9/88

LOG NO: /229	RD.
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FILE NO: 87 - 955-	16688

PROSPECTING REPORT

AT2 CLAIM

CLINTON MINING DIVISION

NTS LOCATION 92N/10E

LATITUDE 51° 30' 16" LONGITUDE 124° 43'4"

OWNER/OPERATOR: LOUIS BERNIOLLES

AUTHOR OF REPORT: LOUIS BERNIOLLES

DATE SUBMITTED: DECEMBER 3, 1987

FILMED

GEOLOGICAL BRANCH ASSESSMENT REPORT

16,688

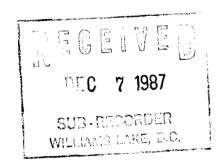


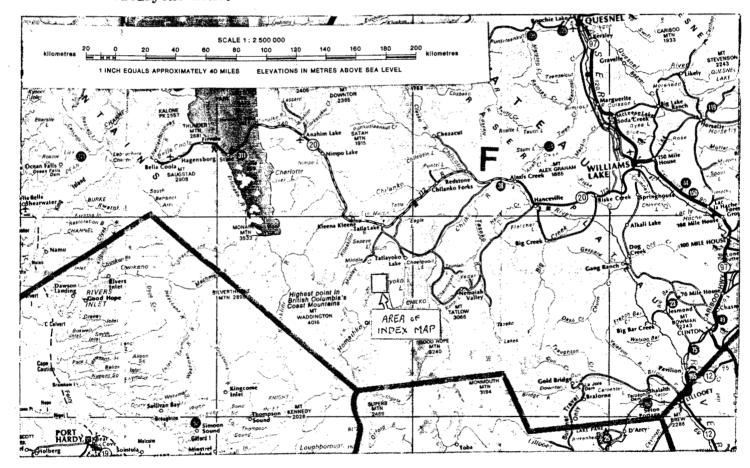
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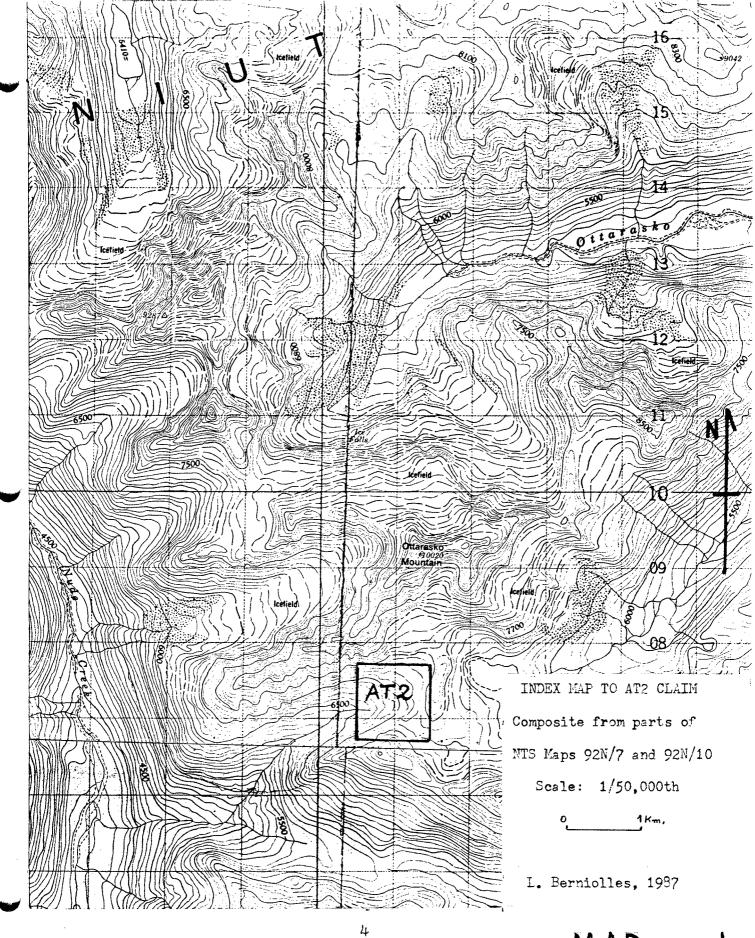
INTRODUCTION

Location of property. The AT2 claim covers 100 hectares (4 units), and is located on the southern flank of Ottarasko Mountain, in the Niut Range of the Coast Mountains. The altitude on the claim varies between 6600 and 7800 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 AT2 claim 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.



Property definition. The AT2 claim was staked in 1984 by the author, who is still the current owner/operator as of this writing. Mineralized float had been found for the first time in 1983, during a regional geochemical stream sediment sampling survey. The claim is located on the contact between the Coast Batholith and a Triassic volcanic series. The most recent geological mapping of the area was performed by N.H. Tipper in 1968. The intrusive rock is, locally, basic to ultrabasic; it was, therefore, considered as a possible host for copper-nickel-cobalt mineralization, as well as platinum/palladium. Current results confirm the existence of Cu-Ni-Co sulphide mineralization in zones of magmatic segregation, but platinum values, while higher than average in igneous rocks, have so far no economic potential. In view of the relative isolation of the claim, any possibility of base metal mining would depend very much on other mining developments in the area, or on the revival of B.C. Hydro's Homathko project, which would bring roads and power to within a few kilometers of the claim.

Summary of work done. All accessible areas of the 100 had claim were prospected systematically by a three-person team, for a total of 46 man/days, over the period July 24 - August 23, 1987. (This work was carried on concurrently with prospecting on adjacent claims, for which separate prospecting reports will be submitted.) A 1.3 km base line, intersecting AT2 and part of an adjacent claim, AT3, was established as a reference tie-in for sampling locations. Eighteen samples were sent to Bondar-Clegg for geochemical analysis.

DETAILED TECHNICAL DATA AND INTERPRETATION

Purpose of investigation. During the summer of 1933, the author found a mineralized boulder train trending west-south-west from the south-facing glacier of Mount Ottarasko. The mineralization was mostly disseminated chalcopyrite in a medium-to-dark grey igneous rock. The tenor was approximately 1.5% copper, with minor quantities of nickel and cobalt. During the 1934 season, the area to the east, which presumably was the source of the boulder train, was staked as the AT2 claim. However, little work was done on the claim until the summer of 1937, during which a prospecting program was, in part, devoted to trying to trace the origin of the boulder train mineralization. The possibility of finding Platinum Group minerals in the vicinity was also under consideration, in view of the abundance of basic and ultrabasic intrusive rocks.

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 relative positions of the intrusives, the Triassic rocks, and any surficial cover (ice, scree or moraine) which conceals much of the actual contact. This map also indicates the 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 lowest areas, where the Batholith is exposed, two zones of magmatic segregation within the intrusive were located on a cliff face; the exposed mineralization in both cases covers 5 to 10 square meters; the sulphide mineralization is massive, and consists of pyrite, pyrrhotite, chalcopyrite, pentlandite and associated cobalt minerals. It is evident, from the aspect of the mineralization, that these outcrops are not the source of the boulder material which was the primary indicator on this property. In fact the source of these boulders has still not been found, and is presumably overlain by the glacier. Samples # AT2-87-14, AT2-87-15, AT2-87-4

Also within the intrusive rocks, seven quartz carbonate veins were located, some of which measure up to 150 m in length, with widths ranging to 4 meters. Their relative positions are indicated on Map No. 2, and their dimensions and attitudes are detailed in the sample description below.

Samples # AT2-87-1, AT2-87-6, AT2-87-6, AT2-87-7, AT2-87-8, AT2-87-9, AT2-87-10, AT2-87-18

A small vein was located in the volcanic series near the intrusive contact; small amounts of sulphides and realgar are associated with calcite. Samples # AT2-87-13

A veinlet of pyrite was located 50 meters S.E. of preceding. Sample # AT2-37-12

At a higher altitude (and therefore at a greater distance from the intrusive contact) a quartz vein was located, visually, as the most likely source of a quartz boulder, exceeding 1 m³ in size, which is deeply stained by azurite and contains blebs of cuprite. Sample # AT2-37-16

A smaller quartz vein with a banded appearance (white, pale green and mauve) was located and sampled in the southern part of the claim. Sample # AT2-87-5

Several zones of ultrabasic igneous rocks are in evidence on the property. In one location, an adjacent zone of alteration and

pyritization was found, and samples of both the ultrabasic rock and the alteration zone were taken and sent for analysis. Samples # AT2-87-3. AT2-87-2

One occurrence of pyritized shale was located. Sample # AT2-87-11

A fragment of massive sulphide float was found near the northern boundary of the claim; the origin is undoubtedly from the main ridge of Ottarasko Mountain, to the north.

Sample # AT2-87-17

Sample description:

- AT2-87-1 Quartz-carbonate vein length 150 m, width 2 to 4 m, strike 35°, dip 72° W
- AT2-87-2 pyritized alteration zone next to ultrabasics approx. 50m²
- AT2-87-3 ultrabasic intrusive rock several occurences over extensive areas
- AT2-87-4 boulder train material, with disseminated chalcopyrite. First indicator to property.
- AT2-87-5 quartz vein length 20 m, width 30 cm, strike 90°, assumed vertical
- AT2-87-6 quartz carbonate vein strike 330°, assumed vertical
- AT2-87-7 quartz carbonate vein strike 110°, dip 70° S.
- AT2-87-8 quartz carbonate vein contorted with N.W. trend
- AT2-87-9 quartz carbonate vein strike 130°, dip 45° S.
- AT2-87-10 quartz carbonate vein strike 10°, vertical
- AT2-87-11 oblong outcrop of pyritized shale 10 m²
- AT2-87-12 veinlet of pyrite near contact
- AT2-87-13 small vein containing realgar, calcite, minor sulphides
- AT2-37-14 magmatic segregation zone 5 to 10 m^2
- AT2-87-15 magmatic segregation zone 5 to 10 m²
- AT2-87-16 quartz vein material large boulder with azurite and cuprite mineralization
- AT2-37-17 massive sulphide float, northern boundary of claim
- AT2-87-18 quartz carbonate veinlet N.W. trend

Signature of the prospector who performed the work (as per section 09(7) of Mineral Act Regulations):

130 Pemberton Ave. North Vancouver, B.C Canada V7P 2R5 Phone: (604) 985-0681 Telex: 04-35266



Geochemical Lab Report

REPORT: 127-7057 (COMPLETE)

REFERENCE INFO:

CLIENT: TCHAIKAZAN EXPLORATIONS

SUBMITTED BY: L. BERNIOLLES

PROJECT: AT2-87

DATE PRINTED: 22-OCT-87

ORDER			ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
	1	Αu	Gold-Fire Assay/N.A.	18	1 PPB	f Tre-assay	INST. NEUTRON ACTIV.
: !	2	Cu	Copper	18	1 PPM	MULT ACID TOT DIG	
	3	РЬ	Lead	18	5 PPM	MULT ACID TOT DIG	PLASMA
	4	Zn	Zine	18	1 PPM	MULT ACID TOT DIG	PLASMA
	5	ďο	Molybdenum	18		MULT ACID TOT DIG	PLASMA
•	6	Co	Cobalt	18	1 PPM	MULI ACID TOT DIG	PLASMA
	7	Ni	Nickel	18	1 PPM	MULI ACID TOT DIG	PLASMA
And the second second	8	Cr	Chromium	18	1 PPM	MULT ACID TOT DIG	PLASMA
	9	ďη	Manganese	18	1 PPM	MULT ACID TOT DIG	PLASMA
	10	Cd	Cadmium	18	1 PPM	MULT ACID TOT DIG	PLASMA
	11	Ag	Silver		0.5 PPM	MULT ACID TOT DIG	PLASHA
	12	Bi	Bismuth	18	2 PPM	MULT ACID TOT DIG	PLASMA
	13	Fe	Iron	18	0.05 PCT	MULT ACID TOT DIG	PLASHA
	14	V	Vanadium	18	1 PPM	MULT ACID TOT DIG	PLASMA
	15	Ås	Arsenic	18	5 PPM	MULT ACID TOT DIG	PLASMA
	16	Te	Tellurium	18	10 PPM	MULT ACID TOT DIG	PLASMA
	17	Ü	Uranium	18	10 PPM	MULT ACID TOT DIG	PLASMA
700 11 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18	¥	Tungsten	18	10 PPM	MULT ACID TOT DIG	PLASNA
	19	Sb	Antimony	18	5 PPM	MULT ACID TOT DIG	PLASMA
	20	Se	Selenium	18	5 PPM	MULT ACID TOT DIG	PLASMA
	21	Sn	Iin	18	10 PPM	MULT ACID TOT DIG	PLASMA
	22	Pt	Platinum	6	15 PPB	FIRE-ASSAY	
	23	Pd	Palladium	6	2 PPB	F IRE-ASSAY	

Bondar-Clegg & Company Ltd.

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



Geochemical Lab Report

REPORT: 127-7057	134						PRI	DJECT: ATZ	2-87		PAGE 1A	
SAMPLE ELEMENT NUMBER UNITS	Au PPB	Cu PPM	Pb PPN	Zn PPM	Mo PPM	Co PPM	Ni PPM	Cr PPM	Mn PPM	Cd PPM	A9 PPH	Bi PPM
R2 AT2-87-1	(1	23	127	604	1	21	31	47	1130	3	⟨0.5	<2
R2 AT2-87-2	6	646	37	236	. 11	113	95	256	947	<1	<0.5	5
R2 AT2-87-3	(1	97	11	125	3	79	443	354	1217	a	<0.5	<2
R2 A12-87-4	160	10847	57	173	7	220	1892	242	1066	(1	3.1	11
R2 AI2-87-5	2	202	11	69	3	15	59	83	1369	<1	₹0.5	<2
R2 AT2-87-6		324	17	125	9	33	61	59	768	(1	<0.5	13
R2 AT2-87-7	4.5	111	27	85	31	31	101	179	1012	<1 ⋅	0.5	<2
R2 AT2-87-8	(1,4	ر 25 🚅	9	65		21.29	N 6 35 381	51	700	4	(2
R2 AT2-87-9	(1)	83	5	65	1,	19	77	167	780	<1	<0.5	3
R2 AT2-87-10	(1)	67	35	222	1	19	31	23	2109	, (1	<0.5	√2
R2 AT2-87-11		121	13	658	21	23	21	27	3100	<1	⟨0.5	3
R2 AT2-87-12	2	35	21	51	5	43	9	67	1130	<1	<0.5	√2
R2 AT2-87-13	CI .	37	19	111	23	- 3	9	53	1385	⟨1	⟨0.5	(2
R2 AT2-87-14	55	4348	15	41	7	248	67	103	670	(1	⋌0. 5	<2
R2 AT2-87-15	95	5024	45	129	9	985	4089	1478	738	(I	0.8	23
R2 AT2-87-16	3./	7345	5	41	7	31	101	296	121	〈1	1.1	7
R2 AT2-87-17	29	1211	45	51	5	69	163	73	961	(1	₹0.5	⟨2
R2 AT2-87-18	(1	286	9	77	3	41	254	258	881	<1	<0.5	, ,

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Geochemica Lab Repor

REPORT: 127-7057							PR	OJECT: AT2-	-87		PAGE 1B	
SAMPLE ELEMEN NUMBER UNIT	*	V PPM	As PPM	Te PPM	U PPM	V PPM	Sb PPM	Se PPM	Sn PPM	Pt PPB	Pd PPB	
R2 AT2-87-1	5.25	167	⟨5	<10	<10	<10	9	⟨5	<10			***************************************
R2 AT2-87-2	>10.00	323	61	<10	<10	<10	21	₹5	⟨10	<15	<2	
R2 AT2-87-3	8.09	194	17	<10	<10	<10	₹5	₹5	<10	<15	<2	
R2 AT2-87-4	>10.00	208	97	13	⟨10	<10	33	⟨5	<10	150	100	
R2 AT2-87-5	2.94	73	<5	<10	<10	<10	<5	<5	<10	· .	uki dibilis Sizi	
R2 AT2-87-6	5.27	191	29	<10	<10	<10	⟨5	₹5	⟨10			
R2 AI2-87-7	3.28	71	₹5	《10	<10	<10	₹5	⟨5	<10			
R2 AT2-87-8	4.37	118_	<5 ∴	<u> </u>	<u> </u>	∴(C10_	∕ (5	∴	≟ ረ 10			الشريفاري
R2 A12-87-9	3.70	- 83	<5	12	<10	<10	√5	⟨5	<10		eg Ú	
R2 AT2-87-10	6.14	189	₹5	(10	<10	<10	39	₹5	<10	er Afrika Julijan		
R2 A12-87-11	>10.00	119	208	<10	<10	⟨10	9	⟨⟨5	⟨10			
R2 AT2-87-12	>10.00	97	29	<10	<10	<10	. g	₹5	<10	Mych		
R2 AT2-87-13	4.77	67	>2000	<10	<10 €	<10	41	6	<10			
R2 AT2-87-14	>10.00	168	119	<10	<10	<10	<5	⟨5	<10	15	2	
R2 AT2-87-15	>10.00	244	181	<10	<10	<10	45	<5	<10	40	65	
R2 AT2-87-16	1.63	11	⟨5	্ব10	<10	<10	⟨5	< 5	<10			alternative to the comment of the
R2 AT2-87-17	>10.00	88	73	12	<10	<10	23	111	₹10	<15	10	
R2 AT2-87-18	4.73	143	₹5	⟨10	<10 €	<10	<5	₹5	<10			

Interpretation and Conclusions.

The various mineralized occurences on the AT2 claim fall into three general categories, depending on their relative position to the contact between the Batholithic rocks and the Triassic volcanics which they intrude.

1) Zones of magmatic segregations within the intrusive. Here the mineralization is of the copper-nickel-cobalt type. Values range to 1% Cu, .4% Ni and .1% Co. Minor amounts of Au-Ag-Pt-Pd are also present. (Samples -4,-14,-15)

- 2) Veins or zones of pyritization and alteration situated at or near the contact. This includes all of the quartz carbonate veins which are rooted in the Batholith, as well as several quartz or calcite veins and pyritized structures situated very close to the contact. These are essentially barren, apart from their iron content. (Samples -1, -3, -5, -6, -7, -8, -9, -10, -11, -12, -13, -18)
- 3) Veins or structures within the intruded volcanic series, situated at some distance from the contact. These show some values in copper (up to .73%). (Samples -16, -17)

From this interpretation of the data, it would seem that any future exploration on this property should take the form of ground geophysical surveys on the parts of the property where the intrusive rocks are exposed, or where they are under a moderate amount of overburden (that is, under glacial ice or under moraine). The presence of abundant pyrrhotite in association with the Cu-Ni-Co sulphides should make a magnetometer survey particularly appropriate to find out if some degree of continuity can be established for this mineralization.

The possibility of significant copper occurences to the north and northwest of this property exists, but the terrain is so rugged that specialized mountaineering personnel would have to be involved in that investigation.

ITEMIZED COST STATEMENT - AT2 - 87 PROJECT

The investigation on the AT2 was done concurrently with a prospecting program on two adjacent claims, AT3 and AT4, located to the west and northwest of AT2. Out of a total of 69 man/days of prospecting, 46 were spent on the AT2. Consequently all costs which are not specific to each investigation have been apportioned on the basis of 2/3 and 1/3.

Field personnel (time spent on AT2)	. 46 man/days	© \$100	\$ 4600
Food & accomodation	2/3 of \$1209		806
Aircraft support	2/3 of \$1199		799
Equipment & supplies	2/3 of \$ 476		317
Laboratory analysis (of AT2 samples)	18 samples	© \$ 30 . 75	553

Total \$ 7075

AUTHOR'S QUALIFICATIONS

- Ten 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.

MAIN RIDGE OF MOUNT OTTARASKO (8,000' TO 10,000' ELEV.) -AT2 BOUNDARY 3 **3A** L.C.P. AT. LAKE

GEOLOGICAL BRANCH ASSESSMENT REPORT

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FLAN MAP OF AT2 CLAIM (MAP NO. 2)

Scale: 1/5000th Elevations in feet

Author: L. Berniolles, 1987

LEGEND

LEGEND

Lithological and surficial boundaries

Triassic volcanics, minor shale and limestone

1A Talus derived from 1

Intrusive rocks of Batholith

ZA Talus derived from 2

Glacier

3A Till and moraine

Soil, silt, gravel

Mineralized zones or structures

△ Cairn

Outcrop sample

Sub-outcrop or localized float sample

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 (ie. AT2-97-n).

0 100m 200m 300m 400m 500

Survey by Topographic Map and Air Photography

MAP no 2

MAP n° 2 (fold-out)

8