




REPORT ON SOIL GEOCHEMISTRY, GEOLOGY
AND RADIOMETRIC SURVEY

PIKE 1-14 CLAIMS
Mayo Mining District
Claim Sheets 106D/16 and 106E/1
Lat. 65°00'N Long. 134°26'W

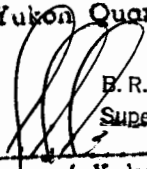
22 March, 1976


A.R. Archer Consulting Engineer

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 \$ 3,150.00


Resident Geologist or
~~Resident Mining Engineer~~

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


E. R. BAXTER
Supervising Mining Recorder

 Commissioner of Yukon Territory

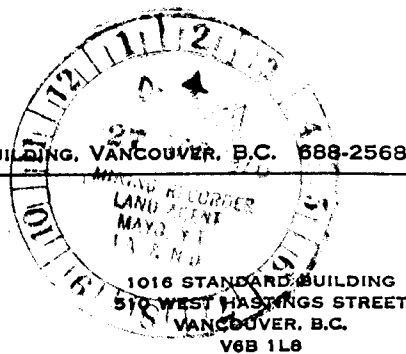


040098

ARCHER, CATHRO
AND ASSOCIATES LTD.
CONSULTING GEOLOGICAL ENGINEERS

Box 4127, WHITEHORSE, Y.T. Y1A 3S9 667-4415

STANDARD BUILDING, VANCOUVER, B.C. 688-2568



REPORT ON SOIL GEOCHEMISTRY, GEOLOGY
AND RADIOMETRIC SURVEY

PIKE 1-14 CLAIMS

Mayo Mining District

Claim Sheets 106D/16 and 106E/1

Latitude 65°00' North

Longitude 134°26' West

22 March, 1976

Alan R. Archer

Consulting Engineer

TABLE OF CONTENTS

<u>In Text</u>	<u>Page</u>
Introduction	1
Property, Location and Access	1
Geology and Mineralization	2
Geochemistry and Radiometric Survey	3
Conclusions	4

<u>Figures In Pocket</u>	<u>Pocket No.</u>
Figure E1 - Radiometric Survey, Pike 1-14 Claims, Scale 1"=200 feet	1
Figure E2 - Uranium and Gold Geochemistry, Pike 1-14 Claims, Scale 1"= 200 feet	1
Figure E3 - Molybdenum Geochemistry, Pike 1-14 Claims, Scale 1"= 200 feet	1
Figure E4 - Copper Geochemistry, Pike 1-14 Claims, Scale 1"= 200 feet	2
Figure E5 - Lead, Zinc and Vanadium Geochemistry, Pike 1-14 Claims, Scale 1"= 200 feet	2

INTRODUCTION

The Pike claims cover an uranium occurrence found by Wernecke Joint Venture (Standard Oil Co. of B.C. Ltd., Aquitaine Co. of Canada Ltd., and Messrs. L & H Clay) in June, 1975 and partially explored by soil sampling, geological mapping and a radiometric survey. This work was performed on a part time basis during the period 27 July - August 31 by a field crew based at Kiwi Lake. The crew consisted of geologist A. Gregson and field men D. Eaton and J. Dickinson. The project was managed by Archer, Cathro & Associates Ltd. and supervision was provided by M.P. Phillips and the writer.

PROPERTY, LOCATION AND ACCESS

The property consists of the contiguous Pike 1-14 mineral claims, as illustrated on Figure E1. The claims are registered in the Mayo Mining District as follows:

<u>CLAIM NAME</u>	<u>GRANT NUMBERS</u>	<u>EXPIRY DATE</u>
Pike 1-14	Y97516-Y97529	27 June, 1976

The property is located at latitude 65°00' north, longitude 134°26' west straddling the boundary between NTS claim sheets 106D/16 and 106E/1. Access is by helicopter from Kiwi Lake, fifteen miles to the northwest.

The Slats claims, which adjoin to the north, were later fringe staked by Great Plains Development Co. of Canada Ltd. There has been some previous staking in the immediate vicinity. A few claims were recorded to the southeast in 1958 by M. Hrebrian. The Pike claim area was once covered by the northwest edge of a large block of MO claims staked by Pacific Giant Steel Ores Ltd. in 1967 to cover the numerous small hematite occurrences that are common

to the area. No work was recorded on any of the claims. Wernecke Joint Venture (WJV) found several old posts, probably Hrebrian's, about one-half mile east of the Pike 14 claim near a minor copper showing.

GEOLOGY AND MINERALIZATION

The Pike claim area is mapped by the Geological Survey of Canada (D.K. Norris, preliminary geology Wind River area released 15 May, 1975) as undivided Lower Proterozoic Unit H0 phyllitic argillites and quartzites. Regional mapping by WJV subdivides G.S.C. Unit H0 into six units, numbered Units 1 to 6 respectively. Only three of the WJV units are found on the Pike claims. These are (1) Unit 3, a fine grained, occasionally phyllitic metavolcanic with mudstone interbeds (2) Unit 5, a grey to black phyllitic argillite and (3) Unit 6, a fanglomerate or regolith.

The southern half of the Pike claims is centered on the west fork of Slats Creek and covers a small radioactive outcrop on the east bank. Slats Creek has steep walls in this area and exposes Unit 5 black argillite in fault contact with Unit 3 metavolcanics. The radioactive zone consists of reddish (hematitic?) metavolcanics outcropping over an area of fifteen by thirty feet. A chip sample returned 0.005 per cent U_3O_8 and a specimen of the strongest radioactivity assayed 0.02 per cent U_3O_8 . No other work was done.

The northern half of the claims lie on a southwest facing slope on the east side of the east fork of Slats Creek. The slope is almost as steep as the angle of repose but has a fairly well developed cover of buckbrush, stunted black spruce and moss and only a little outcrop. Talus fragments are predominantly Unit 6 fanglomerate with some intermixed Unit 3 metavolcanics and Unit 5 argillites. Specular hematite is abundant, occurring both as veinlets and as massive fine grained patches. Weak siderite veining with

traces of chalcopyrite is seen in float from Unit 5 and 6. Figures E1 and E2 illustrate the location of radioactive float found by prospecting, most of which consist of hematitic, red stained Unit 5 argillite with no specifically identifiable radioactive mineral. A five pound rounded boulder of red stained barite containing about 20 per cent black, hard, radioactive mineral (probably brannerite) was found at grid co-ordination 4 West, 14 North. One portion of the boulder contained abundant finely disseminated free gold in both the radioactive mineral and the barite. A specimen with no visible gold and about ten per cent radioactive material assayed 4.66 per cent U_3O_8 , 0.57 per cent ThO_2 , 0.05 per cent rare earths, and 1.2 oz/ton gold.

GEOCHEMISTRY AND RADIOMETRIC SURVEY

A 3,600 foot baseline was established by chain and compass along the Pike claim line on the northeast side of Slats Creek. Stations were marked along the baseline at 400 foot intervals with three foot high lath pickets. Soil sample and radiometric readings were taken by pace and compass on crosslines extending 1,400 feet east and 1,600 feet west of each baseline station.

Soil samples were obtained from a B + C soil horizon by digging a shallow pit with a grub hoe and were analysed at Chemex Labs Ltd. North Vancouver, B.C. for copper, lead, zinc, uranium, vanadium and molybdenum. The uranium analysis was obtained by a standard fluorometric method on an ashed and double acidified, minus 32 mesh fraction. The remaining five elements were determined using atomic absorption spectrometry of a nitric-perchloric extraction of a minus 80 mesh fraction. Sample assays are plotted on Figures E2 to E5. Lead, zinc and vanadium values are all background. Copper, molybdenum and uranium exhibit more or less coincident anomalies in the middle of the claim

group and again on the northeast edge of the claims. Copper background is less than 100 ppm in contrast to more than 1,000 ppm in the centres of the anomalous areas. Molybdenum values exhibit a contrast of more than 10 ppm against a background of less than 1 ppm and uranium assays over 5 ppm in contrast to a background of less than 0.5 ppm. The copper and molybdenum response is similar to that obtained from Unit 6 fanglomerate on the WJV Bond claims. Anomalous uranium response is more consistent than other properties, possibly due to enrichment in the slightly organic rich soils. A soil sample collected 100 feet downhill from the gold rich uranium specimen returned a moderately anomalous 350 parts-per-billion gold.

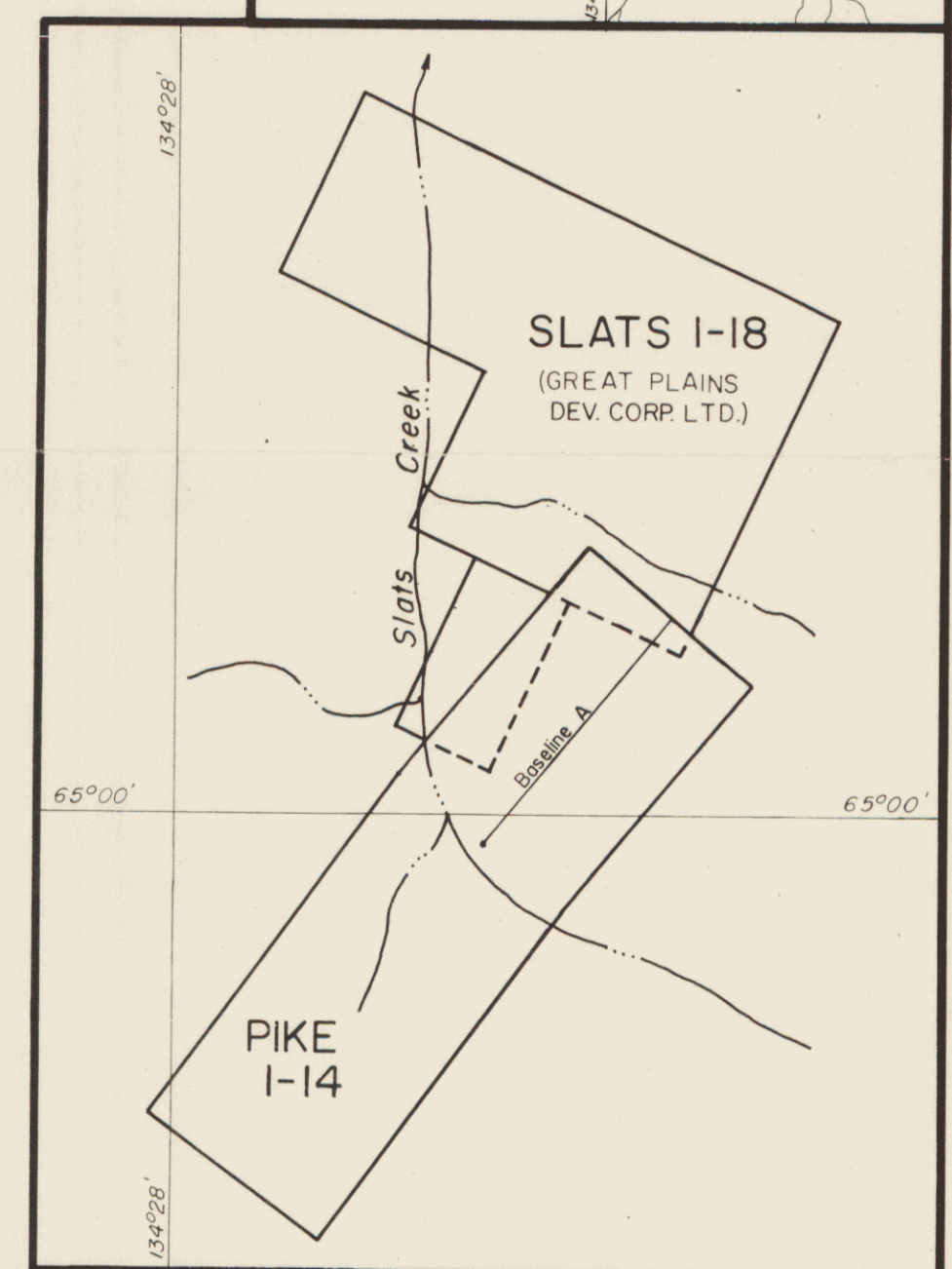
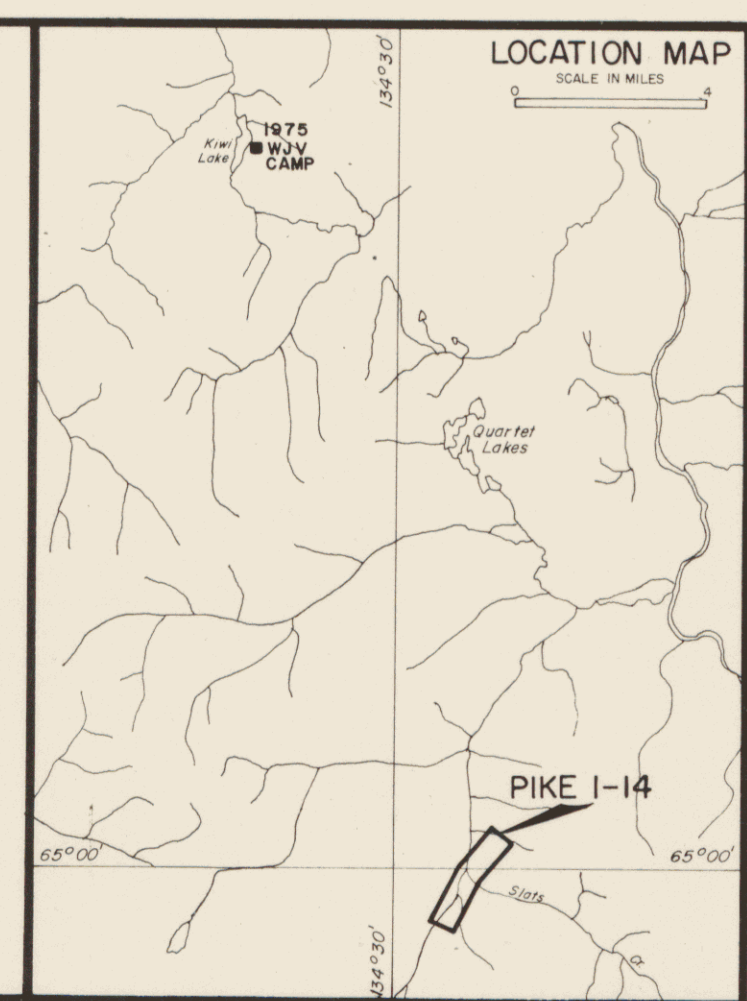
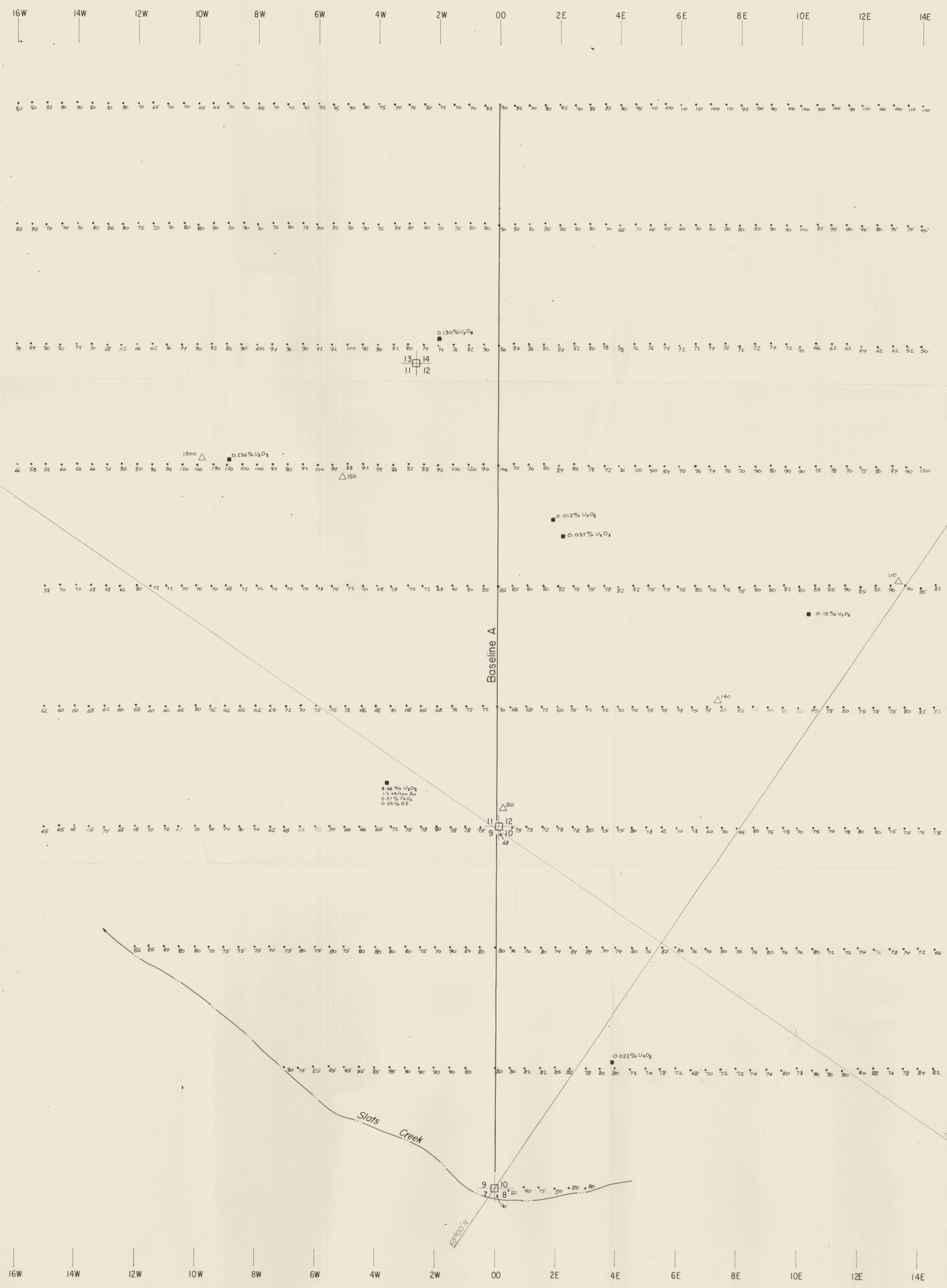
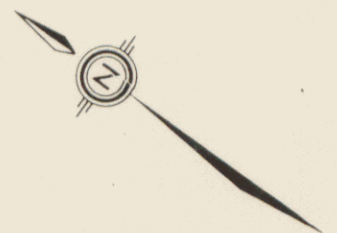
Radioactivity was measured at fifty foot intervals using a Scintrex BGS-1S broadband scintillation counter equipped with a 1 inch by 1 inch thallium activated, sodium iodide crystal sensor. The readings, as illustrated on Figure E2, are in counts per second (cps) at waist level, about three feet above the ground. Background in similar rocks elsewhere ranges from 50 to 80 cps. The claim area has erratic above background response of 80 to 100 cps with a few spot highs in the vicinity of radioactive float. No specific anomalous zones or trends are indicated.

CONCLUSIONS

The abundance of hematite and the anomalous copper and molybdenum geochemical response suggest that the present erosion surface on the Pike claims northeast of Slat Creek is very near the base of the Unit 6 fanglomerate which lies on a Precambrian erosion surface. Any significant uranium mineralization would be expected to occur in pre-Unit 6 structures occurring in either Units 3 or 5 directly below Unit 6. More detailed float mapping and radiometric surveys should be done to locate possible underlying drill targets.

The soil sample splits should be analyzed for gold to test for possible gold rich areas. Gold geochemistry should be extended to the east toward the old claim posts, which might have been staked on a gold occurrence as other metals were quite uneconomic in this district in 1958.

Respectfully submitted,
R. ARCHER
ARCHER, CATHRO & ASSOCIATES LTD.
GEOLOGICAL
R. Archer, B.A.Sc., P.Eng.
ENGINEER
Association of Professional Engineers of the Yukon Territory



LEGEND

- 32 Radiometric survey point with reading in counts per second taken with a Scintrex BGS-1S broadband scintillometer (1" X 1" thallium activated sodium iodide crystal)
- △ 140 Isolated radioactive hotspot with value in counts per second
- 0.05% U₃O₈ Rock (grab) sample

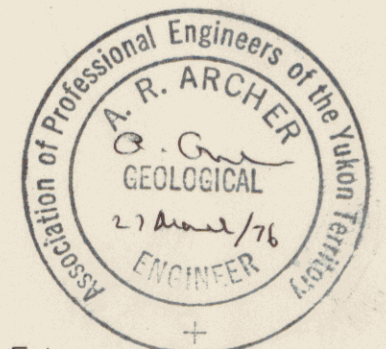
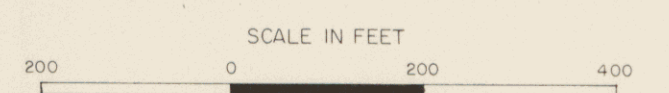


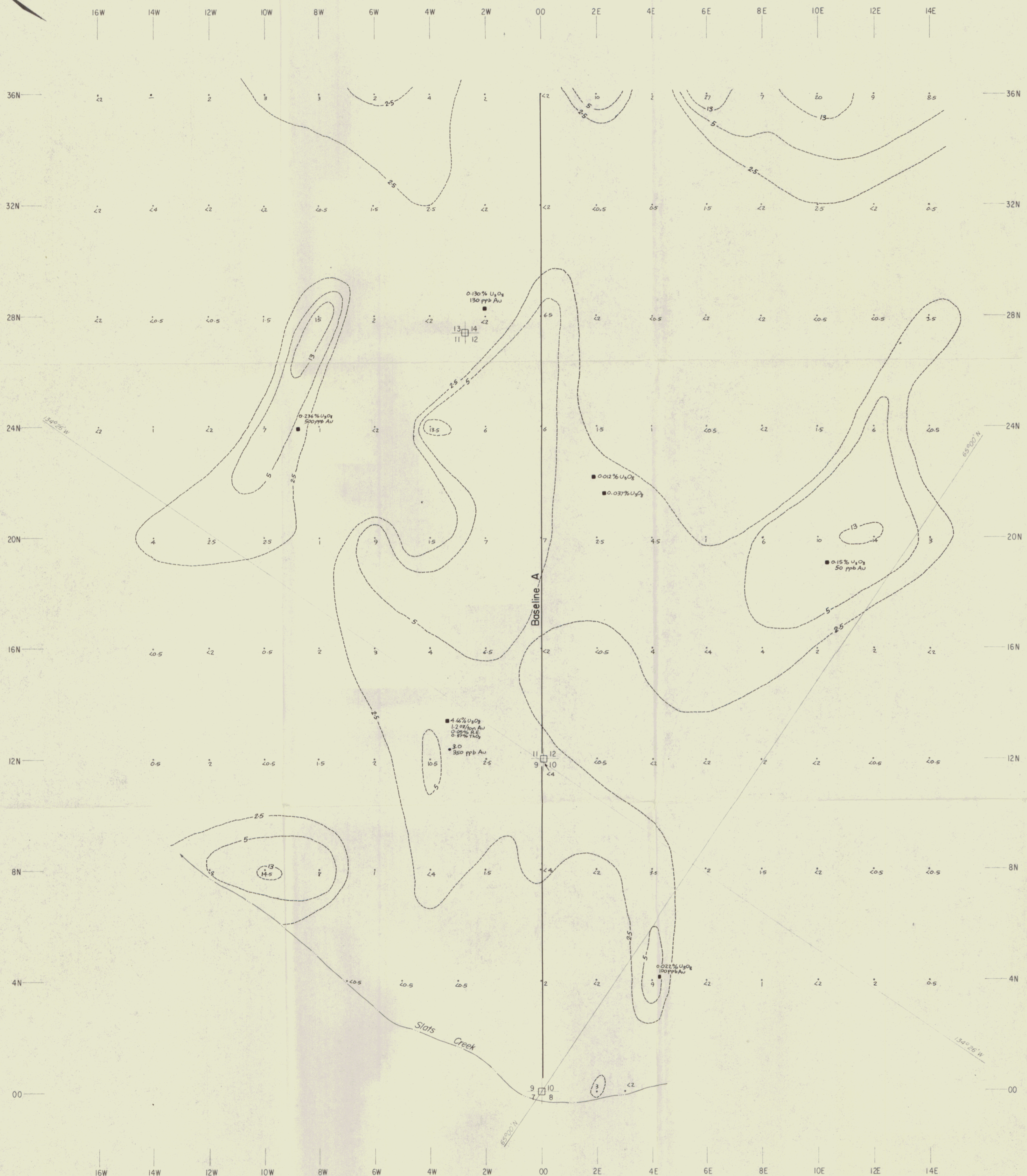
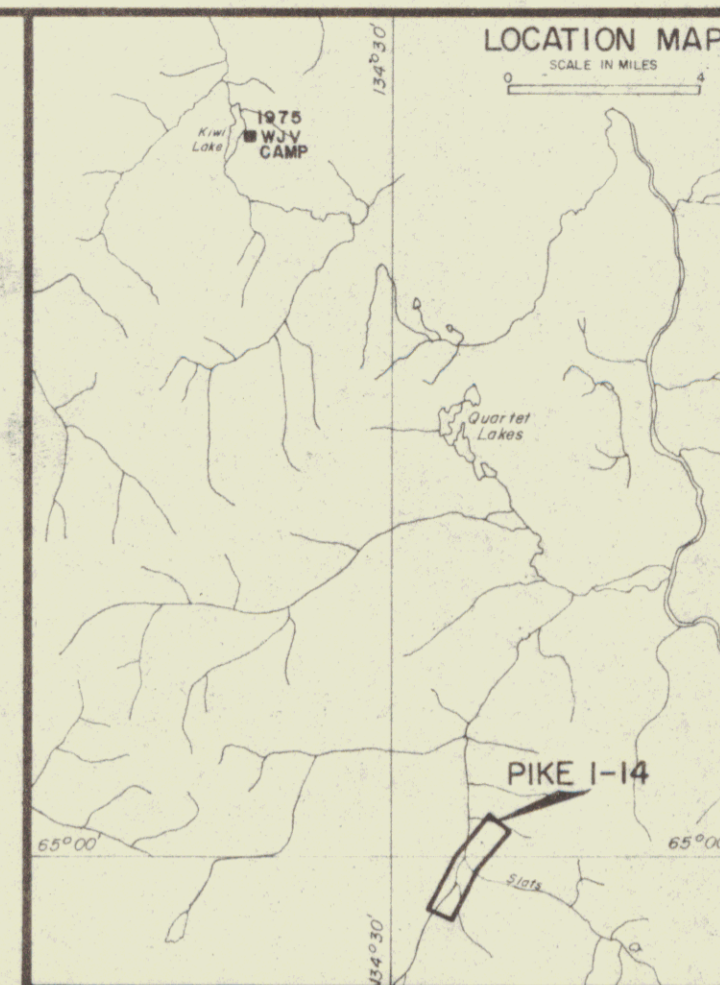
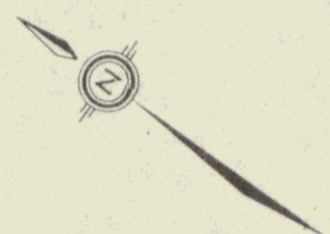
FIG. E-1
ARCHER, CATHRO & ASSOCIATES LTD.

RADIOMETRIC SURVEY

PIKE I-14 CLAIMS
WERNECKE JOINT VENTURE



To accompany report dated March, 1976



LEGEND

- Soil sample with uranium assay in ppm analysed by Chemex Labs Ltd, N. Vancouver, B.C.
- Rock (grab) sample with Au if analysed
- Soil geochem contours at 2.5 ppm, 5 ppm and 13 ppm U.
- Claim post

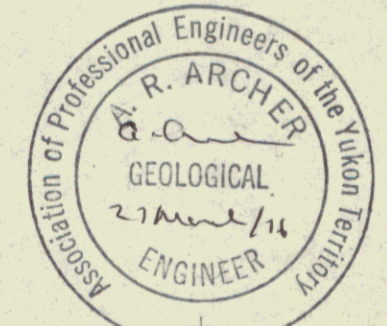
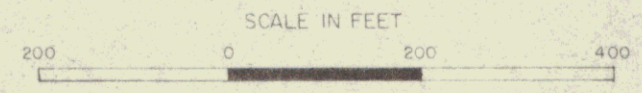
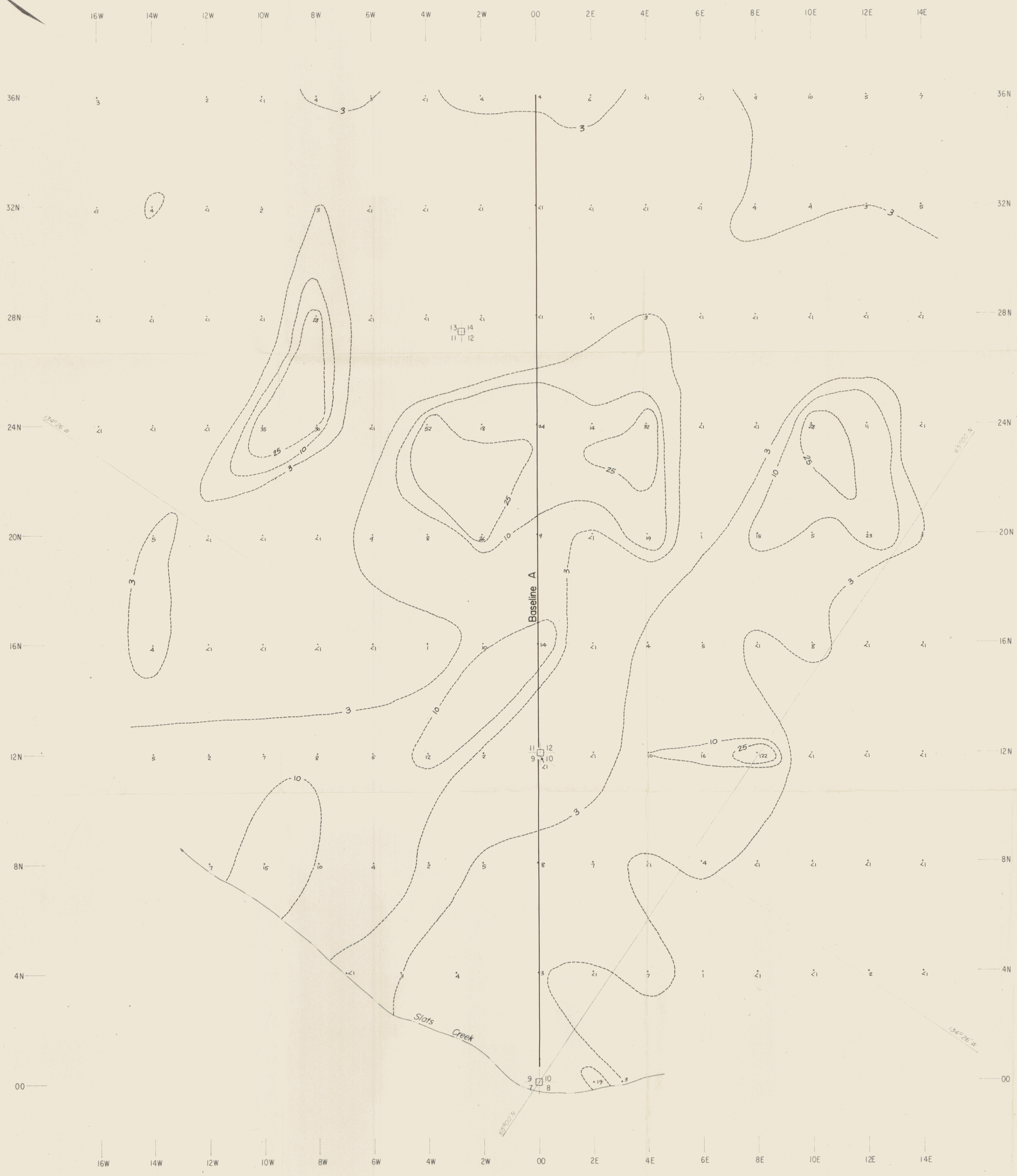
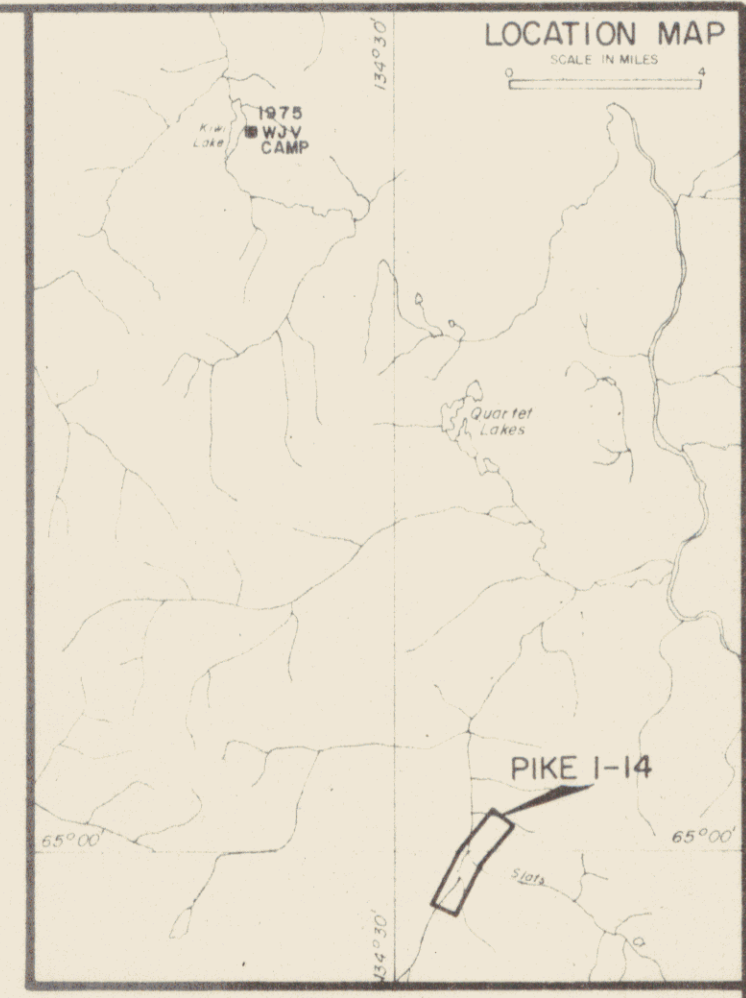
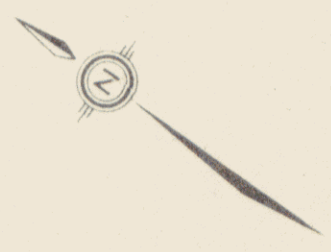


FIG E-2
 ARCHER, CATHRO & ASSOCIATES LTD
URANIUM AND GOLD GEOCHEMISTRY
 PIKE I-14 CLAIMS
 WERNECKE JOINT VENTURE





LEGEND

- 14 Soil sample with molybdenum assay in ppm analysed by Chemex Labs Ltd., N. Vancouver, B.C.
- Soil geochem contours 3ppm, 10ppm and 25 ppm Mo
- Claim post

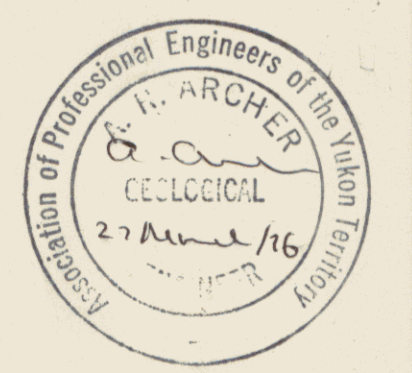
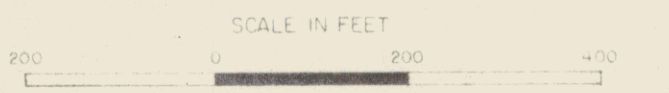
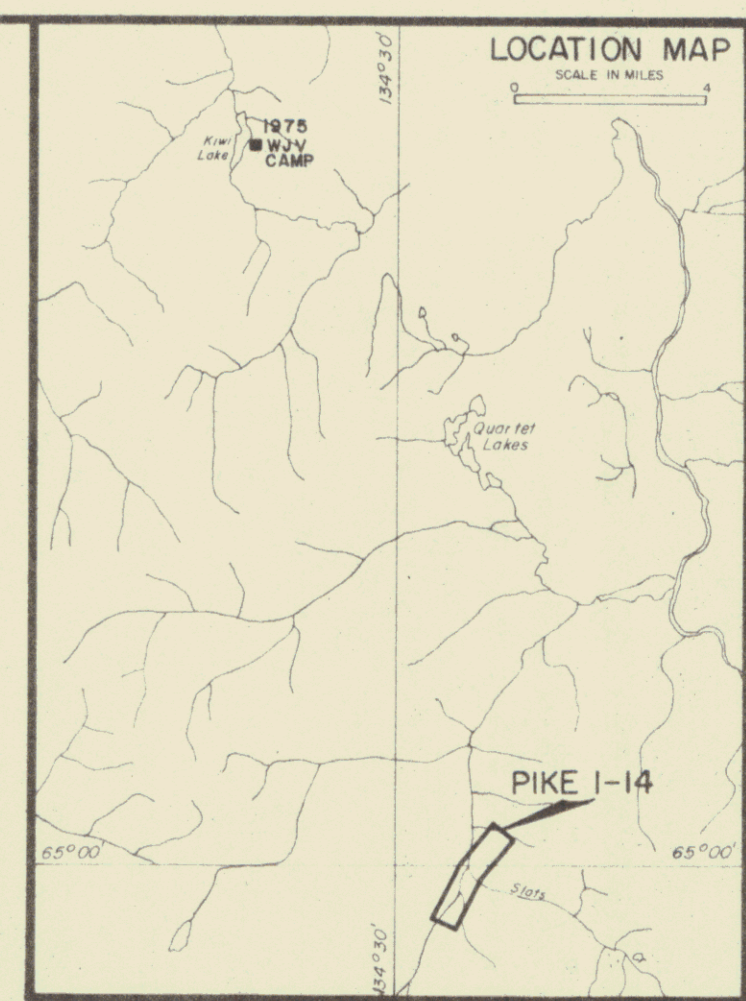
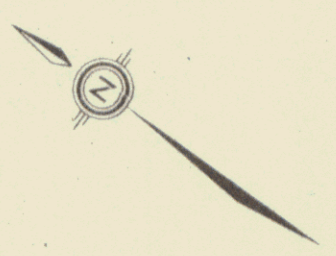


FIG E-3
 ARCHER, CATHRO & ASSOCIATES LTD
MOLYBDENUM GEOCHEMISTRY
 PIKE I-14 CLAIMS
 WERNECKE JOINT VENTURE



To accompany report dated March, 1976



LEGEND

- 355 Soil sample with copper assay in ppm analysed by Chemex Labs Ltd., N. Vancouver, B.C.
- Soil geochem contours at 100ppm, 400ppm & 1000ppm Cu.
- Claim post

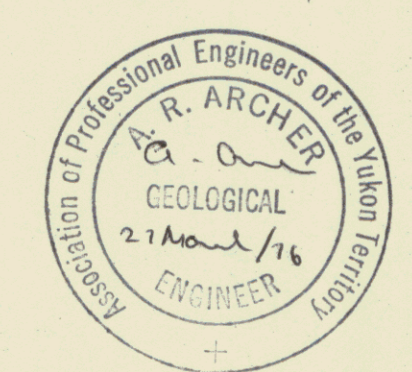
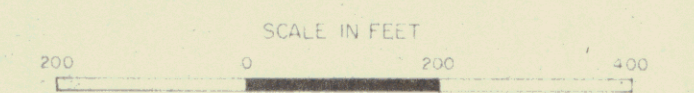
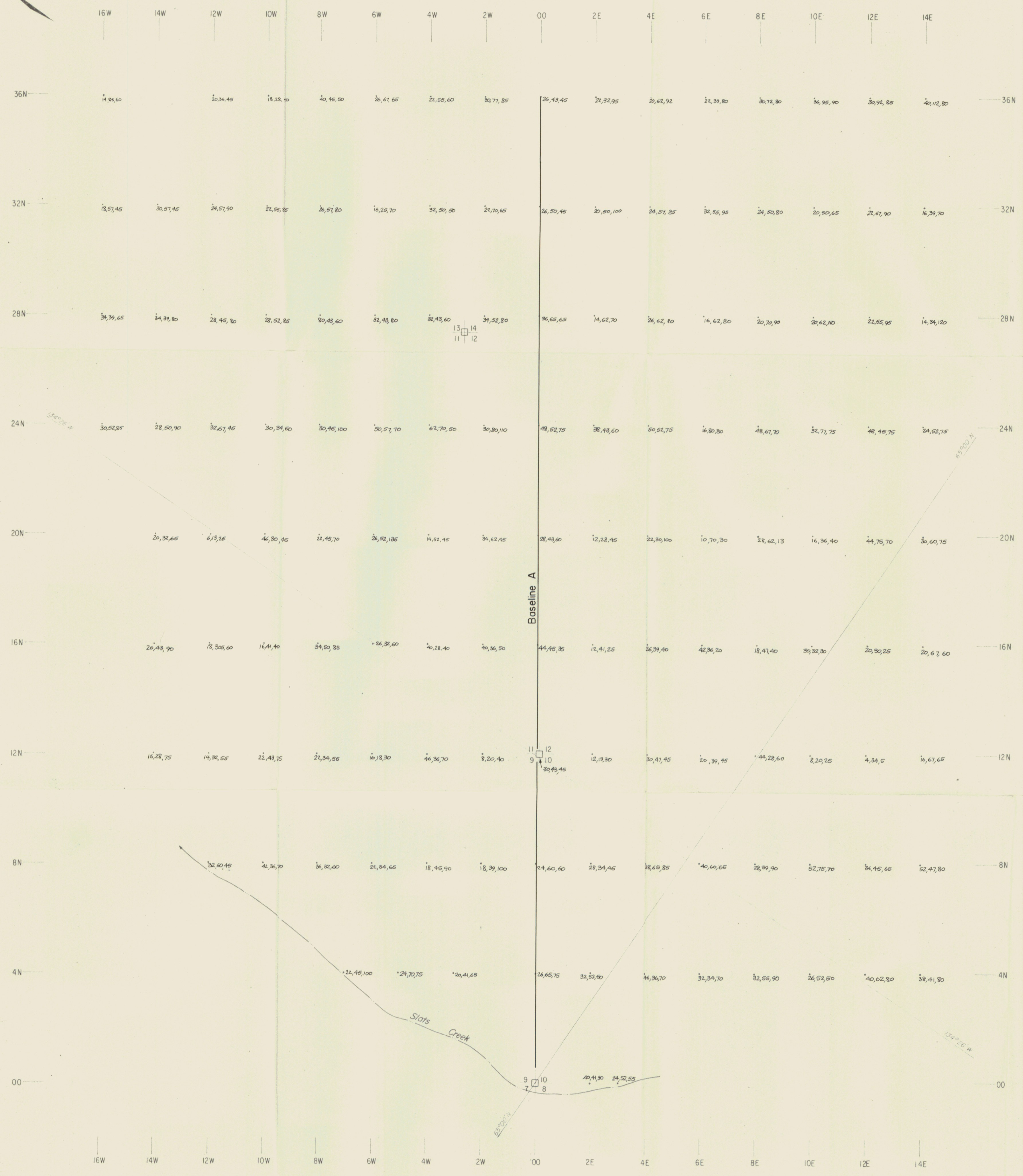
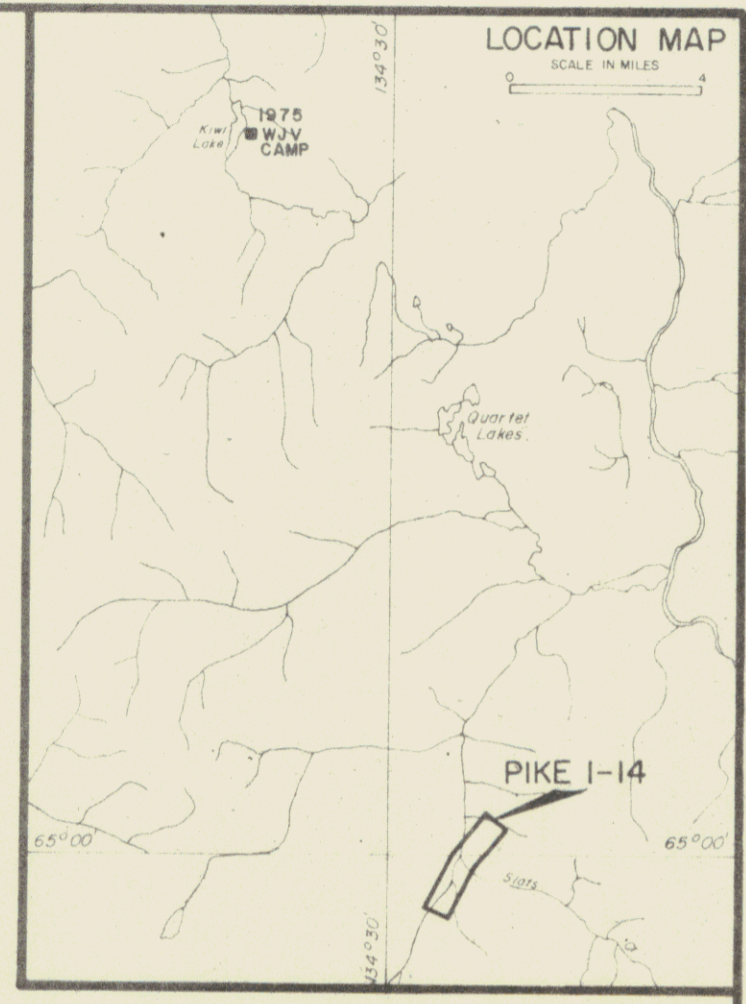
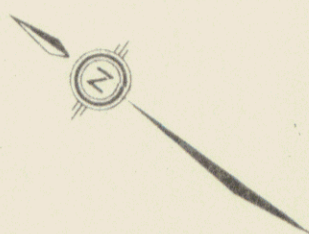


FIG. E-4
ARCHER, CATHRO & ASSOCIATES LTD.

COPPER GEOCHEMISTRY

PIKE I-14 CLAIMS
WERNECKE JOINT VENTURE





LEGEND

- 48,870 ppm assays in ppm analysed by Chemex Labs Ltd., North Vancouver, B.C.
- Claim post

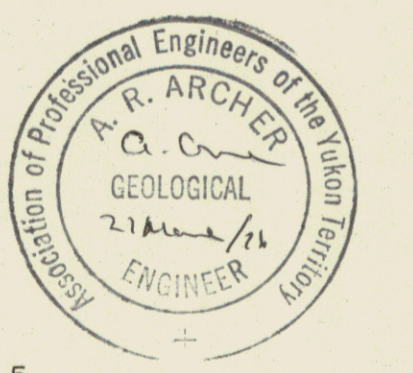


FIG. E-5
 ARCHER, CATHRO & ASSOCIATES LTD.
**LEAD, ZINC & VANADIUM
 GEOCHEMISTRY**
 PIKE I-14 CLAIMS
 WERNECKE JOINT VENTURE

