

REPORT ON 1977 FIELD PROGRAMME
JOVE 1-16 CLAIMS

DAWSON MINING DISTRICT, Y.T.

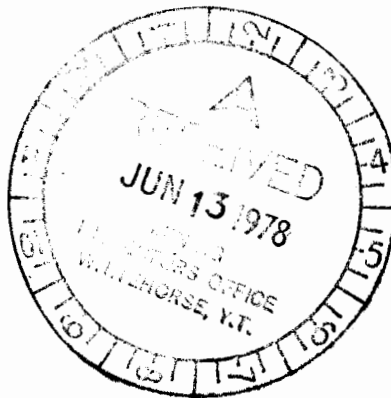
CLAIM SHEETS 115 N/9, 115 N/10

Lat. $63^{\circ}43'N$ Long. $140^{\circ}31'W$

November 1977

W.J. Olsson

Geologist



090343

TABLE OF CONTENTS

	<u>Page</u>
1 - INTRODUCTION	1
1.1 - Location and Access	1
1.2 - Outcrop and Vegetation	1
1.3 - Previous Work	2
2 - 1977 FIELD PROGRAMME	3
2.1 - Introduction	3
2.2 - Objectives	5
2.3 - Logistics	5
2.4 - Geophysics - Radiometric	6
2.5 - Geochemistry - Soils	6
3 - RESULTS	7
3.1 - Geophysics - Radiometric	7
3.2 - Geochemistry - Soils	8
3.3 - Discussion	9
4 - CONCLUSIONS	10
5 - RECOMMENDATIONS	10

APPENDIX A

Certificates of Analysis, Chemex Labs Ltd.
for Jove Grid

LIST OF ILLUSTRATIONS

Figure

		Opposite Page
1	Location Map, Jove Claims (1" = $\frac{1}{2}$ mile)	<u>1</u>
2	Location Map, Jove Claims 1-16 (1:50,000)	5
3	Jove Grid Area	6
4	Jove Grid, Relief-Drainage Map	In Pocket
5	Jove Grid - Geophysics - Radiometric	In Pocket
6	Jove Grid - Geochemistry - Soils	In Pocket

1. - INTRODUCTION

1.1 - Location and Access

The Jove property consists of Jove 1-16 claims and is situated 70 km southwest of Dawson City in the Dawson Range near the headwaters of Glazy Creek, a tributary of Matson Creek (140° 31'W long. 63° 43' N lat.) in the Yukon Territory (NTS ref. 115 N/10, 115 N/9).

Access to the area is by all-weather gravel road to Dawson and from there by float-equipped, fixed-wing aircraft to the mouth of Sixty Mile River on the Yukon River. From that point, the property can be reached by helicopter.

1.2 - Outcrop and Vegetation

The Dawson Range is an area of unglaciated mountain terrain. Outcrop exposure is less than 5%. Slopes are thickly covered with alder and poplar on the south faces with pine and thick moss covering the permafrost areas facing north. The area above tree line is heavily covered with buckbrush as are most of the stream valleys. Well used game trails are common along most creeks.

Topography in the immediate area of the Jove claim block consists of rolling mountains with changes in elevation in the order of 760 metres over 4.5 kilometers. The entire claim block is located on one south-facing slope and for the most part is above the tree line. Buckbrush cover is heavy over the grid.

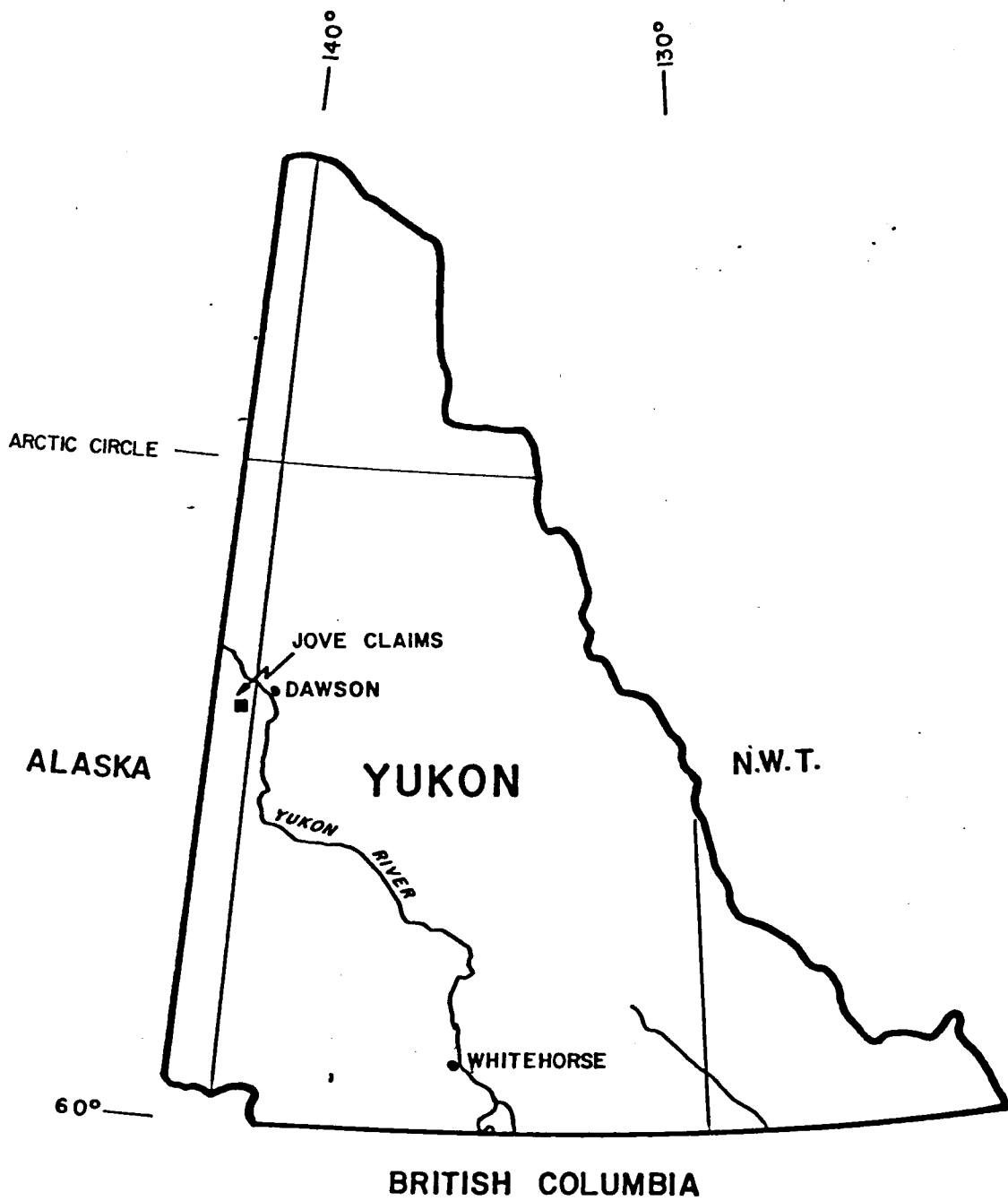
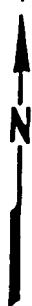


FIG. 1



LOCATION MAP

JOVE CLAIMS

(JOVE 1-16)

SCALE: 1" = 120 mi

1.3 - Previous Work

The geology of the Matson Creek - Sixty Mile River area is reported by D.J. Tempelman-Kluit in GSC Paper 73-41 entitled "Reconnaissance Geology of Aishihik Lake, Snag and part of Stewart River Map-Areas, West Central Yukon".

The schists and gneisses of the Yukon Group are metamorphosed to the upper green schist facies and have a well developed foliation. The age of these rocks is unknown but the unit was metamorphosed with other rocks and therefore is Paleozoic and/or older.

Several granite bodies mapped as Coffee Creek Granite are found within the Snag map area of the Yukon. The granite, considered to be Cretaceous in age, is homogeneous, massive, coarse-grained and equigranular. Equal amounts of smokey quartz and feldspar are present. Biotite and muscovite together comprise up to 5% of the unit and occurs as small euhedral flakes interstitial to the quartzo-feldspathic constituents.

Placer gold has been mined from the Sixty Mile River (30 km north west of the property) since 1892. Production to date is over 213,000 ounces of fine gold. Today several companies are active in placer operations in the area.

2. - 1977 FIELD PROGRAMME

2.1 - Introduction

Reconnaissance work over the summer resulted in the staking of 16 mineral claims in 2 stages. Samples obtained over the anomaly during staking operations warranted further investigation. A follow-up programme was initiated towards the end of the season to obtain information regarding the anomaly in order that a detailed programme for 1978 could be designed.

Personnel involved with the initial phases of the work carried out were: Colin Riley, Senior Geologist, William Olsson, geologist, Eric Onasick, geologist and Jack Dennett, prospector. A Bell 47G3B helicopter on contract from Trans North Turbo Air Ltd., Whitehorse, was piloted by Ron Dennett.

The project was managed by Archer, Cathro and Associates, Consulting Geologists, under the supervision of A. Archer. A campsite was established 1 km from the Yukon-Alaska border along the "Top of the World" highway.

Ground prospecting - sampling traverses were carried out by personnel equipped with either a Scintrex BGS-1L scintillometer or a McPhar TV-1A spectrometer. Water, stream sediment and soil samples were obtained on traverse and were submitted to Chemex Labs Ltd. in North Vancouver for analysis. Values for U, F, Mo, Cu and LOI were obtained from

soil and sediment samples while U, HCO₃, SO₄, and pH determinations were carried out on the water samples.

The uranium analyses for water were obtained by a standard fluormetric method on an acidified, 100 ml sample. Values for uranium in soils were determined by a standard fluormetric method on a .25 gm sample of ashed, double acidified, minus 80 mesh fraction. The copper and molybdenum content of samples were obtained using atomic absorption spectrometry of a nitric perchloric extraction of a minus 80 mesh fraction.

Airborne hound-dogging over anomalous areas was carried out utilizing a Scintrex 113 cubic inch crystal connected to a Scintrex GAD-4 spectrometer. The unit was mounted in the helicopter and was connected to a Fisher 2- channel chart recorder capable of recording any two of Th, U, K and total count.

Some stream sediment samples obtained during the first ground traverse on Glazy Creek were high in uranium content (308 ppm U and 200 ppm U). A subsequent airborne traverse located an anomaly in a draw on the north side of Glazy Creek. Due to the association of high uranium values in silts with the airborne anomaly, 8 claims (Jove 1-8) were staked. At the end of September, a second radiometric anomaly was detected with the helicopter to the east of claims Jove 1-8. An additional 8 claims (Jove 9-16) were staked to cover this area. A list of the claims, their corresponding grant number, the dates on which they were staked and by whom is presented as Table I.

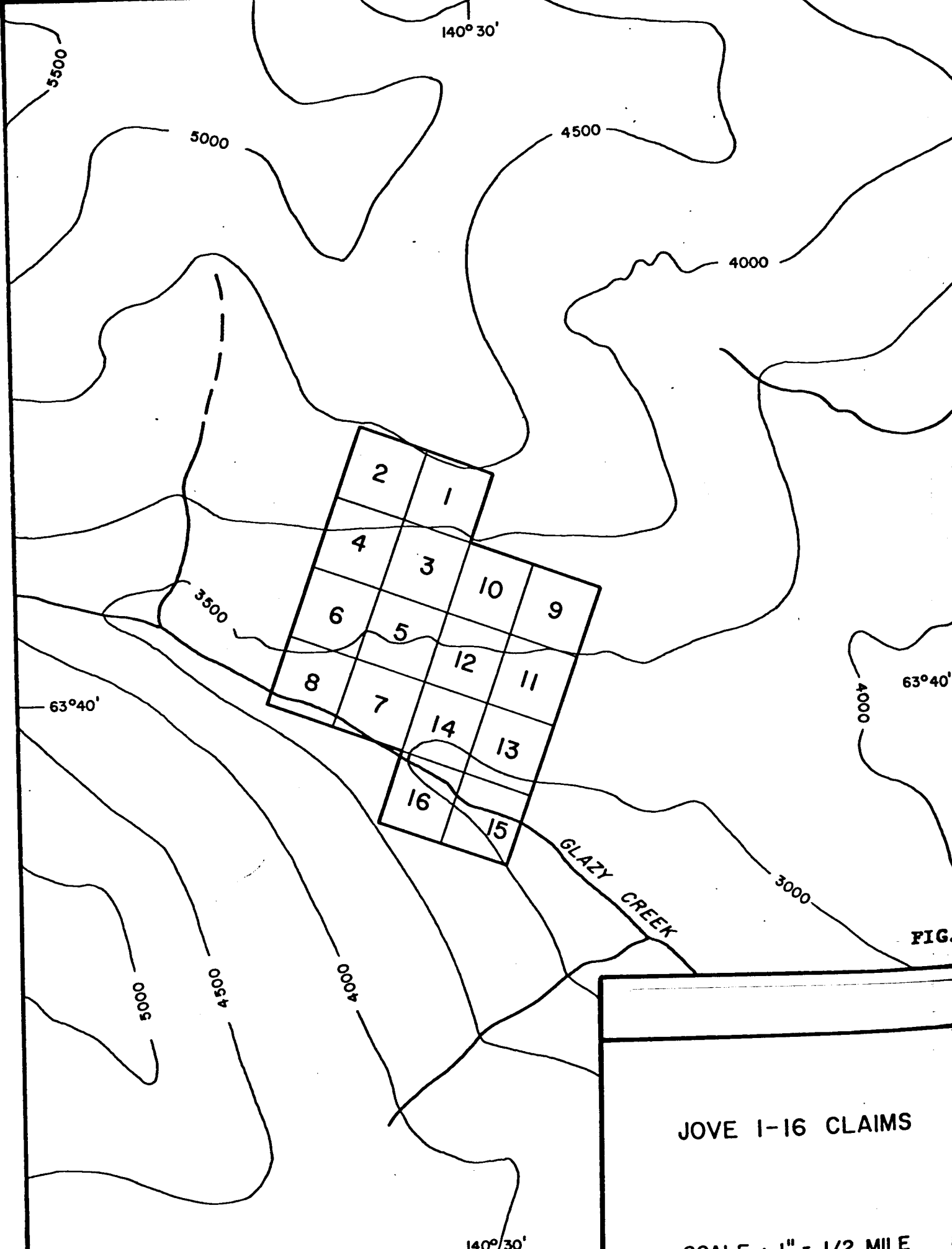


FIG.

JOVE 1-16 CLAIMS

SCALE : 1" = 1/2 MILE

TABLE I

Claim	Grant Number	Date Staked	Staker
Jove 1-8	YA 10220-YA10 ² 027	2 June 1977	E. Onasick
Jove 9-16	YA 10756-YA10763	27 Sept.1977	R.G. Warner

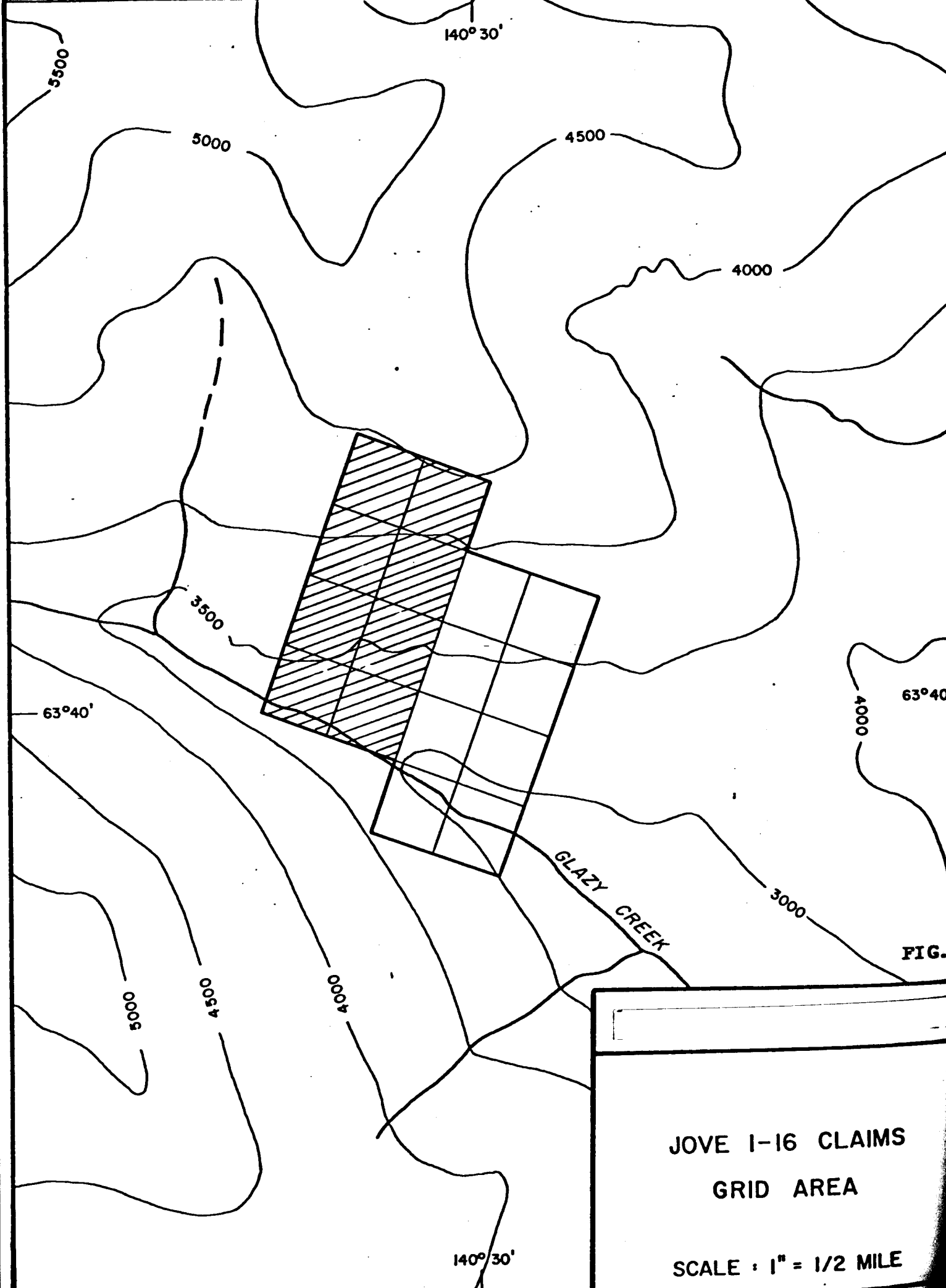
2.2 - Objectives

In late September, a three-man crew working out of Dawson City ran a soil geochemistry and radiometric survey over the claim group Jove 1-8. The purpose was to obtain sufficient data so a detailed follow-up programme for 1978 could be designed.

2.3 - Logistics

Mobilization of men and equipment was to Dawson City by truck. Daily transport to the grid was provided by a Bell G473B helicopter or a Bell 206B Jet Ranger. Logistical support was provided by Archer, Cathro and Associates while the work was carried out under the supervision of William Olsson, geologist. Jack Dennett and Rob Warner, prospectors, provided field assistance.

One baseline was established by chaining (slope-corrected) and compass along the claim line Jove 1-8. Stations were located at 100 meter intervals from which cross-lines were run by topofil and compass. Soil samples and radiometric



140° 30'

5500

5000

4500

4000

3500

63° 40'

63° 40'

4000

GLAZY CREEK

3000

5000

4500

4000

FIG.

JOVE 1-16 CLAIMS

GRID AREA

SCALE : 1" = 1/2 MILE

140° 30'

readings were taken along these lines at 100m and 25m spacings, respectively. Rock chips were obtained from the C-horizon at the soil stations sampled. These chips are to provide a nucleus for establishing a preliminary geological map of the area.

2.4 - Geophysics - Radiometric

A scintillometer survey was carried out in conjunction with a geochemical survey. Readings were taken at 25 meter intervals using Scintrex BGS-1L instruments.

2.5 - Geochemistry - Soils

Soil samples were taken at 100 metre spacings along the cross lines, with a total of 159 samples obtained. Soil cover varied from 15 cm to over 1m thick. The organic content of the samples tends to be high in areas influenced by stream sediments. A pit was dug at (28 00N, 40 50W) to a depth of 70 cm where boulders were encountered. Three soil samples representative of the soil profile were obtained. The organic content of these samples appeared low.

All samples were submitted to Chemex Labs Ltd. in North Vancouver, B.C. for uranium analysis by standard fluorimetric. The lower detection limit of the method is .5 ppm U while the upper limit is 400 ppm U. Samples greater than 400 ppm U were automatically submitted for chemical analysis. Copies of the sample number with the analytical result is submitted as Appendix "A".

3. - RESULTS

3.1 - Geophysics - Radiometric

The contoured, radiometric data from the Jove grid delineates several north-south trends to the basement. Contour intervals were arbitrarily chosen based on observation in the field. They are:

0 - 150 cps
150 - 200 cps
200 - 250 cps
250 - 300 cps
300 cps

The threshold is considered to be 125 cps while the highest reading is 550 cps. The most obvious anomaly lies between 25 00N and 29 00N from station 40 00W to 41 00N. A comparison of the radiometric map with the relief- drainage map, shows the radiometric anomaly lies west of the main stream in the draw north of the river. A weaker more dispersed anomaly lies along the strike and to the north of the major anomaly (at 32 00N, 43 00W). To the east of the baseline, a linear North-South trend in the basement is reflected in the radiometric data. It should be noted that this area is in the direction of the second airborne anomaly which was covered with claims Jove 9-16. Further work must be carried out to test any relationship between the two airborne anomalies.

3.2 - Geochemistry - Soils

Geochemical data was arbitrarily contoured using the following intervals:

.5 ppm U
.5 ppm U - 5 ppm U
5 ppm U - 10 ppm U
10 ppm U

The density of the geochemical sampling programme relative to that of the radiometric survey was 4 times lower. The contoured results therefore tend to provide a more dispersive anomaly on the grid. There is a strong geochemical anomaly in the area of the major radiometric anomaly. The influence of the stream has shifted the geochemical anomaly slightly to the west and has centered it on the baseline.

Several "spot anomalies" consisting of one high soil sample are dotted throughout the grid. The majority of these sample locations are in the eastern half of the grid. Table II has the "spot anomalies" documented.

TABLE II

Spot Anomaly #	Coordinates				Value
1	40	00N	39	00W	16 ppm U
2	37	00N	37	00W	14 ppm U
3	34	00N	43	00W	16 ppm U
4	33	00N	38	00W	10 ppm U
5	31	00N	37	00W	10 ppm U
6	31	00N	39	00W	10 ppm U
7	27	00N	37	00W	10 ppm U

Anomalies 2, 5 and 7 all appear at 37 00N on their respective lines. This trend parallels a weak radiometric anomaly noted previously. Anomalies 5 and 7 are located over this radiometric anomaly

Spot anomaly 3 does not occur over a radiometric anomaly but it does occur along strike of a line joining the major radiometric anomaly with a weaker one at (32 00N, 43 00W).

3.3 - Discussion

Detailed ground follow-up work has located a sharp radiometric and geochemical anomaly on the Jove claims thereby confirming and delineating the airborne anomaly detected earlier in the summer.

The radiometric anomaly is offset to the west of a drainage gully whereas the geochemical anomaly is centered about that gully. The offsetting of the soil anomaly relative to the radiometric anomaly is due to a combination of:

- (a) the influence of organic matter associated with the stream.
- (b) the influence of a lower sampling density of the geochemical survey on the plotted data.

Samples obtained from a pit at (28 00N, 40 50W) represented a profile through the soil horizon. The analytical values were 150 ppm U, 240 ppm U and 135 ppm U from top to bottom respectively (to a depth of 1 metre).

4. - CONCLUSIONS

The results of the 1977 programme carried out on the Jove claims has led to the following conclusions:

1. Radiometric anomalies on Jove 1-8 claims do not appear to be influenced to any extent by the drainage features.
2. The geochemical anomalies on Jove 1-8 show obvious influence by drainage features.

5. - RECOMMENDATIONS

Recommendations based on the above discussions and conclusions are:

1. The geochemical-radiometric survey over Jove 1-8 be extended to cover Jove 9-16.
2. All radiometric and geochemical anomalies be investigated further with emphasis on the major anomalous area in the south central portions of the grid.
3. Additional geochemistry be carried out to further assess any influence permafrost may exert on the geochemical cycle of the area.

W.J. Olsson

APPENDIX A

CERTIFICATES OF ANALYSIS, CHEMEX LABS LTD.
FOR JOVE GRID



CHEMEX LABS LTD.

217 BROOKBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 885-6648
 AREA CODE: 604
 TELEX: 043-62697

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Archer Cathro & Assoc. Ltd.,
 1016 - 510 W. Hastings St.,
 Vancouver, B.C.

CERTIFICATE NO. 42200
 INVOICE NO. 22235
 RECEIVED Sept. 28/77
 ANALYSED Oct. 8/77

ATTN: EYP WATERS

SAMPLE NO. :	PPB "	PPB "	pH	PPM O ₃	PPM SO ₄
I 12691W	0.3	10	5.7		5
13642W ✓	2.2	10	6.6		10

SAMPLE NO. :	PPM Uranium
H 13623S	< 0.5
13624S	< 0.5
13625S	.105
13626S	1.5
13627S	1.0
13628S	1.0
13629S	1.0
13630S	3.0
13631S	10
13632S	1.0
13633S	1.5
13700	3.0
13701	< 0.5
13702	140
13703	1.0
13704	5.0
13705	1.5
13706	1.5
13707	1.5
13708	1.5
13709	3.0
13710	3.0
13711	80
13712	65
13713	110
13714	100
13715	3.0
13716	1.5
13717	1.5

	ppb U	ppb F ⁻	pH	ppm SO ₄
13642W	2.2	10	6.6	10



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-62597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Archer Cathro & Assoc. Ltd.,
 1016 - 510 W. Hastings St.,
 Vancouver, B.C.

CERTIFICATE NO. 42198
 INVOICE NO. 22212
 RECEIVED Sept. 28/77
 ANALYSED Oct. 6/77

ATTN: 'EYP'

SAMPLE NO. :	PPM Uranium
H 13583	1.0
13584	3.0
13585	<0.5
13586	<0.5
13587	<0.5
13588	2.0
13589	1.0
13590	2.0
13591	2.0
13592	4.5
13593	3.5
13594	<0.5
13595	4.0
13596	1.5
13597	1.5
13598	<0.5
13599	<0.5
13600	<0.5
13601S	1.0
13602S	1.0
13603S	0.5
13604S	10
13605S	1.0
13606S	2.0
13607S	1.0
13608S	2.0
13609S	3.0
13610S	1.0
13611S	3.5
13612S	10
13613S	2.0
13614S	10
13615S	4.5
13616S	1.0
13617S	1.0
13618S	1.0
13619S	2.5
13620S	1.0
13621S	2.0
H 13622S	<0.5
Std.	21



MEMBER

CERTIFIED BY: *[Signature]*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 085-0648
AREA CODE: 604
TELEX: 043-52597

ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

Archer Cathro & Assoc. Ltd.,
1016 - 510 W. Hastings St.,
Vancouver, B.C.

CERTIFICATE NO. 42193
INVOICE NO. 22212
RECEIVED Sept. 28/77
ANALYSED Oct. 6/77

SAMPLE NO. :	'EYP'	PPM
		Uranium
13361	<0.5	
13362	<0.5	
13363X	65	
13364	13	
13365	1.5	
13366	6.0	
13367	1.0	
13368	22	
13369	3.5	
13370	1.0	
13371	2.0	
13372	<0.5	
13373	7.0	
13374	1.0	
13375	2.5	
13376	150	JOVE
13377	240	Pit
13378	135	HASL ↓

CERTIFICATE OF ASSAY

TO: Archer Cathro & Assoc. Ltd.,
1016 - 510 W. Hastings St.,
Vancouver, B.C.
VGR: 1L8

CERTIFICATE NO. 33149
INVOICE NO. 22469
RECEIVED October 12, 1977
ANALYSED October 31, 1977

EYP

SAMPLE NO. :	Z	U ₃₀₈
H 10944S		0.090
H 10945S		0.064
H 10946S		0.110

love B.



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 986-0648
 AREA CODE: 604
 TELEX: 043-62597

ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Archer Cathro & Assoc. Ltd.,
 1016 - 510 W. Hastings St.,
 Vancouver, B.C.

CERTIFICATE NO. 42192
 INVOICE NO. 22212
 RECEIVED Sept. 28/77
 ANALYSED Oct. 6/77

ATTN: 'EYP'
 PPM
 Uranium

CERTIFICATE OF ASSAY

TO: Archer Cathro & Assoc. Ltd.,
 1016 - 510 W. Hastings St.,
 Vancouver, B.C.
 VGR: 1L8

CERTIFICATE NO. 33149
 INVOICE NO. 22469
 RECEIVED October 12, 1977
 ANALYSED October 31, 1977

EYP

SAMPLE NO. :	%
	U ₃ O ₈
H 10944S	0.090
H 10945S	0.064
H 10946S	0.110

love B

0.056% U₃O₈

13353	14- [✓] <i>swe</i> ↓
13354	<0.5
13355	<0.5
13356	<0.5
13357	<0.5
13358	1.0
13359	<0.5
H 13360X	<0.5
Std.	21

CTA

MEMBER

CERTIFIED BY: *[Signature]*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO: Archer Cathro & Assoc. Ltd.,
 1016 - 510 W. Hastings St.,
 Vancouver, B.C.

CERTIFICATE NO. 42188
 INVOICE NO. 22212
 RECEIVED Sept. 28/77
 ANALYSED Oct. 6/77

ATTN:

'EYP'

SAMPLE NO. :

13168S	16 -
13169S	<0.5 ✓
13170S	2.0 ✓
13171S	0.5 ✓
13172S	<0.5 ✓
13173S	2.0 ✓
13174S	0.5 ✓
13175S	0.5 ✓
13176S	1.5 ✓
13177S	1.0 ✓
13178S	<0.5 ✓
13179S	<0.5 ✓
13180S	0.5 ✓
13181S	<0.5 ✓
13182S	<0.5 ✓
13183S	14 -
13184S	1.5 ✓
13185S	1.0 ✓
13186S	2.5 ✓
13187S	<0.5 ✓
13188S	1.0 ✓
13189S	3.5 ✓
13190S	3.5 ✓
13191S	0.5 ✓
13192S	4.0 ✓
13193S	2.0 ✓
13194S	1.5 ✓
13195S	0.5 ✓
13196S	0.5 ✓
13197S	1.0 ✓
13198S	<0.5 ✓
13199S	<0.5 ✓
H 13200S	1.0 ✓
Std.	21

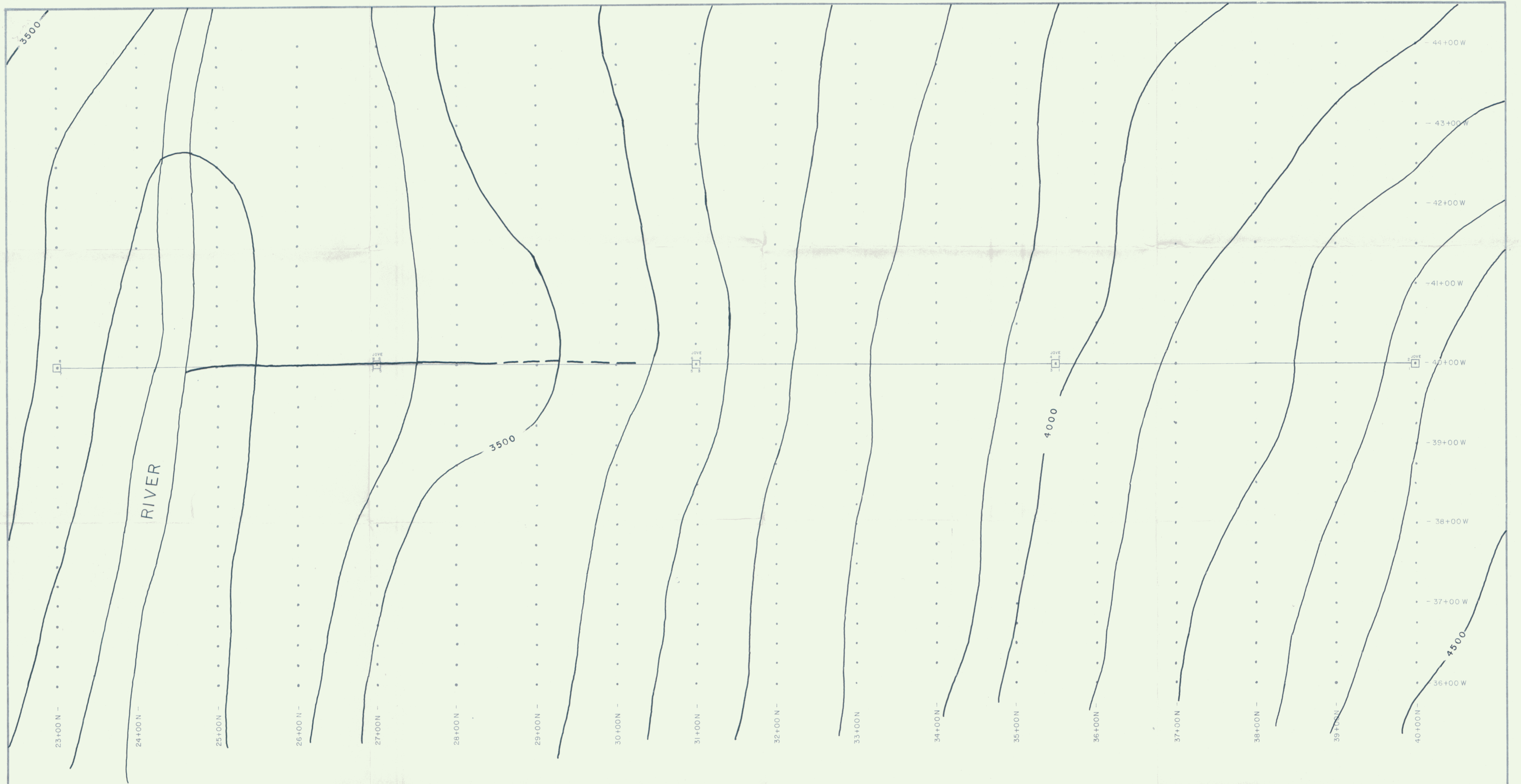
TOUR

67



MEMBER
 CANADIAN TESTING

CERTIFIED BY:



LEGEND

- station
- stream
- relief contour
- claim posts

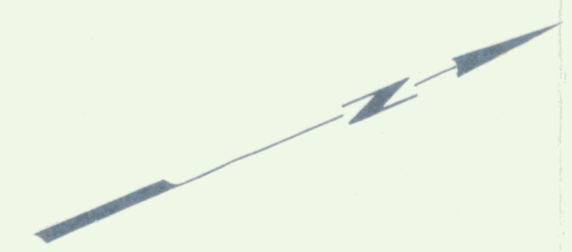
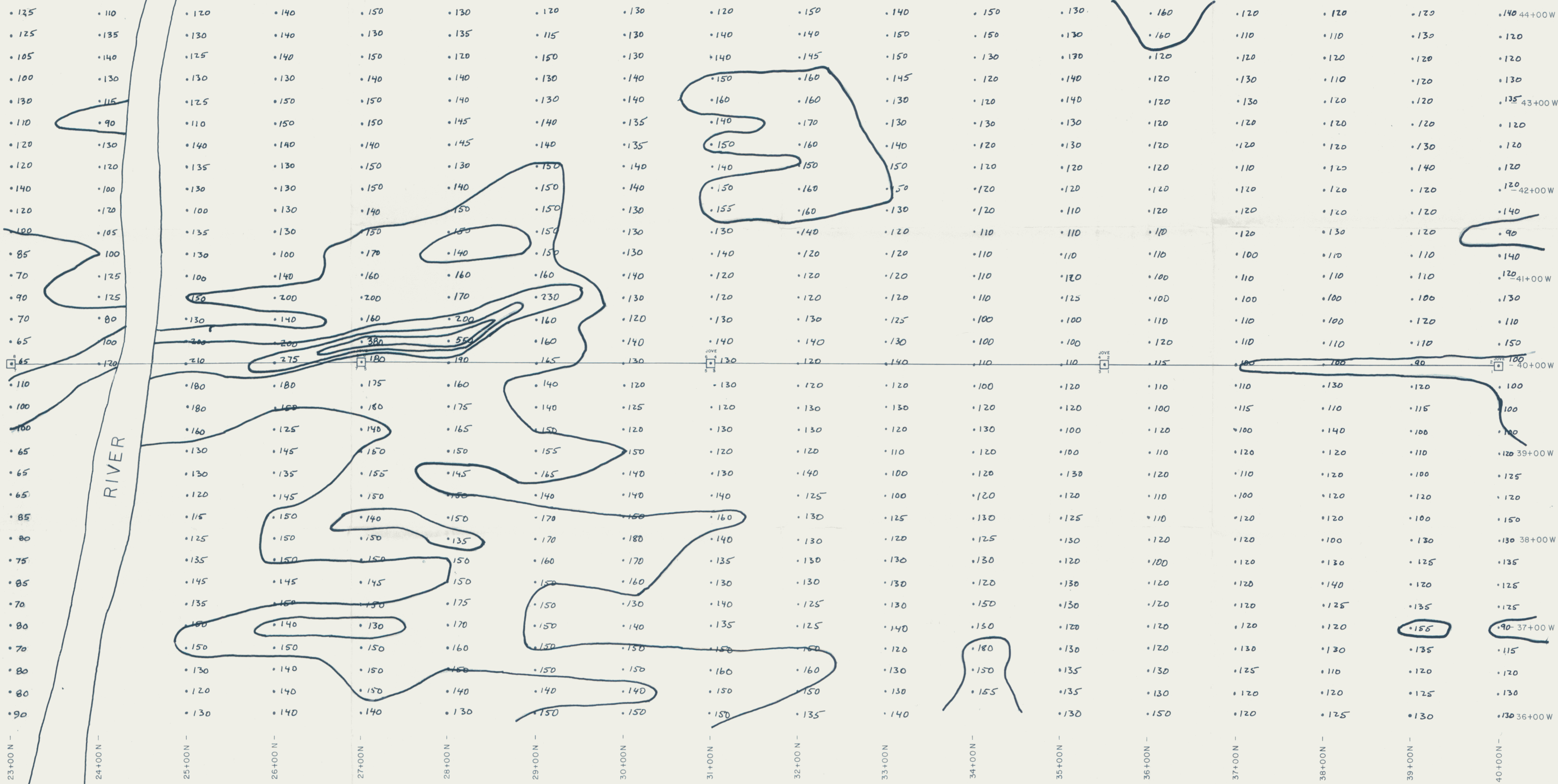


FIG. 4

PROJECT 522
 JOVE GRID
 Yukon Territory
 RELIEF-DRAINAGE MAP
 SCALE 1:2,500
 090343
 SEPT 1977



- LEGEND**
- baseline
 - claim posts
 - 130 scint reading (CPS)
 - radiometric contour
 - 0-150 CPS
 - 150-200 "
 - 200-250 "
 - 250-300 "
 - > 300 "

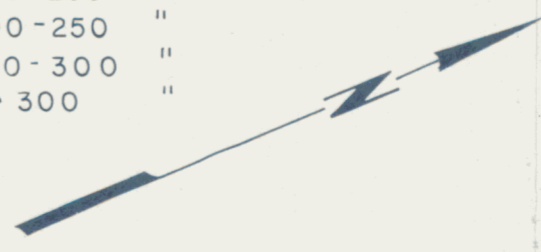
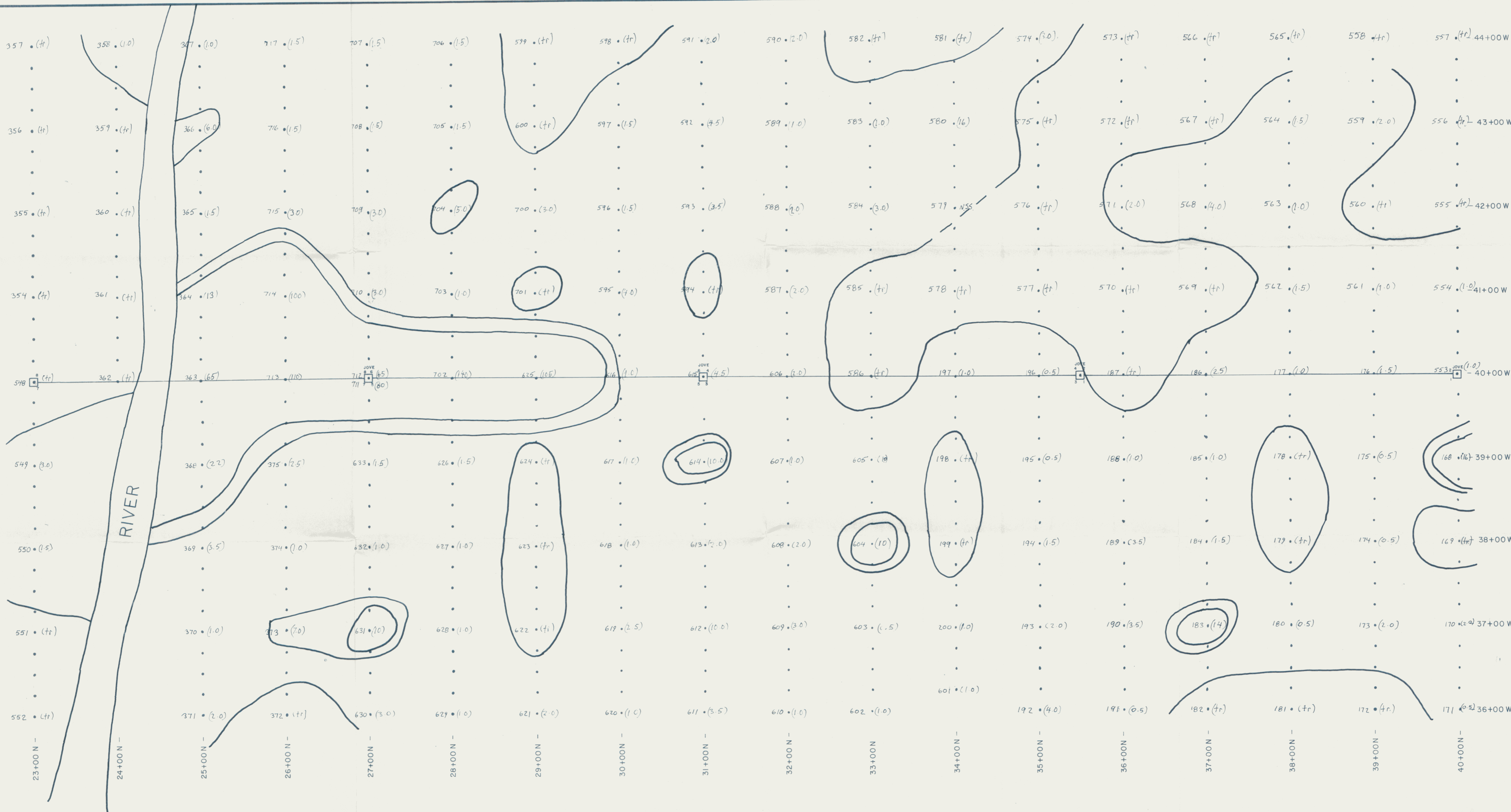


FIG. 5

PROJECT 522
 JOVE GRID
 Yukon Territory
 GEOPHYSICS-RADIOMETRIC

SCALE 1:2,500 090343



GEOCHEMICAL CONTOURS

- < .5 ppm U
- .5 - 5 ppm U
- 5 - 10 ppm U
- > 10 ppm U

LEGEND

- baseline
- claim posts
- 199 · sample number
- (1.0) sample value (ppm U)

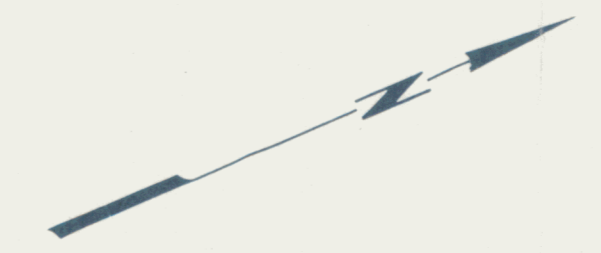


FIG. 6

PROJECT 522
 JOVE GRID
 Yukon Territory
 GEOCHEMISTRY - SOILS
 SCALE 1:2,500
 090343
 SEPT 1977