

IDA CLAIMS  
YUKON  
GEOLOGY AND GEOCHEMISTRY  
1979

J. McClintock P. Eng. December 1979

Location

N.T.S. 116-A-4

090548

IDA CLAIMS  
GEOLOGY AND GEOCHEMISTRY

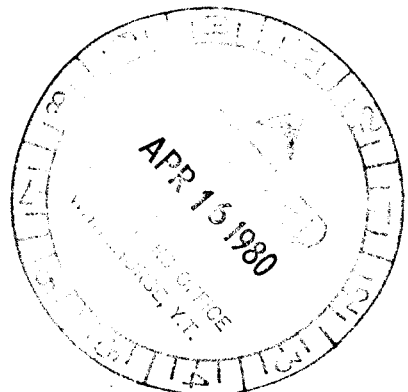


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- II CLAIM STATUS



-LIST OF ILLUSTRATIONS

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## SUMMARY

Regional silt sampling conducted over the Dawson Fault Region during the Aurora Gold Project detected an eight by eight kilometre area in which all stream sediments contain anomalous values for the known gold path finders: arsenic, antimony and mercury. Because of the strongly anomalous values for each of the elements analysed, and the bleached and silicified rock found in the creeks, 120 claims were staked.

Examination of the claims found them to be underlain by mudstones, argillites, cherts and minor limestones of the Road River Formation that have been intruded by two porphyritic monzonite stocks. The sedimentary rocks have been strongly faulted along northwesterly and westerly directions. Highly kaolinized feldspar porphyry dykes have been introduced along some of the westerly trending faults.

Silicification consisting of thin drusy quartz veins and replacement of the rock between veinlets by silica, occurs in many of the fault zones. These fault zones range from a few metres to over 200 metres in width and are traceable for over 100 metres. In addition to silicification, 0.5 to 1.5 metre wide arsenopyrite bearing quartz veins are also present. These veins commonly occupy northwesterly trending faults.

Analyses of rock samples for gold have indicated that gold is present in amounts up to 4.5 grams/tonne in the silicified fault zones. Gold was also found in the highly kaolinized feldspar porphyry dykes. It was noted that these gold-bearing rocks also contain anomalous antimony and mercury values.

For the 1980 field season it is recommended that a programme of detailed soil and rock sampling be undertaken to define the extent and grade of gold mineralization. Estimated cost of the sampling programme is \$137,700.

## 1. INTRODUCTION

In early August 1979, Rio Tinto Canadian Exploration Limited staked a group of 120 mineral claims, the "Ida" claims, located in the Dawson area, Yukon. The claims were staked to cover a mercury, arsenic and antimony silt anomaly detected during the Aurora Gold Project as a result of silt sampling the Dawson Fault Region, (Dwg L-6604). Sampling had been concentrated in areas anomalous for mercury detected by an earlier Geological Survey of Canada silt sampling programme, the follow-up soil sampling outlined an 8 by 8 kilometre area in which all creeks had anomalous values of arsenic, antimony and mercury. During collection of the silt samples, silicified, bleached siltstones and limestones were noted as float in the creeks. The co-incident extremely anomalous arsenic, antimony and mercury values with silicified and bleached siltstone and limestone, prompted the staking.

On completion of staking, a week was spent on the property conducting follow-up prospecting and silt, soil and rock sampling. The purpose of the follow-up work was to determine the source of the arsenic, antimony and mercury anomalies and to discover if gold accompanied these elements.

Findings of the follow-up work are discussed in this report.

### 1.1 Location and Access

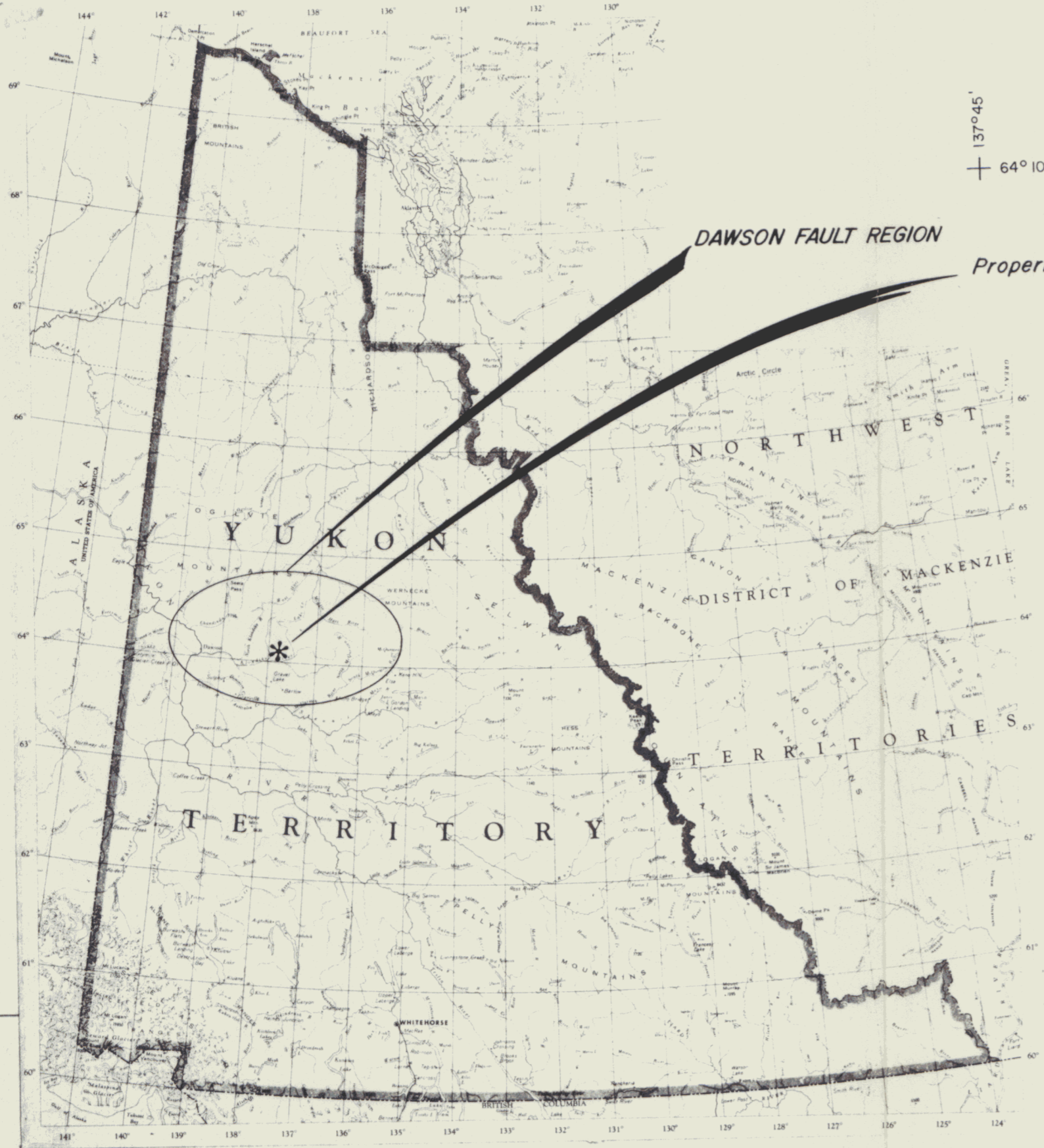
The property is located in the central Yukon within map sheet 116 A-4. The claims are situated midway between Aussie and Hamilton Creeks, 90 kilometres east of Dawson. Centre of the property occurs at Latitude  $64^{\circ}09'N$  and Longitude  $137^{\circ}37'W$ .

The claims are shown on the accompanying map (Dwg. L-6604) and are described in detail in the schedule of claims, Appendix I.

Currently, the property is accessible only by helicopter, the closest being a Bell 206 B operated by Trans North Turbo Air out of their permanent base in Dawson. Considerable savings during mobilization can be obtained by driving equipment and personnel to the old Yukon Consolidated Gold Corporation dam located 16 kilometres east of the property and flying equipment from that location.

### 1.2 Topography and Vegetation

The Ida claims lie within the southern Ogilvie Ranges, a moderately rugged range of mountains having relief between mountain peaks and valleys in the order of 762 metres. The region has been glaciated and is characterized by broad "U" shaped valleys with steep walls.



137°45'  
+ 64°10'



**DAWSON FAULT REGION**

*Property*

20	18	16	14	12	10	8	6	4	2
19	17	15	13	11	9	7	5	3	1
40	38	36	34	32	30	28	26	24	22
39	37	35	33	31	29	27	25	23	21
60	58	56	54	52	50	48	46	44	42
59	57	55	53	51	49	47	45	43	41
80	78	76	74	72	70	68	66	64	62
79	77	75	73	71	69	67	65	63	61
100	98	96	94	92	90	88	86	84	82
99	97	95	93	91	89	87	85	83	81
120	118	116	114	112	110	108	106	104	102
119	117	115	113	111	109	107	105	103	101

SCALE 1:50,000



*John McArthur*

N. T. S. 116 A / 4

RIO TINTO CANADIAN EXPLORATION LTD.

IDA CLAIMS

LOCATION MAP

JAN. 80

J.M./y.m.

DWG.  
L - 6604

Vegetation consists of black spruce, alders and fir in the valleys thinning to tag alder and buck brush by 1370 metres. Above 1370 metres, vegetation is restricted to grasses and moss. Rock exposure and talus is widespread, particularly above 1220 metres, where rock and talus forms approximately 60% of the surface area.

### 1.3 Regional Geology

The region of the claims was mapped in 1961 at a scale of 1:250,000 by L. H. Green of the Geological Survey of Canada (G.S.C. Memoir 364). Green shows that the property lies within Ordovician and Silurian Road River Formation which in the vicinity of the claims consists of interbedded black chert, argillite and quartzite intruded by Cretaceous syenite.

## 2. WORK BY RIOCANEX

In the 1979 field season a regional reconnaissance programme was undertaken over the Dawson Fault Region in search of large-tonnage, low-grade gold deposits similar to those found at Carlin and Cortez, Nevada. The Dawson Fault Region was selected because of favourable rock types and structures. Method of examination consisted of helicopter supported silt sampling over portions of the Dawson Fault region in which the Geological Survey of Canada had detected anomalous mercury values. All silt samples collected were analysed for arsenic, antimony and mercury. Samples collected in the vicinity of Aussie Creek contained spectacular values for each of the three gold path finder elements prompting staking of the 120 Ida claims.

In addition to the collection of standard silt samples, 2000 gram bulk samples were also collected so that they could be concentrated on a Wilfley table and the concentrate analysed for gold. This work will be completed when the Wilfley table is installed.

During late August and early September the Ida claims were prospected, rock sampled and soil sampled by a two-man crew to determine the source of the arsenic, antimony and mercury anomalies. A total of 68 soil and 44 rock samples were collected during this follow-up programme.

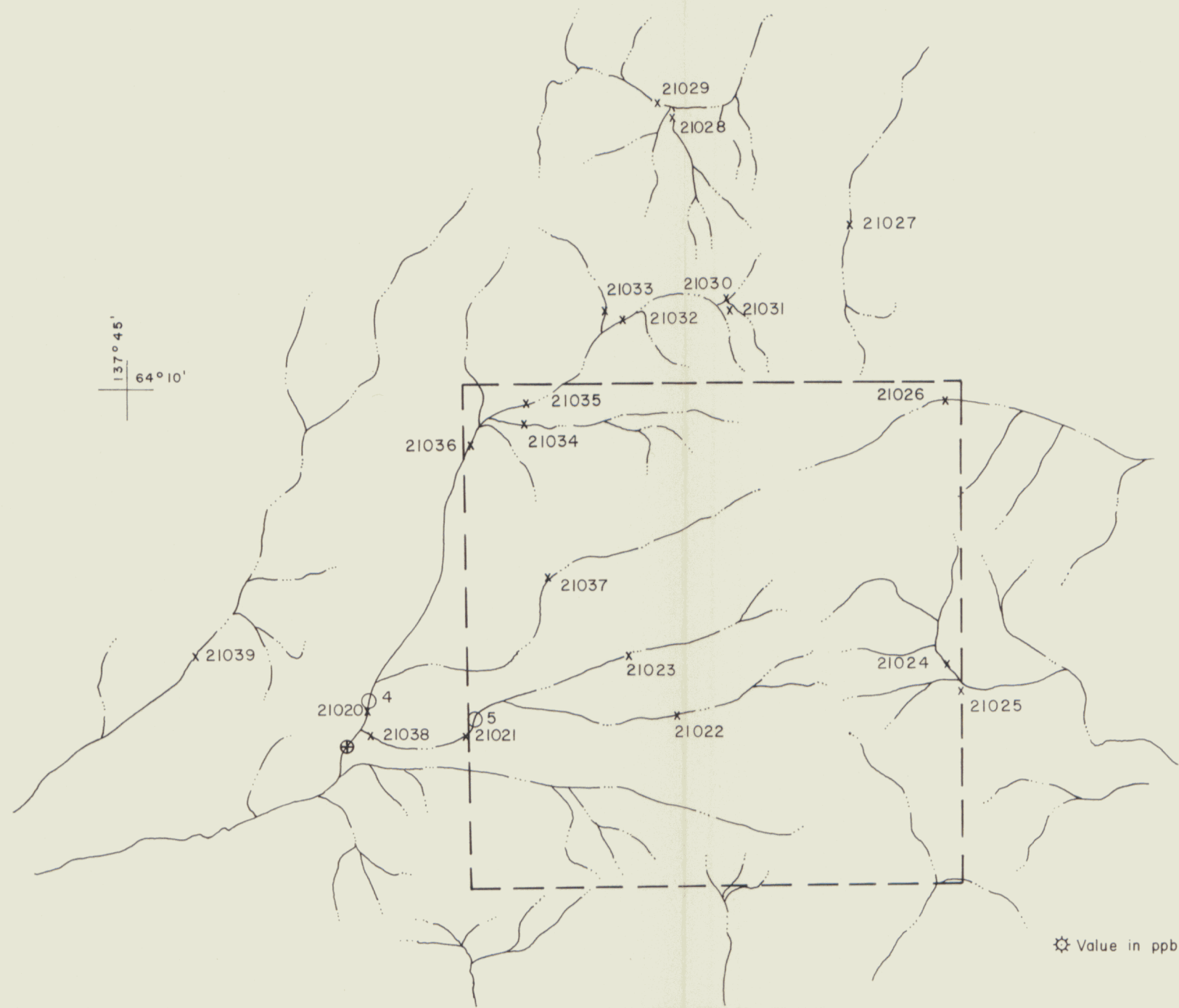
### 3. GEOCHEMISTRY

#### 3.1 Sampling, Sample Preparation and Analytical Procedure

Initial silt sampling of the Dawson Fault Region was conducted by a two man helicopter supported crew in early June. Samples were collected from small tributary creeks to the creek anomalous for mercury as reported by the Geological Survey of Canada. Nearby creeks draining the headwaters of the mercury-anomalous creek were also sampled. In addition to the standard silt samples, two large bulk samples consisting of 2000 grams of -35 mesh silt were collected from the mercury anomalous creeks. Locations of the silt samples and the bulk samples are displayed on Drawing GC-6581.

Rock and soil sampling was carried out on the Ida claims in late August and early September by a two man crew working out of a single base camp. During the follow-up prospecting, rock samples were collected from outcrop and talus. Method of collection consisted of the random gathering of small rock chips from 3 by 3 metre areas of the talus or rock outcrop. Where rock outcroppings, or talus was lacking, soil samples were collected from the "B" horizon.

*John M. Chuteck*



Silt Sample No.	Analytical Result ppm				
	As	Sb	Hg*	Cu	Mo
21020	210	< 5	130	53	2
21021	200	< 5	160	39	4
21022	500	125	3400	150	5
21023	880	16	410	225	3
21024	900	11	550	139	4
21025	400	70	250	80	4
21026	445	9	310	90	3
21027	17	< 5	90	61	9
21028	16	< 5	160	72	4
21029	11	< 5	130	33	3
21030	20	< 5	125	40	4
21031	240	< 5	170	123	6
21032	240	< 5	125	95	2
21033	13	< 5	105	40	5
21034	500	7	115	127	9
21035	120	< 5	140	76	5
21036	240	< 5	140	95	2
21037	>1000	8	380	146	3
21038	400	< 5	360	88	4
21039	13	< 5	100	20	3

\* Value in ppb

LEGEND

- Bulk Sample
- ⊕ G.S.C. Mercury Anomaly
- x 21037... Silt Sample Location
- IDA Claim Boundary

N. T. S. 116 A/4

SCALE 1:50,000



RIO TINTO CANADIAN EXPLORATION LTD		
DAWSON FAULT REGION		
AUSSIE CREEK - IDA CLAIMS		
MERCURY ANOMALY 4		
NOV 79	s. g.	DWG. GC - 6581



Soil and silt samples collected during the initial and follow-up programmes were placed in kraft paper envelopes. Silt samples were shipped to Bondar-Clegg Laboratories in North Vancouver, while soil samples were sent to Chemex Laboratories in North Vancouver. At both laboratories, samples were oven dried at 30°C. Dried samples were sieved through 80 mesh bolting cloth with over sized material being discarded. Analysis was carried out on the -80 mesh material by atomic absorption spectrometer after digestion with hot nitric and perchloric acid. All samples treated by this technique were analysed for mercury, antimony, copper and zinc, or molybdenum. Arsenic analysis was conducted on the -80 mesh material by fusing the samples, then redissolving the fused material and analysing this solution by colourmetric techniques.

Rock chip samples were placed in plastic sample bags and shipped to Chemex Laboratories in North Vancouver. The rock samples were treated by normal fire assay techniques with the resultant bead being analysed by neutron activation for gold. In addition to gold, the samples were also analysed for arsenic, antimony and mercury. Analysis for arsenic, antimony and mercury was done by standard rock geochemical techniques.

### 3.1 Interpretation of Results

Results of the initial silt sampling are displayed on Drawing GC-6581, with soil sample results on Drawing GC-8698 and rock sample results on Drawing GC-8699. A complete listing of results for rock, soil and silt samples is provided in Appendix I.

Threshold and anomalous levels for each of the elements analysed in silt samples have been derived with statistical calculations being carried out on 175 samples collected during the Aurora Gold project. Statistical calculations were similarly conducted on results of 315 soil samples collected from the Ida claims and from soil samples collected elsewhere over similar Road River Formation. Previous work in this part of Yukon has shown all of the elements of interest to have a log normal distribution. Hence statistical manipulations were conducted on the logs of values. Threshold and anomalous results were taken at mean plus two standard deviations, and mean plus three standard deviations, respectively, for each of the elements investigated. Statistical results are listed in Table 1 for silt samples and Table 2 for soil samples.

TABLE 1

Threshold and Anomalous Element Values in Silt Samples, Dawson Fault Region

<u>Element</u>	<u>Threshold</u>	<u>Anomalous</u>
As	120	250
Sb	5	8
Hg	210	300

(Data on the -80 mesh fracture; analysis for Hg conducted on the atomic absorption spectrometer after digestion with hot nitric and perchloric acid. Analysis for As and Sb done by colourmetric techniques after fusion and leaching with hydrochloric acid and hydride elevation in silver diethyldithiocarbamate in pyridine).

TABLE 2

Threshold and Anomalous Element Values in 'B' Horizon Soils, IDA Claims.

<u>Element</u>	<u>Threshold</u>	<u>Anomalous</u>
As	450	>500
Sb	37	67
Hg	232	260

(Data on the -80 mesh fraction; analysis for Sb and Hg conducted on the atomic absorption spectrometer after

digestion with hot nitric and perchloric acid. Analysis for As conducted by colourmetric techniques after fusion and leaching with hydrochloric acid and hydride elevation in silver diethyldithiocarbamate in pyridine).

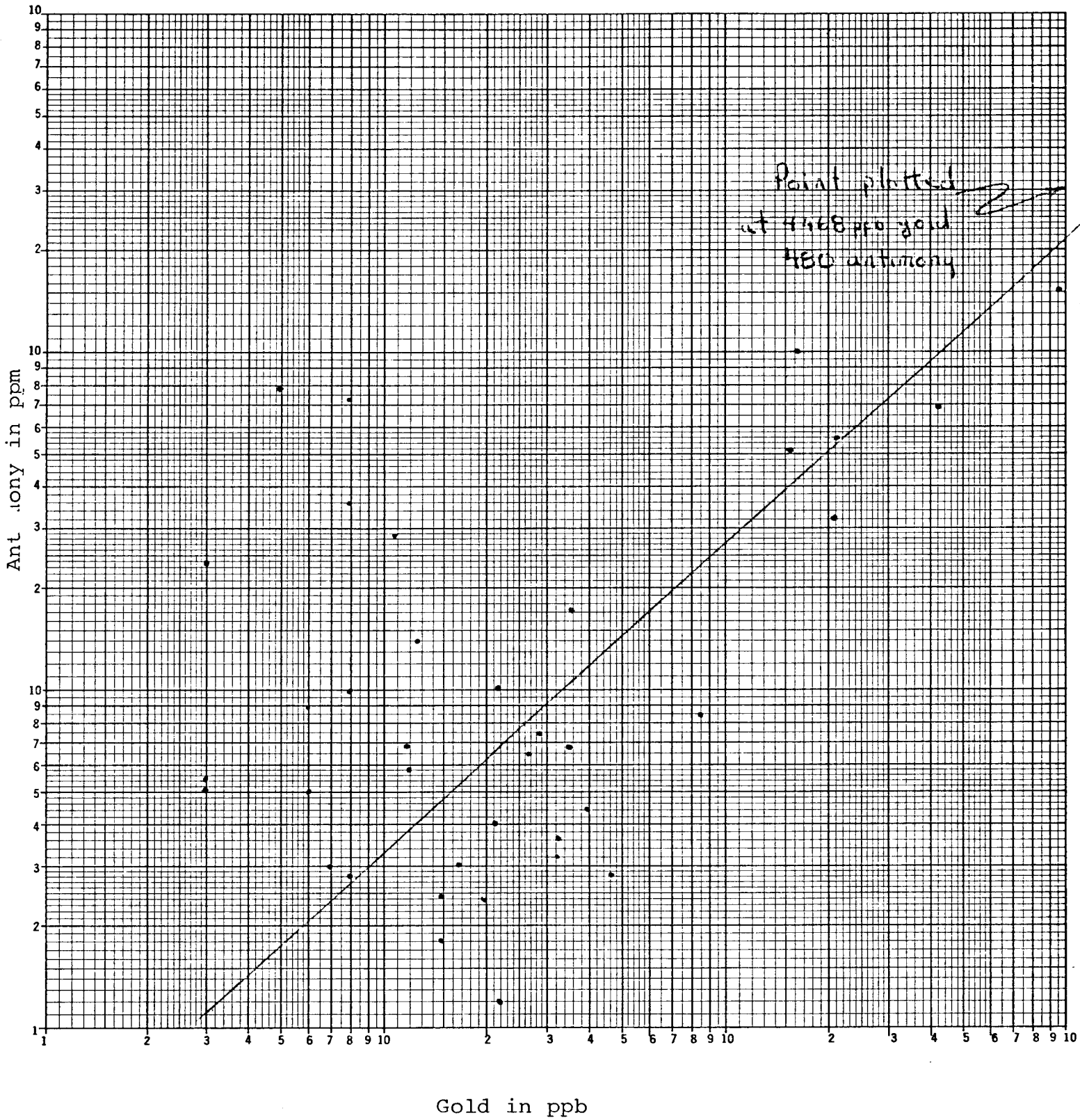
Analysis of silt samples revealed a large region drained by creeks which contained highly anomalous values for arsenic, antimony and mercury (Dwg. GC-6581). Follow-up work outlined several regions of anomalous arsenic, antimony and mercury in soil samples. Analysis of rock samples for gold showed values ranging from 0.1 to 4.5 grams/tonne. Highest gold values were found in rocks which were silicified and contained abundant drusy quartz veins. One sample of a highly kaolinized feldspar porphyry found in a region of extensive silicification contained 0.99 grams/tonne gold. A single sample of quartz-veined argillite contained 4.5 grams/tonne gold.

Generally, the significant gold values corresponded with high antimony and mercury values; however, all high mercury and antimony values did not coincide with high gold values. Closest correlation of gold with a pathfinder element was with antimony (fig. 1). No correlation exists between arsenic and gold.

Future exploration, particularly rock sampling, should be concentrated in areas found to be anomalous for antimony and mercury because of the correlation of these two elements with gold.

Figure 1

Plot of Antimony Vs Gold in Rock Samples



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#### 4. GEOLOGY

Mapping determined that the Ida claims are underlain by thinly bedded black mudstones, cherty argillites, cherts and minor limestones of the Road River Formation (Dwg G-8697). These sediments all strike northwest and dip steeply to the northeast. These sediments have been intruded by two stock-like bodies of porphyritic monzonite with phenocrysts of feldspar, up to 1 cm and of hornblende up to 0.5 cm in a fine-grained pinkish feldspathic groundmass. Feldspars form 70% of the rock with the remainder being hornblende and lesser biotite. Ratio of phenocrysts to matrix is dependent on the proximity of the monzonite to the sedimentary contact. Near this contact the monzonite has a pronounced porphyritic texture with phenocrysts forming 50% of the rock; towards the core of the stock the percentage of phenocrysts increases until, at the core, the rock has an equigranular, hypidiomorphic texture. Peripheral to the stock is a zone of biotite-hornfels. This hornfels has a reddish-brown colour imparted by the development of very fine-grained biotite. In addition to the formation of biotite the rock has been silicified. Width of the hornfels zone varies from 100 to 400 metres.

The sediments have also been intruded by feldspar porphyry dykes. These dykes, which range from five to thirty metres in width, generally trend in an east-west direction. The dykes have highly kaolinized groundmass and phenocrysts with phenocrysts forming 40% of the rock. Most of the dykes occur in the region between the two

stocks, although one dyke was located outside of this zone.

Numerous faults and fault zones are present on the claim block. All of these faults are in the Road River Formation and appear to have influenced the emplacement of both the porphyritic monzonite and the feldspar-porphyry dykes. The faults are preferentially oriented in north-westerly and westerly directions.

With the exception of the hornfels zone about the two stocks, the only alteration noted was silicification. Silicification occurs in many of the faults and fault related shatter zones. Here, silicification consists of drusy quartz and grey chalcedony veins and replacements of the host rock by silica. Also present in the silicified zones are abundant limonite-filled fractures and bleaching of rock from its original black colour to white. Silicification occurs in the Road River Formation both in the hornfels zone and outside of this zone, suggesting silicification post-dates emplacement of the stocks. Areas affected by silicification range from a few metres to over 200 metres in width and in all cases are continuous along strike for over 100 metres. No zones of silicification have been observed in the porphyritic monzonite.

Also present, but independent of the silicified zones, are arsenopyrite-bearing quartz veins. These veins range from 0.25 metres to 1.5 metres in width and are very irregular showing radical changes in width along strike. Most of the veins trend northwesterly and are continuous along strike for less than 100 metres. Typically, the veins consist of 10 to 30% arsenopyrite with the remainder

of the vein being white, coarsely crystalline quartz. The veins, of which there are at least four, are concentrated in the region between the two stocks.

Sulphide mineralization noted during examination consisted of arsenopyrite, pyrite, and traces of chalcopyrite. Arsenopyrite is primarily present in the major quartz veins, although lesser amounts of disseminated arsenopyrite were noted locally in the monzonite stocks adjacent to their contact with the sediments. Minor pyrite, arsenopyrite, and traces of chalcopyrite were found sporadically distributed in the hornfels zone. Each of these three sulphide minerals occurs in dry fractures and as disseminations.

Analysis of rock samples collected from various locations on the claim block show gold to be present in significant quantities ( $>100$  ppb) in the silicified fault zones and highly altered feldspar porphyry. The highest gold analysis of 4485 ppb occurred in a silicified fault zone. Results of gold analyses obtained from the quartz veins returned only low gold values ( $<30$  ppb). Similarly, analysis of the arsenopyrite-bearing monzonite returned low gold values.

## 5. CONCLUSIONS

Work conducted in 1979 located gold in amounts up to 4.5 grams/tonne in silicified fault zones in Ordovician-Silurian Road River Formation rocks. At least three gold bearing fault zones have been found and have dimensions from 20 to over 200 metres in width and are continuous along strike for over 100 metres. As all rock sampling done to date has been grab samples, no widths can be assigned to the gold values.

Silicification which accompanies the gold consists of fine drusy quartz and grey chalcedony veinlets ranging in width from hairline to 0.5 cm. Much of the rock between the veinlets has been totally replaced by silica. The nature of the silicification indicates they were the result of low temperature hydrothermal solutions.

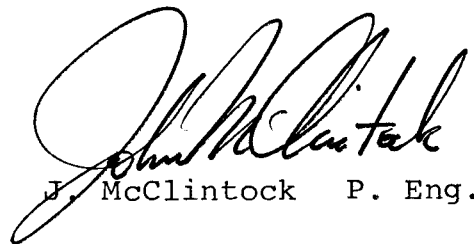
In addition to the large areas of low temperature silicification several arsenopyrite bearing quartz veins were discovered. These quartz veins were not found to contain gold mineralization and may be related to an earlier, higher temperature, hydrothermal event.

## 6. RECOMMENDATIONS

For the 1980 field season it is recommended that a programme be undertaken to determine the extent and surface grade of gold mineralization found to date. In addition, the remainder of the claim block should be explored to determine if any, as yet undetected, gold bearing zones exist on the claim block.

The programme should consist of surface rock chip sampling and hand trenching of the known gold mineralization, and detailed geological mapping of the entire claim block. Contemporaneous with the rock chip sampling and geological mapping, soil sampling of the claim block on a 50 by 150 metre grid should be done. Soil samples would be analysed for Sb, Hg and As. Particular attention would be directed at areas having high Sb as this element shows a close correlation with gold.

Cost of the programme is estimated at \$137,700.



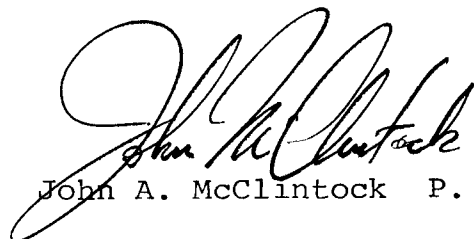
J. McClintock P. Eng.

STATEMENT OF QUALIFICATIONS

J.A. McClintock

- 1) I am a geologist residing at 3302B Bracken Avenue, Mission British Columbia and am currently employed by Rio Tinto Canadian Exploration Limited of 520-800 West Pender Street, Vancouver, B.C.
- 2) I graduated from the University of British Columbia, in 1973 with a B.Sc. honours degree in Geology and have practised my profession since that time.
- 3) I carried out the 1979 field work for Rio Tinto Canadian Exploration Limited which form the basis of this report.
- 4) I am a member of the Professional Engineers of British Columbia.

RIO TINTO CANADIAN EXPLORATION LIMITED



John A. McClintock P. Eng.

Y.T. IDA CLAIMS  
 GEOCHEMICAL & GEOLOGICAL SURVEYS  
 AUGUST 31 - SEPTEMBER 6, 1979  
 COST STATEMENT

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Salaries & Wages

J. McClintock	June 15	1 day		\$ 66.00*	
A. Winkler	June 15	1 day		39.00*	
J. McClintock	Aug 31-Sept. 6	7 days @ \$66		462.00	
J. Muir	Aug 31-Sept. 6	7 days @ \$29		203.00	
C. D. Spence	Sept. 5	1 day		123.00	
R. S. Hewton	Sept. 5	1 day		83.00	
					\$ 976.00

Benefits @ 20% of salary & wages 195.20

Food & Accommodation

Eldorado				\$126.50	
Danny's Department Store				111.02	
Whitehouse Motel				100.00	
					\$ 337.52

Riocanex Equipment 18 man days @ \$3.00 \$ 54.00

Helicopter

Transwest	June 15	3.1 hrs		\$1,049.35*	
Transnorth Turbo Air	Sept. 01-05	5 hrs		2,022.83	
					\$3,072.18

Radio Rental

Traegor SSB50C 8 days @ \$5.00 \$ 40.00

Geochemical Analysis

Bondar-Clegg Lab					
31 soil/silts for AS, HG, SB @ \$9.50				\$294.50*	
Chemex Lab					
60 rocks for AS, HG, SB @ \$11.00				660.00	
68 soil/silts for CU, PB, ZN, AS, HG, SB @ \$12.45				846.60	
28 soil/silts for AU @ \$6.75				189.00	
					\$1,945.10

Report Preparation

794.00

TOTAL \$7,414.00

\* These items are associated with pre-staking collection of samples, the results of which led to staking.

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Report Preparation

794.00

TOTAL \$7,414.00

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\* These items are associated with pre-staking collection of samples, the results of which led to staking.



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Rio Canex,  
800 W. Pender St.,  
Suite 520,  
Vancouver, B.C.

INVOICE: B 7795

DATE: July 11, 1979

REPORT NO: 49-130

PROJECT:

84	Analyses of Arsenic	@\$2.75	\$231.00
84	Analyses of Antimony	3.25	275.00 (273.00)
84	Analyses of Mercury	3.50	294.00
			<hr/>
		TOTAL	\$800.00 (798.00)
			<hr/> <hr/>

PAID

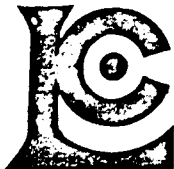
JUL 17 1979

7795

RIOCANEX VANCOUVER	
MAT'L REC'D	<i>[Signature]</i>
EXTENS. CHK'D	<i>[Signature]</i>
PRICES O.K.	<i>[Signature]</i>
PAYMENT APPROVED	
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## INVOICE

## CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
NORTH VANCOUVER, B.C.  
CANADA V7J 2C1  
TELEPHONE: ~~435-5487~~ 984-0221  
AREA CODE: 604  
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

TO: Riocanex Limited  
Ste. 520 - 800 W. Pender St.  
Vancouver, B.C.  
V6C 2V6  
ATTN:CERTIFICATE NO. 51264  
INVOICE NO. 33988  
DATE Nov. 23/79

	DESCRIPTION	SUB-TOTAL	TOTAL
5	Analyzed for As, Sb & Hg @ \$9.25	\$46.25✓	
5	Prepared @ \$1.75 (rocks)	8.75✓	
			\$55.00✓

8646-59

VSP.  
66

PAID DEC 07 1979

TERMS-NET 30 DAYS

78-040

1½% Per Month (18% Per Annum) Charged on Overdue Accounts



# INVOICE

## CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
NORTH VANCOUVER, B.C.  
CANADA V7J 2C1  
TELEPHONE: 583-0649  
AREA CODE: 604  
TELEX: 043-52597

984-0221

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

TO: Riocanex Ltd.,  
Ste. 520 - 800 W. Pender St.  
Vancouver, B.C.  
V6C 2V6

RECEIVED

OCT 18 1979

CERTIFICATE NO. 66286 & 88  
INVOICE NO. 33195  
DATE Oct. 16/79

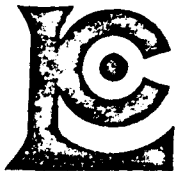
	DESCRIPTION	SUB-TOTAL	TOTAL
28	Analyzed for Au @ \$5.00 (N.A.)	\$140.00 ✓	
28	Prepared @ \$1.75	49.00 ✓	
			\$189.00 ✓

Stamp: RIOCANEX VANCOUVER  
DATE PAID: ✓  
ENTER AMOUNT: ✓  
TOTAL OK: ✓  
PAID BY: ✓  
Handwritten: JM<sup>c</sup> 8646  
Date: Oct 16 1979

TERMS-NET 30 DAYS

78-040

1½% Per Month (18% Per Annum) Charged on Overdue Accounts



011 119

# INVOICE

## CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
 NORTH VANCOUVER, B.C.  
 CANADA V7J 2C1  
 TELEPHONE: 866-0648 934-0221  
 AREA CODE: 604  
 TELEX: 043-52597

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

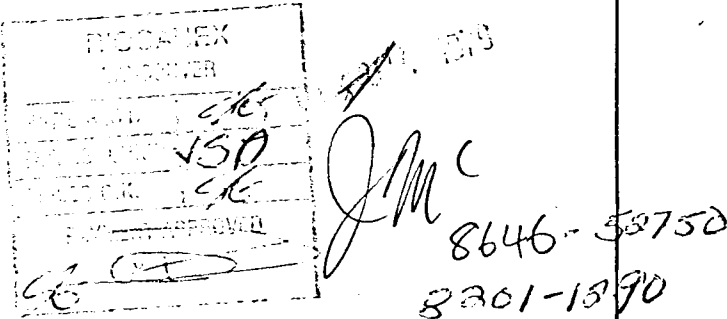
TO: Riocanex Ltd.  
 Ste. 520 - 800 Pender W. Street  
 Vancouver, B.C. V6C 2V6

CERTIFICATE NO. 50644-45-47-48

INVOICE NO. 32905

ATTN: (ROCKS)

DATE Sept. 28/79

	DESCRIPTION	SUB-TOTAL	TOTAL
47	Analyzed for As, Sb & Hg @ \$9.25	\$434.75✓	
6	Analyzed for Co & Ag @ \$2.15	12.90✓	
53	Prepared (rocks) @ \$1.75	92.75✓	
			\$540.40✓

TERMS-NET 30 DAYS

78-040

1½% Per Month (18% Per Annum) Charged on Overdue Accounts



# INVOICE

RECEIVED

SEP 27 1979

# CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
 NORTH VANCOUVER, B.C.  
 CANADA V7J 2C1  
 TELEPHONE: ~~985-0221~~ 984-0221  
 AREA CODE: 604  
 TELEX: 043-52597

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

TO: Riocanex Ltd.  
 Ste. 520 - 800 W. Pender St.  
 Vancouver, B.C. V6C 2V6

CERTIFICATE NO. 50635-36 & 50651

INVOICE NO. 32795

ATTN:

DATE Sept. 26/79

	DESCRIPTION	SUB-TOTAL	TOTAL
68	Analyzed for Cu,Pb,Zn,As,Sb & Hg @ \$12.00	\$816.00✓	
8	Analyzed for As, Sb & Hg @ \$9.25	74.00✓	
8	Prepared (rocks) @ \$1.75	14.00✓	
68	Prepared @ \$0.45	30.60✓	
	<div data-bbox="235 882 552 1194" style="border: 1px dashed black; padding: 5px;"> <p>RIOCANEX VANCOUVER</p> <p>DATE RECEIVED <i>est</i></p> <p>AMOUNT PAID <i>✓</i></p> <p>AMOUNT DUE <i>✓</i></p> <p>AMOUNT PAID <i>✓</i></p> </div> <div data-bbox="617 994 958 1172" style="text-align: center;"> <p><i>J. McCall</i></p> <p>8646</p> </div>		\$934.60✓

SEP 27 1979

TERMS-NET 30 DAYS

1½% Per Month (18% Per Annum) Charged on Overdue Accounts

78-040





TRANS NORTH TURBO AIR LTD.  
 BOX 4338, WHITLHORSE, YUKON T.A. 376  
 TELEPHONE (403)668 2177 C.H. X 036 8-290

ACCOUNT NUMBER	2705
40551	
INVOICE DATE	11/19/79
A/C TYPE	200B
AIRCRAFT REGISTRATION C	GTMG
FLIGHT DATE	01/09/79
PURCHASE ORDER NO.	A645

RIO TINTO

CHARTERER

520 FOO WEST PENNER UNIT

BILLING ADDRESS

V6C 2V6

FUEL & OIL-X	TNTA FUEL USED	(RS)-GALS.	FROM
TNTA	CUST.	1.4	

FROM	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
THUSON		1.4		ZPAK + GEAR
TO		1.4		
MUSKIECK RETURN				

NO. ANNEX APPROVED

JSP

APPROVED

SUB	G.L.	AMOUNT
81075020		525.00
81075110		42.16

1-4 @ 375.00	525.00
--------------	--------

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

WAITING TIME	@	/HR.	
FUEL: 31	@	136 GAL.	42.16
FUEL: 1.4	@	1 GAL.	1575
MEALS & LODGING			
OTHER			
OTHER			

CHARTERER'S SIGNATURE

PILOT'S SIGNATURE

ENGINEER'S NAME

Watt

TOTAL \$ 567.16

FLIGHT REPORT  
INVOICE

IDA 8646



TRANS NORTH TURBO AIR LTD.  
 BOX 4338, WHITEHORSE, YUKON VIA 3T6  
 TELEPHONE 14031668 2177 FAX 036 8 290

*RIC TINTO*

CHARTERER

ACCOUNT NUMBER	2705
40566	
INVOICE DATE	117 19 79
A/C TYPE	206B
FLIGHT DATE	05 09 79
PURCHASE ORDER NO.	

BILLING ADDRESS

FUEL & OIL-X	TNTA FUEL USED	HRS.-GALS.	FROM
TNTA CUST.		(2.6)	

FROM *DAWSON*  
 TO *AUSSIE CR TX.*

MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
	2.6		4-PAK + MOLECULAR CAMP
	(2.6)		

PROXIMEX  
 WINDOLVER  
 FEED ✓  
 SPO ✓  
 (D)

SUB	G.L.	AMOUNT
861750	20	975 00
861751	11	80 37

2.6 @ 375.00 975 00

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

WAITING TIME	@	/HR.	
FUEL:	57	@ 1-41/GAL.	80 37
FUEL:	@	/GAL.	
MEALS & LODGING			
OTHER			
OTHER			

*[Signature]*  
 CHARTERER'S SIGNATURE

*[Signature]*  
 PILOT'S SIGNATURE

*[Signature]*  
 ENGINEER'S NAME

**TOTAL** \$10,553.37

*LIDA 8646*

FLIGHT REPORT  
 INVOICE

RF RECES EXPEDIT

# WHITEHOUSE MOTEL LTD.

BOX 193

Y08 160

DAWSON CITY, YUKON

PHONE 993-5576

TO •

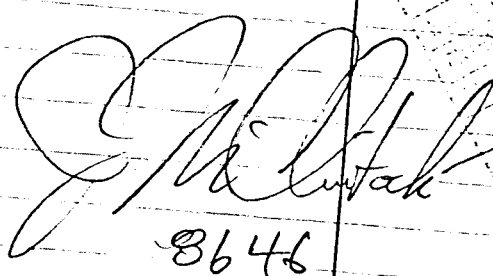
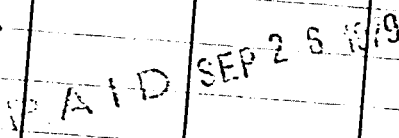
- RIO TINTO CANADIAN EXPLORATION LIMITED,
- 800 W. PENDER STREET,
- SUITE 520,
- VANCOUVER, B.C.
- V6C 2V6

DATE Sept 6, '79

AMOUNT OF REMITTANCE

PLEASE RETURN THIS TOP PORTION WITH YOUR REMITTANCE

--

DATE	DETAILS	CHARGES	CREDITS	AMOUNT OF REMITTANCE
BALANCE FORWARD				BALANCE
6/9/79	Expediting Services 1 week  (JACK McCLINTOCK ) (2 man camp)	100.00		160.00
 8646				
				\$ 100.00

S2STA IN ACCOUNT WITH

PAYMENTS MADE AFTER DATE SHOWN SHALL APPEAR ON NEXT STATEMENT.

## STATEMENT

LAST AMOUNT IN THIS COLUMN IS BALANCE OF YOUR ACCOUNT AT THE DATE SHOWN.



BOX 338, DAWSON CITY, YUKON Y0B 1G0  
 PHONE: (403) 993-5451  
 TELEX: 036-8-269



INVOICE N<sup>o</sup> 791230

DATE Sept 23, 1979

CUSTOMER  
 ORDER NO. \_\_\_\_\_

DL NO: Rio Tinto Canadian Exploration  
 ADDRESS: Suite 615, Two Bental Centre  
555 Burrard Street, VANCOUVER, B.C.

001 0 3 777

TERMS: NET 7 DAYS  
 1 1/4% PER MONTH CHARGED  
 ON OVERDUE ACCOUNTS

Sept 6	C.D. Spence - Dining Room Charges					7	00
	TOTAL THANK YOU					7	00
	PAID 10/10/79						
	8646						

PROCESSED  
 RECEIVED  
 CHECKED  
 O.K.  
 APPROVED

"HOME OF THE KLONDIKE"



# CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
NORTH VANCOUVER, B.C.  
CANADA V7J 2C1  
TELEPHONE: [REDACTED] 984-0221  
AREA CODE: 604  
TELEX: 043-52597 RECEIVED

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

SEP 27 1979

## CERTIFICATE OF ANALYSIS

TO: Riocanex Ltd.  
Ste. 520 - 800 W. Pender St.  
Vancouver, B.C. V6C 2V6

CERTIFICATE NO. 50635

INVOICE NO. 32795

RECEIVED Sept. 15/79

ATTN:

ANALYSED Sept. 25/79

SAMPLE NO. :	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPM Hg
21800	114	20	58	490	5.8	170
21801	100	14	46	280	3.0	130
21802	114	16	78	>500	7.2	300
21803	210	30	114	>500	39	120
21804	102	20	78	360	13.0	160
21805	680	78	104	>500	47	480
21806	235	28	60	>500	36	280
21807	114	20	52	>500	23	1800
21808	48	12	46	>500	4.4	300
21809	76	16	40	>500	8.0	190
21810	42	14	58	>500	5.0	110
21811	54	18	46	430	11.6	400
21812	16	10	40	84	0.6	130
21813	34	10	48	175	1.4	150
21814	66	14	68	>500	4.8	110
21815	38	10	44	310	1.4	70
21816	36	12	58	465	1.2	70
21817	28	10	36	94	1.0	80
21818	104	8	54	66	1.8	90
21819	32	10	26	56	3.0	120
21820	118	54	54	>500	49	170
21821	78	18	52	270	10.0	170
21822	60	14	44	110	3.6	190
21823	200	22	66	>500	8.4	120
21824	56	12	50	300	9.8	150
21825	158	20	66	>500	23	960
21826	156	28	66	>500	22	620
21827	156	18	58	>500	9.8	180
21828	148	22	66	>500	18.4	480
21829	108	12	54	440	6.2	150
21830	134	14	82	480	10.0	190
21831	430	24	106	>500	36	150
21832	116	14	76	>500	11.2	130
21834	100	106	250	440	50	570
22482	36	6	60	14	1.4	130
22483	14	6	36	11	0.1	130
22484	56	8	64	125	2.0	80
22485	176	18	62	>500	26	560
22486	82	16	52	420	20.0	120
22487	24	6	46	19	1.0	110



MEMBER  
CANADIAN TESTING  
ASSOCIATION

CERTIFIED BY:

*Hart Biddle*

INVOICE N<sup>o</sup> 791156

DATE Sept. 13, 1979

CUSTOMER  
ORDER NO. \_\_\_\_\_

TERMS: NET 7 DAYS  
1 1/4% PER MONTH CHARGED  
ON OVERDUE ACCOUNTS

BOX 338, DAWSON CITY, YUKON Y0B 1G0  
PHONE: (403) 993-5451  
TELEX: 036-8-269



SEP 25 1979

TO: Rio Tinto Canadian Exploration  
 ADDRESS: #615, 555 Burnard Street  
VANCOUVER, B.C. V7X 1G4

Sept. 5-6	J. Muir/J. McLintock - two nights twin accomadation @ 40.00			80	00
	- Dining Room Charges			36	90
	- Phone Charges			2	60
	<b>Total Thank You</b>			<b>119</b>	<b>50</b>

RIO TINTO  
V7X 1G4  
VSP  
SC

7.11.79  
J.M.C.  
7.11.79

"HOME OF THE KLONDIKE"



# CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
 NORTH VANCOUVER, B.C.  
 CANADA V7J 2C1  
 TELEPHONE: 984-0221  
 AREA CODE: 604  
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

## CERTIFICATE OF ANALYSIS

TO: Riocanex Ltd.  
 Ste. 520 - 800 W. Pender St.  
 Vancouver, B.C. V6C 2V6

CERTIFICATE NO. 50636

INVOICE NO. 32795

RECEIVED Sept. 15/79

ATTN:

ANALYSED Sept. 25/79

SAMPLE NO. :	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPM Hg
22488	24	4	50	22	1.2	60
22489	42	6	52	23	1.8	90
24490	36	4	64	106	0.1	170
22491	42	8	50	200	1.2	100
22492	56	8	64	160	1.2	140
22493	26	8	52	54	1.0	80
22494	80	10	82	160	10.6	100
22495	182	18	74	290	11.2	270
22496	44	8	74	70	1.8	960
22497	102	430	470	> 500	300	1450
22498	156	140	182	> 500	89	900
22499	122	40	88	> 500	33	470
22500	146	122	146	> 500	49	430
22501	94	102	130	415	12.8	340
22502	132	98	144	450	49	290
22503	62	32	32	42	9.0	1150
22504	26	10	66	250	1.4	130
22505	36	8	48	140	0.1	90
22506	24	8	38	37	0.4	60
22507	94	60	54	> 500	16.4	840
22508	28	36	68	> 500	54	1500
22509	430	30	68	> 500	30	200
22511	64	10	48	450	2.4	160
22512	770	170	120	310	42	580
22513	98	28	102	> 500	71	570
22514	18	22	66	31	0.4	400
22515	122	40	68	470	16.4	230
22516	24	12	46	25	3.0	200



MEMBER  
 CANADIAN TESTING  
 ASSOCIATION

CERTIFIED BY:

*Hart Biddle*







# CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
 NORTH VANCOUVER, B.C.  
 CANADA V7J 2C1  
 TELEPHONE: 506-8848 984-0221  
 AREA CODE: 604  
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

## CERTIFICATE OF ANALYSIS

TO: Riocanex Ltd.  
 Ste. 520 - 800 W. Pender Street  
 Vancouver, B.C. V6C 2V6

CERTIFICATE NO. 50645

INVOICE NO. 32905

RECEIVED Sept. 19/79

ANALYSED Sept. 27/79

ATTN: (ROCKS)

Also on Cert. #66343

SAMPLE NO. :	PPM As	PPM Sb	PPM Hg
21538	>500	100	1050
21539	>500	36	290
21540	310	73	1050
21541	28	77	1100
21542	102	36	720
21543	>500	66	5300
21544	175	24	530
21850	12	3.0	140
21851	8.0	6.8	110
21852	190	6.6	790
21853	500	7.4	70
21854	64	2.0	30
21855	90	5.4	80
21856	12	2.4	30
21857	14	5.0	30
21858	24	5.8	30
21859	>500	6.4	40
218 A	26	480	2750
218 B	110	3.0	80



MEMBER  
 CANADIAN TESTING  
 ASSOCIATION

CERTIFIED BY: *Hart Biddle*



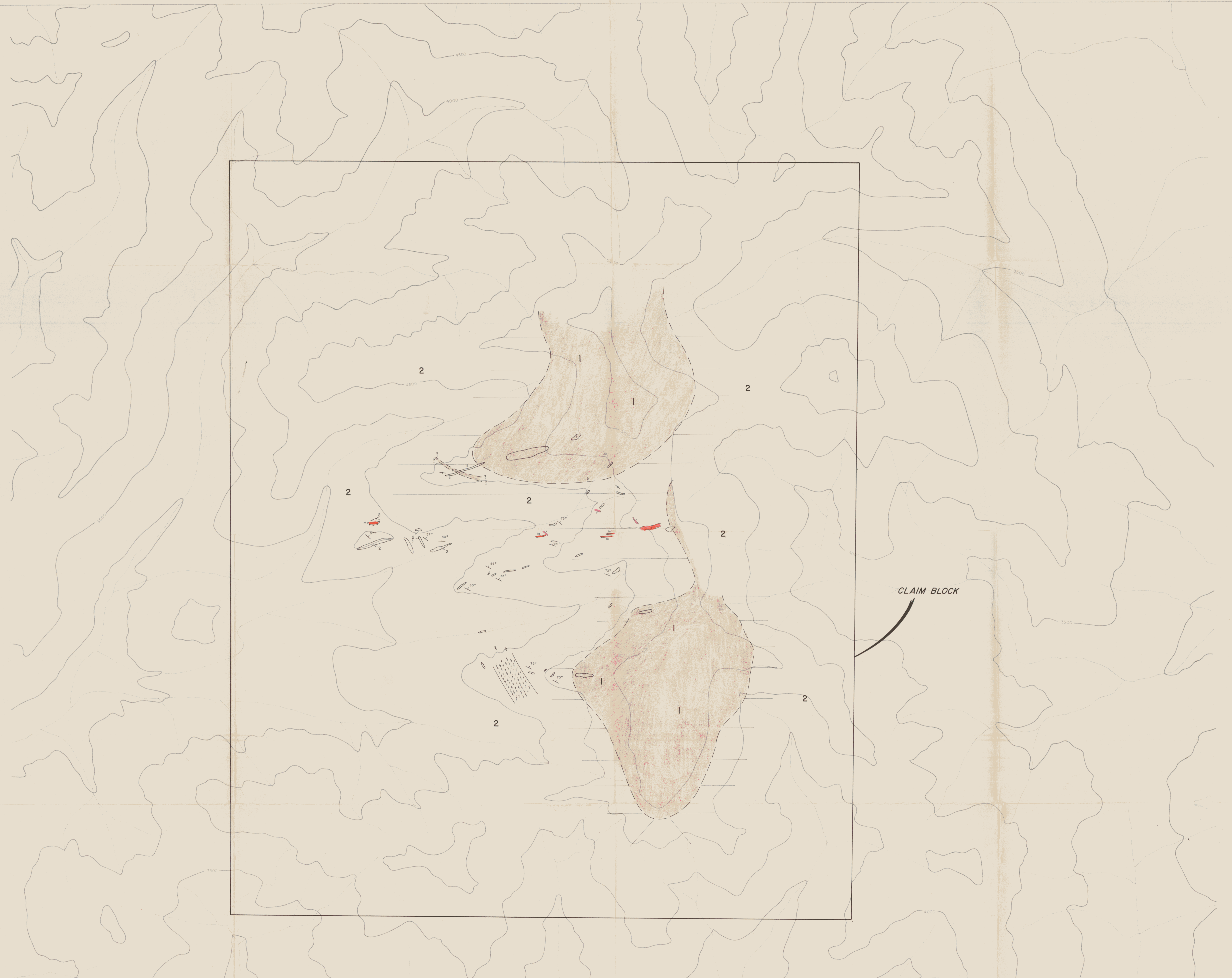




Appendix II

Claim Status

<u>Claim Name</u>	<u>Tag Number</u>	<u>Expiry Date</u>
IDA 1-39	YA32962 - YA33000	August 7, 1980
IDA 40-120	YA47001 - YA47081	August 7, 1980



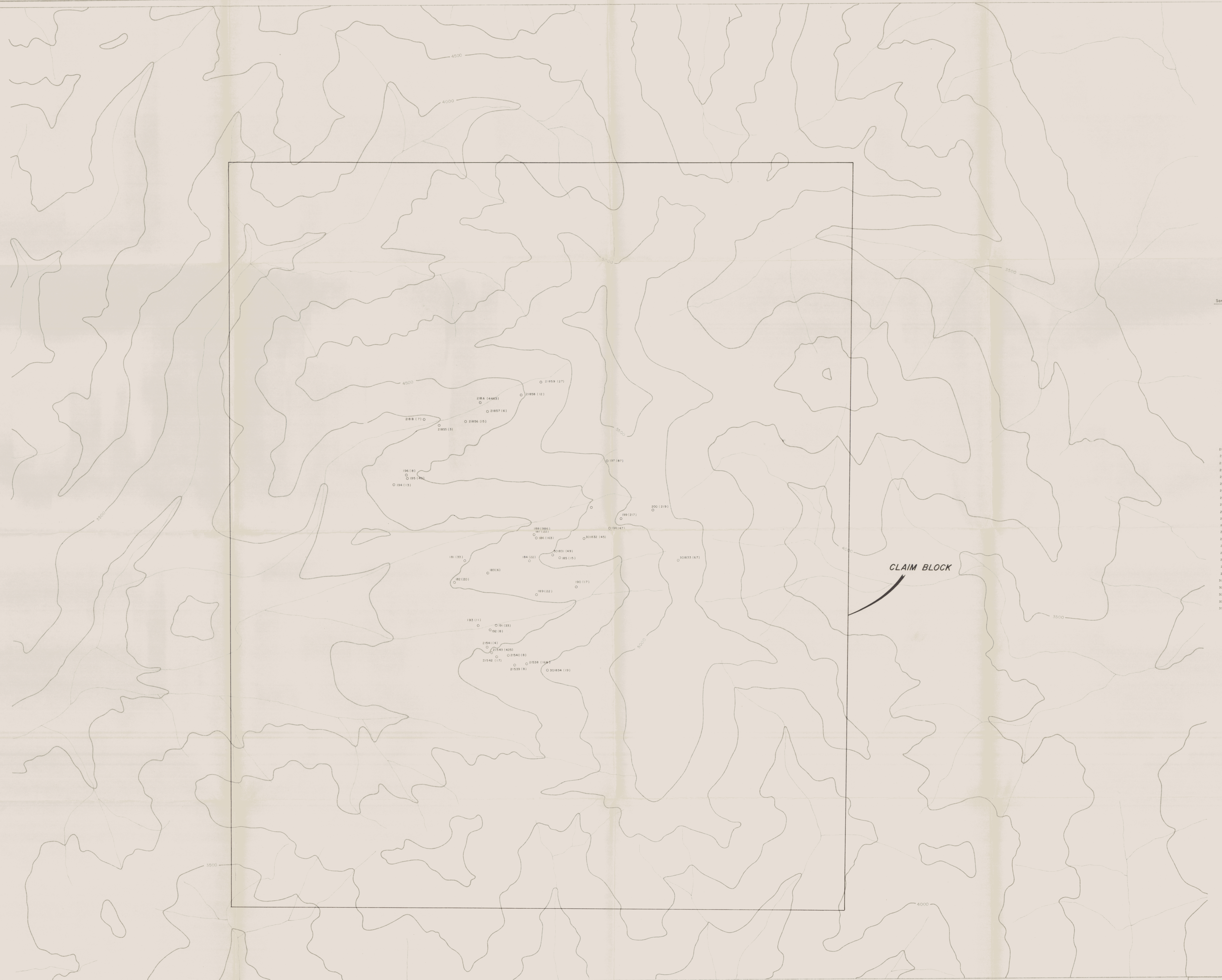
CLAIM BLOCK

*John M. ...*



- 2 - Chert, Mudstone, Argillite Minor Limestone
- 1 - Biotite Hornfels
- 1g - Monzonite
- 1g - Koolinized Feldspar Porphyry
- 90° - Strike, Dip of Bedding
- - Arsenopyrite Bearing Quartz Vein
- - Fault Zone
- - Rock Outcrop
- - Geological Contact

N.T.S. 116A/4  
 SCALE 1:10,000  
 Contour Interval: 500 feet



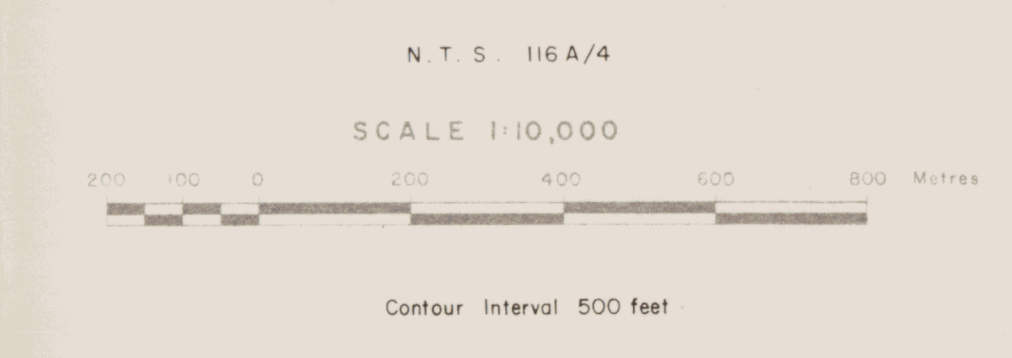
Results in ppm

Sample No.	As	Sb	Hg
181	>500	3.4	40
182	20	2.4	50
183	108	8.8	120
184	55	1.2	1240
185	>500	1.8	640
186	>500	5.1	780
187	>500	10	530
188	40	150	1430
189	>500	4.0	250
190	180	3.4	180
191	20	3.2	1550
192	74	1.0	500
193	>500	28	560
194	380	14.8	180
195	>500	4.2	90
196	60	2.9	80
197	235	8.4	60
198	>500	28	950
199	>500	3.2	200
200	>500	55	510
21538	>500	100	1050
21539	>500	36	290
21540	300	7.8	1050
21541	28	7.7	1100
21542	102	3.6	290
21543	>500	6.6	5300
21544	173	24	530
21550	12	3	140
21551	8	68	110
21552	190	66	130
21553	>500	74	70
21554	64	2.0	30
21555	90	5.4	80
21556	1.2	2.4	30
21557	14	5.0	30
21558	24	5.8	30
21559	>500	64	40
218 A	26	480	2780
218 B	10	30	80
301830	>500	7.9	600
301831	>500	100	5200
301832	410	17	50
301833	38	20	930
301834	170	5.4	100

Results in ppb

CLAIM BLOCK

○ 190(17) --- Rock Sample Location and Number (ppb Au)



*J.M. [Signature]*

