

GEOLOGY AND GEOCHEMISTRY

BATEAUX CLAIM

SKEENA MINING DIVISION

NTS 103F/1W
Latitude $53^{\circ}04'N$ Longitude $132^{\circ}29'W$

OWNER: Gordon G. Richards

OPERATORS: JMT Services
Prism Resources
Noranda Exploration
McIntyre Mines Limited

WRITTEN BY: Gordon G. Richards, P.Eng.

SUBMITTED: August 9, 1979

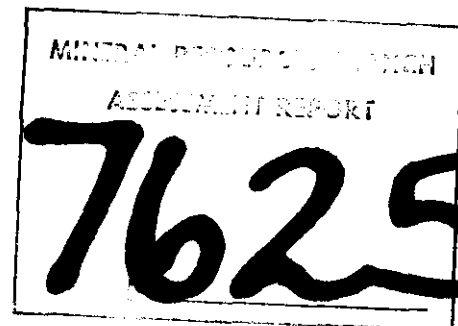


TABLE OF CONTENTS

LIST OF ILLUSTRATIONS	ii
INTRODUCTION	1
LOCATION AND ACCESS	1
TOPOGRAPHY AND VEGETATION	1
GEOLOGY: General	4
Structure	4
Mineralization and Alteration	5
GEOCHEMISTRY	5
CONCLUSIONS AND RECOMMENDATIONS	8
STATEMENT OF COSTS	9
STATEMENT OF QUALIFICATIONS	10
APPENDIX: Geochem Results	

LIST OF ILLUSTRATIONS

FIGURE 1	PROPERTY LOCATION MAP	2
FIGURE 2	CLAIM MAP - BATEAUX CLAIM	3
FIGURE 3	GEOLOGY AND GEOCHEMISTRY	In Pocket

INTRODUCTION

The Bateaux mineral claim lies along a prominent though previously unmapped major fault system. Several anomalous gold samples were obtained from reconnaissance traverses made in the area by J.S. Christie and G.G. Richards in the summer of 1977 and spring of 1978. The property was staked in July, 1978. Property examinations since then have indicated that a section of calcareous Kunga Formation rocks lying along a major drainage is in fault contact with Karmutsen Formation greenstones, and intruded by rhyolite dykes. Widespread siliceous alteration and anomalous gold geochemistry indicate the property worthy of a more detailed mapping and sampling programme.

LOCATION AND ACCESS

The property is located along the major drainage that flows northwesterly into the head of Kitgoro Inlet at the northwest end of Moresby Island, Queen Charlotte Islands. It is accessible by helicopter or fixed-wing aircraft from Sandspit or by boat from the Pacific Ocean.

TOPOGRAPHY AND VEGETATION

The valley floor of the major drainage crossing the property is 200 to 300 metres wide. Valley sides are steep but generally easy to traverse except at the eastern and western ends of the south side. Ridges are from 700 to 1600 feet above sea level.

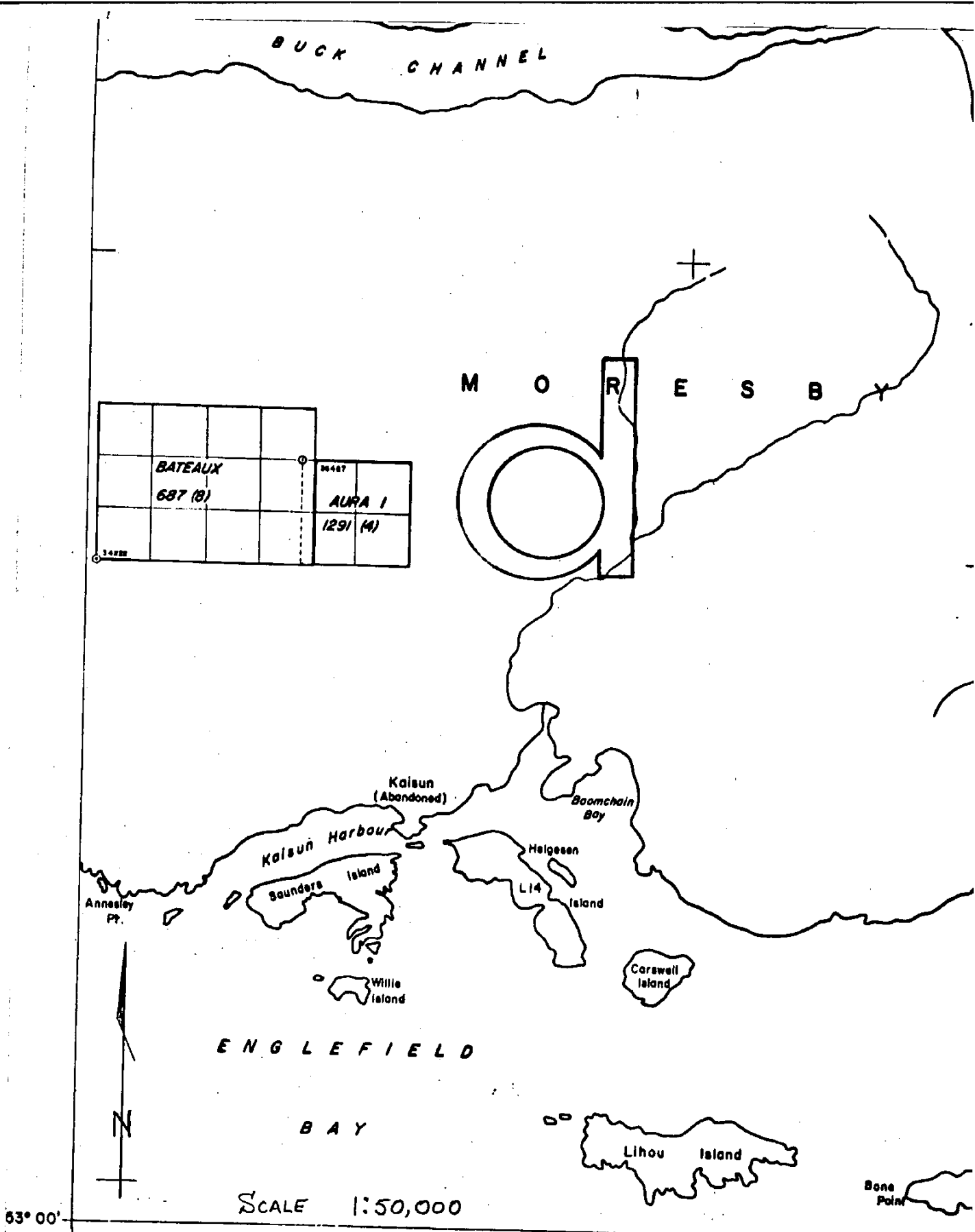
Steep slopes and valley bottom are heavily timbered with mature Hemlock and Spruce. Ridges and benches are covered in scrubby Cypress swamps.



FIGURE 1
 PROPERTY LOCATION MAP
 BATEAUX CLAIM

SCALE
 Mile 136 0 136 Mile

Prepared by	Date	NTS MAP AREA	DRAWING No
Drawn by	Revised.		



SKEENA MINING DIVISION
 Mining Division Boundary
 Indian Reservation
 Mineral and Placer Reserve
 Ecological Reserve
 Park Boundary
 Recreation Area Boundary
 Surveyed Line

- - - - - Crown Granted
 // // // // Reverted CG. Mineral Claim
 - - - - - Forfeited Mineral Claim
 - - - - - Verified Location Corner Post
 - - - - - Power Transmission Line
 - - - - - Pipeline
 - - - - - Stream... perennial

CG
 Rev. CG
 ✓
 VVV
 PIPELINE

TO SOUTH SEE
MINE
DEPART
 This map is p
 geographic
 information

FIGURE 2. CLAIM MAP - BATEAUX CLAIM

GEOLOGY

The following description is a generalization made on a few visits to the property (See figure 3 for dates). Most of the hillsides above the base of slope have not been traversed.

General

The oldest rocks on the property are massive dark green and grey flows, flow breccias, tuffs and possibly some argillites of the Lower Triassic and older Karmutsen Formation.

Above the Karmutsen and probably largely in fault contact with it, the Triassic-Jurassic Kunga Formation consists of basal massive grey limestone overlain by thin bedded flaggy black limestones grading upward to thin bedded limy argillites. Some of the Jurassic Yakoun Formation, overlying the Kunga, may be present on the property in volcanic breccia outcrops at sample sites R32 and R34.

Small quartz eye rhyolite dykes of probable Tertiary age are also common. They have been found in the northwest corner of the claim cutting massive limestones of the Kunga Formation and volcanic breccias of the Yakoun Formation. Float of similar rock has been seen in numerous small creeks draining the north side of the valley. The dykes are mineralized typically with 1/2 to 3% disseminated pyrite and are associated with local intense quartz veining and silicification.

Structure

The dominant structure on the property is a fault system that extends from Buck Point, at the northwestern tip of Moresby Island, southeastward some twenty-five miles past the head of Peel Inlet. The fault system appears to be a major

regional control of mineralization on this property as well as the BUCKHORN property to the NW and the OVERPROOF property to the SE. The fault system is not well exposed although some fault strands have been identified on the BATEAUX claim (figure 3).

Alteration and Mineralization

Rhyolite dykes and possibly plugs intruding limestones on the south side of the valley are locally intensely silicified and quartz veined. They contain 1/2 to 3% disseminated pyrite and rare arsenopyrite, usually in the wider quartz veins (3 cm). Limestones in the same general area, but also across the valley on the north side, contain abundant sintery quartz veins up to one or two metres wide individually but occasionally coalescing to form pervasive silicification up to 10 metres wide. These veins are barren of sulphide and are rarely anomalous for Au, As, Sb, or Hg (figure 3). Kunga argillites and Yakoun volcanics contain 1 - 5% pyrite and rare arsenopyrite. Near R31 and R34 they are more fractured than the rhyolites and limestones. Approximately 1500 metres along the south side of the valley, outcrops display the above textures. Beyond this 1500 metres the ~~mineral~~ rock type is Karmutsen greenstone that is only locally altered. Small zones of quartz veins occur adjacent to the above described zone. Some of these veins contain 2% arsenopyrite and 1 - 5% pyrite and are highly anomalous in gold (Sample 58461).

GEOCHEMISTRY

Reconnaissance geochem sampling in 1977 followed by base of slope silting along both sides of the major drainage crossing the Bateaux claim in 1978 indicated a large area of high background Au-As geochemistry with sporadic high Hg geochemistry. The property was staked in July 1978 and then examined with several major mining companies working out of Vancouver. The results of these property examinations are shown in figure 3

and indicate an encouraging geochemical pattern when combined with the known geology. One centre of highly anomalous geochemistry runs at and near sample sites J5367 (950 ppb Au) J5368 (6000 ppb Au). Host rock at this site is quartz eye rhyolite. Targets in this area include the rhyolite itself and whatever underlies the valley floor in the immediate area. Another target may exist at depth if it could be shown that a more favourable host rock exists beneath the limestone. Limestone is generally considered a poor host rock for bulk gold mineralization but a calcareous argillite as is abundant in the Kunga Formation is considered a much better host.

Only the area described above has been examined in any detail. The base of slope geochemistry however indicated a much broader anomalous geochem pattern covering the whole of the Bateaux claim. Much more work needs to be done to test potential for further targets. It is interesting to note that the silt draining the outcrop sampled by J5368 ~~was~~ (6000 ppb Au) and only 10 metres downstream ran only 15 ppb Au!

Rock chip samples were made up from three to ten rock chips, were small enough to fit into standard kraft sample bags and are therefore only preliminary in nature. Silt samples were collected with a spoon from active silt in creeks. Soil samples were collected from the B-horizon which occurred from 1 cm to 10 cm beneath the A-horizon.

The McIntyre Mines samples (series BAT 1-10 and 58461-58468) were collected on August 7, 1978 and analyzed at Chemex Labs. For Cu, Pb, Zn, Ag and Mo, a one gram sample was digested in perchloric nitric acid and analyzed by atomic absorption. Pb and Ag were corrected for background absorption. For Ba, Ca,

and Sr a one-half gram sample was digested in a solution of perchloric nitric acid and hydrofluoric acid, taken to dryness, taken up in a hydrochloric acid solution containing sodium or potassium and then analyzed by atomic absorption. For Hg, a one gram sample was digested in nitric acid with a small amount of hydrochloric acid and then analyzed by flameless atomic absorption. For As, a one gram sample was digested in perchloric nitric acid and then analyzed by flameless atomic absorption. For Sb, a one gram sample was digested in hydrochloric acid and analyzed by atomic absorption. For Au geochem, a 5 gram sample was ashed and digested in aqua regia. A gold bromide complex was extracted with MIBK and analyzed by atomic absorption. Au assays were determined by the standard five assay technique.

The Noranda Exploration samples (series J5351 to J5369) were collected on March 21, 1979 and analyzed at the Bondar-Clegg Lab. For arsenic, samples were dissolved in perchloric nitric acid and analyzed colorimetrically. For Au, samples were ashed, dissolved in hot aqua regia and analyzed by atomic absorption. For Hg, samples were dissolved in a controlled aqua regia solution and analyzed by closed cell atomic absorption. For Sb, samples were analyzed by X-ray fluorescence.

The Prism Resources samples (series R1 to R45) were collected on April 8, 1979 and analyzed at Vangeochem. The samples were analyzed geochemically for gold by treating a ten gram sample with an organic acid and analyzing with atomic absorption

CONCLUSIONS AND RECOMMENDATIONS

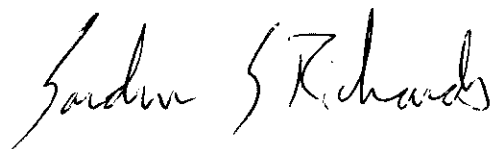
Results of the preliminary surveys are encouraging. A complete geological-geochemical survey should be done on the claim to provide a thorough understanding of contact relationships and geochemical highs.

1.	August 7, 1978		\$
	McIntyre Mines Limited		
a)	Wages: J.T. Shearer	\$100.00	100.00
	A.E. Angus	No charge	
	C. Angus	No charge	
	G.G. Richards	\$100.00	100.00
b)	Food: 2 man x \$20/man day X 1 day		40.00
	Accommodation: Motel		40.00
c)	Transportation: Vancouver-Sandspit return @ \$150/man		
	Applied to property - 1/2fare J. Shearer		
	1/2fare G. Richards		150.00
	Helicopter: Sandspit to property-return		300.00
d)	Geochem: Series 58461 to 58468		194.50
	Series BAT 1 to BAT 10		143.25
2.	March 21, 1979		
	Noranda Exploration		
a)	Wages: John Fraser	\$100.00	100.00
	G.G. Richards	\$100.00	100.00
b)	Food: 2 men X \$20/man day X 1 day		40.00
	Accommodation: Motel		40.00
c)	Transportation: Vancouver-Sandspit-return @ \$150/man		
	Applied to property - 1/2 fare J. Fraser		75.00
	Helicopter: Sandspit to property-return		300.00
d)	Geochem: Series J5351 to J5369		260.00
3.	April 8, 1979		
	Prism Resources		
a)	Wages: Angus McDonald	\$100.00	100.00
	G.G. Richards	\$100.00	100.00
	J.C. Christie	No charge	
	C. Harivel	No charge	
b)	Food: 2 men X \$20/man day X 1 day		40.00
	Accommodation: Motel		40.00
c)	Transportation: Vancouver-Sandspit-return @ \$150/man		
	Applied to property - 1/2 far A. McDonald		75.00
	Helicopter: Sandspit to property-return		300.00
d)	Geochem: Series R1 to R45		201.10
4.	Report, Draughting and Supplies		500.00
			<u>\$ 3,338.85</u>

STATEMENT OF QUALIFICATIONS

I, Gordon G. Richards of Vancouver, British Columbia do hereby certify that,

1. I am a Professional Engineer of the Province of British Columbia, residing at 818 West 68th Ave, Vancouver, B.C., V6P-2V2.
2. I am a graduate of the University of British Columbia B.A.Sc. Geology 1968, M.A.Sc. Geology 1974.
3. I have practised my profession as a mining exploration geologist, continuously since 1968.
4. This report is based on my personal knowledge of the district, and mapping of the geology at the property.



Gordon G. Richards, P.Eng.
August 9, 1979

APPENDIX

GEOCHEM RESULTS



VANGEOCHEM LAB LTD.
1521 PEMBERTON AVE.,
NORTH VANCOUVER, B.C.,
CANADA V7P 2S3

TELEPHONE: 986-5211
AREA CODE: 604

• Specialising in Trace Elements Analyses •

Certificate of Geochemical Analyses

-IN ACCOUNT WITH-
A. MacDonald

Report No: 79 51 001 Page 2 of 3
Samples Arrived:
Report Completed:
For Project:
Analyst:

Attention:

Sample Marking	Au ppb				
Q C 36 float	740			rock	
Q C 37	50				
79 R 1	10			rock	
2	nd				
3	20			rock	
4	nd				
5	nd				
6	10				25 mesh
7	100				25 mesh
8	30				
9	30				
10	20				
11	10			rock	
12	10			rock	
13	20				
14	20				
15	20				
16	80				
17	20				
18	10				
19	10				
20	10				
21	nd				
22	nd				
23	10				
24	20				
25	nd			rock	
26	10				
27	10				
28	20				
29	90				25 mesh
30	nd			rock	
31	20				
32	nd			rock	
33	20				
34	190	245		rock	
35	nd			rock	
36	20			rock	
79 R 37	10			rock	

MASTER PRINTING LTD.

REMARKS:

Signed:

% Mo x 1.6683 = % MoS₂ 1 Troy oz./ton = 34.28 ppm 1 ppm = 0.0001% nd = none detected ppm = parts per million

All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.



VANGEOCHEM LAB LTD.
1521 PEMBERTON AVE.,
NORTH VANCOUVER, B.C.,
CANADA V7P 2S3

TELEPHONE: 986-5211
AREA CODE: 604

Certificate of Geochemical Analyses

• Specialising in Trace Elements Analyses •

-IN ACCOUNT WITH-

A. MacDonald

Report No: 79 51 001 Page 3 of 3
Samples Arrived:
Report Completed:
For Project:
Analyst:

Attention:

Sample Marking	Au ppb				
79 R 38	10				
39	nd				rock
40	10				rock
41	400 *	425			
42	60				rock
44	10				rock
79 R 45	10				rock
79 H 101	10				rock
02	nd				rock
03	nd				rock
04	nd				rock
79 H 105	20				rock
79 C 1	20				rock
2	nd				rock
79 C 3	nd				rock
45					

MASTER PRINTING LTD.

REMARKS:

Signed: *[Signature]*

6683 = % MoS₂ 1 Troy oz./ton = 34.28 ppm 1 ppm = 0.0001% nd = none detected ppm = parts per million

All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.



CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

212 BROOKSBANK AVE.
NORTH VANCOUVER B.C.

RECEIVED
AUG 23 1978
CERTIFICATE NO. 45147

CERTIFICATE OF ANALYSIS

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

INVOICE NO. 27638

RECEIVED August 14, 1978

ANALYSED August 22, 1978

ATTN: B.C. GOLD
c.c. J. Shearer

SAMPLE NO. :	PPM Cu	PPM Pb	PPM Zn	PPM Ag	PPB Au	PPB Hg	PPM Sb	PPM As
BAT 1	16	1	94	0.1	<10	160	1	>500
2	8	1	76	0.1	<10	70	1	45
3	34	1	194	0.1	<10	850	1	18
4	20	1	116	0.1	<10	160	1	20
5	34	1	154	0.1	50	230	1	125
6	270	1	188	0.1	<10	4000	56	225
7	94	1	126	0.1	20	910	1	45
8	132	2	152	0.1	20	1400	1	55
9	58	2	215	0.2	<10	800	2	45
BAT 10	44	4	138	0.1	<10	280	NSS	NSS



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

CERTIFICATE OF ANALYSIS

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

CERTIFICATE NO. 45148

INVOICE NO. 27622

RECEIVED August 14, 1978

ANALYSED August 22, 1978

ATTN: ROCKS
B.C. GOLD

SAMPLE NO. :	PPM Cu	PPM Mo	PPM Pb	PPM Zn	PPM Ag	PPM Ni
58461	20	2	2	4	0.6	
58462	12	1	2	44	0.1	
58463	6	3	1	4	0.1	
58464	12	3	1	22	0.1	
58465	10	1	1	60	0.1	
58466	74	1	1	82	0.1	
58467	46	2	1	28	0.1	
58468	345	2	1	94	0.1	



FILE

CHEMEX LABS LTD.

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

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN:

ROCKS
B.C. GOLD

CERTIFICATE NO. 45148
INVOICE NO. 27622
RECEIVED August 14, 1978
ANALYSED August 22, 1978

SAMPLE NO. :	PPM Sb	PPM As	PPM Ba	PPM Ca	PPM Sr	PPB Hg
58461	24	1	100	700	20	
58462	1	>500	150	9400	135	
58463	1	35	75	>10,000	265	3
58464	2	12	125	>10,000	575	
58465	1	15	50	3500	50	
58466	1	20	100	>10,000	70	
58467	2	>500	1250	>10,000	240	560
58468	1	175	175	>10,000	160	1050



CHEMEX LABS LTD.

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

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN:

B.C. GOLD

CERTIFICATE NO. 34161
INVOICE NO. 27673
RECEIVED August 14, 1978
ANALYSED August 23, 1978

SAMPLE NO. :	oz Au GOLD
58461	0.036
58462	<0.003
58463	<0.003
58464	<0.003
58465	<0.003
58466	0.010
58467	<0.003
58468	<0.003



BONDAR-CLEGG & COMPANY LTD.

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 885-0881 TELEX: 04-64554

Geochemical Lab Report

As; Perchloric Nitric
Hg; Controlled Aqua Regia

Extraction Au; Fire Assay & Hot Aqua Regia Report No. 29 - 164 PROJECT: 1A #4-1

Hg; Closed Cell Atomic Absorption Sb; XRF

Method Au; Atomic Absorption As; Colorimetric From Noranda Explorations Ltd.

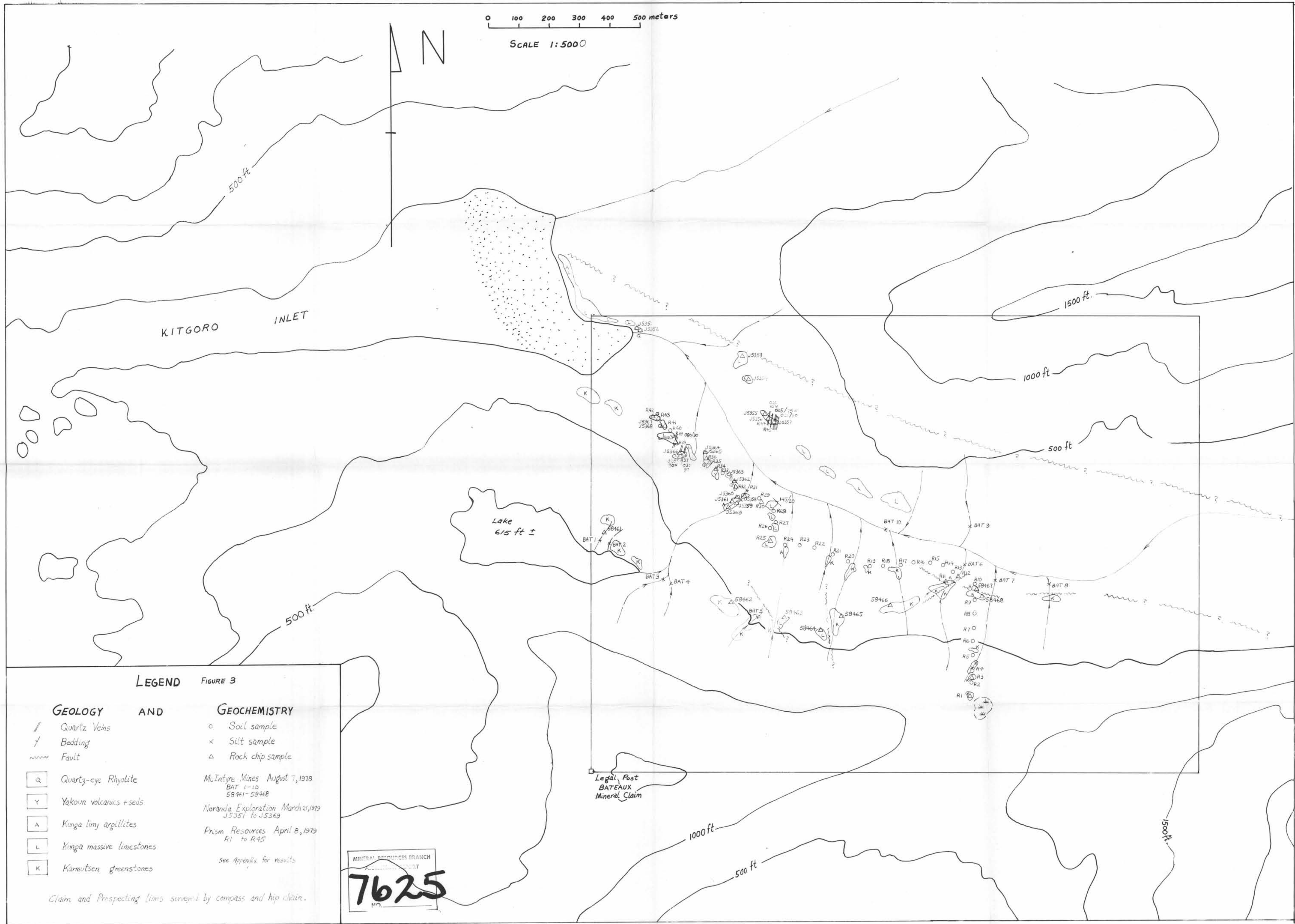
Fraction Used _____

Date April 5 1979

SAMPLE NO.	As ppm	Au ppb	Hg ppb	Sb ppm	SAMPLE NO.				
J 5351	50	10	300	60					
5352	56	15	1035	110					
5353	5	< 5	105	1					
5354	78	< 5	355	30					
5355	10	< 5	190	3					
5356	12	< 5	100	2					
5357	6	< 5	115	3					
5358	13	< 5	125	< 1					
5359	5	< 5	130	40					
5360	5	< 5	135	< 1					
5361	23	5	405	3					
5362	7	< 5	90	3					
5363	420	85	65	2					
5364	80	40	120	10					
5365	70	75	40	2					
5366	12	10	50	25					
5367	>1000	950	75	70					
5368	>1000	6000	135	215					
5369	60	10	410	2					
	2.75	3.75	3.50	3.25					
				Sil 45					
				Rt 1.75					

0 100 200 300 400 500 meters

SCALE 1:500



KITGORO INLET

Lake 615 ft ±

LEGEND FIGURE 3

GEOLOGY AND GEOCHEMISTRY

- / Quartz Veins
- / Bedding
- ~~~~ Fault
- Q Quartz-eye Rhyolite
- Y Yakoun volcanics + seds
- A Kinga lomy argillites
- L Kinga massive limestones
- K Kamutsen greenstones
- o Soil sample
- x Silt sample
- △ Rock chip sample

McIntyre Mines August 7, 1978
BAT 1-10
58461-58468

Noranda Exploration March 21, 1979
J5351 to J5369

Prism Resources April 8, 1979
R1 to R45

see Appendix for results

Legal Post
BATEAUX
Mineral Claim

MINERAL RESOURCES BRANCH

7625

Claim and Prospecting lines surveyed by compass and hip chain.