

PROSPECTING REPORT

on the

RUFF Claims

Atlin Mining Division British Columbia

N.T.S 104N11/104N12 Latitude 59° 43' North Longitude 133° 30' West

by

Stephen Kenwood, P. Geo.

January 5, 2001



TABLE OF CONTENTS

Summary	2
Location, Access, and Physiography	2
Claim Status	2
History	3
Regional Geology	4
Property Geology	5
Conclusions	5
Statement of Costs	7
Bibliography	8

Page

List of Figures

Page After
2
2
4
6

List of Appendices

1

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Appendix I – Statement of Qualifications Appendix II – Rock Sample Descriptions Appendix III –Analytical Results

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SUMMARY

The RUFF claims are located approximately eighteen kilometres northeast of the town of Atlin, in the extreme northwest corner of the province of British Columbia. Silver-leadzinc mineralization was discovered in the area in 1901. The RUFF property is a 20 unit claim owned by the author.

LOCATION, ACCESS, AND PHYSIOGRAPHY

The property is located on the southwestern slopes of Mount Vaughn, approximately eighteen kilometres northeast of the town of Atlin in the extreme northwest corner of British Columbia (Figure 1). The property can be accessed by a good all weather gravel road off the Atlin-Whitehorse highway. Numerous trails and roads on the property provide excellent access.

The property is almost entirely above treeline, with elevations ranging from 1,350 metres to 2,000 metres. The bulk of the showings and workings are found in the grass-covered uplands; thick talus cover obscures fresh rock exposure on the upper slopes of Mount Vaughn. Frozen overburden covers a large portion of the property and is comprised of glacial ablation till which ranges in thickness from one to ten metres. Permafrost occurs above the 1,650 metre elevation.

CLAIM STATUS

The RUFF property (Figure 2) is comprised of 20 units in the Atlin Mining Division. The following is the pertinent claim information:

<u>Claim</u>	<u>Units</u>	Record Number	Expiry	<u>Owner</u>
RUFF	20	372574	October 5, 2001	S. Kenwood

<u>HISTORY</u>

During the Klondike gold rush of the late 1890's, placer gold was discovered in the Atlin area. This activity resulted in the discovery of silver-lead deposits on the slopes of Mount Vaughn and Mount Leonard.

M.J. Ruffner later optioned and staked the Atlin Ruffner crown grants, which are contiguous with the RUFF claims to the north, in 1918. Surface prospecting revealed four vein zones on the present property with the bulk of all subsequent work being performed on the No. 2 and No. 4 veins. Underground work began in 1921 on the number four vein at the 4975 level and later drifting was done on the number two vein at the 4300 level. Small shipments of sorted lead-silver ore were made in 1923 and 1927.

After Ruffner's death, the C.V. Bob Group acquired control in 1928 and continued to develop the underground workings, driving the 3900 level crosscut for a length of about 2650 feet. This crosscut intersected the No. 2 vein at 1450 feet and continued toward the No. 4 vein for another 1200 feet. Diamond drilling of four holes from the end of this level intersected the No. 4 vein but recoveries were poor (Morgan, 1981). Work on the 4100 and 4300 levels was also accomplished by this group but failed to provide sufficient encouragement to warrant further work and they dropped their option in 1934.

Bobjo Mines Ltd. acquired the property in 1934 and continued underground exploration on the 5150 (4E drift) and 4300 (2X drift) levels, advancing them 640 and 580 feet respectively.

In 1951 Atlin Ruffner Mines reopened the workings and produced a shipment of 44 tons of ore grossing 7 ounces gold, 5,343 ounces silver, 36,197 pounds lead, and 5,824 pounds of zinc. Their surface work included bulldozer trenching and drilling of about 4,000 feet of AX core on the Vulcan and Big Canyon veins, which lie to the south of the present claims.

Interprovincial Silver Mines Ltd. optioned the Vulcan Property in 1966, part of which is covered by the RUFF claims, and drilled 9,120 feet of AX core on the veins that parallel the mineralized structures on the Atlin-Ruffner claims. The company optioned the Atlin-Ruffner claims in 1967 and work that year included construction of ten miles of access roads that improve access to the RUFF property.

REGIONAL GEOLOGY

The Atlin district lies east of the eastern fringe of the Coast Range batholith and at the western margin of an 80 kilometre wide belt of Upper Mississippian to Upper Triassic of the Cache Creek Group, referred to locally as the Atlin Terrane (Figure 3). The main lithologies in the Atlin Terrane are a basal unit of Mississippian to Pennsylvanian basalt that is overlain by cherts and argillaceous sediments with minor carbonates and volcanics. These rocks extend for 300 kilometres to the southeast and for over 100 kilometres to the northwest. The first of several intrusive events in the area are the Permian aged Atlin Intrusions; mafic and ultramafic rocks, mainly serpentinized peridotite and minor dunite and gabbro that are found east and south of the RUFF property.

The many mineral occurrences in the area lie within and around the fringe of a Cretaceous aged intrusive stock of complexly zoned granitic rocks that lie east of the north end of Atlin Lake, extending eastward 80 kilometres to Teslin Lake.

The inner zone of the Cretaceous aged batholith varies from biotite hornblende diorite to granodiorite and is referred to as the Fourth of July Creek batholith. Potassium argon ages range from 73.3 +/- 2.6 Ma to 110 +/- 4 Ma from biotite and hornblende, respectively (Christopher and Pinsent, 1979). The eastern limit of the batholith is north and east of the property. This unit is characterized by late stage emplacement of lamprophyre dykes. These dykes are host to or adjacent to mineralization found on the adjacent Atlin Ruffner property.



	LEGEND
	QUATERNARY PLEISTOCENE AND RECENT
	17 Glacial drift; alluvium
orcorc	TERTIARY AND QUATERNARY
Š CE	16 Olivine basalt and scoria; 16a, Tertiary; 16b, Pleistocene
	TERTIARY (7) 15a, quartz monzonite; 15b, granophyre; 15c, gabbro and diorite
	CRETACEOUS OR TERTIARY
	Andesite, basalt; albite trachyte, albite rhyolite, dacite, and related pyroclastic rocks; conglomerate, sandstone
	CRETACEOUS 13 a, alaskite, 13 b, quartz monzonite
	JURASSIC (May be in part older and younger) COAST INTRUSIONS Audifferentiated granitic rocks; 12a, Black Mountain body, 12b, Fourth of July Creek body; 12c, pink granite; 12d, Mount McMaster body; 12e, diorite; 12f, alkaline granite
	JURASSIC LABERGE GROUP Volcanic greywacke, siltstone, mudstone, shale, conglomerate; minor concretionary sandy limestone
	TRIASSIC (?) Greywacke, chert, argillite, conglomerate, tuff, slate, greenstone, impure limestone, jasper
	PENNSYLVANIAN AND PERMIAN ATLIN INTRUSIONS Peridotite; meta-diorite and meta-gabbro; 9a, serpentinite; 9b, carbonitized serpentinite; 9c, talc-bearing (steatifized) ultramafic rocks
ozoic	CACHE CREEK GROUP 6. Chert, argiilite, chert-pebble conglomerate and chert breccia; derived quartzite and schist; minor 7 and 8 7. Greenstone and volcanic greywacke; derived amphibolite; minor 6 and 8 9. Limestone and limestone breccia
PALÆ	PENNSYLVANIAN AND/OR PERMIAN 4. Andesite, basalt, and related pyroclastic rocks; conglomerate, sandstone, shale 5. Limestone May be in part or wholly equivalent to 6, 7, 8
	MISSISSIPPIAN AND/OR EARLIER SYLVESTER GROUP 3a, greenstone, chlorite schist, greywacke, quartzite, quartz- biotite schist; 3b, impure crystalline limestone
AMBRIAN OR FEOZOIC	PRE-PERMIAN Quartz monzonite
PREC	YUKON GROUP Hornblende-quartz-feldspar schist and gneiss; quartzite, crystalline limestone. May be in part equivalent to 3
	Undifferentiated, mainly volcanic rocks of uncertain, possibly several, ages. Andesite, basalt, agglomerate, tuff, breccia; diorite and quartz diorite porphyries; rhyolite. In part probably Triassic.

The Surprise Lake Batholith is also locally of economic significance with the Adanac molybdenum porphyry five kilometres to the southeast of the RUFF claims. This deposit is reported to contain 104 million tons grading 0.096% Molybdenum (Morgan, 1980).

PROPERTY GEOLOGY

The entire property is underlain by multiphase intrusions of the Fourth of July batholith, which was correlated by Aitken (1959) as belonging to the Coast intrusions. The majority of the property is underlain by medium to coarse-grained quartz monzonite with the extreme eastern portion underlain by quartz diorite, which is believed to be a product of magmatic differentiation.

A series of east trending faults dipping 50 to 70 degrees north represent the main structural features on the property and acted as conduits for mineralization. This trend is consistent with the structural trends of mineralized lode gold deposits in the area that occur along the Pine Creek, Adera, and Union Mountain faults.

Between September 15 and September 21, four days were spent prospecting the claims for the presence of either high grade silver-lead-zinc vein mineralization or porphyry style copper mineralization, both types of mineralization being present on the adjoining Atlin-Ruffner crown grants immediately north of the RUFF property.

CONCLUSIONS

Of the sixteen samples assayed (Figure 4), two were taken on the Atlin-Ruffner crown grants to the north, including sample # 102400-05, a representative sample from one of the exposed trenches that returned highly anomalous silver, lead, zinc, and copper values. Of the remaining 13 samples, six were highly anomalous in copper, zinc and +/- lead. One of these samples (# 102500-09) was an arsenopyrite vein but the rest of the samples were found in variably altered intrusive rocks.

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In general, the hillside has very poor outcrop exposure; it should be noted that most of these samples were float or interpreted to be subcrop that was typically found in bulldozer cuts. The anomalous copper values ranging in values from 357 ppm to 3,723 ppm found in the country rock are potentially indicative of a mineralized porphyry.



STATEMENT OF COSTS

Geologist -	4 days @ \$300		\$1,200
Expenses -			
- Truck Rental	4 days @ \$50	\$200	
- Rock Samples	16 @ \$18	272	
- Fuel, Food, Accom	modation	_250	
Exper	ises Total:		722
Report	1 1/2 days @ \$300		<u> 450</u>
		Total:	\$2,372

BIBLIOGRAPHY

- Aitken, J.D. (1959): Atlin Map-area, British Columbia; Geological Survey of Canada, Memoir 307, 89 pages.
- Bloodgood, M.A., Rees, C.J. and Lefebure, D.V. (1989): Geology and Mineralization of The Atlin Area, Northwestern British Columbia (104N/11W and 12E); B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork 1988, Paper 1989-1, pages 311-321.
- Campbell, D.D., (1967): Progress Report; Atlin Silver Properties, Atlin, B.C. for Interprovincial Metals Ltd. (N.P.L.), 20 pages.
- Christopher, P.C. and Pinsent, R.H. (1979): Geology of the Ruby Creek and Boulder Creek Area near Atlin (104N/11W) (Adanac Molybdenum Deposit); B.C. Ministry of Energy, Mines and Petroleum Resources, Preliminary Map No. 52.
- Clifford, J.A., (1969): A Private Company Report for Interprovincial Silver Mines Ltd. (N.P.L.) on their Silver-Lead-Group of Claims, near Atlin B.C.

APPENDIX I

Statement of Qualifications

I, Stephen Patrick Kenwood, hereby certify that:

- 1. I am a Consulting Geologist with an office at 2073 149th Street, Surrey, British Columbia, Canada, V4A 8L4.
- 2. I am a graduate of the University of British Columbia with a Bachelor of Sciences Degree in Geology (1987).
- 3. I am a registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia (#20447).
- 4. I have practiced my profession since 1987 working as an employee and consultant for International Mining Companies and Junior Resource Companies.
- 5. The work described in this prospecting report was carried out under my supervision.

Dated at Surrey, British Columbia, this 5th day of January, 2001.

Stephen Kenwood, P.Geo.

APPENDIX II - ROCK SAMPLE DESCRIPTIONS

FA 102400-02 (585659E, 6622301N): blocky talus sample of hornblende quartzmonzonite; 15 centimetre chip across fracture surface of white syenite dike; dike is feldspar-quartz with 2% biotite; hornblende quartz-monzonite host rock is chloritealtered.

FA 102400-03 (585330E, 6622044N): 30 metre by 15 metre talus patch with orangeweathered hornblende quartz-monzonite intermixed with biotite-feldspar dike material; black>white, inequigranular altered quartz-monzonite, hornblende to biotite-actinolite felted masses; trace – 1% pyrite as blebs and disseminated in the groundmass; some weathered surfaces show pale green-yellow clay alteration.

FA 102400-04 (585132E, 6622071N): localized (5 metre radius) of chalcedonic veining and silicification of quartz rich fined grained porphyritic intrusive in quartz-monzonite host; weak clay alteration of feldspar.

FA 102400-05 (584863E, 6622267N): trenched stockpile located on Crown Grants; gossanous, strongly weathered, patchy yellow-green stains; pervasive limonitic oxidation; mixed quartz vein with arsenopyrite, sphalerite, galena, chalcopyrite, pyrite and altered quartz-monzonite; random chip sample from stockpile; on trend with collapsed adit 100 metres downhill to the west.

FA 102400-06 (584992E, 6621960N): along west edge of access road; bleached, weakly argillic-altered quartz-eye porphyry float with mm. clear quartz veinlets; <1% disseminated pyrite; strong limonitic oxidation on surface and along fractures.

FA 102500-01 (583742E, 6621722N): grab sample from four orange/black rinded boulders and one piece from dike in subcrop uphill; very fine-grained quartz-plagioclase-biotite(?) tonalite or diorite; pervasive mineralized ribbed veinlets, blebs and grains of arsenopyrite, mm chalcopyrite-filled gashes, disseminated, blebby pyrite and very fine-grained silvery blue mineral (sulfosalt?); groundmass is purple hue (biotite alteration?) (hornfelsed quartz-monzonite?).

FA 102500-02 (583742E, 6621722N): 50 cm chip across loosely jointed subcrop of finegrained hornblende/chlorite/biotite, quartz, feldspar intrusive; 10-15% quartz; 1-2% brown oxide disseminated in groundmass.

FA 102500-03: No sample taken.

FA 102500-04 (584872E, 6621778N): scattered pieces of fine-grained quartz-eye felsic dike spread through crumbled mounds of quartz monzonite.

FA 102500-05 (585066E, 6621845N): fine-grained beige aplite dike cutting fine-grained inequigranular quartz monzonite; blebs of arsenopyrite, pyrite found in dike.

FA 102500-06 (585179E, 6621833N): float sample of autobrecciated intermediate dike; dark gray aphanitic groundmass; intermediate dike with pebble-sized sub-rounded to sub-angular clasts.

FA 102500-07 (585180E, 6621805N): float boulder with margin of biotite rich mafic dike in contact with medium-grained hornblende quartz monzonite; approximately 2% disseminated chalcopyrite in margins of quartz monzonite, both interstitial and in cores of hornblende masses; 1-2% chalcopyrite along fractures in mafic dike material.

FA 102500-08 (585232E, 66221915N): located in area cleared of surface rubble by bulldozer (southern transport?); pervasive manganese stained to rinded boulders of finegrained masses of hornblende-biotite + feldspar + quartz granodiorite to quartz monzonite with 20% mafic content; malachite staining on fracture surface; < 2% chalcopyrite blebs and specks disseminated in groundmass.

FA 102500-09 (585177E, 6621952N): float sample form mineralized talus in a limonitealtered exposure exposed by a bulldozer; arsenopyrite vein with pervasive alteration of quartz monzonite host rock.

FA 102500-10 (585177E, 6621952N): same general area as previous sample; pieces of quartz feldspar float boulders; blue-grey to white chalcedonic veining within fine-grained quartz eye felsic porphyry; 1-2% pyrite.

FA 102500-11 (585177E, 6621952N): same general area as previous two samples; fine grained inequigranular biotite-plagioclase +/- quartz/nepheline dike; biotite variably altered to chlorite; 3% disseminated pyrite; boulders altered with a red-brown rind.

FA 102500-12 (585177E, 6621952N): same general area as previous three samples; medium-grained hornblende quartz monzonite; hornblende becoming biotite and felted mass; chalcopyrite and biotite interstitial to groundmass.

APPENDIX III – ANALYTICAL RESULTS

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	SAMPLE#	No	Cu	P.	- 	Žn Zn	PA	Ni	500 Co	885 Mn	Dunsinu Fe	As	<u>. V</u> ອກເ 	Au	BC \ Th	/6C 11 Sr	15 5 Cd	ubonit Sb	teol b)	r: ste v	VE K Ca	ENWOOL P	La	Cr	Ma	Ba	ri Ti	8	Al	Na	K	
Ì		ppm	ppm	pp	n	ppm	ppn	ppn	ppn	jojpm	7.	ppm	ppm	ppn	ppm	ppm	ppm	ppm	pçm	ppm	χ.	<u>x</u>	ppm	ppro	*	P PM	X	ppm	X	*	X	ppm
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	FA 102500-11 FA 102500-12 STANOARD C3 STANDARD G-2	5 4 28 2	2980 3723 68 4	4 1 3 <	4 5 8 3	367 264 170 50	15.5 10.4 5.9 <.3	22 10 42 10	12 3 13 5	1397 839 837 597	5.98 4.29 3.32 2.08	2252 1677 62 5	<8 <8 22 <8	<2 <2 <2 <2	10 18 22 5	25 23 32 84	4.3 2.2 24.9 <.2	3 <3 16 3	دع 3 24 ح3	110 61 86 46	.37 .20 .63 .73	.106 .084 .103 .114	21 19 20 9	63 35 178 88	1.47 .98 .61 .63	108 79 148 228	. 15 . 07 . 10 . 14	<3 5 27 5	2.45 1.72 1.80 .96	.01 .01 .04 .08	1.20 .79 .18 .52	8 <2 18 2
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