shows the results of the grid scintillometer survey. All anomalies greater than 800 cps (approx. twice background) are indicated as well as the readings at 100 foot intervals along the grid. Surficial geology is also indicated.

In the south part of the property, four boulders were found in float which contained a surficial veneer of radioactivity from 1400 to 2600 cps. These are apparently related to crystallization of radioactive minerals along joint surfaces in pink porphyritic syenite. Crystals of titaniferous andradite up to 2 cm in diameter are associated with the radioactivity which spectrometry has demonstrated to be due to thorium. The float is found in a boulder glacier and has not been traced to source.

Radioactive boulders registering 820 to 4500 cps are scattered across the glacial moraine. One boulder (4500 cps) was found to contain 0.39 lbs U/ton and 22.36 lbs Th/ton.

Radioactive boulders were found in scree in the northern part of the property. These were traced to the radioactive dikes (Unit 4) which were described in the previous section. Detailed work which was conducted on the longest of these dikes is described below.

10. GEOLOGY, RADIOMETRIC SURVEYS, AND ROCK GEOCHEMISTRY, RADIOACTIVE DIKE

Drawing 13 shows the results of detailed mapping, scintillometry, spectrometry and rock geochemistry conducted on a radioactive dike found near the end of Line 40N. The location of the dike is shown on Drawing 11 and 14.

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The dike measures 750 feet by 10(?) feet, strikes 100 to 120°, dips steeply north, and is open on both ends. Much of the dike is not accessible so that accurate widths were difficult to determine.

Radioactivity is generally greater than 1000 cps and ranges to 4500 cps. Spectrometer equivalent assays show that thorium is more abundant than uranium. Geochemical analyses of 5 samples indicate a uranium content of 0.11 to 0.31 lbs U/ton. Thorium was analyzed for 2 of these samples and returned values of 1.97 and 1.71 lbs Th/ton.

11. REGIONAL RADIOMETRICS

Regionally on the property (Drawing 4) anomalous radioactivity is found in alkali granite dikes (Unit 4) and in scree derived from these dikes. Often, the dikes could not be traced due to the precipitous nature of the terrain. One sample from the easternmost dike contained 0.24 lbs U/ton. Thorium was not analyzed.

A small uranophane stain was located in the northeast extremity of the property on a syenite face. The significance of this staining has not been determined.

12. OTHER METALS

Rosettes of molybdenite were found in float on a joint surface of Unit 3, just outside the northwest corner of the property. Secondary copper stains (chrysocolla) were located in float in the north and northeast parts of the property. These areas of mineralized float are indicated on Drawing 14. Minor sulfides are found elsewhere on the property in association with small, commonly gossaned inclusions of mesozoic sediments.

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13. SUMMARY AND CONCLUSIONS

Radioactive mineralization on the property is apparently due to thorium. Several radioactive dikes have been located in the north-central part of the claim group and it is possible that others are located in inaccessible portions of the same area. Together, they might comprise considerable tonnage potential. Elsewhere on the property, radioactivity is probably confined to shears. Exploration on the Beta claim group was cut short due to extreme weather conditions. The significance of uranophane staining and the source of copper and molybdenite boulders could therefore not be assessed.

14. RECOMMENDATIONS

Some further work is warranted on the Beta claim group to locate the source of mineralized float and to investigate the significance of uranophane staining in the northeast corner of the property where only cursory exploration was conducted.

APPENDIX 2

SPECIFICATIONS OF INSTRUMENTS

A) SCINTREX BGS-1SL SCINTILLOMETER

Detector:	Thallium activated sodium iodide crystal and photomultiplier assembly
Detector Volume:	1.5" x 1.5" for 2.65 cubic inches (43.5 cm^3)
Energy Response:	Broadband, all gamma energies above 0.1 MeV
Ratemeter Ranges:	30, 100, 300, 1000, 3000, 10000 cps (1 cps = 2.5 x 10^4 mR/hr)
Accuracy:	± 5% of full scale
Temperature Range:	-20^oC, + 55^oC
Power Supply:	4 "D" cells
Dimensions:	240 mm x 90 mm x 150 mm
Weight:	2.2 kg (with batteries)

B) EM-16, VLF ELECTROMAGNETIC UNIT

Source of Field:	VLF Station, Maine, U.S.A.
Parameters Measured:	1) Vertical in-phase component 2) Vertical quadrature component
Frequency Range:	15 - 25 kHz
Scale Range:	in-phase ± 150% quadrature ± 40%
Readability:	± 1%
Temperature Range:	-40^o to $+50^oC$
Power Supply:	6 "AA" cells
Dimensions:	42 x 14 x 9 cm
Weight:	1.6 kg

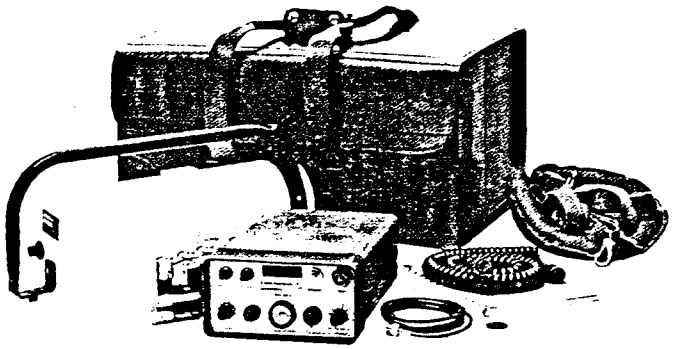
delete, not used for Beta exploration

VERSATILE OPERATION

Precise gamma ray measurements are a powerful tool for uranium prospecting and geologic mapping. The DISA-400A provides simultaneous (real time), high resolution measurements of the natural gamma radiation emitted from near-surface rock formations, with specific "windows" for the total spectrum (T/C), potassium (K^{40}), uranium (as Bi^{214}) and thorium (as Tl^{208}). At the push of a button, the radiation environment is sampled for a selectable time period (1 second to 30 seconds/minutes); an audible "ready" alarm indicates the sample period is completed and the measured data is ready to be visually displayed on the front panel 4-digit readout. The data on each channel is sequentially displayed as Total Count, potassium, uranium, and thorium.

The DISA-400A is designed to be used with a variety of specialized crystal detectors from 21 to over 110 cubic inches for all man-carry portable, laboratory or vehicular survey applications. A selectable channel analog output is provided for those applications that require continuous recording of the gamma radiation from any one of the four channels.

The DISA-400A offers technological improvements that have been recognized by the mining industry: a compact pushbutton spectrometer console, compatability with a wide variety of detector configurations, moderate price and operational reliability. The DISA-400A allows optimum use of the survey dollar with increased survey capability.



COMPLETE FIELD SYSTEM

The Model DISA-400A field system typically includes the Model N_aI-21 hand-held detector shown above, and consists of:

1. Electronics console
2. Model N_aI-21 crystal detector (21.2 cu. in.)
3. Calibration Source (Cs^{137})
4. Interconnect Cables
5. Adjustable padded shoulder harness
6. Instruction Manual, complete set of batteries, and leather storage case.

CONSOLE SPECIFICATIONS

Energy Discrimination:	Three switch selectable differential window settings (factory adjusted), and one total count (threshold) setting:	
	Potassium (K^{40}):	Window peak—1.46 MeV Window width—200 KeV
	Uranium (as Bi^{214}):	Window peak—1.76 MeV Window width—200 KeV
	Thorium (as Tl^{208}):	Window peak—2.62 MeV Window width—400 KeV
	Total Count (T/C):	All energy above 0.4 MeV
Count Rate:	Switch selectable sampling times of 1, 2, 4, 6, 8, 10, 20 or 30 seconds/minutes. Sampling is activated by front panel pushbutton.	
Ready Alarm:	Audio tone (constant) indicates count rate is completed and data is ready to be displayed.	
Data Output:	Visual:	Illuminated 4-digit numeric readout. Data is displayed sequentially as T/C, K, U and Th.
	Analog:	Continuous count of any one channel from front panel BNC connector. Output Level: 1 v, 5 ma. max. (100 counts/sec full scale) Full Scale Range Expander: × 1, 2, 4, 8, 32, 64, 128 Sampling Time Constant: 1, 2, 5, 10 seconds
Calibration Source:	Cessium – 137 (Cs^{137})	
Power Requirements:	Twelve 1.5 v "D-cell" flashlight batteries. Charge state indicated by front panel meter. One set batteries allows approximately 40 hours continuous operation (Note: Battery life diminishes with a decrease in ambient temperature).	
Temperature Range:	–20°C to +85°C	
Size:	3.5 in. high x 7.0 in. wide x 10.5 in. deep (9 x 18 x 27 cm)	
Weight:	7 lbs. (3.2 kg) including batteries	

DETECTOR SPECIFICATIONS

A variety of crystal detectors may be used with the DISA-400A console for specific applications. Each detector consists of a sodium-iodide (N_aI) crystal optically coupled to a high-gain photomultiplier tube and hermetically sealed within a thermally insulated housing. Each housing also contains a high voltage power supply (nominally 900V regulated to within ± 0.05%) and preamplifier. Appropriate interconnecting cables are included.

Portable Detector: (Model N_aI-21)	Crystal:	3" dia. x 3" thk. (7.6 x 7.6 cm)
	Volume:	21.2 cu. in. (347 cm^3)
	Housing:	Aluminum
	Size:	4.5" dia x 14.1 (11.5 x 36 cm)
	Weight:	7.5 lbs (3.4 kg)
Laboratory Detector: (Model N_aI-LAB/50)	Crystal:	4" dia. x 4" thk. (10.2 x 10.2 cm)
	Volume:	50 cu. in. (823 cm^3)
	Housing:	Cylindrical aluminum container with 2" thick (5.1 cm) lead lining
	Size:	12" dia. x 22" h. (30.5 x 56 cm)
	Weight:	405 lbs (184 kg)
Vehicular Detector: (Model N_aI-110)	Crystal:	6" dia. x 4" thk. (15.2 x 10.2 cm)
	Volume:	113.1 cu. in. (1853 cm^3)
	Housing:	Aluminum container w/shock mounts
	Size:	12" l. x 12" w. x 26" h. (30.5 x 30.5 x 64 cm)
	Weight:	41 lbs (18.6 kg)

not used for Beta exploration

geoMetrics 395 JAVA DRIVE SUNNYVALE, CA. 94086 U.S.A (408) 734-4616 CABLE: "GEOMETRICS" SUNNYVALE TELEX NO: 357-435

GEOMETRICS INTERNATIONAL CORP 80 ALFRED ST., MILSON'S POINT SYDNEY NSW 2061 PHONE: 929-9942

Exploranium DIVISION OF geoMetrics SERVICES (CANADA) LTD 436 LIMESTONE CRESCENT, DOWNSVIEW (TORONTO), ONTARIO, CANADA TELEPHONE: (416) 661-1966 TELEX NO: 06-22694

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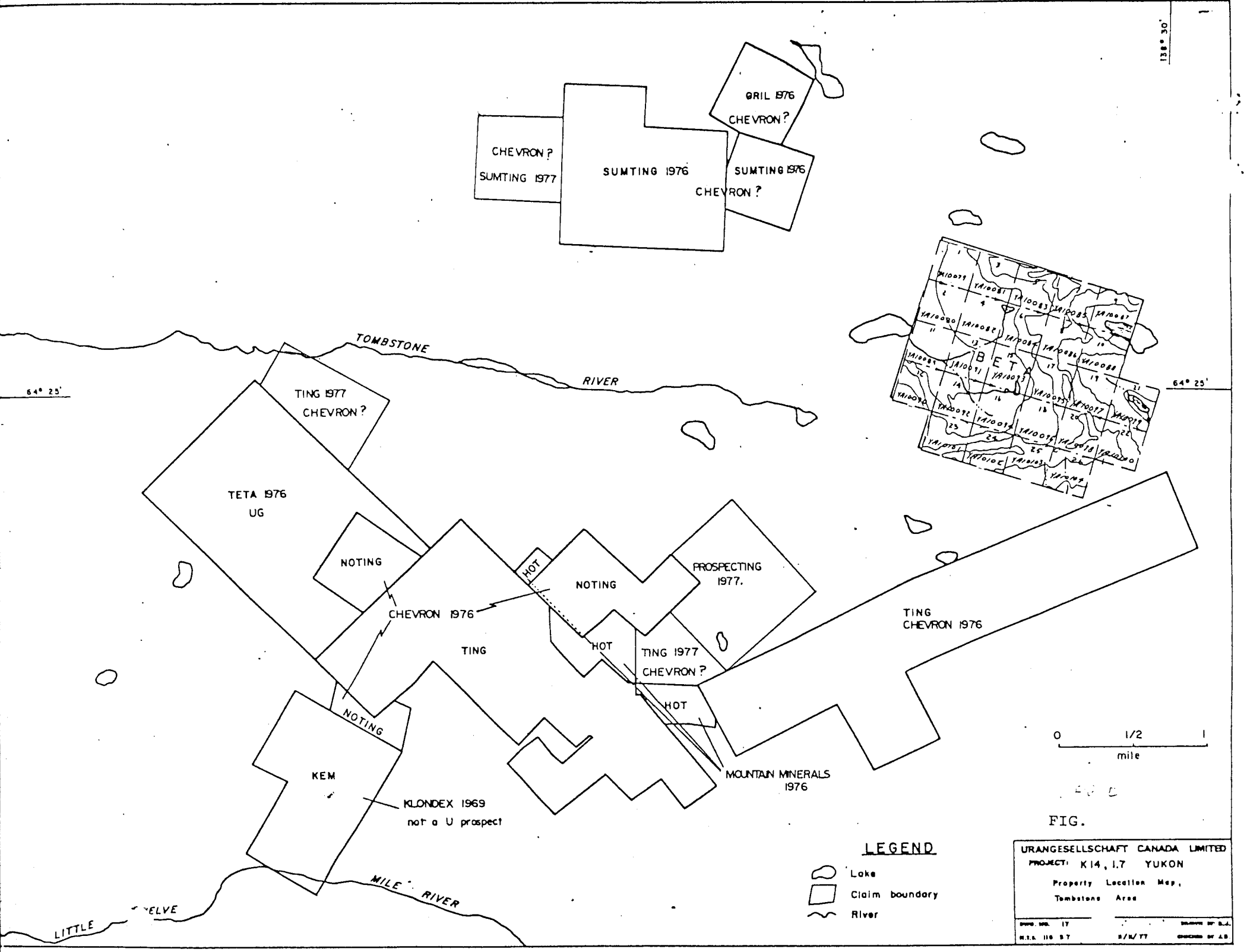
138° 30'
64° 25'
64° 25'
TOMBSTONE
RIVER
GRIL 1976
CHEVRON?
CHEVRON?
SUMTING 1977
SUMTING 1976
SUMTING 1976
CHEVRON?
BET
TING 1977
CHEVRON?
TETA 1976
UG
NOTING
HOT
NOTING
PROSPECTING
1977.
CHEVRON 1976
TING
HOT
TING 1977
CHEVRON?
HOT
TING
CHEVRON 1976
NOTING
KEM
KLONDEX 1969
not a U prospect
MOUNTAIN MINERALS
1976
MILE
RIVER
LITTLE
0
1/2
1
mile
LEGEND
Lake
Claim boundary
River
URANGESELLSCHAFT CANADA LIMITED
PROJECT: K14, 17 YUKON
Property Location Map,
Tombstone Area
FIG.

HEER VALLEY

NORTH VALLEY

NACHBAR VALLEY

SPITZ LAKE

SPITZ MOUNT

SPITZ VALLEY

GRID VALLEY

TORDIS LAKE / VALLEY

TORDIS MOUNTAIN

MARIA LAKE / VALLEY

MARIA PEAK

MOUNT MONOLITH

LONG VALLEY

TOMBSTONE RIVER

TALUS LAKE

MOUNT BERTHA

BETA VALLEY

ANNE LAKE / VALLEY

TETA CLAIM GROUP

CHRISTINE LAKE CHRISTINE VALLEY

LITTLE VALLEY

PEAK MT.

FAUST VALLEY 3

FAUST VALLEY 2

FAUST VALLEY 1

TETA VALLEY

TOMBSTONE MOUNTAIN

BETA CLAIM GROUP

SOUTH VALLEY

TETA LAKE TETA VALLEY

LITTLE 12 MILE VALLEY

LEGEND

6	DYKES
5c	QUARTZ MONZONITE
5b	GRANITE
4	SYENITE
3	QUARTZITE
2	ROOF PENDANTS

SCALE

0 800 1600 2400 Ft.

URANGESELLSCHAFT CANADA LIMITED

PROJECT: K14, 17 YUKON (TOMBSTONE)

BEDROCK GEOLOGY

DWG. NO. 1	**SCALE:** 1" = 10,000	**DRAWN BY:** ML.
N.T.S. 116B7	**DATE:** OCT. '79	**CHECKED BY:** B.W.

HEER VALLEY

NORTH VALLEY

NACHBAR VALLEY

SPITZ LAKE

SPITZ MOUNT

SPITZ VALLEY

GRID VALLEY

TORDIS LAKE / VALLEY

TORDIS MOUNTAIN

MARIA LAKE / VALLEY

MARIA PEAK

MOUNT MONOLITH

LONG VALLEY

TOMBSTONE RIVER

TALUS LAKE

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CHRISTINE LAKE CHRISTINE VALLEY

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FAUST VALLEY 3

FAUST VALLEY 2

FAUST VALLEY 1

SOUTH VALLEY

TETA VALLEY

TOMBSTONE MOUNTAIN

BETA CLAIM GROUP

TETA LAKE TETA VALLEY

LITTLE 12 MILE VALLEY

LEGEND

- SCREE
- OUTCROP
- BOULDER GLACIER
- MORAINE

SCALE

0 800 1600 2400 Ft.

URANGESELLSCHAFT CANADA LIMITED

PROJECT: K14, 17 YUKON (TOMBSTONE)

SURFICIAL GEOLOGY

DWG. NO. 2	**SCALE:** 1" = 10,000	**DRAWN BY:** ML.
N.T.S. 116B7	**DATE:** OCT '79	**CHECKED BY:** B.W.

LEGEND

6500 TOPOGRAPHICAL CONTOUR (feet)

0 800 1600
feet

URANGESELLSCHAFT CANADA LIMITED

PROJECT: KI4 - I.7 YUKON

BETA CLAIM GROUP

LOCATION OF GRID

J. Bayly

DWG. NO.9 SCALE: 1"=800' DRAWN BY: PMV

N.T.S. 116 B-7 DATE: 21/10/77 CHECKED BY: JB.

LEGEND

- S — Scree
- O — Outcrop
- M — Moraine
- B — Boulder Glacier

TOPOGRAPHICAL CONTOUR (feet)

0 800' 1600'

URANGESELLSCHAFT CANADA LIMITED

PROJECT: KI4 - I.7 YUKON

BETA CLAIM GROUP

SURFICIAL GEOLOGY

J. Bagby

DWG. NO. 10	**SCALE:** 1"= 800'	**DRAWN BY:** PMV
N.T.S. 116 B-7	**DATE:** NOV. 20/77	**CHECKED BY:** JB

LEGEND

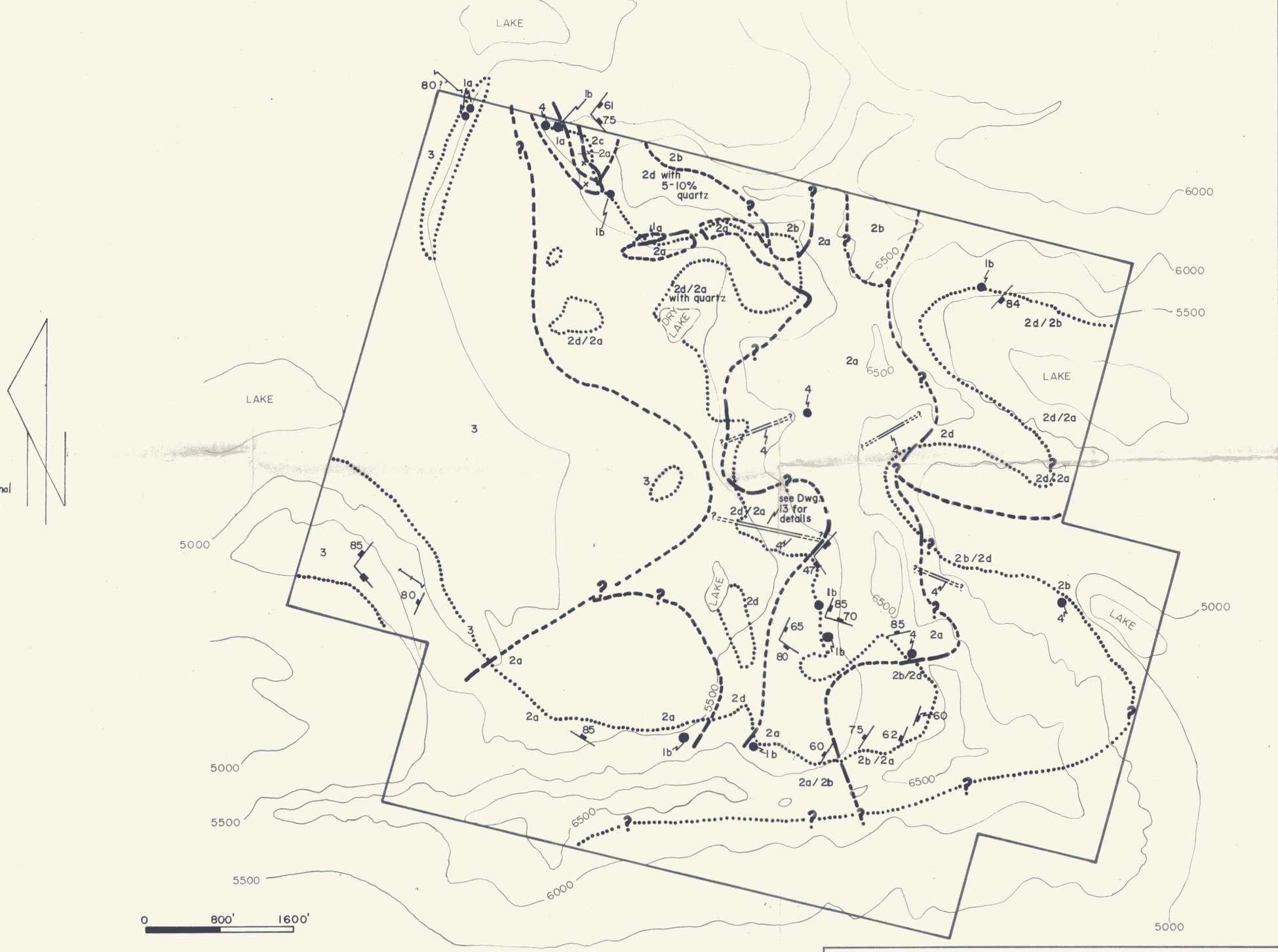
MIDDLE CRETACEOUS

- 4 — Pink alkali granite
- 3 — White alkali granite
- 2a — Pink porphyritic syenite
- 2b — Grey porphyritic syenite
- 2c — Syenite with > 20% mafics
- 2d — "Pegmatitic" porphyritic syenite

MESOZOIC

- 1a — Metadiorite (?) inclusions
- 1b — Quartzite & calc silicate inclusions (± skarn)

- 85 — Strike & dip of joints
- 80 — Strike & dip of shears
- Geological Contact, of dikes 1 defined 2 assumed 3 } all contacts gradational
- Outcrop boundary
- × Isolated outcrop
- ● Xenolith or rock unit of limited areal extent
- 6500 TOPOGRAPHICAL CONTOUR (feet)



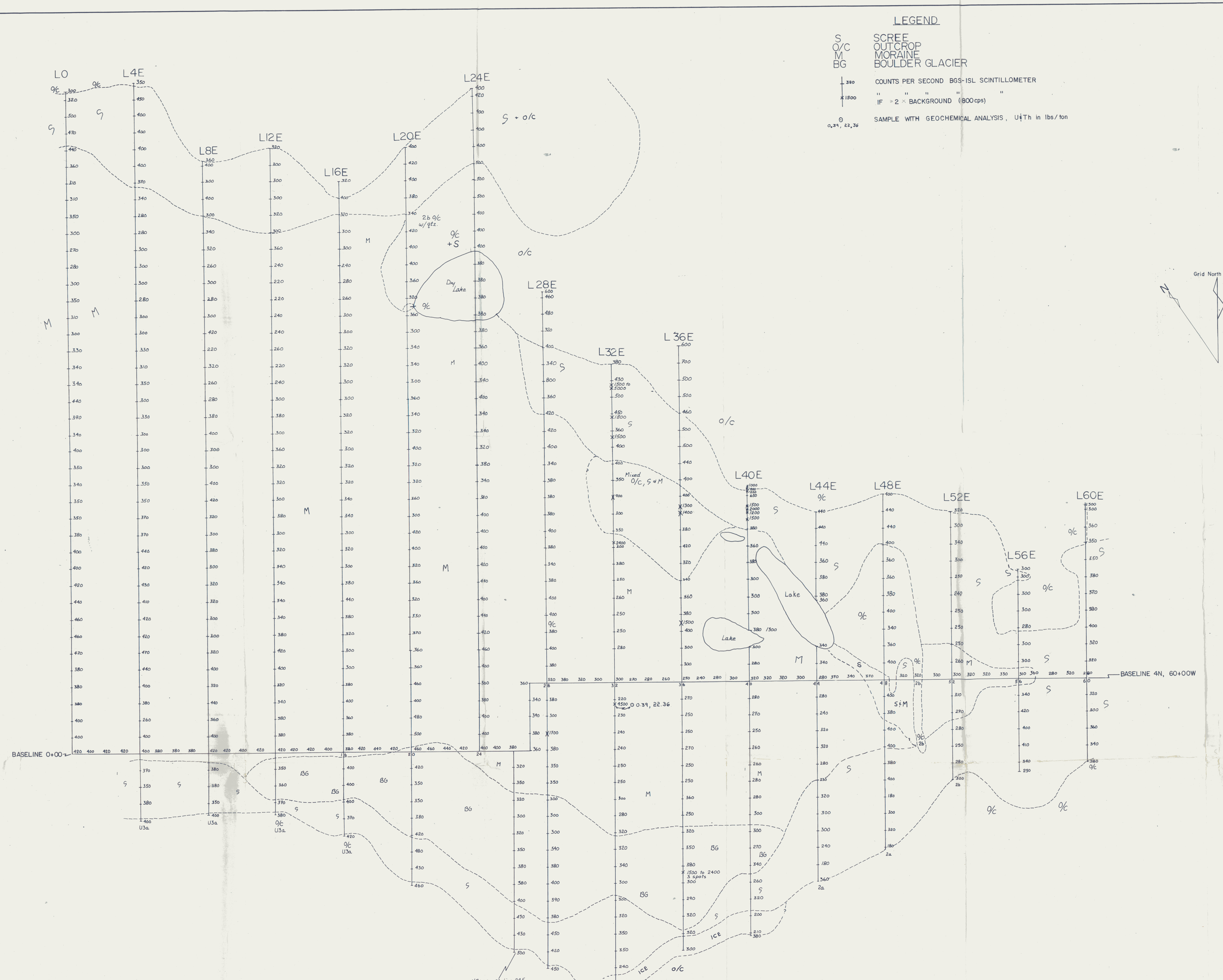
URANGESELLSCHAFT CANADA LIMITED

PROJECT: KI4 - 1.7 YUKON

BETA CLAIM GROUP

BEDROCK GEOLOGY

DWG. NO. 11	SCALE: 1" = 800'	DRAWN BY: PMV
N.T.S. 116 B-7.	DATE: Nov. 29/77	CHECKED BY: JB



URANGESELLSCHAFT CANADA LIMITED

PROJECT: KI4, I.7 YUKON, BETA CLAIM GROUP

GRID SCINTILLOMER SURVEY, SURFICIAL GEOLOGY, & ROCK GEOCHEMISTRY

DWG. NO. 12 | SCALE: 1" = 200' | DRAWN BY: PMV

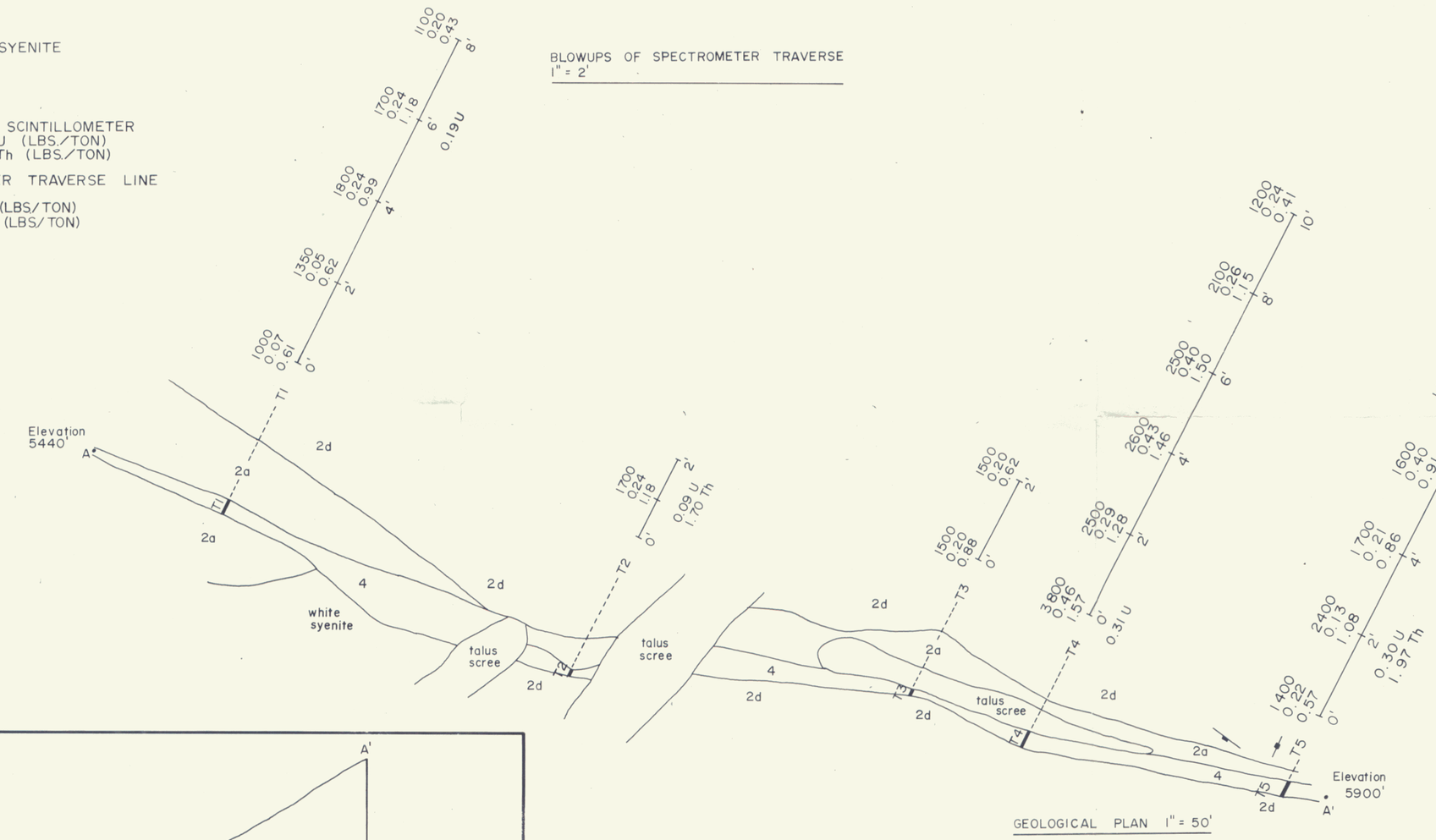
N.T.S. 116 B-7 | DATE: DEC. 5, 1977 | CHECKED BY: JB

LEGEND

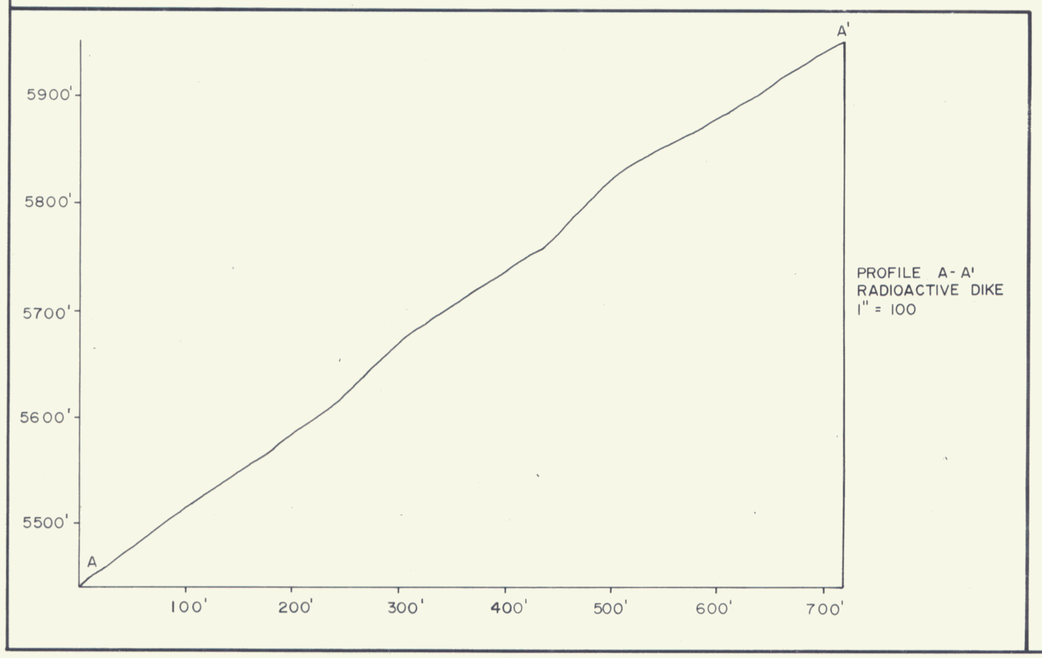
- 4 — PINK ALKALI GRANITE (RADIOACTIVE, > 1000 CPS)
- 2a — PINK PORPHYRITIC SYENITE
- 2d — "PEGMATITIC" PORPHYRITIC SYENITE
- 85 — JOINT & DIP
- 1700 — CPS BGS-ISL SCINTILLOMETER
  0.24 — EQUIVALENT U (LBS./TON)
  1.18 — EQUIVALENT Th (LBS./TON)
- T2 (0' — 2') ------ SPECTROMETER TRAVERSE LINE
  0.09 U — CHEMICAL U (LBS/TON)
  1.70 Th — CHEMICAL Th (LBS/TON)

N

BLOWUPS OF SPECTROMETER TRAVERSE
1" = 2'



GEOLOGICAL PLAN 1" = 50'



PROFILE A-A'
RADIOACTIVE DIKE
1" = 100

0 50' 100'

See Dwgs 11 and 14 for location

URANGESELLSCHAFT CANADA LIMITED

PROJECT: K14, I.7

BETA CLAIM GROUP
GEOLOGY, RADIOMETRICS & ROCK GEOCHEMISTRY
RADIOACTIVE DIKE

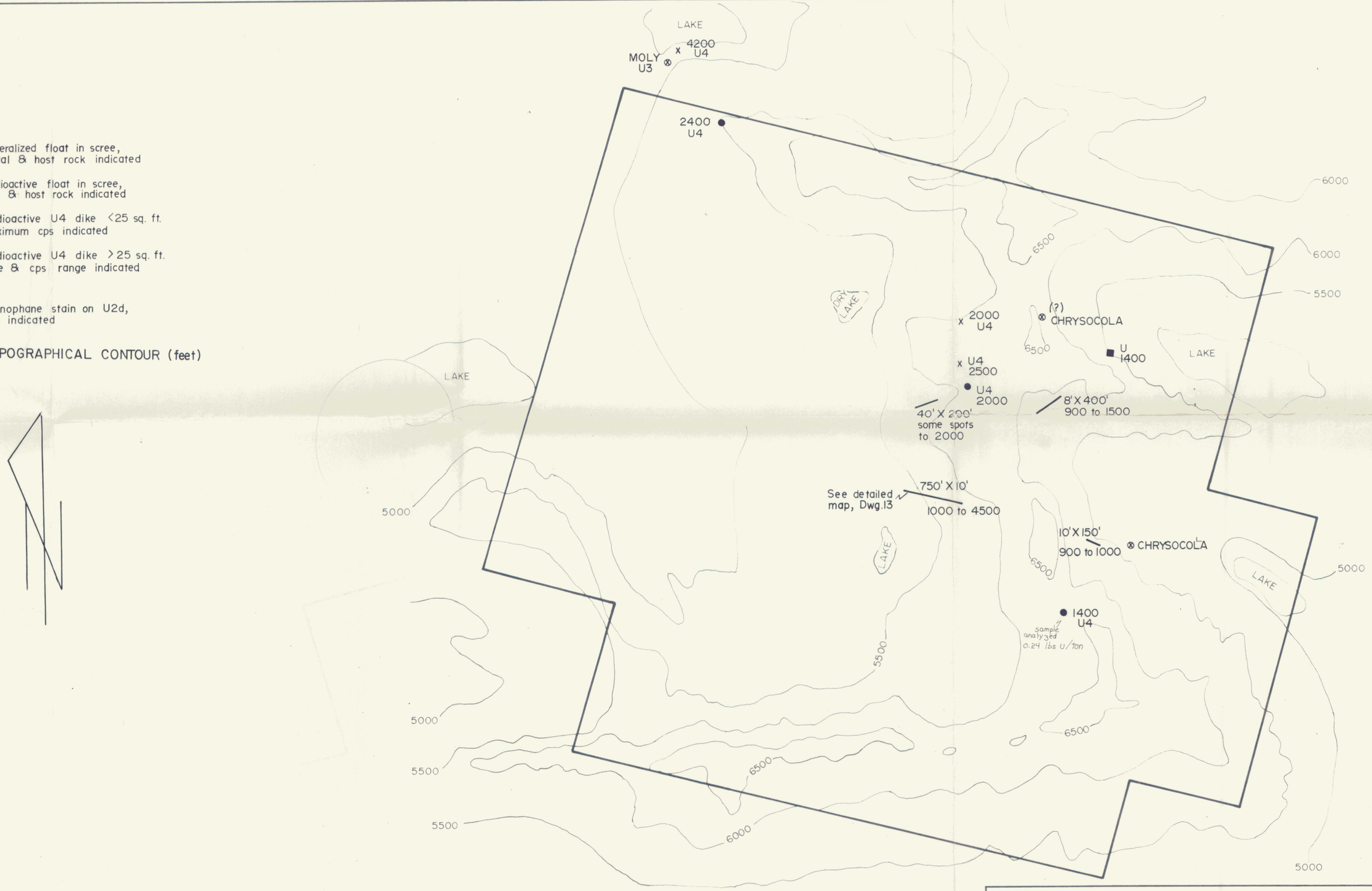
J. Boyle

DWG. NO. 13	**SCALE:** As indicated	**DRAWN BY:** PMV
N.T.S. 116 B-7	**DATE:** Nov. 20/77	**CHECKED BY:** JB

LEGEND

MOLY U3 ⊗	Mineralized float in scree, metal & host rock indicated
U4 1500 x	Radioactive float in scree, cps & host rock indicated
2000 U4 ●	Radioactive U4 dike <25 sq. ft. maximum cps indicated
75' X 10' 1000 to 4500 /	Radioactive U4 dike >25 sq. ft. size & cps range indicated
U 1400 ■	Uranophane stain on U2d, cps indicated

6500 TOPOGRAPHICAL CONTOUR (feet)



0 800 1600
feet

URANGESELLSCHAFT CANADA LIMITED

PROJECT: K14 - 1.7 YUKON

BETA CLAIM GROUP
Reconnaissance Radiometrics
and Location of
Mineralized Float

J. Brophy

DWG. NO. 14	**SCALE:** 1" = 800'	**DRAWN BY:** PMV
N.T.S. 116 B-7	**DATE:** NOV. 15/77	**CHECKED BY:** JB