

LIN CLAIMS 1 - 12

CLAIM SHEET 117A2

Latitude 68° 10'N  
Longitude 137° 38'W

AIRBORNE GAMMA-RAY SPECTROMETRY

AND

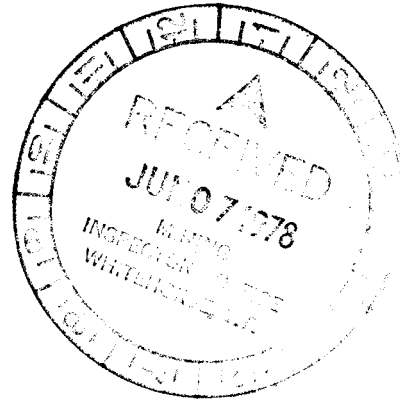
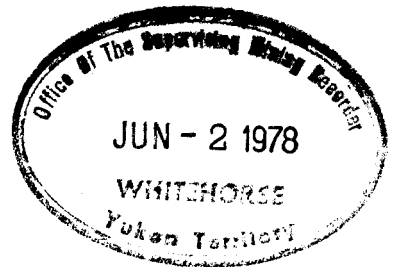
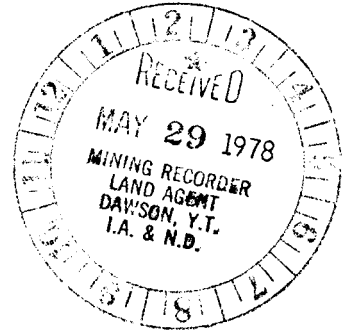
STREAM SEDIMENT GEOCHEMISTRY

1977 JUNE 6, 7, JULY 10, 14

BY

M. F. COWAN

090331



This report has been examined by the  
Geological Department and is recom-  
mended to the Commission to be consid-  
ered as representing a value of

\$1200.00

*J.B. Craig*  
~~Assistant Commissioner of  
Mines and Geology~~

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

*B.R. Baxter*  
B. R. BAXTER  
Supervising Mining Recorder

*J.R. [Signature]*  
Commissioner of Yukon Territory



1.0 LIST OF CLAIMS

Map Sheet 117A2

Latitude 68<sup>0</sup> 10'N  
Longitude 137<sup>0</sup> 38'W

<u>Claim Number</u>	<u>Record Number</u>
Lin 1	YA 10118
2	YA 10119
3	YA 10120
4	YA 10121
5	YA 10122
6	YA 10123
7	YA 10124
8	YA 10125
9	YA 10126
10	YA 10127
11	YA 10128
12	YA 10129

Registered Holder of Lin Claims 1-12 is  
Aquitaine Company of Canada Ltd.

## 2.0 INTRODUCTION

During August, 1976, Aquitaine personnel discovered weak radioactivity in clastic sediments approximately 10 km east-southeast of Bonnet Lake. The Lin claims were subsequently staked the following spring to cover the occurrence. The claims were recorded May 26, 1977.

Stream sediments were collected in June, 1977, from a stream flowing across the southwestern portion of the claims and in July, 1977, an airborne spectrometer survey at a line spacing of approximately 300 m was completed over the claims. A number of weak anomalies were detected during this survey.

## 3.0 AIRBORNE GAMMA-RAY SPECTROMETRY

The airborne survey was made using an Exploranium DGRS-1002 gamma-ray spectrometer and detector comprising two, 24.7 cm x 10.2 cm thallium activated NaI crystals with a total volume of 9046 cm<sup>3</sup>, and a Mars-6 six channel recorder.

The spectrometer and recorder unit were mounted in the center of the rear seat of a Bell 206B Jet Ranger helicopter and the detector was mounted in the rear cargo compartment. A Bonzer radar altimeter was mounted underneath the nose of the helicopter and the altimeter console secured to the instrument panel hood, allowing the pilot to monitor and maintain the required terrain clearance.

The spectrometer survey was conducted at a ground speed of approximately 100 km per hour and an average terrain clearance of 50 m. Line spacing was approximately 300 metres.

### 3.1 RESULTS

As shown by the flight records (in pocket) several anomalous airborne responses were observed during the airborne survey. Anomalies are shown on Figure 2.

### 4.0 STREAM SEDIMENT GEOCHEMISTRY

Eight sediment samples were collected from a stream flowing northwesterly through the southwestern portion of the claim block. They were analyzed fluorometrically for  $U_3O_8$  by Loring Laboratories Ltd. of Calgary.

### 4.1 RESULTS

The stream sediment samples (Figure 3) contained from 0.5 to 0.7 ppm  $U_3O_8$  and are not considered anomalous.

### 5.0 GROUND INVESTIGATION

Areas adjacent to the stream that was sampled were prospected with scintillometers but no anomalous radioactivity was noted. The bedrock

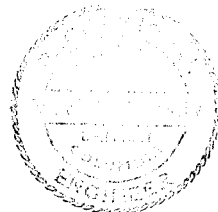
in the area is mainly black shale with lesser quartzite.

The airborne anomaly at 139/13.0 was investigated briefly and found to be caused by weakly radioactive felsenmeer fragments. The fragments comprise white chert, pebble conglomerate with a silica-rich matrix, and dark grey sandstone. Background in the area is 50-150 counts per second measured with an SPP-2NF scintillometer, with spotty radioactivity giving readings up to 700 counts per second.

#### 6.0 CONCLUSIONS AND RECOMMENDATIONS

Weak radioactivity on the Lin Claims is associated with white chert, pebble conglomerate, and grey sandstone. Most of the anomalies detected during the airborne spectrometer survey have not been checked on the ground.

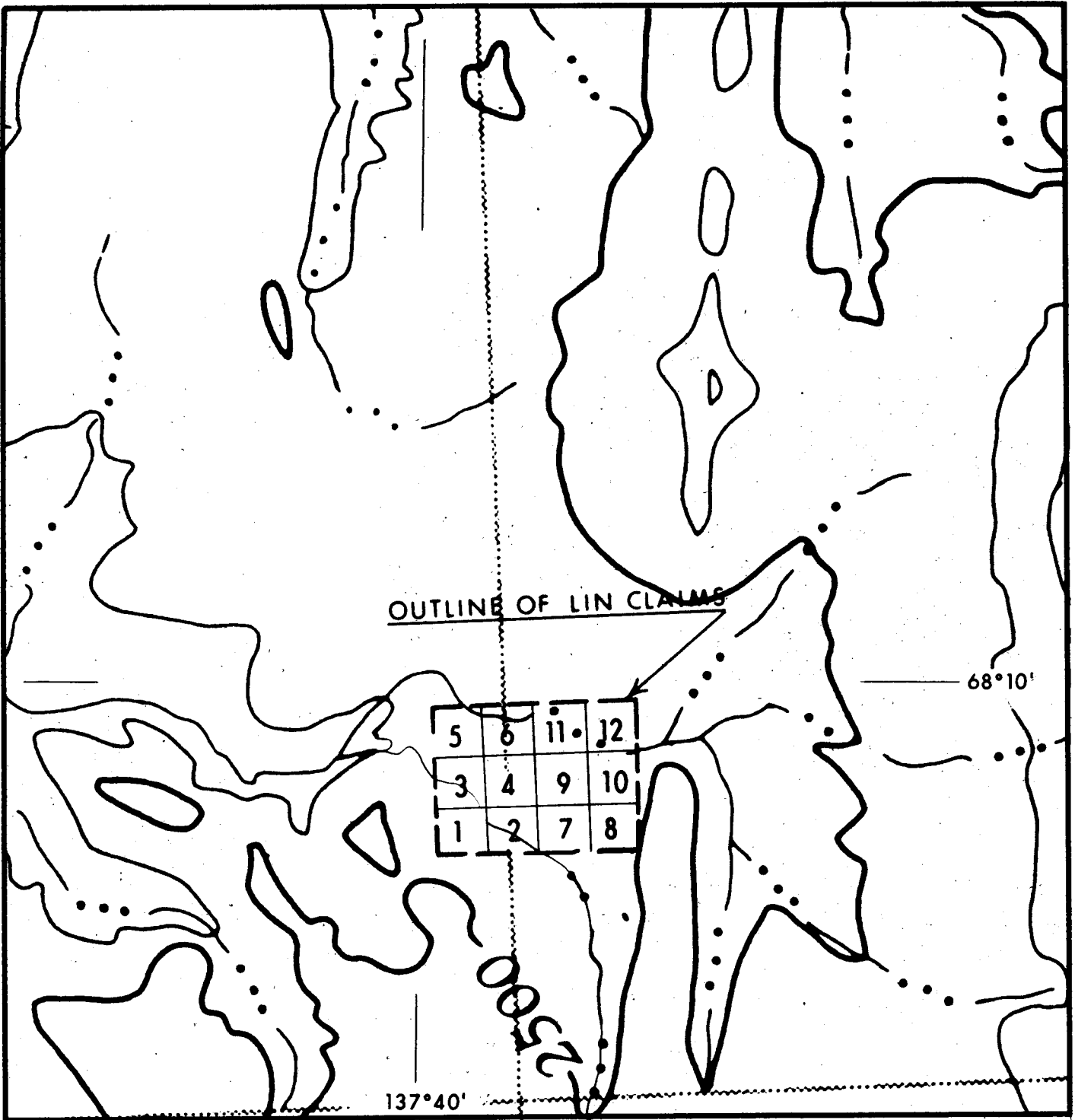
It is recommended that these anomalies be investigated by prospecting and detailed ground scintillometry in order to assess their significance.



*M.A. Cowan P. Eng.*


APPENDIX 1

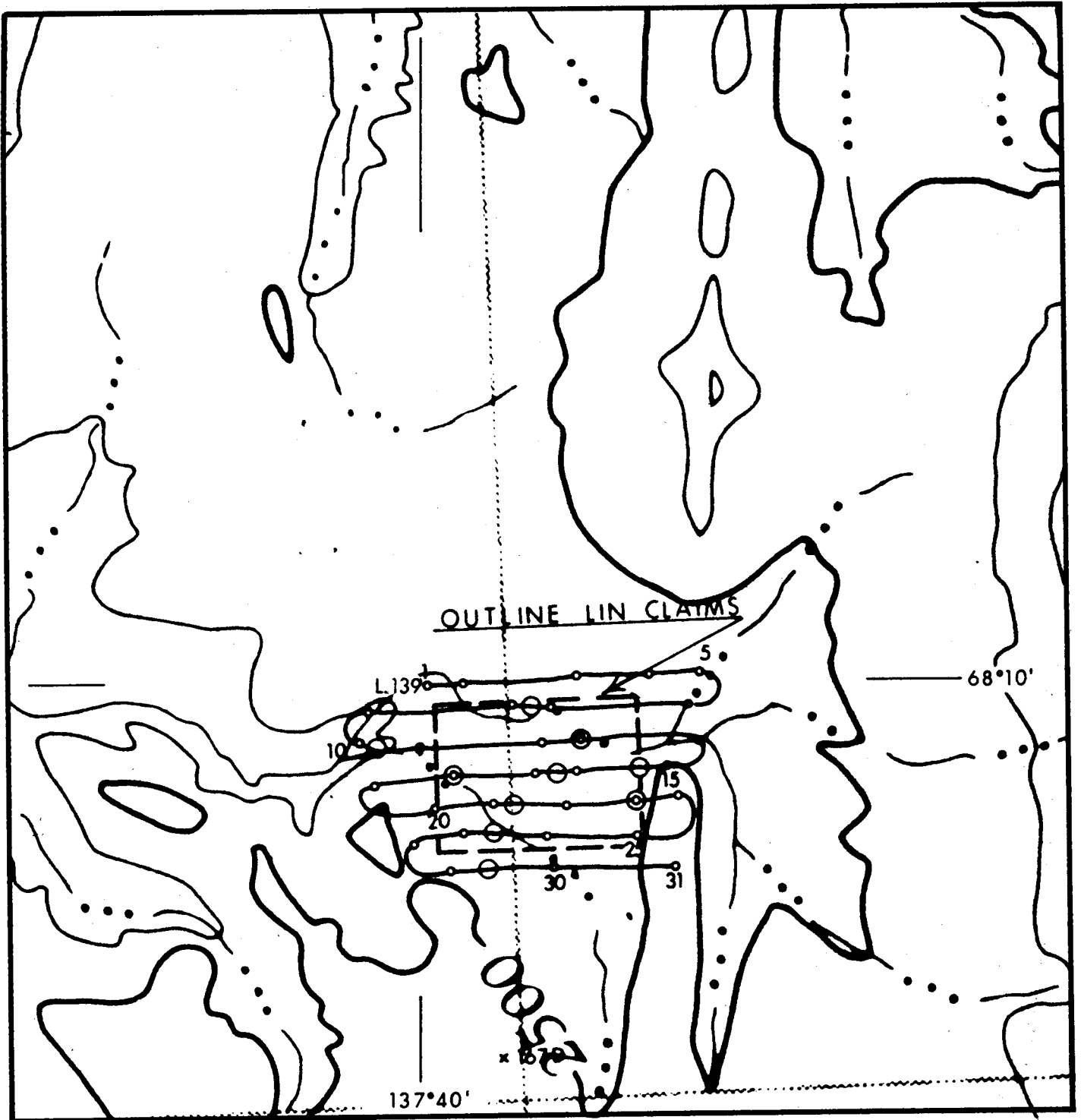
FIGURES 1, 2, 3




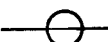
Scale 1:50,000

Contour Interval 500 Feet

 <b>AQUITAINE COMPANY OF CANADA LTD.</b>		
<b>LIN CLAIMS</b> <b>LOCATION MAP</b>		
<b>DATE.</b> 1977	<b>NTS.</b> 117A/2	<b>FIGURE NO.</b> 1




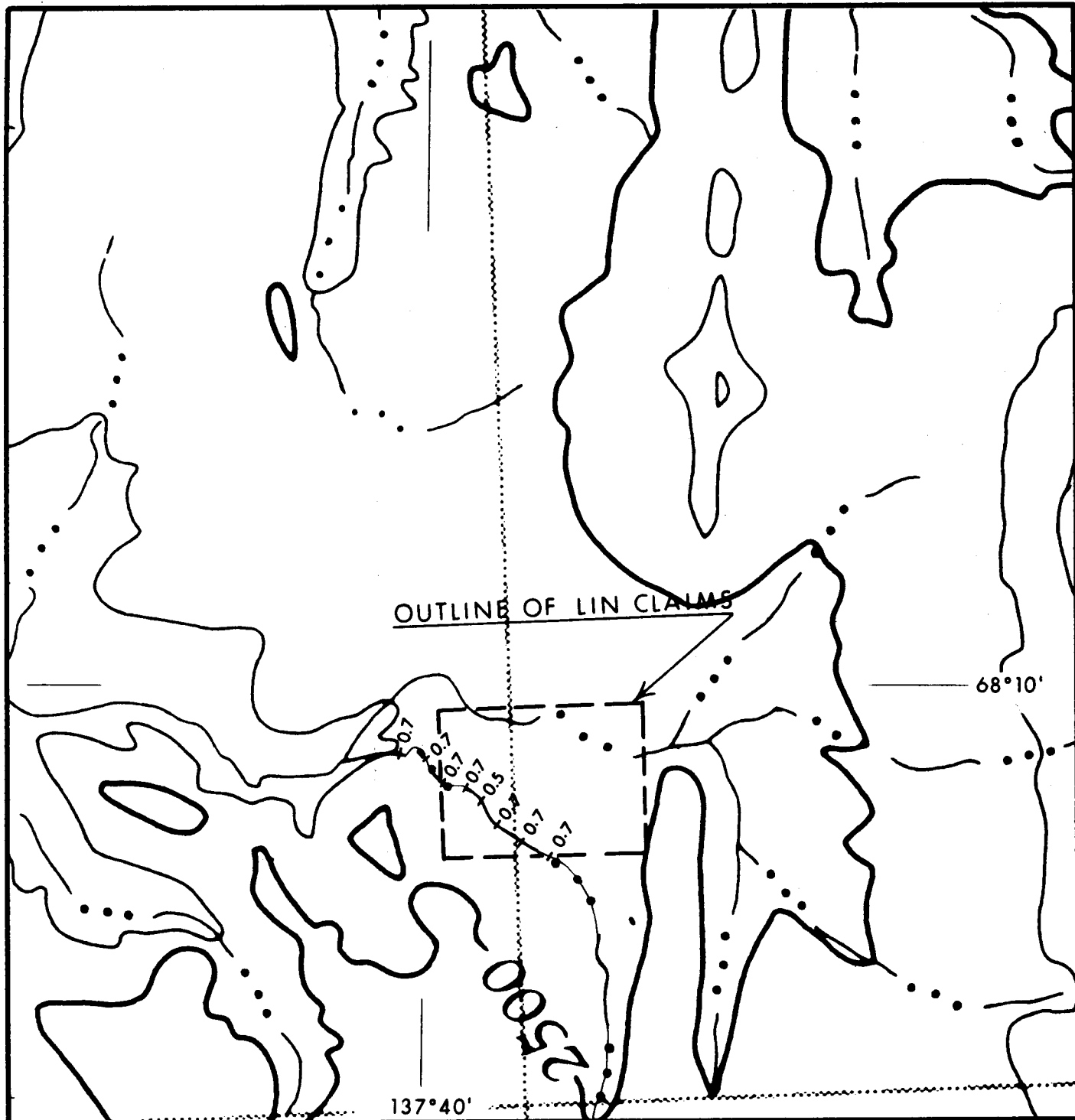
Scale 1:50,000

-  Flightline with fiducial points
-  Anomaly, between fiducial points, at fiducial point

Contour Interval 500 Feet

**FLIGHTLINE 139,**


 <b>AQUITAINE COMPANY OF CANADA LTD.</b>		
<b>LIN CLAIMS</b> <b>AIRBORNE SPECTROMETER</b> <b>SURVEY</b>		
<b>DATE</b> 1977	<b>NTS</b> 117A/2	<b>FIGURE NO.</b> 2

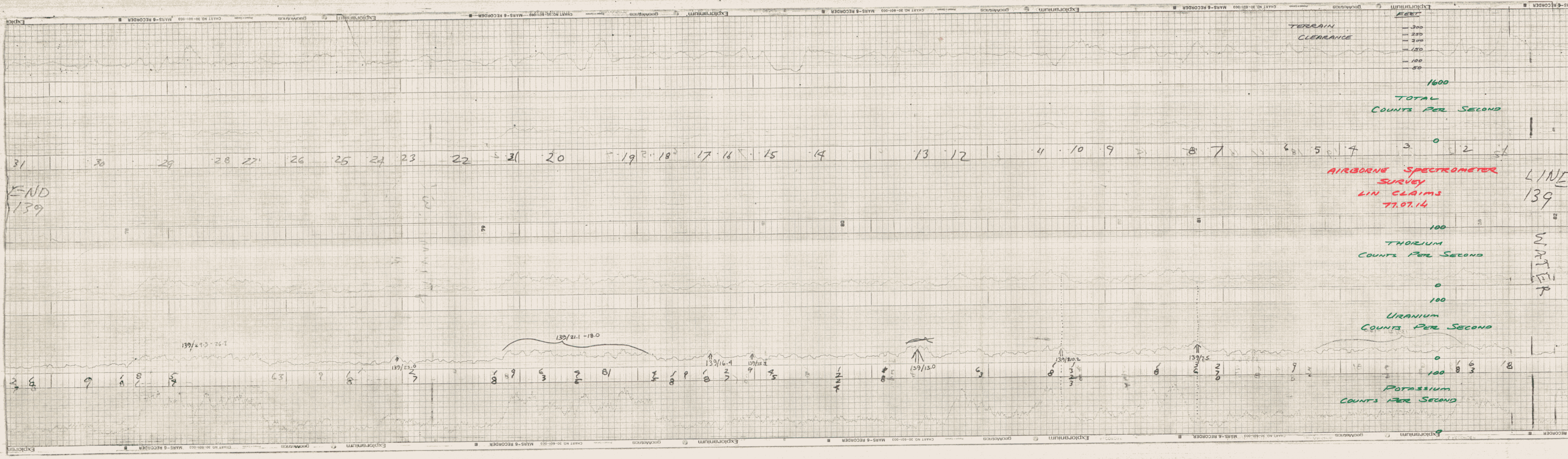


Scale 1:50,000

Contour Interval 500 Feet

0.7 ppm  $U_3O_8$  in stream sediments

 <b>AQUITAINE COMPANY OF CANADA LTD.</b>		
<b>LIN CLAIMS</b>		
<b>STREAM SEDIMENT GEOCHEMISTRY</b>		
<b>DATE.</b> 1977	<b>NTS.</b> 117A / 2	<b>FIGURE NO.</b> 3



END  
139

AIRBORNE SPECTROMETER  
SURVEY  
LIN CLAIMS  
77.07.14

LINE  
139

WATER

139/24.3 - 26.7

139/23.0

139/21.1 - 18.0

139/16.4

139/15.2

139/13.0

139/10.2

139/7.5

WATER