

ARIS SUMMARY SHEET

District Geologist, Prince George

Off Confidential: 89.08.23

ASSESSMENT REPORT 18022

MINING DIVISION: Clinton

PROPERTY: AT
LOCATION: LAT 51 31 00 LONG 124 44 00
UTM 10 5708488 379728
NTS 092N10E

CLAIM(S): AT 3-4
OPERATOR(S): Berniolles, L.
AUTHOR(S): Berniolles, L.
REPORT YEAR: 1988, 23 Pages

COMMODITIES

SEARCHED FOR: Gold, Copper, Nickel

GEOLOGICAL

SUMMARY: Near the contact of Upper Cretaceous Coast Batholith and Triassic volcanics, copper-nickel-cobalt sulphides occur in zones of magmatic segregation within the batholith. In the Triassic volcanics, several veins and stockwork structures contain quartz-gold and copper mineralization.

WORK

DONE: Prospecting
PROS 800.0 ha
Map(s) - 1; Scale(s) - 1:5000
ROCK 46 sample(s) ;ME

INDEXED

REPORTS: 16688
MINFILE: 092N 043

LOG NO: 1124	RD.
ACTION:	
FILE NO:	

PROSPECTING REPORT

AT3, AT4 CLAIMS

CLINTON MINING DIVISION

NTS LOCATION 92N/10

LATITUDE 51° 31' LONGITUDE 124° 44'

FILMED

OWNER/OPERATOR: LOUIS BERNIOLLES

AUTHOR OF REPORT: LOUIS BERNIOLLES

DATE SUBMITTED: NOVEMBER 17 1988

GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,022

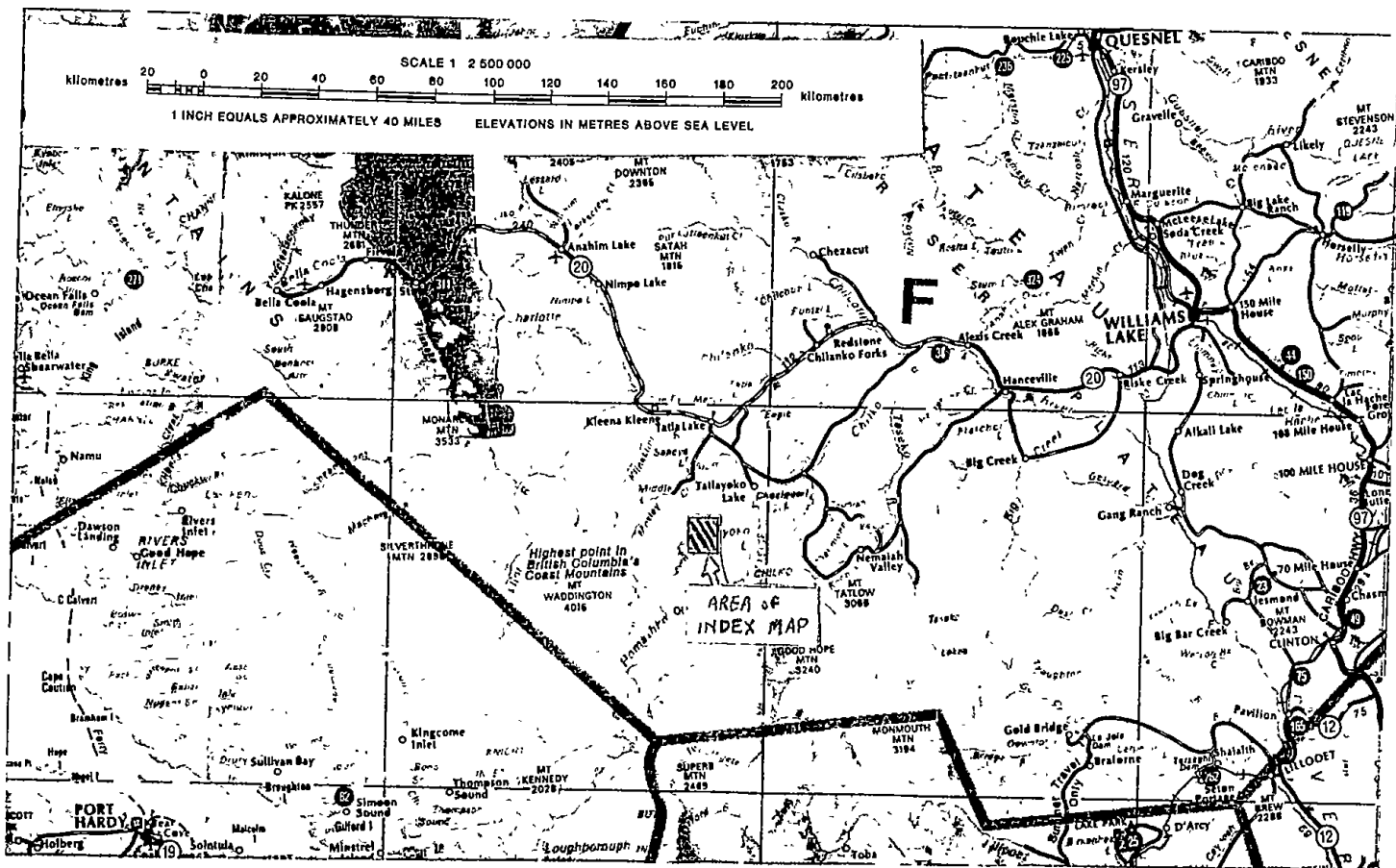
TABLE OF CONTENTS

	Page
INTRODUCTION	3 /
Location of property	3 /
Access to the claims	3 /
Index Map (MAP NO. 1)	4 /
Property definition	5 /
Summary of work done	5 /
 DETAILED TECHNICAL DATA AND INTERPRETATION	 5 /
Purpose of investigation	5 /
Description of observations made during investigation	6 /
Geochemical Lab Reports from Bondar-Clegg	10 /
Report 127-9400 samples -19 to -30, multielement	10 /
Report 627-9400 Certificate of Analysis, samples -19 & -29	13 /
Report V88-07250.0 samples -31 to -64, multielement	14 /
Report V88-07250.6 Certificate of Analysis, samples -43 & -45	19 /
Interpretation and conclusions	20 /
 ITEMIZED COST STATEMENT	 22 /
 AUTHOR'S QUALIFICATIONS	 23 /
 PLAN MAP (MAP NO. 2) SHOWING LOCATION OF SAMPLES (in pocket) /	

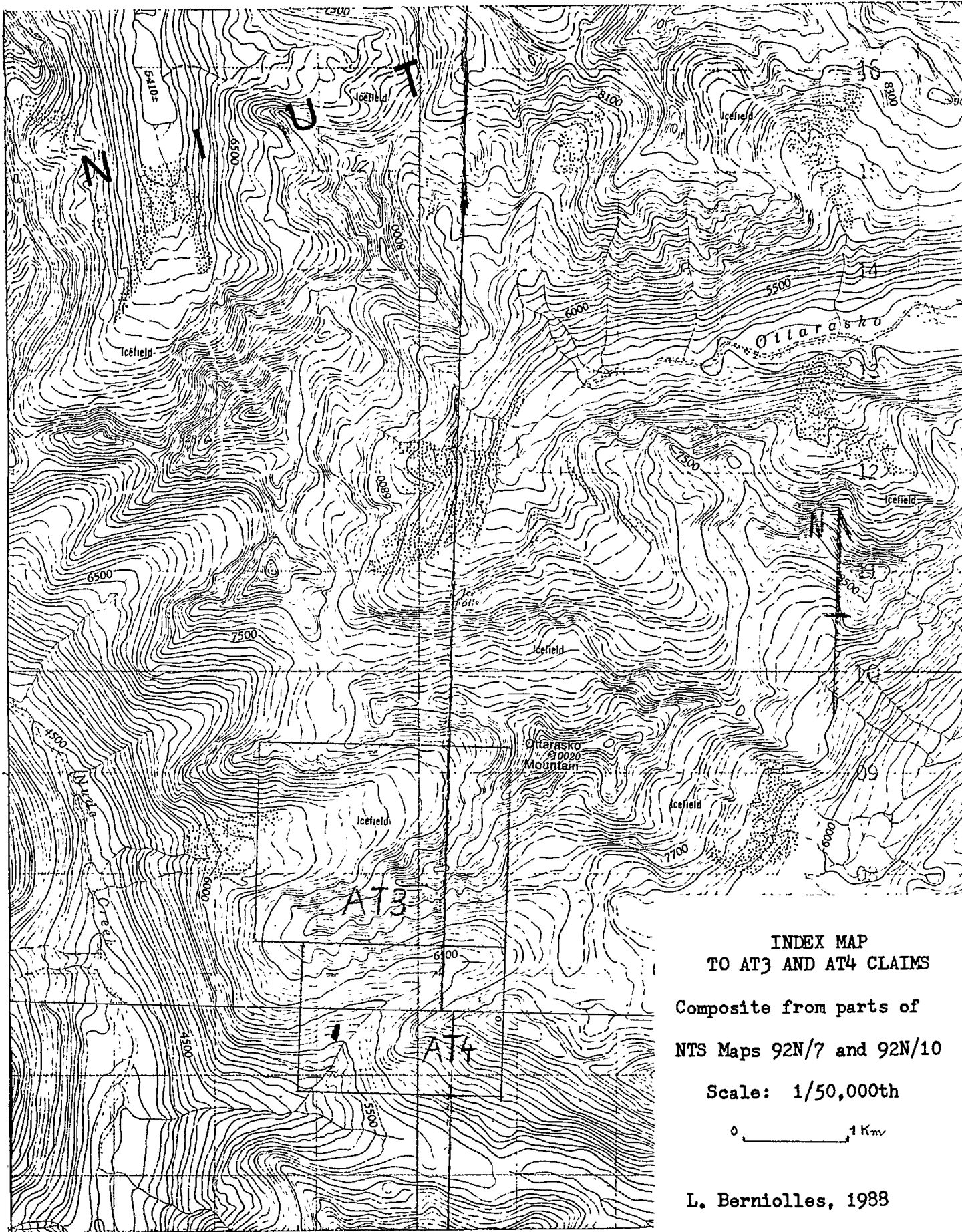
INTRODUCTION

Location of property. The AT3 and AT4 claims (group name AT34) cover 800 hectares (32 units), and are located on the western flank of Otтарasko Mountain, in the Niut Range of the Coast Mountains. The altitude on the claims varies between 4900 and 9500 feet, and the terrain which is extremely rugged, is partly overlain by a glacier.

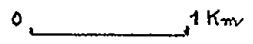
Access to the claim. The Niut Range is located in the Western Chilcotin region; Tatla Lake, the local center for services, is situated 225 kms west of Williams Lake on Highway 20. In Tatla Lake meals and rooms can be had at the Graham Inn, and a helicopter charter service (Whitesaddle Air Services) operates locally. This is the most practical way to inspect the AT34 group which otherwise can only be accessed by four or five days of hard bushwacking via Tatlayoko Lake.



Section of B.C. Road Map showing location of Index Map area.



INDEX MAP
TO AT3 AND AT4 CLAIMS
Composite from parts of
NTS Maps 92N/7 and 92N/10
Scale: 1/50,000th



L. Berniolles, 1988

Property definition. The AT3 and AT4 claims (the AT34 group) were staked in July 1987 by the author - who is still the current owner/operator as of this writing - as western and northwestern extensions of the AT2 claim, which was being prospected in detail at the time. The claims are located primarily on Triassic volcanics underlain by the Coast Batholith; at the southern end of the group the batholith has actually been uncovered by glacial action. The most recent geological mapping of the area was performed by W.H. Tipper in 1968.

The mineralization found on the AT34 group falls under 4 categories, the first two of which represent western extensions of the mineralization found on claim AT2.

1) Cu-Ni-Co sulphides in zones of magmatic segregation within the batholith.

2) Copper-bearing quartz and sulphide veins and stockworks in the andesitic upper strata on the main (southwest) ridge of Mount Otтарasko.

3) Auriferous quartz occurrences within the volcanic series near the eastern boundary of the property. The precise source location of the float samples taken is still unclear, as they have been transported by the glacier.

4) Auriferous quartz and chalcopyrite in strata-bound fracture fillings within one of the volcanic flows, identified near the northern boundary of the group.

Summary of work done. All accessible areas of the 800 ha. group were prospected systematically by a three-person team, for a total of 111 man/days, over the periods August 1 - August 23 1987 and July 17 - August 22 1988. Two base lines, intersecting respectively, part of claim AT3 and part of claim AT4, (total 1.8 km) were established as reference tie-ins for sampling locations. Forty-six samples were sent to Bondar-Clegg for geochemical analysis.

DETAILED TECHNICAL DATA AND INTERPRETATION

Purpose of investigation. During the summer of 1987, a prospecting program on the AT2 claim (just east of AT3 and AT4) led to the discovery of massive copper-nickel-cobalt sulphide zones within the ultramafic intrusive rocks which characterize that property. The surrounding area was prospected briefly to ascertain whether extensions or recurrences of this mineralization could be found. Positive results in the westerly and northwesterly directions led to the staking of claims AT3 and AT4. During the summer of 1988 a follow-through prospecting program on these two claims led to further discoveries; all the work done to date on the AT34 group is documented in the present prospecting report.

Description of observations made during investigation.

In a general way, the area prospected is underlain by the Coast Batholith, and the overlying Triassic volcanic series has been locally eroded down to the intrusive by stream and glacial action. Map No. 2, scale 1/5000th, shows the surficial geology of the claims and location of the samples which were sent for analysis, as well as the nature of these samples (bedrock outcrop, sub-outcrop or localized float, glacier-transported float).

In the southernmost area, where the batholith is exposed, five quartz carbonate veins were located. Their relative positions are indicated on Map No. 2, and their dimensions and attitudes are detailed in the sample description below.

Samples # AT34-87-20, AT34-87-21, AT34-87-22, AT34-98-23

To the west of the above, also within the intrusive rocks, two samples of very localized float (broken off a cliff face onto the talus slope) show good massive sulphide mineralization containing pyrite, chalcopyrite and pentlandite in an ultramafic igneous rock.

Samples # AT34-87-19, AT34-87-26

Just to the west of that, a small fracture zone of greenish, crumbly rock was sampled; a nearby sample of basalt float with a well-formed blue-grey crust was also sent for analysis.

Samples # AT34-87-25, AT34-87-24

Moving to the north, on the southern flank of the main ridge of Otтарasko Mountain, several samples of sulphide mineralization within andesitic rocks were taken. The rocks, broken into blocks often exceeding 1 m³, originate at the upper levels of the ridge.

Samples # AT34-87-26, AT34-87-27

Moving north again, to the north flank of the main ridge of Otтарasko Mountain, we find more sulphides in andesitic rocks, some mildly pyritized phyllites and siltstones, as well as several quartz occurrences, both in place and as glacier transported float definitely originating from the main ridge.

Samples # AT34-87-30, AT34-88-58, AT34-88-59, AT34-88-60, AT34-88-61, AT34-88-38, AT34-88-39, AT34-88-40

Further north, dealing with a group of samples which have (or are being) transported by the glacier, and whose precise origin is still not clear, we have:

a) quartz vein fragments with very minor amounts of sulphides, often auriferous.

Samples # AT34-87-29, AT34-88-34, AT34-88-36, AT34-88-37

b) quartz or sulphide inclusions within fragments of volcanic rock, with varying Cu-Au contents.

Samples # AT34-88-41, AT34-88-43, AT34-88-44, AT34-88-45, AT34-88-46, AT34-88-47

Finally, on the northern section of the claim (on the south flank of the northwest ridge of Mount Ottarasko) we have a number of quartz veins or occurrences in place, as well as various mineralized float samples which must have originated locally (with no ice transport). Samples # AT34-88-31, AT34-88-32, AT34-88-33, AT34-88-35, AT34-88-42, AT34-88-48, AT34-88-49, AT34-88-50 thru -54, AT34-88-55, AT34-88-56, AT34-88-57, AT34-88-62, AT34-88-63, AT34-88-64

Sample description:

- AT34-87-19 composite sample of dark hornblende diorite with massive inclusions of sulphides: pyrite, chalcopyrite, pentlandite - the source boulders fall off a vertical cliff onto the scree
- AT34-87-20 quartz carbonate vein - strike 35° , near vertical, over 2 m wide, 100+ m long
- AT34-87-21 quartz carbonate vein, beige-brown at center, greenish along both walls, strike 160° , dip near vertical, 3+ m wide, 100+ m long - this is a sample of the beige center
- AT34-87-22 same vein as above, greenish material on flanks of vein
- AT34-87-23 composite samples of 3 smaller quartz carbonate veins just east of -21 - approximately same attitude as -21
- AT34-87-24 fragment of basalt float with blue-grey crust
- AT34-87-25 small greenish vein and surrounding decomposed material - strike NW, vertical
- AT34-87-26 float, ultramafic sample in major NW trending fault canyon - sulphide inclusions several centimeters across
- AT34-87-27 sample taken off massive float block (1.5 to 2 m³); banded disseminations of sulphides in a porphyritic andesite
- AT34-87-28 composite sample of five pyritized grey volcanics float blocks on scree, some with quartz and sericite veinlets
- AT34-87-29 quartz float - white quartz with very minor chalcopyrite - assays at .46 o/t gold - north lateral moraine, on AT3
- AT34-87-30 composite of 2 samples of greyish volcanics with sulphides from float found on south lateral moraine, on AT3 - samples very similar to those making up -28
- AT34-88-31 eight quartz veinlets, parallel, vertical over a total width of 3 m - NW strike - each veinlet 10 to 15 cm wide, white quartz with grey banding
- AT34-88-32 wall rock from -31 - medium grey volcanics with disseminated sulphides - reddish weathering with azurite stains
- AT34-88-33 quartz vein - northeasterly strike, dipping SW 25° , outcropping over 5 m length and 1 m width, but open in both dimensions - yellow-brown quartz, minor sericite
- AT34-88-34 composite sample from quartz boulder train on surface of glacier - yellowish-grey quartz, very minor sphalerite and galena - assays at 6.2 g/t gold

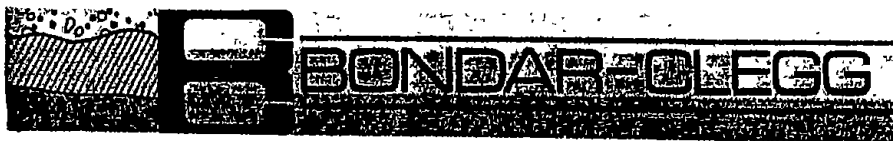
- AT34-88-35 contorted quartz veinlet, 10 to 20 cm wide - strike north-westerly, approximately vertical, white quartz, minor sericite, limonite stains
- AT34-88-36 quartz float - white quartz, minor sericite
- AT34-88-37 quartz float - white quartz with grey inclusions and fairly abundant muscovite - bright orange stains
- AT34-88-38 white quartz float (from terminal moraine, AT3)
- AT34-88-39 white quartz float (south lateral moraine, AT3)
- AT34-88-40 white quartz float (south lateral moraine, AT3) - minor sulphides
- AT34-88-41 float - quartz fracture fillings in grey volcanic flow - minor sulphides, malachite, azurite stains
- AT34-88-42 float - quartz carbonate with azurite and malachite stains
- AT34-88-43 float - quartz fracture filling in dark grey very fine-grained volcanic rock - good sulphide content: chalcopyrite, pyrite, bornite, with malachite stains on the host rock
- AT34-88-44 float - quartz in grey volcanic, minor disseminated sulphides - malachite stain on host rock
- AT34-88-45 quartz veinlets in a ladder structure within grey and mauve volcanic flows - sample taken from large angular boulders arranged in a train along the north lateral moraine on AT3 - gold-copper mineralization
- AT34-88-46 composite sample of mineralized float on medial moraine quartz with pyrite and minor chalcopyrite associated with grey pyritized volcanic rock
- AT34-88-47 composite sample from north lateral moraine - description similar to -46
- AT34-88-48 quartz vein - strike 150° , near vertical, length approximately 100 m, width 30 cm, rusty zone on both walls
- AT34-88-49 local float from alteration zone surrounding -48, grey mottled quartz, chalcopyrite, malachite
- AT34-88-50 quartz vein - strike 155° , near vertical, length 200+ m, width 30 to 40 cm - northernmost location on vein: limonite, small amounts of sulphides, including galena
- AT34-88-51 same as -50, but 60 m SE - no visible mineralization
- AT34-88-52 same as -50, but 125 m SE - white quartz, malachite stains, very minor chalcopyrite
- AT34-88-53 same as -50, but 175 m SE - no visible mineralization apart from a few crystals of pyrite
- AT34-88-54 altered limonitic wall rock along quartz vein (sampled in -50, -51, -52, -53) location 150 m SE from sample -50
- AT34-88-55 zone of quartz carbonate 30 m east of -54, over 20 m²
- AT34-88-56 quartz vein - strike 160° , dip 80° East, exposed over 15 m - pyrite crystals
- AT34-88-57 pale grey limestone with disseminated pyrite crystals, weathers beige-brown
- AT34-88-58 composite sample of mildly pyritized phyllites and siltstones, from localized float

- AT34-88-59 quartz vein remnant - attitude approximately North South vertical, no visible mineralization
- AT34-88-60 quartz lens (vein?) in line with fault - strike 130° , dip 85° West, 2 m wide, 20+m long, no visible mineralization
- AT34-88-61 quartz float, on south side of glacier, on AT3 - disseminated crystals of galena
- AT34-88-62 quartz vein remnant - white quartz with sericite
- AT34-88-63 composite sample from several quartz veins and veinlets trending approximately NW on a cliff face - quartz, sericite, biotite, limonite
- AT34-88-64 quartz vein float from huge fragment of vein, buried under snow until mid August - quartz with minor pyrite disseminations

Signature of the prospector who performed the work (as per section C9(7) of Mineral Act Regulations) :



Louis M. Berniolles



REPORT: 127-9400 (COMPLETE)

REFERENCE INFO:

CLIENT: TCHAIKAZAN EXPLORATIONS
 PROJECT: AT34

SUBMITTED BY: LOUIS BERNOILLES
 DATE PRINTED: 9-DEC-87

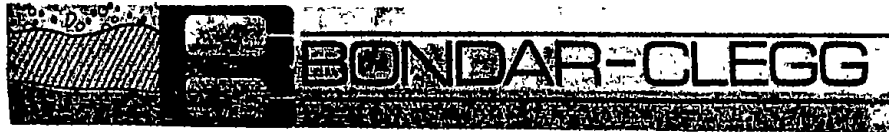
ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Cu Copper	12	1 PPM	MULT ACID TOT DIG	PLASMA
2	Pb Lead	12	5 PPM	MULT ACID TOT DIG	PLASMA
3	Zn Zinc	12	1 PPM	MULT ACID TOT DIG	PLASMA
4	Mo Molybdenum	12	1 PPM	MULT ACID TOT DIG	PLASMA
5	Co Cobalt	12	1 PPM	MULT ACID TOT DIG	PLASMA
6	Ni Nickel	12	1 PPM	MULT ACID TOT DIG	PLASMA
7	Cr Chromium	12	1 PPM	MULT ACID TOT DIG	PLASMA
8	Mn Manganese	12	1 PPM	MULT ACID TOT DIG	PLASMA
9	Cd Cadmium	12	1 PPM	MULT ACID TOT DIG	PLASMA
10	Ag Silver	12	0.5 PPM	MULT ACID TOT DIG	PLASMA
11	Bi Bismuth	12	2 PPM	MULT ACID TOT DIG	PLASMA
12	Fe Iron	12	0.05 PCT	MULT ACID TOT DIG	PLASMA
13	V Vanadium	12	1 PPM	MULT ACID TOT DIG	PLASMA
14	As Arsenic	12	5 PPM	MULT ACID TOT DIG	PLASMA
15	Te Tellurium	12	10 PPM	MULT ACID TOT DIG	PLASMA
16	U Uranium	12	10 PPM	MULT ACID TOT DIG	PLASMA
17	W Tungsten	12	10 PPM	MULT ACID TOT DIG	PLASMA
18	Sb Antimony	12	5 PPM	MULT ACID TOT DIG	PLASMA
19	Se Selenium	12	5 PPM	MULT ACID TOT DIG	PLASMA
20	Sn Tin	12	10 PPM	MULT ACID TOT DIG	PLASMA
21	Au Gold-Fire Assay/N.A.	6	1 PPB	FIRE-ASSAY	INST. NEUTRON ACTIV.
22	Pt Platinum	2	15 PPB	FIRE-ASSAY	
23	Pd Palladium	2	2 PPB	FIRE-ASSAY	

REPORT: 127-9400

PROJECT: AT34

PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Co PPM	Ni PPM	Cr PPM	Mn PPM	Cd PPM	Ag PPM	Bi PPM	Fe PCT
R2 AT34-87-19		>20000	13	212	7	644	1697	193	364	<1	9.9	<2	>10.00
R2 AT34-87-20		489	17	338	7	57	73	105	811	<1	0.5	<2	9.63
R2 AT34-87-21		413	25	244	3	31	65	13	1120	<1	<0.5	<2	4.87
R2 AT34-87-22		87	15	195	3	25	35	47	869	<1	<0.5	<2	6.98
R2 AT34-87-23		79	23	312	1	21	57	23	1178	<1	<0.5	<2	4.45
R2 AT34-87-24		119	71	161	3	3	15	151	103	<1	0.7	<2	2.24
R2 AT34-87-25		220	27	222	5	67	123	79	1122	<1	2.3	19	8.59
R2 AT34-87-26		5653	15	276	3	163	1291	282	991	<1	0.7	7	>10.00
R2 AT34-87-27		4039	55	240	11	179	55	33	903	1	0.5	7	>10.00
R2 AT34-87-28		2137	27	103	7	129	35	43	801	<1	<0.5	<2	7.92
R2 AT34-87-29		260	31	51	<1	49	19	173	228	<1	8.7	3	3.20
R2 AT34-87-30		833	13	75	3	57	37	43	1291	<1	<0.5	<2	6.90



REPORT: 127-9400

PROJECT: AT34

PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	V PPM	As PPM	Te PPM	U PPM	W PPM	Sb PPM	Se PPM	Sn PPM	Au PPB	Pt PPB	Pd PPB
R2 AT34-87-19		275	31	<10	<10	<10	<5	9	<10	60	110	60
R2 AT34-87-20		334	<5	<10	<10	<10	<5	<5	<10			
R2 AT34-87-21		160	<5	<10	<10	<10	<5	<5	<10			
R2 AT34-87-22		352	<5	<10	<10	<10	<5	6	<10			
R2 AT34-87-23		144	<5	<10	<10	<10	<5	9	<10			
R2 AT34-87-24		56	35	19	<10	<10	7	<5	<10	50	60	40
R2 AT34-87-25		435	17	<10	<10	<10	5	<5	<10			
R2 AT34-87-26		364	13	<10	<10	<10	<5	<5	<10			
R2 AT34-87-27		163	73	<10	<10	73	9	8	13	120		
R2 AT34-87-28		137	35	<10	<10	<10	<5	<5	<10	140		
R2 AT34-87-29		13	19	32	<10	<10	<5	<5	<10	>10000		
R2 AT34-87-30		200	<5	<10	<10	<10	<5	<5	<10	680		



REPORT: 127-9400 (COMPLETE)

REFERENCE INFO:

CLIENT: TCHAIKAZAN EXPLORATIONS
 PROJECT: AT34

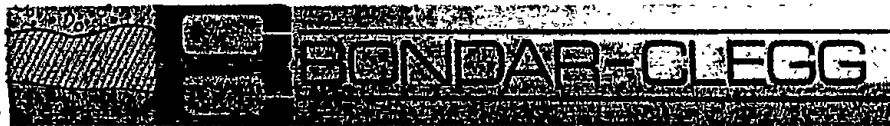
SUBMITTED BY: LOUIS BERNOILLES
 DATE PRINTED: 9-DEC-87

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	12	2 -150	12	CRUSH, PUI VERIZE	-150 12

REMARKS: ASSAY OF HIGH Au, Cu TO FOLLOW ON #627-9400

REPORT COPIES TO: MR. LOUIS BERNOILLES

INVOICE TO: MR. LOUIS BERNOILLES



REPORT: 627-9400

PROJECT: AT34

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	AU OPT	CU PCT
R2 AT34-87-19			3.08
R2 AT34-87-29		0.465	



REPORT: 627-9400 (COMPLETE)

REFERENCE INFO:

CLIENT: TCHAIKAZAN EXPLORATIONS
 PROJECT: AT34

SUBMITTED BY: LOUIS BERNIOLLES
 DATE PRINTED: 18-DEC-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	1	0.001 OPT		Gold - FIRE ASSAY
2	Cu	1	0.01 PCT		Copper

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	2	2 -150	2	AS RECEIVED, NO SP	2

REPORT COPIES TO: MR. LOUIS BERNIOLLES

INVOICE TO: MR. LOUIS BERNIOLLES

REPORT: V88-072511.0 (COMPLETE)

REFERENCE INFO:

CLIENT: TCHATKAZAN EXPLORATIONS
 PROJECT: AT34

SUBMITTED BY: I. BRANTOLES
 DATE PRINTED: 5-OCT-88

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au Gold	34	1 PPM	FIRE-ASSAY	FIRE ASSAY DCP
2	Ag Silver	34	0.2 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
3	As Arsenic	34	5 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
4	B Boron	34	2 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
5	Ba Barium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
6	Be Beryllium	34	0.5 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
7	Bi Bismuth	34	2 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
8	Cd Cadmium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
9	Ce Cerium	34	5 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
10	Co Cobalt	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
11	Cr Chromium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
12	Cu Copper	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
13	Ga Gallium	34	2 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
14	La Lanthanum	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
15	Li Lithium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
16	Mo Molybdenum	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
17	Nb Niobium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
18	Ni Nickel	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
19	Pb Lead	34	2 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
20	Rb Rubidium	34	20 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
21	Sb Antimony	34	5 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
22	Sc Scandium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
23	Sn Tin	34	20 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
24	Sr Strontium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
25	Ta Tantalum	34	10 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
26	Te Tellurium	34	10 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
27	Tl Thallium	34	10 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
28	V Vanadium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
29	W Tungsten	34	10 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
30	Y Yttrium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
31	Zn Zinc	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC
32	Zr Zirconium	34	1 PPM	MULT ACID TOT DIG	PLASMA EMISSION SPEC

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
V7P 2R5
985-0681 Telex 04-352667



Geochemical Lab Report

REPORT: V88-07250.0 (COMPIITF)

REFERENCE INFO:

CLIENT: TCHAIKAZAN EXPLORATIONS
PROJECT: AT34

SUBMITTED BY: L. BERNIOLLES
DATE PRINTED: 5-OCT-88

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBR	SAMPLE PREPARATTONS	NUMBER
R ROCK OR BED ROCK	34	2 -150	34	CRUSH,PULVERIZF -150	34

REMARKS: ASSAY OF HTGH Au, Cu TO FOLLOW ON V88-07250.6

ELEVATED DETECTION LIMITS ON SOME ELEMENTS
DUE TO INTERFERENCE FROM HTGH COPPER CONTENT.

- THE PACKAGE THAT YOU REQUESTED IS NO LONGER
AVAILABLE, SO WE HAVE SUBSTITUTED OUR NEW
PACKAGE. IF YOU REQUIRE THE MISSING ELEMENTS,
PLEASE ADVISE, AND WE WILL RUN THEM BY OUR
SPECIFIC TECHNIQUES.

REPORT COPIES TO: MR. LOUIS BERNIOLLES

INVOICE TO: MR. LOUIS BERNIOLLES

REPORT: V88-07250.0

PROJECT: AT34

PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	As PPM	B PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM
R2 AT34-88-31		4	0.9	<50	<2	111	<4.0	<5	<1	15	4	223
R2 AT34-88-32		38	4.1	<50	<2	356	<4.0	<5	1	7	24	66
R2 AT34-88-33		4	0.8	<50	<2	60	<4.0	<5	<1	8	4	258
R2 AT34-88-34		6200	1.0	<50	25	24	<4.0	<5	18	<5	<2	191
R2 AT34-88-35		37	0.6	<50	<2	242	<4.0	<5	<1	8	4	217
R2 AT34-88-36		6	<0.5	<50	4	54	<4.0	<5	<1	<5	<2	294
R2 AT34-88-37		196	1.6	<50	<2	121	<4.0	<5	<1	<5	8	259
R2 AT34-88-38		5	<0.5	<50	3	6	<4.0	<5	<1	<5	4	310
R2 AT34-88-39		1	0.5	<50	<2	32	<4.0	<5	<1	<5	9	292
R2 AT34-88-40		4	0.8	<50	<2	100	<4.0	<5	<1	<5	33	299
R2 AT34-88-41		179	2.2	<50	<2	242	<4.0	<5	1	<5	22	134
R2 AT34-88-42		127	8.9	152	<2	477	<4.0	<5	3	8	12	110
R2 AT34-88-43		8200	23.7	<50	<2	208	<4.0	46	10	6	21	107
R2 AT34-88-44		1240	7.0	<50	<2	228	<4.0	<5	2	<5	11	236
R2 AT34-88-45		>10000	5.1	<50	<2	135	<4.0	9	3	8	19	102
R2 AT34-88-46		234	0.9	<50	<2	70	<4.0	<5	<1	11	175	88
R2 AT34-88-47		456	2.0	<50	<2	97	<4.0	<5	1	6	199	130
R2 AT34-88-48		37	1.2	<50	<2	499	<4.0	<5	<1	6	16	176
R2 AT34-88-49		690	31.0	70	<2	253	<4.0	6	4	9	26	197
R2 AT34-88-50		25	24.3	259	<2	156	<4.0	40	1	<5	8	284
R2 AT34-88-51		11	4.5	<50	<2	183	<4.0	15	<1	8	2	242
R2 AT34-88-52		8	1.5	<50	<2	14	<4.0	<5	<1	<5	<2	317
R2 AT34-88-53		4	0.7	<50	<2	325	<4.0	<5	<1	7	4	258
R2 AT34-88-54		6	1.3	243	<2	308	<4.0	<5	1	89	38	117
R2 AT34-88-55		6	<0.5	<50	<2	1032	<4.0	<5	<1	25	11	52
R2 AT34-88-56		24	1.4	<50	<2	176	<4.0	<5	<1	6	4	169
R2 AT34-88-57		10	0.5	<50	<2	459	<4.0	<5	1	<5	39	53
R2 AT34-88-58		9	3.0	70	<2	325	<4.0	<5	3	11	8	91
R2 AT34-88-59		3	<0.5	<50	<2	25	<4.0	<5	<1	<5	2	241
R2 AT34-88-60		14	<0.5	<50	<2	37	<4.0	<5	<1	<5	9	230
R2 AT34-88-61		40	1.7	75	<2	79	<4.0	<5	2	<5	4	287
R2 AT34-88-62		2	<0.5	<50	<2	194	<4.0	<5	<1	<5	3	304
R2 AT34-88-63		14	<0.5	<50	<2	197	<4.0	<5	<1	<5	13	277
R2 AT34-88-64		379	<0.5	<50	<2	134	<4.0	<5	<1	23	11	153

REPORT: V88-1172511.11

PROJECT: AT34

PAGE 10

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Ga PPM	La PPM	Li PPM	Mn PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM
R2 AT34-88-31		76	8	6	6	<5	3	8	<10	<50	<5	3
R2 AT34-88-32		1357	16	<1	24	<5	6	5	<10	<50	<5	18
R2 AT34-88-33		68	6	?	3	<5	2	7	<10	<50	<5	3
R2 AT34-88-34		28	4	<1	?	<5	?	4	23	<50	<5	2
R2 AT34-88-35		29	9	4	11	<5	3	9	<10	<50	<5	4
R2 AT34-88-36		5	3	<1	1	<5	1	5	<10	<50	<5	<1
R2 AT34-88-37		1323	4	<1	3	<5	?	6	<10	<50	<5	2
R2 AT34-88-38		39	<2	<1	<1	<5	<1	7	<10	<50	<5	<1
R2 AT34-88-39		49	3	<1	<1	<5	1	10	<10	<50	<5	<1
R2 AT34-88-40		61	8	<1	8	513	3	13	<10	<50	<5	2
R2 AT34-88-41		2403	12	1	17	<5	4	10	11	<50	<5	10
R2 AT34-88-42		4990	15	2	7	<5	5	10	<10	92	717	12
R2 AT34-88-43		>200000	12	<1	7	<5	5	12	13	<50	16	14
R2 AT34-88-44		8627	9	<1	8	<5	4	8	<10	102	11	5
R2 AT34-88-45		8617	14	2	9	<5	3	13	11	<50	<5	17
R2 AT34-88-46		931	17	1	10	<5	3	2	<10	<50	<5	11
R2 AT34-88-47		2438	7	<1	7	<5	3	2	<10	<50	<5	5
R2 AT34-88-48		118	13	1	20	<5	3	26	<10	<50	<5	5
R2 AT34-88-49		8768	9	1	6	<5	4	28	67	<50	32	6
R2 AT34-88-50		1018	5	<1	6	<5	2	9	1755	<50	124	3
R2 AT34-88-51		137	7	?	9	9	?	7	168	<50	29	3
R2 AT34-88-52		687	3	<1	?	<5	?	6	27	<50	9	<1
R2 AT34-88-53		34	7	?	9	15	?	8	11	57	<5	3
R2 AT34-88-54		142	25	5.5	69	7	7	95	41	<50	25	10
R2 AT34-88-55		40	13	8	85	<5	<1	14	19	<50	5	8
R2 AT34-88-56		19	5	1	6	20	?	7	83	<50	<5	2
R2 AT34-88-57		59	13	1	41	<5	3	11	14	55	<5	18
R2 AT34-88-58		229	11	7	37	6	?	8	497	<50	53	12
R2 AT34-88-59		31	<2	<1	10	<5	<1	4	<10	<50	<5	<1
R2 AT34-88-60		65	4	<1	7	<5	?	13	<10	69	<5	3
R2 AT34-88-61		84	<2	1	2	7	<1	6	575	<50	14	<1
R2 AT34-88-62		14	<2	<1	?	<5	<1	4	26	<50	<5	6
R2 AT34-88-63		56	4	<1	6	<5	1	6	12	<50	<5	5
R2 AT34-88-64		251	4	11	18	<5	<1	8	25	<50	<5	6

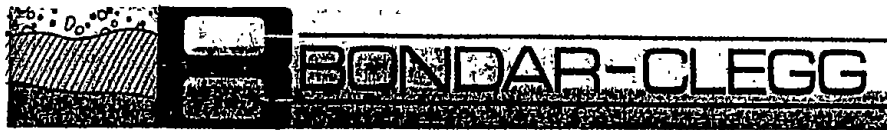
REPORT: V88-07250.D

PROJECT: AT34

PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Sn PPM	Sr PPM	Ta PPM	Ta PPM	Tl PPM	V PPM	W PPM	Y PPM	Zn PPM	Zr PPM
R2 AT34-88-31		<30	71	<10	<20	<20	23	<10	3	18	8
R2 AT34-88-32		<30	196	<10	<20	<20	179	20	12	70	2
R2 AT34-88-33		<30	33	<10	<20	<20	23	<10	2	14	6
R2 AT34-88-34		<30	54	<10	<20	<20	14	<10	1	496	3
R2 AT34-88-35		<30	66	<10	<20	<20	37	<10	3	27	8
R2 AT34-88-36		<30	3	<10	<20	<20	9	<10	<1	10	<1
R2 AT34-88-37		<30	16	<10	<20	<20	21	<10	2	32	2
R2 AT34-88-38		<30	3	<10	<20	<20	4	<10	<1	9	<1
R2 AT34-88-39		<30	20	<10	<20	<20	8	<10	<1	9	<1
R2 AT34-88-40		<30	10	<10	<20	<20	36	<10	<1	43	1
R2 AT34-88-41		<30	263	<10	<20	<20	125	<10	8	59	3
R2 AT34-88-42		<30	55	<10	<20	<20	681	<10	5	78	35
R2 AT34-88-43		<30	335	<10	<20	<20	158	15	11	<206	8
R2 AT34-88-44		<30	59	<10	<20	<20	81	<10	2	66	5
R2 AT34-88-45		<30	491	<10	<20	<20	121	<10	14	138	6
R2 AT34-88-46		<30	235	<10	<20	<20	96	<10	15	58	8
R2 AT34-88-47		<30	78	<10	<20	<20	55	<10	9	52	13
R2 AT34-88-48		<30	46	<10	<20	<20	72	<10	4	57	7
R2 AT34-88-49		<30	86	<10	<20	<20	52	13	5	165	4
R2 AT34-88-50		<30	30	<10	<20	<20	32	<10	1	45	4
R2 AT34-88-51		<30	107	<10	<20	<20	33	<10	1	32	9
R2 AT34-88-52		<30	5	<10	<20	<20	6	<10	<1	13	<1
R2 AT34-88-53		<30	17	<10	<20	<20	34	<10	1	14	8
R2 AT34-88-54		<30	222	<10	<20	<20	207	24	14	125	165
R2 AT34-88-55		<30	611	<10	<20	<20	69	<10	11	55	30
R2 AT34-88-56		<30	14	<10	<20	<20	24	<10	2	18	6
R2 AT34-88-57		<30	162	<10	<20	<20	179	<10	5	89	2
R2 AT34-88-58		<30	310	<10	<20	<20	122	<10	8	367	16
R2 AT34-88-59		<30	11	<10	<20	<20	7	<10	<1	22	<1
R2 AT34-88-60		<30	46	<10	<20	<20	32	<10	2	36	3
R2 AT34-88-61		<30	11	<10	<20	<20	8	<10	3	66	4
R2 AT34-88-62		<30	21	<10	<20	<20	51	<10	2	13	3
R2 AT34-88-63		<30	42	<10	<20	<20	47	<10	3	25	2
R2 AT34-88-64		<30	301	<10	<20	<20	46	<10	9	37	17

Bondar-Clegg & Company Ltd.
 130 Pemberton Ave.
 North Vancouver, B.C.
 Canada V7P 2R5
 Phone: (604) 985-0681
 Telex: 04-352667



Certificate
 of Analysis

REPORT: V88-07250.6

PROJECT: AT34

PAGE: 1

SAMPLE NUMBER	ELEMENT UNITS	Au OPI	Cu PCT
---------------	---------------	--------	--------

K2 AT34-88-43			3.04
K2 AT34-88-45		0.446	

Bondar-Clegg & Company Ltd.
 130 Pemberton Ave.
 North Vancouver, B.C.
 Canada V7P 2R5
 Phone: (604) 985-0681
 Telex: 04-352667



Certificate
 of Analysis

REPORT: V88-07250.6 (COMPLETE)

REFERENCE INFO:

CLIENT: TCHAIKAZAN EXPLORATIONS
 PROJECT: AT34

SUBMITTED BY: I. BERNIOLLES
 DATE PRINTED: 7-OCT-88

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au Gold	1	0.002 OPI		Fire Assay
2	Cu Copper	1	0.01 PCT		Atomic Absorption

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
P ROCK OR BED ROCK	2	2 -150	2	As RECEIVED. NO SF	2

REPORT COPIES TO: MR. LOUIS BERNIOLLES

INVOICE TO: MR. LOUIS BERNIOLLES

Interpretation and Conclusions.

The various mineralized occurrences on the AT3 and AT4 claims are aligned approximately on a southeast-northwest axis over a distance of 2.5 km and fall into four general categories, depending on their relative position to the contact between the Triassic volcanics and the batholithic rocks which intrude them on the southern part of the claims.

1) Zones of magmatic segregations within the intrusive. Here the mineralization is of the copper-nickel-cobalt type, and represent a continuation of the mineralization found on the AT2 claim, to the east. Values range to 3% Cu, .17% Ni and .06% Co. (Samples -19, -26).

2) Quartz and sulphide veins and stockworks to the north of the above, within the volcanic pile. Values in copper (up to .4%) with small amounts of gold (up to .68 g/t). These occurrences also represent a continuation of the mineralization found on or just north of the AT2 claim to the east. (Samples -27, -28, -30)

3) Still further north, auriferous quartz occurrences (indicated by float blocks) with almost no other associated minerals. Gold values to .46 oz/t, with a high Au/Ag ratio. The precise origin of this float has not yet been identified. (Samples -29, -34)

4) Finally, at the northern end of the property, various occurrences of Cu-Au-Ag mineralization, associated either with minor quartz fracture fillings within a gangue of volcanic rock, or with NW trending quartz veins. Values up to 3% Cu and .44 oz/t Au with a low Au/Ag ratio. (Samples -41, -42, -43, -44, -45, -47, -49, -50)

From the above data, two working hypotheses could be suggested with regard to further exploration in the area.

First, an overwhelming number of the structures found on the property show a SE-NW orientation. This is true of faults, of dykes, and of veins. Furthermore it is true, on a larger scale, of the mineralized trend itself, regardless of the particular form that it takes. There is, possibly, a regional relationship between this trend and the proximity of the northwest trending Ottarasko and Tchaikazan transcurrent faults a few kilometers east of the claims. If so, one might reasonably expect mineralization to continue to the NW from the northern boundary of the property.

Secondly, it might be noted that the sequence of elements, and the proportions of elements, which are found in the various mineralized sections (going from the SE to the NW) correspond roughly to the horizontal endogenic zonation of elements outward from a thermal center. Should this coincidence still be valid further north (that is further away from the batholithic contact), one might expect to find further gold values associated with zinc, lead and possibly more significant amounts of silver.

The possibility of Au-Ag-Zn-Pb mineralization to the northwest of the claims, finds some support in the presence of a Total Heavy Metal anomaly in the stream sediments of the creek draining

that area. (This anomaly was found and documented by the author during the course of a 1984 regional geochemical survey). Furthermore, the Blackhorn Mountain gold occurrences, 5 km northwest of the AT3 claim, are known to have significant lead and silver components. A rapid preliminary examination of the ground by the author during the summer of 1988 confirms the presence of some sulphide mineralization in the area under question, but its extent, as well as its precise nature, are still unclear; the area will require a substantial amount of systematic prospecting.

On the AT3⁴ group itself, further activities could include the following:

- 1) Ground geophysics on the relatively restricted areas where the terrain will allow the establishment of a grid. This would probably be most appropriate in the vicinity of the Cu-Ni-Co mineralization on claim AT4.
- 2) The viability of airborne geophysics should be investigated. The terrain is so rugged and the changes of altitude so abrupt that the value of an airborne survey may be diminished.
- 3) Further prospecting should be done by qualified mountaineering personnel in the areas which could not be reached by the author (ie which could only be reached by using technical aids to climbing: pitons, ropes, etc.).
- 4) Several drilling targets are already identified, to test quartz veins as well as the ultramafic intrusives containing the copper-nickel mineralization.

ITEMIZED COST STATEMENT - AT34 PROJECT

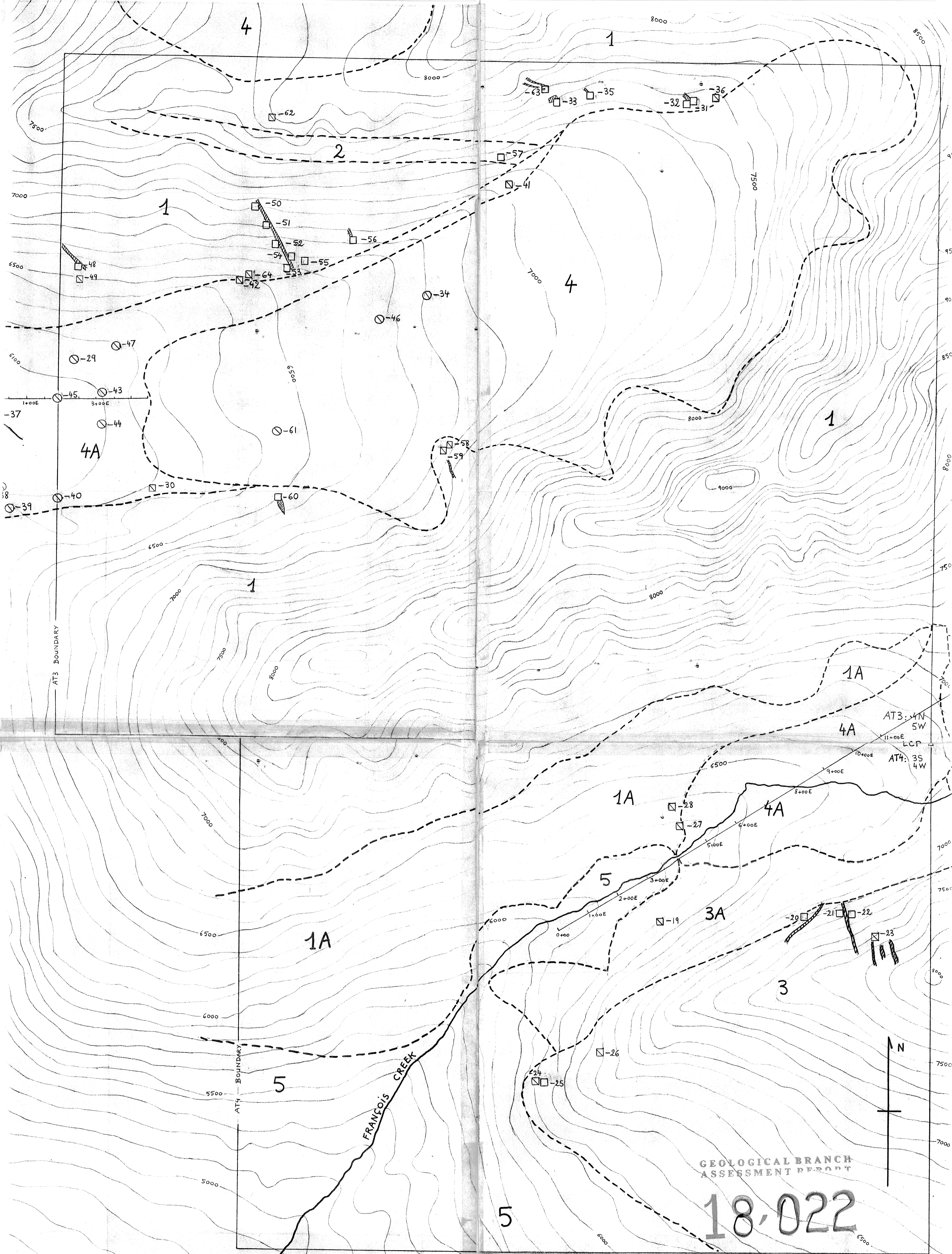
Field personnel	111 man/days	@ \$100	\$ 11,100
Food and accomodation			1,998
Aircraft support (Bell 206B)	3.1 hrs.	@ \$560	1,734
Ground transport (P.U.)	2550 km	@ 15¢	382
Equipment & supplies			1,254
Laboratory analysis	46 samples	@ \$26.25	1,209
Report writing			<u>150</u>
		Total	\$ 17,827

AUTHOR'S QUALIFICATIONS

- Eleven years experience as an independent prospector in France, Northern Saskatchewan and Central British Columbia.

- Attended the Third Annual Mineral Exploration Course for Prospectors, sponsored by the B. C. Ministry of Energy, Mines & Petroleum Resources, at Selkirk College, Castlegar, B. C., from April 29 to May 12, 1979.

- The author holds a B.A. in Mathematics from the University of Lyon, France, and a B.A. in Economics from the University of British Columbia.



GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,022

PLAN MAP OF AT3 AND AT4 CLAIMS (MAP NO. 2)

Scale: 1/5000th Elevations in feet

Author: L. Berniolles, 1988

LEGEND

- | | | | |
|--|---|--|---------------------------------------|
| | Lithological and surficial boundaries | | Cairn |
| | Triassic volcanics, minor shale and limestone | | Outcrop sample |
| | Triassic shale and limestone | | Sub-outcrop or localized float sample |
| | Talus derived from | | Glacier borne float sample |
| | Intrusive rocks of Batholith | | |
| | Talus derived from | | |
| | Glacier | | |
| | Till and moraine | | |
| | Soil, silt, gravel | | |
| | Mineralized zones or structures | | |

The number next to each sample location refers to the suffix n in the sample numbering system used in the text and in the geochemical analysis report (i.e. AT34-87-n or AT34-88-n)

