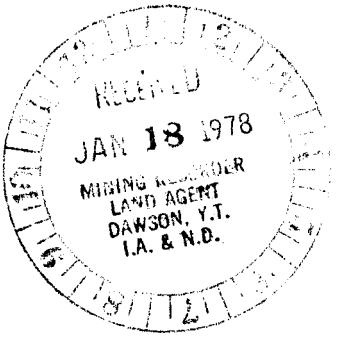
Assessment Report

on

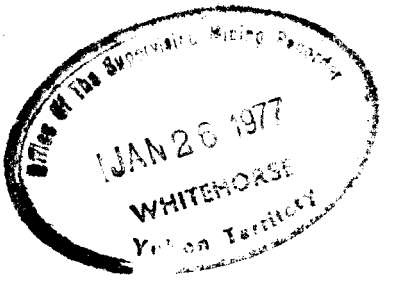
Nebulous 1-33 Claims



Dawson Mining District

Claim Sheet 116B/7

Latitude 64°28'N, Longitude 138°47'W



December 23, 1977

Alan R. Archer, P. Eng. Consulting Engineer

090271

This report has been examined by the Geological Evaluation Unit ...

6264.05

D.B. Craig

... work under ... Mining Act.

Considered as ... Section 53 (4) ...

B. R. BAXTER
Supervising Mining Recorder

Commissioner of Yukon Territory

TABLE OF CONTENTS

INTRODUCTION

The Nebulous property consists of 33 mineral claims, covering a radiometrically anomalous portion of the Brenner stock, about 9 km northwest of Tombstone Mountain. Prospecting In 1976 located three areas of secondary uranium mineralization called the West, Ridge and East Zones in weakly jointed monzonite on a steep, frost-fractured, partially talus-covered slope.

The 1977 program was conducted during the period June 30 to July 12 by field men D. Eaton, R. Warner and J. Cockell and consisted of hand trenching and channel sampling of the West Zone and a small radiometric grid survey over a nearby 1976 airborne radiometric anomaly. The program was managed by Archer, Cathro & Associates Ltd.

All assays were done at Chemex Labs Ltd., North Vancouver, B.C.

PROPERTY, LOCATION & ACCESS

The Nebulous claims are recorded in the Dawson Mining District as follows:

CLAIM NAME	GRANT NUMBERS	EXPIRY DATE
Nebulous 1-15	YA 5089 - YA 5103	23 January, 1979
Nebulous 16-29	YA 5142 - YA 5155	23 January, 1979
Nebulous 30-33	YA 5170 - YA 5173	23 January, 1979

The claims are located at latitude 64°28' north and longitude 138°47' west within NTS claim sheet 116B/7, 56 km (35 miles) northeast of Dawson. The nearest road point is Km 58 (mile 36) on the Dempster Highway which lies 19 km (12 miles) to the southeast. Access is by helicopter from Dawson.

GEOLOGICAL SETTING

The property is located within a 5 km diameter Middle Cretaceous quartz monzonite intrusion called the Brenner stock, which cuts Silurian to Cretaceous shales, quartzite and limestone. The stock has no significant associated faulting and is more erosion resistant than the surrounding sedimentary rocks, resulting in a maze of steep-walled cirque valleys separated by extremely steep, knife-edge ridges. Valleys are covered by debris from extinct alpine glaciation while their sides are often obscured by coarse blocky talus. Outcrop, while abundant, is mostly located on steep cliffs which are usually inaccessible.

The Brenner stock exhibits a crude compositional zoning, grading from aplite at the centre through pink monzonite porphyry, porphyritic hornblende monzonite, monzonite porphyry and finally to augite biotite monzonite at its margins. Airborne radiometric surveys in 1976 showed that the entire stock is radiometrically anomalous although the strongest response was obtained over the porphyritic hornblende monzonite phase near its contact with monzonite porphyry. Prospecting in 1976 failed to locate specific zones of high grade uranium mineralization although an area of weak secondary enrichment was outlined in monzonite porphyry near the south end of the claims. The best showing, called the West Zone, consists of frost-opened joints coated with abundant yellow stain, a specimen of which assayed 1.1% U_3O_8 and only 30 ppm Th. Thirteen samples across a 50 m wide exposure of host rock averaged 42 ppm U with individual specimens assaying up to 150 ppm U and 340 ppm Th.

1977 EXPLORATION PROGRAM

Trenching

The main objective in 1977 was to trench into bedrock at the West Zone to obtain better samples and to determine if the open joints on surface contained more abundant secondary uranium mineralization at depth. Figures U-NE2 and U-NE3 on the following pages illustrate the geology and location of trenching and assay results of Trench NWA, respectively. This trench was cut between 1 and 2 m deep into the West Zone from 90 and 123 feet (10 m long) on the 1976 A-B sample line (see 1976 Figure U-NE1). This area proved fairly easy to trench in spite of the steep (38°) slope. Open surface joints proved to be too tight in bedrock to host mineralization and the abundance of secondary uranium oxides in mineralized joints remained unchanged at depth. Three clusters of mineralized joints exposed in the trench were channel sampled and returned uranium (U_3O_8) assays of 0.026% across 2 cm, 0.052% across 10 cm and 0.048% across 24 cm. Chip channel sampling of the monzonite in 2 m panels along the base of the trench (carefully avoiding mineralized joints) returned assays ranging from 0.007% U_3O_8 to 0.012% U_3O_8 with an average of 0.0082% U_3O_8 as compared to 0.0059% obtained by surface sampling in 1976. The average assay combining mineralized joints and country rock is 0.0105% U_3O_8 over the 10 m trench length.

Since Trench NWA and the West Showing in general occur in a snow chute where most of the weathered talus has been scoured away, two smaller trenches were blasted into less scoured bedrock nearby to determine if the yellow stain in bedrock was more widespread. Trench NWB was cut 1 m deep and 3.5 m long about 40 m west of Trench NWA and cut three, 4 cm wide, weakly crushed (?) joint seams

138° 47'

EAST NEB LAKE

SEE FIG. U-NE3 LAKE ZONE SCINT GRID

U_3O_8 .005%
Th .022%

NEBULOUS 16-19

5000

PORPHYRITIC HORNBLENDE MONZONITE

CAMP

64° 28'

MONZONITE PORPHYRY

AUGITE BIOTITE MONZONITE

5500

6000

6500

EAST ZONE

RIDGE ZONE

NWB .006% .022% U_3O_8

.031% U_3O_8

NWA

.011% U_3O_8

NWC .006% U_3O_8

NEBULOUS 1-4

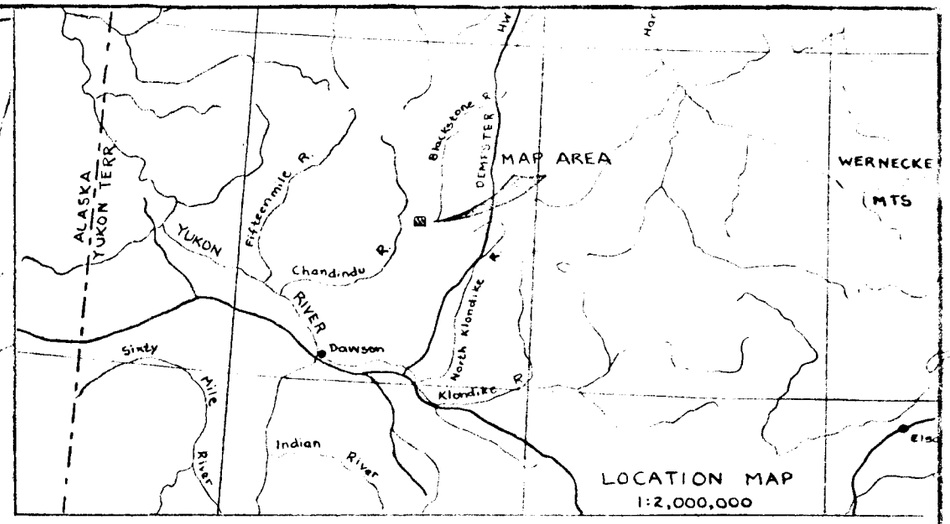


FIG. U-NE 2

ARCHER, CATHRO AND ASSOCIATES

WEST ZONE GEOLOGY AND TRENCH LOCATIONS

NEBULOUS 1-33 CLAIMS

UKON JOINT VENTURE

Dec 23/77

LEGEND

NWB .006% U_3O_8 — TRENCH LOCATION, NAME, AND ASSAY IN % U_3O_8

A — B — 1976 UJV CHIP SAMPLE LOCATIONS

.005% U_3O_8 .022% Th — ROCK SAMPLE LOCATION AND ASSAY IN % U_3O_8 AND % Th

CAMP

CLAIM POSTS

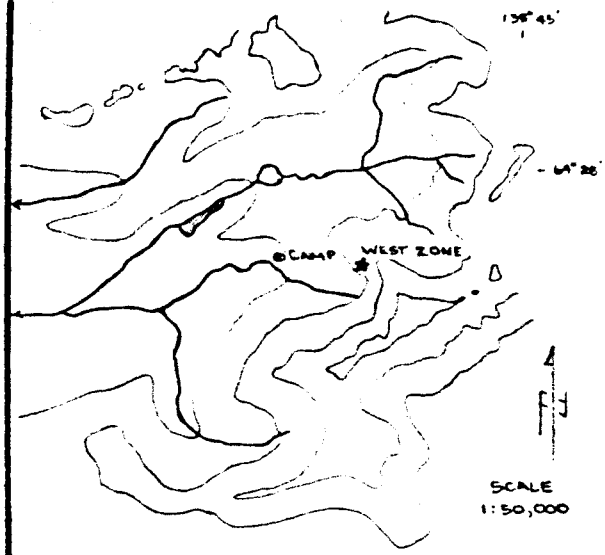
CONTACTS OF MONZONITE PORPHYRY, APPROXIMATE AND INFERRED

SCALE 1:5000

100 60 0 100 200 300

METERS

NTS 11687



NEBULOUS WEST ZONE LOCATION MAP

FIGURE U-NE8
ARCHER, CATHRO, AND ASSOCIATES

ASSAY AND RADIOMETRIC PLAN TRENCH NWA - WEST ZONE

NEBULOUS 1-35 CLAIMS

UKON JOINT VENTURE

— BOTTOM OF TRENCH
--- TOP OF BEDROCK
···· TOP OF TRENCH
↓ SLOPE OF HILLSIDE

—·—·— YELLOW STAINED FRACTURES

ZONE OF HIGHLY FRACTURED ROCK AND ASSAY
0.052%

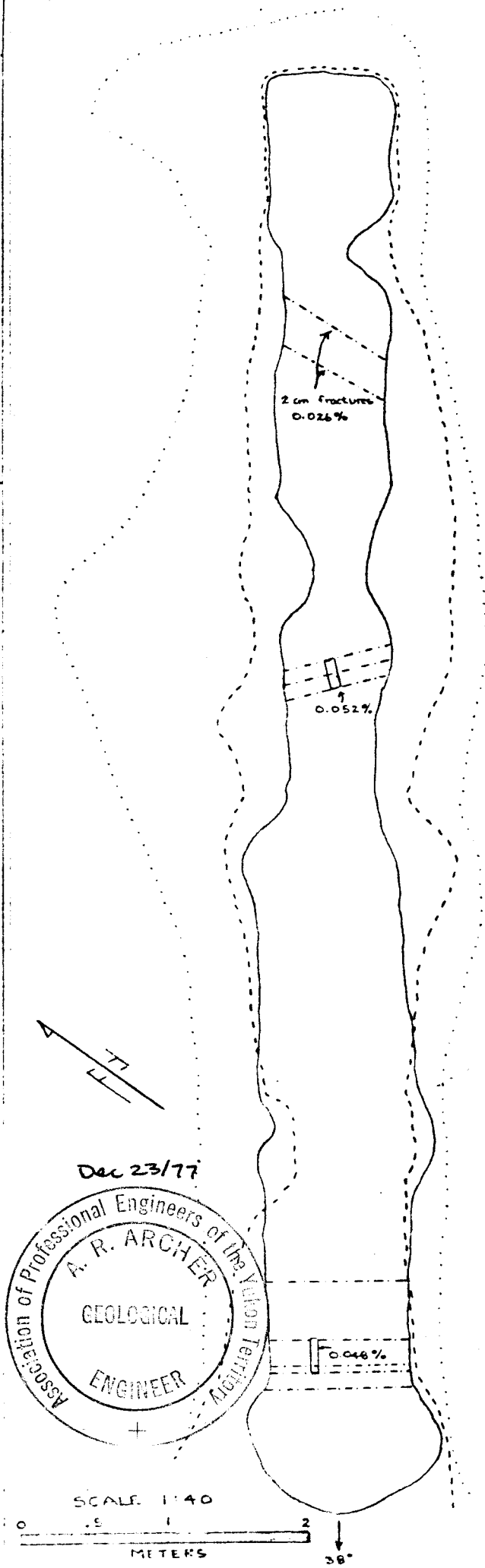
0.048% CHANNEL SAMPLE ACROSS MULTIPLE FRACTURES AND ASSAY

ALL ASSAY VALUES EXPRESSED IN PERCENT U_3O_8

ALL SCINT READINGS TAKEN AT BOTTOM OF TRENCH WITH SCINTREX BGS-1SL (43 cc CRYSTAL)

CHIP SAMPLES COLLECTED FROM 2 METER PANELS AT THE TOP AND THE BOTTOM OF THE TRENCH. YELLOW STAINED ROCK NOT INCLUDED WITH THESE SAMPLES.

NEBULOUS CLAIMS
TRENCH LOCATION SKETCH



SCINT READING	ASSAY PPM
2100	0
2100	
2000	
1900	
1900	0.007 % (TOP) 0.008% (BOTTOM)
2000	
4000	
2050	
2100	2
1900	
1850	
2000	
2100	0.008% 0.008%
2700	
2100	
2100	
1850	4
2350	
2300	
2200	
1800	0.008% 0.012%
1900	
1800	
1800	
1800	6
1800	
1800	
1800	
1800	0.007% 0.007%
1800	
1750	
2000	
2000	8
2000	
2300	
4100	
5000	0.005% 0.007%
4000	
3000	
4000	
4000	10

with traces of yellow secondary uranium mineralization. A grab sample from the joints assayed 0.018% U_3O_8 while a random chip sample of the host intrusion assayed 0.006% U_3O_8. Trench NWC was located at 65 m east of trench NWA on a 50° slope where minor yellow staining was occurring along a joint surface. The trench was cut between 1/2 and 1 m deep over an area of 4 m by 3.4 m. No increase in joint density was found and only a trace of yellow staining was located in exposed joint surfaces. A chip sample across the trench assayed 0.006% U_3O_8.

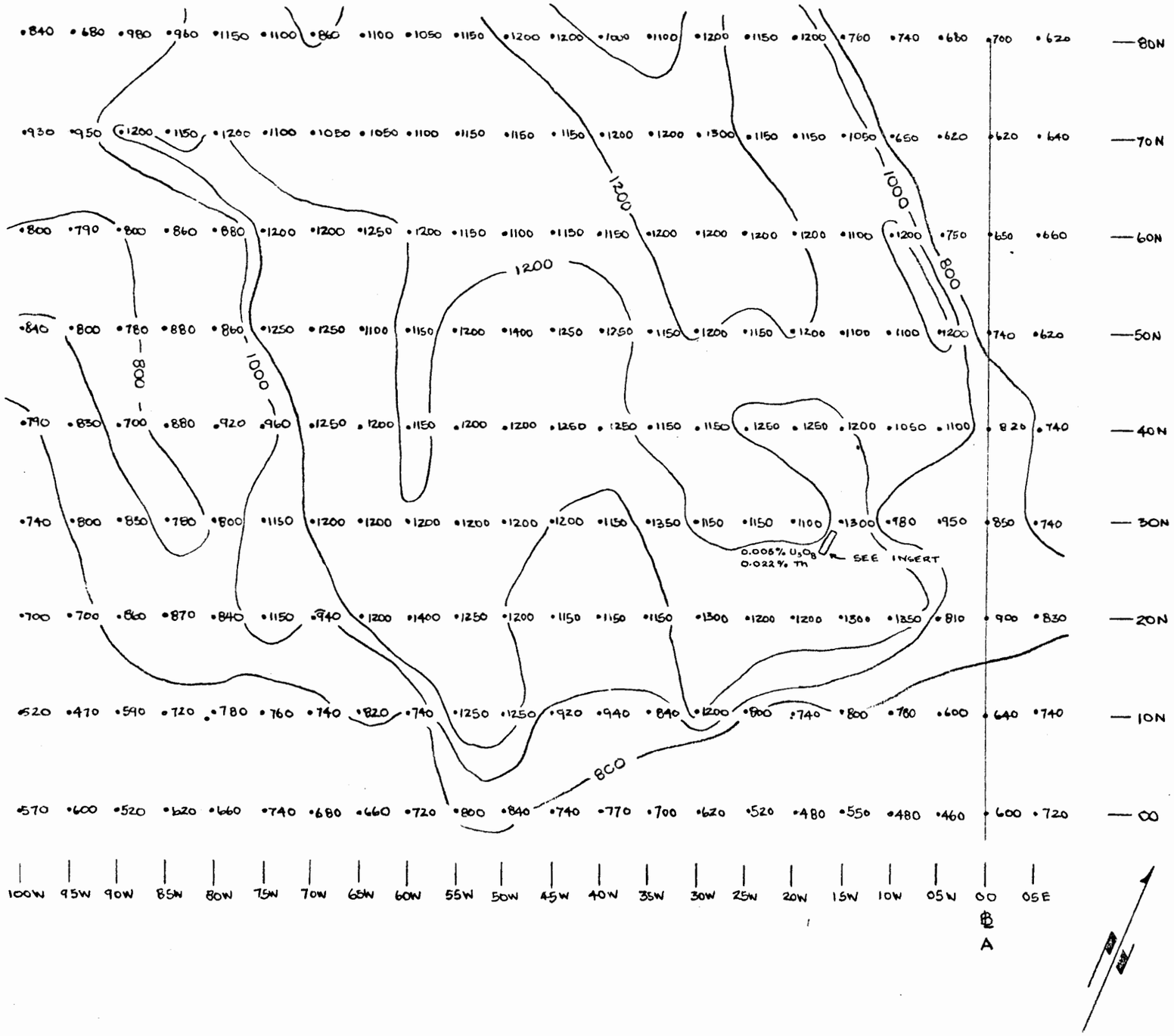
Grid Radiometrics and Prospecting

An 80 by 100 m grid radiometric survey was conducted over an anomalous area located by airborne radiometrics in 1976. The airborne response was 6700/1800 cps as compared to 7125/500 cps for the West Zone. The anomalous area lies about 100 m northwest of the West Zone in a relatively flat, boulder-covered valley. Figure U-NE4 on the following page illustrates the ground response using a Scintrex BGS-1SL scintillometer (43 cc crystal). An area of 70 m by 70 m, open to the northwest, gave about double the background of 400 cps. A few outcrops of monzonite show through the boulders in the anomalous area and a 3 m chip sample across one outcrop assayed 50 ppm U and 220 ppm Th. No secondary uranium minerals were seen on joint surfaces.

Prospecting located a float train of twice background radioactive boulders originating from an inaccessible ridge above Trench NWB. The boulders were composed of coarse grained monzonite porphyry with inclusions of fine grained, weakly foliated, mafic-rich monzonite. Most of the radioactivity is derived from the coarser grained portion. Two chip samples of the float averaged

Dec 23/77

Association of Professional Engineers of the Yukon Territory
A. R. ARCHER
C. R. C.
GEOLOGICAL
ENGINEER



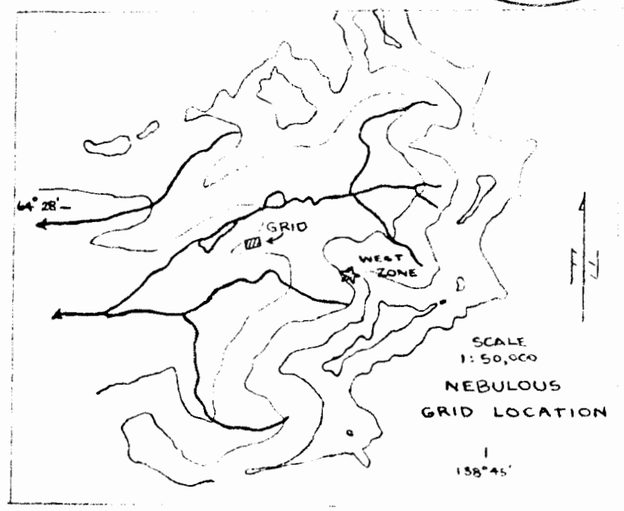


FIGURE U-NE 4

ARCHER, CATHRO AND ASSOCIATES

RADIOMETRICS, ASSAY

LAKE ZONE

NEBULOUS 1-33 CLAIMS

UKON JOINT VENTURE

LEGEND

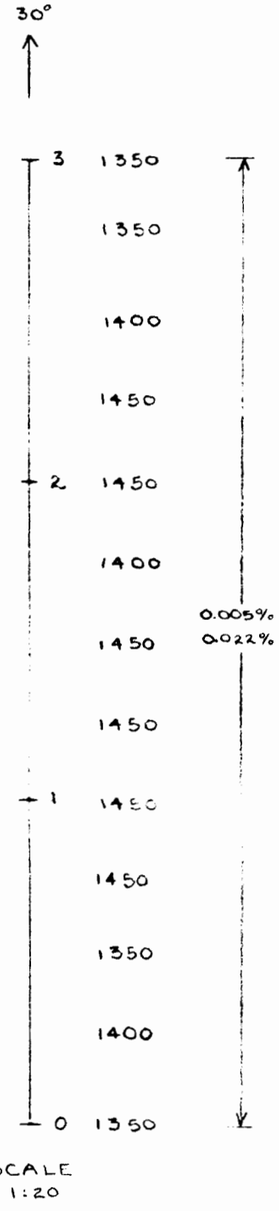
0.005% U_3O_8 / 0.022% Th — CHIP SAMPLE LOCATION AND ASSAYS IN % URANIUM AND % THORIUM

•1200 — RADIOMETRIC STATION AND READING AT WAIST HEIGHT WITH SCINTREX BGS-1SL (43 cc. CRYSTAL)

SCALE 1:500

5 0 5 10 15 20 25
METERS

DETAIL RADIOMETRICS AT CHIP SAMPLE LOCATION



SCALE 1:20

0.021% U_3O_8 and 0.022% Th. The float is not abundant and the source is unlikely to exceed 10 m in width.

CONCLUSIONS AND RECOMMENDATIONS

Most uranium on the Nebulous claims is occurring as a trace element concentration in a zoned monzonite stock. The highest values are found in a porphyritic phase which exhibits weak secondary uranium enrichment due to precipitation of yellow oxides along joint surfaces during weathering. A 10 m long trench from the best area averaged 0.0105% U_3O_8 of which 0.0082% was contributed by the porphyritic monzonite and 0.0023% by secondary enrichment. Substantial tonnages of open pit material with no stripping ratio may be available in this grade range if the secondary enrichment extends to depth.

Additional exploration will require diamond drilling to outline tonnage and grade. A large core size and mud circulation will be required to ensure maximum recovery of secondary oxides. Petrological work and a mill test should precede any drill program to ensure that the uranium in the monzonite is in a recoverable form. Further work will be both expensive and risky and should only be considered on a joint venture or option basis.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES LTD.,

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

ARA:jm