

GEOCHEMICAL SURVEY
'B' and 'SUNEP' Claims
YUKON

Lat. $63^{\circ}35'$ Long. $139^{\circ}30'$
NTS 115 0/11, 12

J. McClintock June 6 -
 July 20, '75



COMPLETE
LIST OF CLAIMS

<u>CLAIMS</u>	<u>NUMBERS</u>	<u>DUE DATES</u>
B 1 - 12	Y56956-67	Aug. 10, 1978
B 15 - 18	Y56970-73	Aug. 10, 1978
BJB 1 - 8	Y99779-86	June 27, 1976
BJB 9 - 17	Y99868-76	July 8, 1976
SUNEP 1 - 14	Y99745-58	June 17, 1979
SUNEP 18 - 24	Y99759-65	June 17, 1979
SUNEP 26 - 34	Y99766-74	June 17, 1979
ASH 1 - 44	Y99883-926	July 14, 1976
PAX 1 - 10	Y99927-36	July 14, 1976

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LIST OF ILLUSTRATIONS

	<u>ILLUSTRATION NO.</u>	<u>SCALE</u>
LOCATION MAP	L - 6292	1 inch to 2300 ft.
SAMPLE LOCATION MAP	GC - 8347	1 : 5,000
GEOCHEM MAP SHOWING Cu SOIL RESULTS IN PPM	GC - 8348	1 : 5,000
GEOCHEM MAP SHOWING Mo SOIL RESULTS IN PPM	GC - 8348	1 : 5,000
GEOCHEM MAP SHOWING Pb SOIL RESULTS IN PPM	GC - 8349	1 : 5,000
GEOCHEM MAP SHOWING Zn SOIL RESULTS IN PPM	GC - 8349	1 : 5,000

GEOCHEMICAL SURVEY

On The

'B' and 'SUNEP' Claims

Lucky Joe Creek Area, Y.T.

INTRODUCTION

In spring of 1975 Rio Tinto Canadian Exploration Limited acquired by option from Silver Standard Mines Ltd., (NPL) a block of 16 mineral claims, the 'B' claims, located in the Dawson area, Yukon Territory. Shortly after acquisition of this property an additional 30 mineral claims, the 'Sunep' claims, were staked peripheral to the 'B' claims for protection purposes.

The 'B' claims were staked in 1970 to cover a copper showing discovered by Silver Standard Mines earlier that year. Shortly after staking the ground Silver Standard carried out a small soil sampling programme. This survey revealed a broad copper soil anomaly to exist on the property. Unfortunately due to the limited size of the survey the southern limit of the anomaly was not defined.

During the 1975 field season additional soil sampling was carried out over the property by Rio Tinto. The purpose of this survey was:

- (1) to determine the southern limit of the known copper soil anomaly and,
- (2) to test the ground situated immediately adjacent to the original Silver Standard soil grid.

This programme was carried out under the supervision of Mr. John McClintock. Results of the survey are discussed in the following report.

LOCATION and ACCESS

The property is situated in west central Yukon within map sheet 115 - 0 - 12. The claims overlie the headwaters of Lucky Joe Creek approximately 30 air miles south of the city of Dawson and six air miles east of the Yukon River. The approximate centre of the property occurs at Latitude $63^{\circ}36'$ and Longitude $139^{\circ}31'$.

The property is currently accessible only by helicopter. Trans North Turbo Air presently operate a Bell 206 B helicopter out of their permanent base at Dawson City. This is the closest helicopter to the property and was used for access during the current programme.

A 22 mile long unimproved cat trail leads from the mouth of Quartz Creek to the centre of the property. This trail was put in for access purposes by Silver Standard Mines in 1970. This trail could be improved to provide access by tracked vehicle to the property.

GEOLOGICAL SETTING

The area was mapped at a scale of 1 inch to 4 miles by the G.S.C. in 1934 and 1935 (G.S.C. Map 711A; Bostock, 1942). This work shows the property to be situated over a north - south trending belt of Yukon Group gneiss and schist, sandwiched between two large bodies of gneissic granite. Outcrop and float noted during the current survey suggest this work to be reasonably accurate.

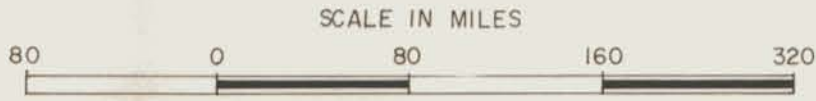
SAMPLING, SAMPLE PREPARATION and ANALYTICAL

PROCEDURE

The soil sampling programme was carried out by a four man crew working from a base camp on Lucky Joe Creek located on the B claims. Work was carried out over a period of seven weeks, between June 6 and July 20. A total of 603 soil samples were taken.



SUNEP 31	SUNEP 33	SUNEP 19	SUNEP 21	SUNEP 23	SUNEP 32
SUNEP 30	SUNEP 34	SUNEP 18	SUNEP 20	SUNEP 22	SUNEP 24
SUNEP 29	B 4	B 3	B 17	B 18	SUNEP 14
SUNEP 29	B 2	B 1	B 15	B 16	SUNEP 13
SUNEP 27	B 5	B 6	B 9	B 10	SUNEP 12
SUNEP 2	B 7	B 8	B 11	B 12	SUNEP 11
SUNEP 1	SUNEP 3	SUNEP 5	SUNEP 7	SUNEP 9	
SUNEP 2	SUNEP 4	SUNEP 6	SUNEP 8	SUNEP 10	



RIO TINTO CANADIAN EXPLORATION LTD.		
LUCKY JOE OPTION		
PROPERTY LOCATION		
AUG. 1975	JM / YM.	DWG. L-6292

Soil samples were collected at 50 meter intervals along 100 meter spaced east - west trending lines. Wherever possible samples were taken from the 'B' soil horizon. Where 'B' horizon material could not be obtained the 'AH' horizon was sampled and the samples recorded as such. Most of the 'AH' samples were taken on the southern permafrost slope.

All samples were placed in Kraft paper envelopes and shipped to the Rio Tinto Laboratory in North Vancouver, B. C. Here samples were oven dried at approximately 60°C. Dried samples were sieved through 80 - mesh bolting cloth and over - sized material discarded. Analysis was carried out on the minus 80 - mesh fraction by atomic absorption spectrometer after digestion with hot concentrated nitric and perchloric acid. All samples were analysed for Cu, Mo, Pb, and Zn.

INTERPRETATION OF RESULTS

The results of the soil sampling programme are shown on four accompanying drawings all at the scale of 1 cm to 50 meters (1:5,000). Sample locations are shown on drawing GC-8347. The value in ppm obtained for the elements Cu, Mo, Pb, and Zn are shown on drawings GC - 8338 to GC - 8349 inclusive.

Threshold and anomalous levels for each of the metals of interest have been derived for 'B' horizon and 'AH' horizon soils and are shown in Tables I and II. The 'B' horizon statistics were carried out on approximately 527 samples taken from the B and Sunep claims. The AH statistics were carried out on 70 samples collected over the same area. Previous work in this part of the Yukon has shown all of the elements of interest to show a log normal distribution in the two media sampled. Therefore, statistical manipulations were carried out on the logs of the values. Threshold and anomalous levels were taken at the mean plus two standard deviations and the mean plus three standard deviations respectively for each of the metals investigated.

TABLE I

Threshold and Anomalous Metal Values in 'B' horizon
Soils - Lucky Joe Creek area.

<u>Metal</u>	<u>Threshold Value</u>	<u>Anomalous Value</u>
Cu	49 ppm	62 ppm
Mo	2.5 ppm	3 ppm
Pb	38 ppm	52 ppm
Zn	160 ppm	208 ppm

(Data on the minus 80 - mesh fraction; analysis on the Atomic Absorption spectrometer after digestion with hot concentrated nitric and perchloric acid).

TABLE II

Threshold and Anomalous Metal Values in 'AH' horizon
soils - Lucky Joe Creek Area.

<u>Metal</u>	<u>Threshold Value</u>	<u>Anomalous Value</u>
Cu	79 ppm	106 ppm
Mo	2 ppm	2.5 ppm
Pb	5.5 ppm	7.0 ppm
Zn	58 ppm	71 ppm

(Data on the minus - 80 mesh fraction; analysis on
the Atomic Absorption spectrometer after digestion
with hot concentrated nitric and perchloric acid.)

Examination of the soil sample results reveals that the copper soil anomaly is continuous to the south - east within a narrow band which parallels Lucky Joe Creek. The soil anomaly terminates abruptly to the south. However, the presence of perma-frost along this southern slope may inhibit the migration of metal ions from bedrock to the surface thus suppressing the soil anomaly. Therefore the negative results obtained over this slope should be regarded with some suspicion. No copper soil anomaly was found to the north - west, north or east. All samples taken in these areas were low for copper and molybdenum. A few sporadically high zinc and lead values were found peripheral to the main area of interest, however these were generally separated by background values in adjacent samples. Zinc values were anomalous over the area outlined by anomalous copper values.

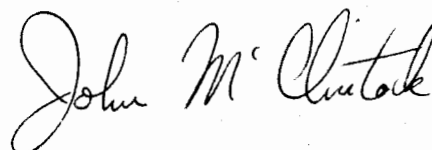
CONCLUSIONS and RECOMMENDATIONS

The recent soil survey succeeded in extending the known soil anomaly slightly to the south east along Lucky Joe Creek. Although no new anomalies were detected in other adjacent areas the presence of permafrost may be a factor in the termination of the anomaly to the south.

Anomalous zinc values appear to occur coincident with the copper anomaly. Other metals are generally low over the entire area sampled.

The large area of high copper values is thought to outline the area of greatest potential for copper mineralization.

Additional programmes should concentrate on this area of high copper values and on the southern permafrost slope. Work should include detailed mapping and an Induced Polarization survey.



J. McClintock

JMc:rl

Vancouver Office
August 1975

Vancouver, B.C.
730 510 W.Hastings St.
Ph. 688-3328

JOB Rio Tinto LOCATION Lucky Joe Creek RIG 21 DRILL MODEL S/311 JOB # 32
HOLE NO. 75-1 - 90' x 10'

[illegible]

Whitehorse, Y.T.
184 Industrial Rd.
Ph. 667-6434

ARCTIC DIAMOND DRILLING LTD.

DAILY REPORT TIME SUMMARY

Vancouver, B.C.
730 510 W. Hastings St.
Ph. 688-3328

JOB Rio Tinto LOCATION Lucky Joe Creek RIG 21 DRILL MODEL S/34 JOB # 32
HOLE NO. 75-1 - 70" x 68

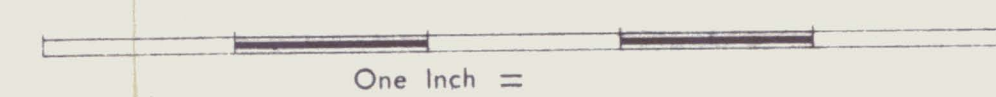
		MOVING		1 CORE DRILLING		2 NON CORE DRILLING		3 USING MUD		4 CASING		5 MAINTENANCE & REPAIRS		6 CEMENTING		7 SAMPLING		8 TESTING		9 WATER SUPPLY		10 TRAVELLING TIME PAID		11 STAND BY TIME		12 TIME NOT ACCOUNTED		13 OVER BURDEN FT.		CORING FT.		REAMING CASING		CORE RECOVERED FT.	
DATE	SHIFT	MEN HRS	MACHINE	MEN HRS	MACHINE	MEN	MACHINE	MEN	MACHINE	MEN	MACHINE	MEN	MACHINE	MEN	MACHINE	MEN	MACHINE	MEN	MACHINE	MEN	MACHINE	MEN	MACHINE	MEN	MACHINE										
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31	D/S																			8		"													
Aug. 1	D/S	8																		40		"													
2	D/S	46																																	
3	D/S	48																																	
4	D/S	56																																	
5	D/S	48																																	
6	D/S	48																																	
7	D/S	28																																	
8	D/S																										0-41	41-117	0-41						
-	N/S																																		
9	D/S																																		
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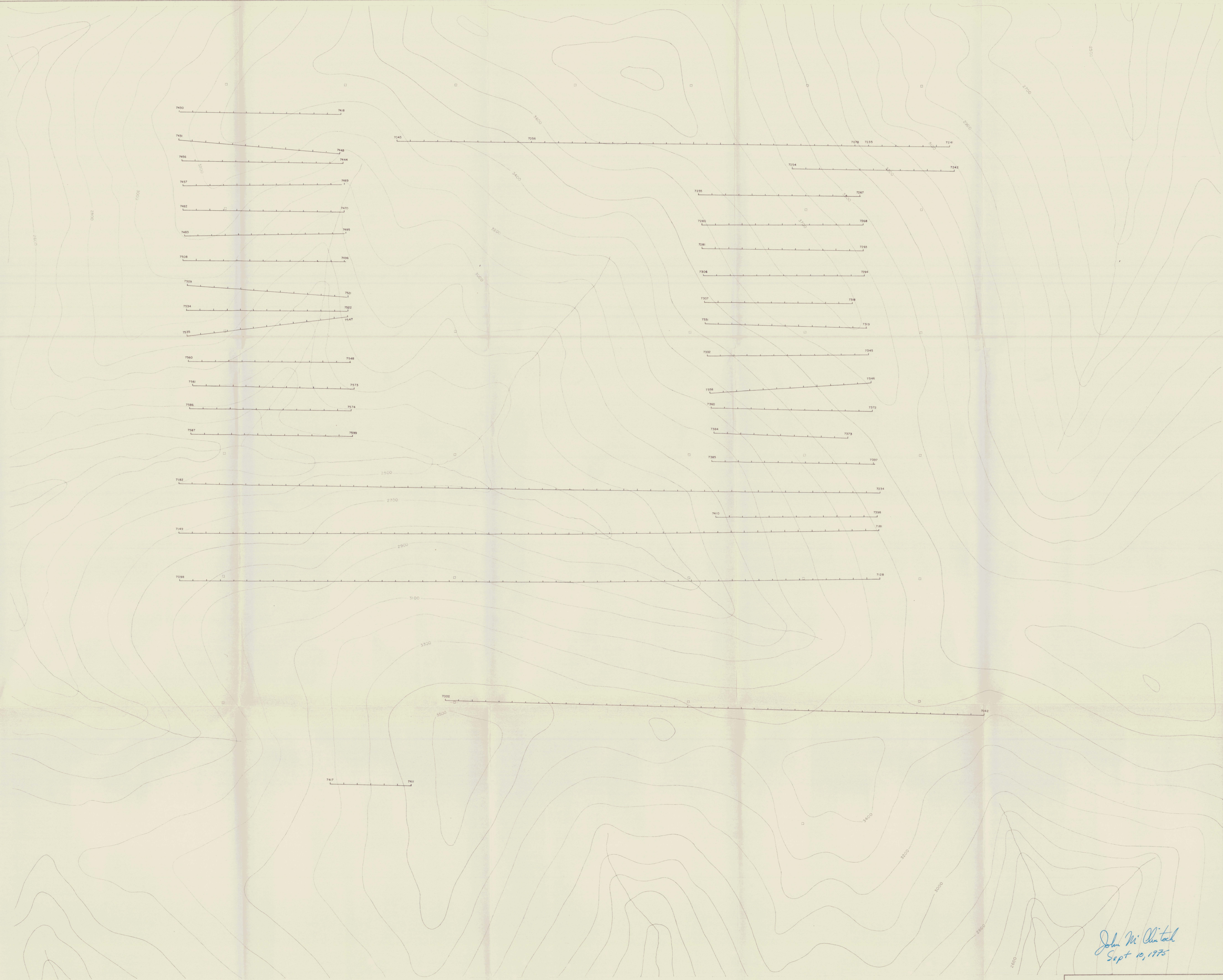
LEGEND
● Drill site
□ Camp

N.T.S.
1:50,000

SCALE

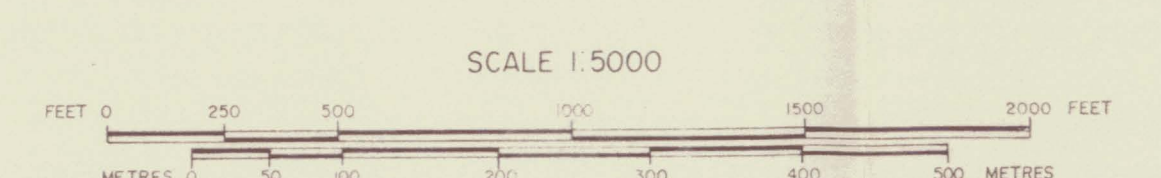


RIO TINTO CANADIAN EXPLORATION LIMITED	
LUCKY JOE OPTION	
CAMP and DRILL SITE LOCATION	
DWG.	



John McClinton
Sept 10, 1975

N.T.S. 115-0-12



RIO TINTO CANADIAN EXPLORATION LIMITED		
LUCKY JOE OPTION		
YUKON TERRITORY		
SOIL SAMPLE LOCATION MAP		
AUG 1975	J.M. / y.m.	DWG. G.C. 8347

