GEOCHEMICAL REPORT

ON THE FH PROPERTY

SKEENA MINING DIVISION
N.T.S. 103P/11W
Latitude: 55° 32' 00" N
Longitude: 129° 26' 00" W

for

Frank Onucki.
209 - 2040 Barclay Street
Vancouver, B.C.
V6G 1L5

by

Rick Kemp, P. Geo.
Vancouver, B.C.

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SUMMARY

The FH claims are located in the Alice Arm area of northwestern British Columbia approximately 40 kilometers southeast of Stewart. Access is presently by helicopter, although an old cat road crosses the property along the Dak River and it could be upgraded to provide access to tidewater at Alice Arm.

The Property is on the eastern margin of the Coast Plutonic Complex and is underlain by sedimentary, volcanic and associated intrusive rocks of the Jurassic Hazelton Group.

Numerous mineral occurrences are present in the Alice Arm area including a number on and in proximity to the FH claims. Many are structurally controlled silicified zones in quartz veins mineralized with one or more of silver, gold, lead, zinc and copper. Porphyry molybdenum deposits are also present, including the now closed B.C. Moly Mine.

Prospectors and mining companies have been attracted to the FH claims since the early 1900's, mostly because of a prominent iron gossan zone called Red Bluff, which is located on crown granted claims at the northwest edge of the property. Some significant copper values were obtained in this area. Reconnaissance soil and rock sampling have been concentrated in this area and south onto ground now covered by the FH claims. Between 1990-93 the property owner and later Hemlo Gold Mines Inc., the latter who held an option on the property, conducted reconnaissance soil and rock sampling, defining a coincident gold-copper anomaly approximately 1000 metres long and up to 500 metres wide. Values within this anomaly ranged from 110 to 580 ppb Au with higher values to 21,000 ppb Au and copper values ranging from 238 to 1442 ppm Cu. Other narrow lenticular anomalies were also located.

During August and September of 1996, personnel from Atna Resources conducted programs of soil and rock sampling in order to assess the potential of the FH claims. A total of 10 rocks and 13 soil samples were collected on the FH 1 claim with values up to 470 ppb Au and 688 ppm Cu obtained in soils and 5654 ppm Cu and 267 ppb Au from rocks.

Additional detailed geological mapping, soil and rock sampling and geophysics are warranted to explore the large anomalous area on the FH claims for bulk tonnage, copper-gold mineralization and/or copper-gold vein mineralization.

INTRODUCTION

This report summarizes exploration work conducted on the FH claims during two property examinations in August and September of 1996. Previous exploration has discovered copper-gold mineralization in sufficient quantity to warrant further examination.

The FH property, consisting of the FH1 and FH2 claims, is situated on the eastern margin of the Coast Plutonic Complex, approximately 40 kilometres southeast of Stewart, B.C. Access to the property is currently by helicopter from Stewart or Meziadin.

The area partially covered by the FH claims has been explored intermittently since the early 1900's with some significant copper values obtained. Most recently, Hemlo Gold Mines Ltd. optioned the property, and between 1990-93 conducted reconnaissance soil and rock sampling, defining a coincident gold-copper anomaly approximately 1000 metres long and up to 500 metres wide.

It is believed that the FH property warrants further exploration. Future work should concentrate on detailed geological mapping, soil and rock sampling and geophysics followed by diamond drilling if warranted.

LOCATION, ACCESS AND PHYSIOGRAPHY

The property, centered at 55° 32' N latitude and 129° 26' W longitude, is located at the head of Alice Arm, approximately 10 km northeast of the townsite of Kitsault in the Kitsault River Valley (Figure 1).

Access is currently gained by helicopter from bases located at Stewart and Meziadin, B.C. A cat road, constructed in 1966, crosses the property along the Dak River and could be upgraded to provide access to tidewater at Alice Arm at reasonable costs.

The claims lie within the rugged boundary ranges of the Coast Mountains. Elevations range from near sea level to approximately 800 metres on the upper slopes. Vegetation consists of mature hemlock and balsam with numerous windfalls and areas of thick undergrowth.

CLAIM DETAILS

The FH property is located in the Skeena Mining Division, on NTS map sheet 103 P/11W (Figure 2). Claim information is summarized below:

Claim Name	No. of Units	Tenure No.	Expiry Date
FH1	20	344062	February 28, 2000*
FH2	20	344063	February 28, 2000*

The expiry dates as listed above will be in effect upon approval of work filed for assessment purposes.

The Annual Work Approval Number for the FH property is SMI -96-0101532-258

0 100 200 300 MILES
0 100 200 300 400 500KM.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

FH CLAIMS
LOCATION MAP
DAK RIVER, ALICE ARM AREA

N.T.S. 103P-11W SKEENA M.D., B.C.

SCALE : AS SHOWN	APRIL 1996	FIG. 1
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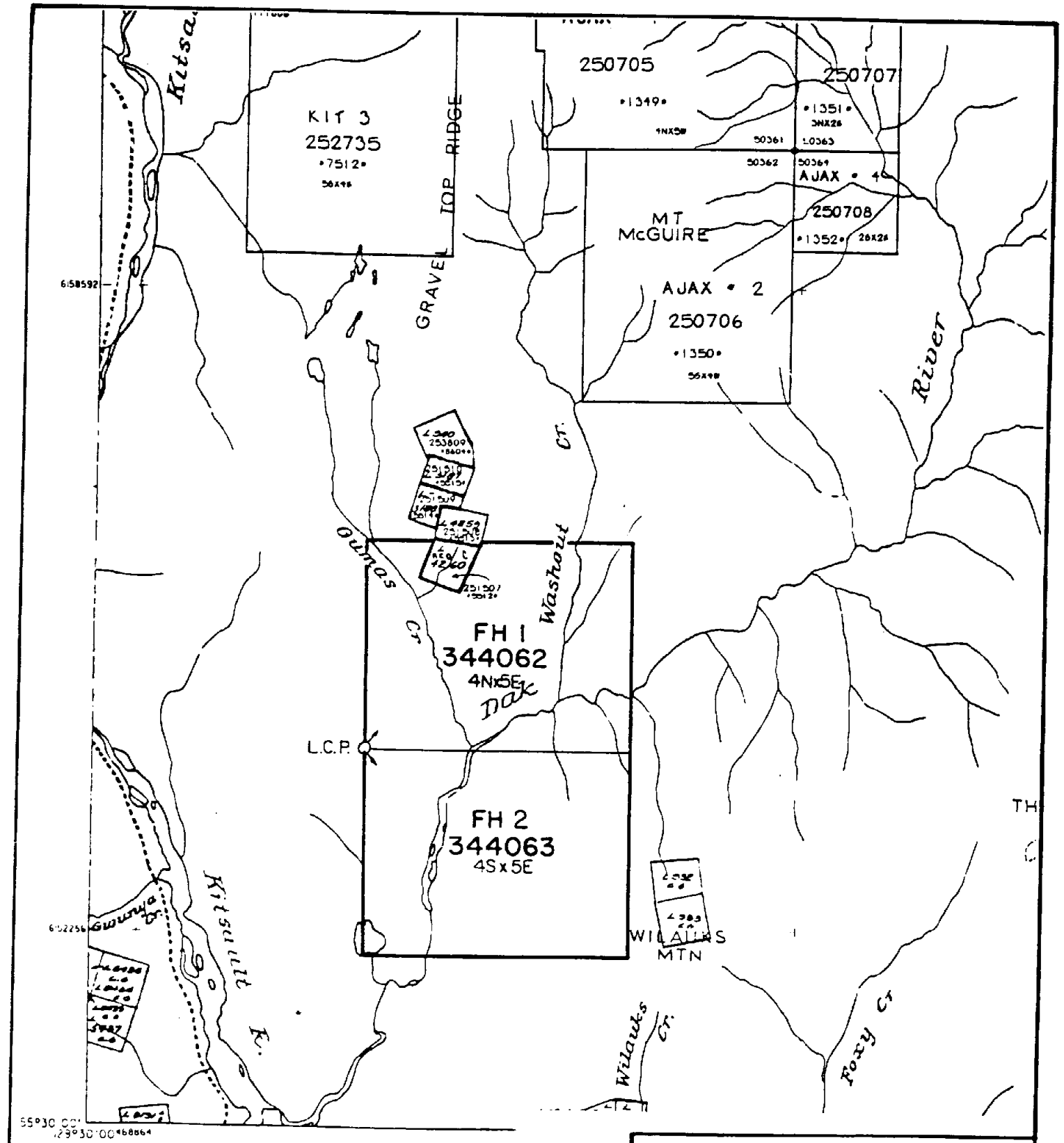

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FH CLAIMS
CLAIM MAP

DAK RIVER, ALICE ARM AREA

N.T.S. 103P-11W SKEENA M.D., B.C.

0 1 2 3 KM.

SCALE : AS SHOWN	APRIL 1996	FIG. 2
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HISTORY

The Alice Arm area has been actively prospected since the early 1900's. During this period a large number of mineral occurrences were located, some of which developed into producing mines. The abundance of mineral occurrences is graphically illustrated on Open File Map 1986/2 (Alldrick et.al. 1986) where the location of 120 mineral properties are shown, most of which lie within a narrow north-trending belt following the Kitsault River. Most of these deposits are structurally controlled silicified zones or quartz veins mineralized with one or more of silver, gold, lead, zinc and copper. Porphyry molybdenum deposits also occur in the area, lying on the eastern and southern fringes of the mineralized belt.

The Red Bluff area, located at the northwest edge of the FH claims and partially overstaked by them, was explored in the early 1900's. Prospectors were attracted to this area by a prominent iron gossan on the ridge between Gumas and Washout Creeks. It was tested by trenches, several short adits and two diamond drill holes. This area is covered by the FH claims and four reverted crown grants - Sunbeam (L.3187), Albion (L.3188), Red Bluff (L.4259) and Devils Club (L.4260).

During 1966-68, Northlodge Copper Mines Ltd. and Kennco Exploration Ltd. and in 1980 Amax Explorations Ltd. conducted reconnaissance geological - geochemical surveys over parts of the Red Bluff area. The results of the above exploration indicated that the area contained anomalous amounts of copper, molybdenum and gold in soils and rocks.

In 1990, Hemlo Gold Mines Ltd. examined the northern end of the Red Bluff property, in the vicinity of the gossanous bluff of the same name. They ran several reconnaissance soil lines returning several samples anomalous in gold and copper.

In 1991, Boyle (Great Northern Resources Corp.) conducted a reconnaissance soil sampling program on the slopes extending south from the Red Bluff area to the Dak River and on the lower western slopes of Wilauks Mountain. These samples returned a number of locations anomalous in one or more of gold, arsenic, copper, molybdenum, zinc and to a lesser degree silver.

In 1992, Hemlo Gold Mines Inc. optioned the Red Bluff as part of the large property held by Great Northwest Resources Corp., with Noranda Exploration Ltd. being the operator. In 1992 they laid out a grid and conducted geological mapping, soil and rock sampling over the northern part of the optioned ground. Significant anomalous values were obtained in Au, Cu, As and Zn. The following year they extended the grid to the south as well as filled in intermediate grid lines in areas of significant Cu-Au anomalous soil sample sites. Although they defined a large Cu-Au geochemical anomaly they terminated their option in 1993.

REGIONAL GEOLOGY

The Alice Arm area is located on the eastern contact of the Coast Plutonic Complex where it intrudes the west-central margin of the Bowser Basin. Geologically, geographically and economically the country rocks to the east of the Coast Plutonic complex form a well defined entity (Grove, 1986) which he has termed the Stewart Complex.

In the Alice Arm area the Stewart Complex includes sedimentary and volcanic rocks of the Hazelton Group which has been subdivided into a number of formations, most of which are present in the Alice Arm area.

These are:

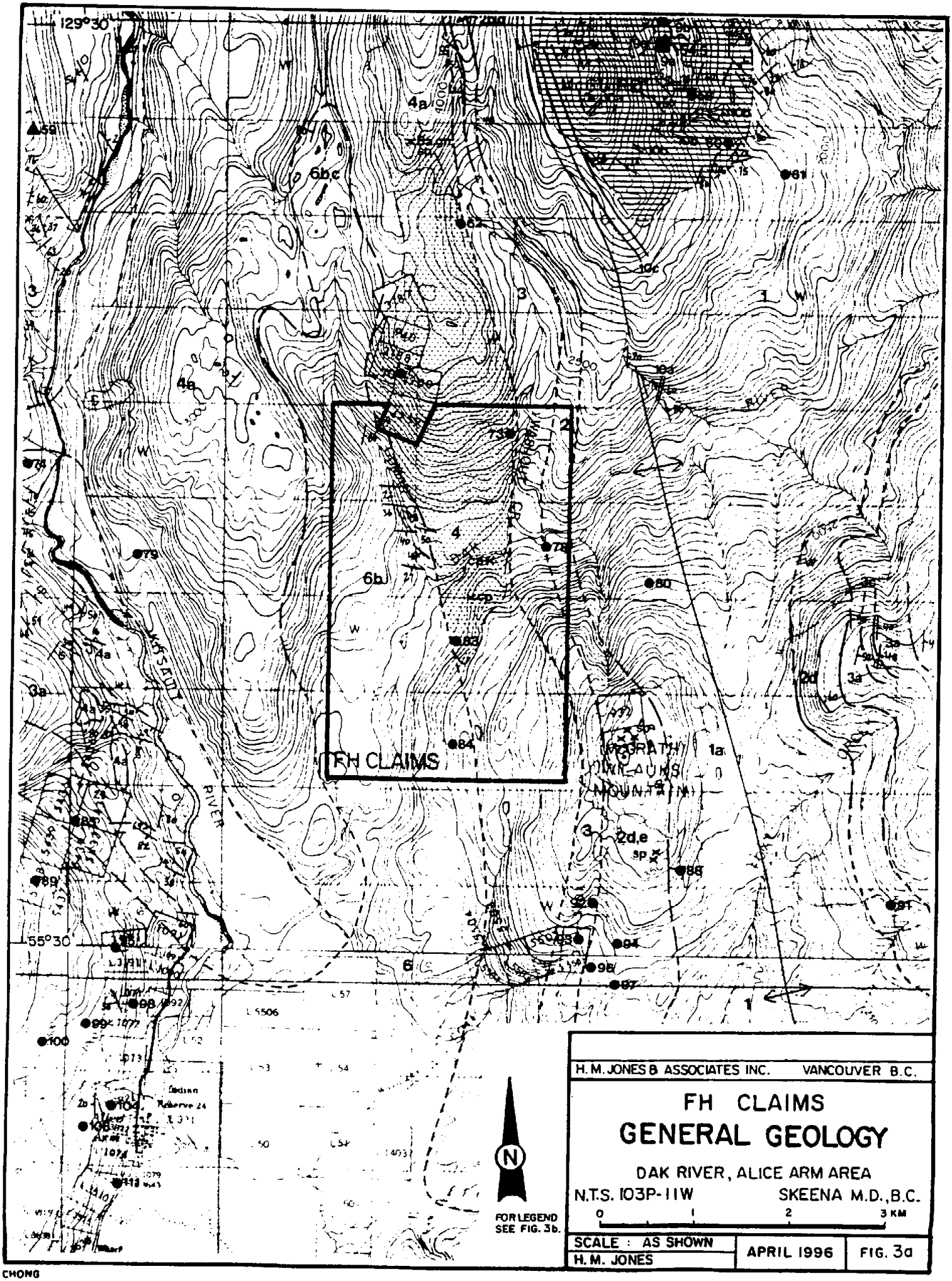
Nass Formation	Upper Jurassic: primarily siltstone, greywacke and sandstone, minor argillite, conglomerate, sandstone.
Salmon River Formation	Middle Jurassic: consists mostly of siltstone, greywacke, and sandstone with minor limestone and conglomerate, includes massive rhyolite and rhyolite breccias, tuffaceous beds.
Bette Creek Formation	Middle Jurassic: consists mainly of beds of red and green epiclastic volcanic sandstone and conglomerate, also breccias, tuffs and pillow lavas.
Unuk River Formation	Lower Jurassic: mostly thick bedded green, red and purple volcanic breccia, conglomerate, sandstone and siltstone intercalated with tuffs, pillow lavas and flows.

The above rocks are intruded by the Coast Plutonic Complex. It consists of multiple intrusions ranging in age from Triassic to Cretaceous. In the Alice Arm - Stewart area, Grove (1986) has subdivided the eastern margin of the complex into a number of intrusive phases. These include: the Texas Creek pluton of probable Middle Jurassic age, the Hyder pluton and related bodies of Tertiary age, and an undivided group comprising part of the Central Gneiss Complex.

Structurally, all formations within the Hazelton Group have undergone periods of deformation. Each is also separated by an unconformity.

Folding is prevalent in the district in the Illiance River area. Two synclinal and one anticlinal folds, all trending north to north northeast, were mapped. A regional north-northwest anticlinal fold was also noted passing through Wilauks Mountain.

Faults are common features in all the mines and mineral deposits in the Stewart complex. Four faults sets are recognized in the general Alice Arm area. These trend northwesterly, northerly, northeasterly and easterly. Many of the topographic features are controlled by these faults, i.e., fiords, glaciers and river valleys, etc.



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FH CLAIMS
GENERAL GEOLOGY

DAK RIVER, ALICE ARM AREA

N.T.S. 103P-11W SKEENA M.D., B.C.

SCALE : AS SHOWN	APRIL 1996	FIG. 3a
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PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

OPEN FILE MAP 1986/2

GEOLOGY OF THE KITSAULT RIVER AREA
NTS 103P

Geology by D. J. Alldrick, G. L. Dawson, J. A. Bosher, and I.C.L. Webster

Compilation and drafting by G. L. Dawson

LEGEND

INTRUSIVE ROCKS

TERTIARY
EOCENE AND YOUNGER

DYKES: diorite, microdiorite (a); lamprophyre (b); diorite, sill phase (c)

EARLY TO MIDDLE EOCENE

ALICE ARM INTRUSIONS: quartz monzonite (a); biotite quartz monzonite porphyry (b); sericite quartz monzonite porphyry (c)

COAST RANGE BATHOLITH: quartz monzonite (a); granodiorite (b)

VOLCANIC AND SEDIMENTARY ROCKS

QUATERNARY
PLEISTOCENE

7 MAFIC VOLCANICS: olivine basalt flows

JURASSIC
MIDDLE TO UPPER JURASSIC

UPPER SEDIMENTARY UNIT: basal fossiliferous wacke (a); siltstone, shale, and minor sandstone (b); intraformational conglomerate (c); limestone (d)

LOWER TO MIDDLE JURASSIC

EPICLASTIC AND FELSIC VOLCANIC UNIT: maroon and green volcanic conglomerate, breccia, and minor sandstone (a); black siltstone, argillite, wacke, and limestone (b); greenish grey dacitic pyroclastic rocks and feldspar porphyritic flows (c)

INTERMEDIATE VOLCANIC UNIT: green and minor maroon andesite pyroclastic rocks (a); feldspar ± hornblende andesite porphyry (b), black siltstone (c); maroon siltstone, sandstone, and conglomerate (d); limestone and fossiliferous limestone (e), chert (f)

MIDDLE SEDIMENTARY UNIT: black siltstone (a); limestone and fossiliferous limestone (b); green and purple volcanic breccia with minor siltstone, sandstone, and conglomerate (c); interbedded siltstone, sandstone, wacke, and polymictic pebble conglomerate (d)

MAFIC VOLCANIC UNIT: olivine porphyry basalt flows (a), augite porphyry basalt flows and pillowed flows (b); basaltic pyroclastic rocks (c); basaltic conglomerate (d), black siltstone, sandstone, wacke, and limestone (e)

LOWER SEDIMENTARY UNIT: black siltstone, argillite, shale (a); black wacke, sandstone, limestone (b)

ALTERATION

BIOTITE HORNFELS

SILICIFICATION-SERICITIZATION-PYRITIZATION

Abbreviations

Barite	Ba	Lead	Pb
Chalcopyrite	cp	Molybdenum	Mo
Chlorite	chl	Nickel	Ni
Cobalt	Co	Pyrite	py
Copper	Cu	Pyrrhotite	po
Epidote	ep	Silica	Si
Galena	gn	Silver	Ag
Gold	Au	Sphalerite	sp
Iron	Fe	Zinc	Zn
Jasper	ja		

SYMBOLS

- Adit
- Anticline (normal, overturned)
- Bedding, tops unknown (horizontal, inclined, vertical)
- Bedding, tops known (inclined, overturned)
- Contours (interval 500 feet)
- Fault, arrows indicate sense of movement (defined, approximate)
- Fossil locality
- Geological contact (defined, approximate, assumed)
- Height in feet above mean sea level
- Limit of alteration
- Mineral occurrence, trench, or pit
- Minfile location: accurate within 500 metres; accurate within 1 kilometre
- Schistosity (horizontal, inclined, vertical)
- Syncline (normal, overturned)
- K-Ar Date (Ma)

MAP NO.	NAME	COMMODITIES	MINFILE NO.
58	LEROY	Pb,Ag,Au	163
59	EAGLE	Fe	174
60	IDA	Pb,Zn,Ag	164
61	BUTTE	Pb,Zn,Ag	165
62	OBSERVER	Cu,Pb,Zn	162
63	MONARCH	Cu	15
64	DOLLAR BILL	Pb,Zn,Ag	229
65	LA ROSE	Ag,Pb	170
66	ST. ELOI	Ag	171
67	SPECULATOR 2	Ag	172
68	SILVER BAR	Ag,Ba	142
69	HORSECUT	Pb,Zn,Ag	-
70	RED BLUFF	Cu	160
71	BUNKER HILL	Ag,Pb	173
72	SILVER BELL	Ag,Cu,Pb,Zn	141
73	FOX	Cu,Zn	161
74	CAPE HOME	Zn	168
75	SILVER STAR	Ag	143
76	GREY GOOSE	Ag,Pb,Zn	140
77	BELLEVUE	Ag,Pb,Zn	139
78	MAR DANCE, III	Cu,Zn,Ag	156
79	RIVERSIDE	Ag,Pb	166
80	SILVER CHORD, SILVER BAR	Pb,Zn,Ag	159
81	SILVER STAR, SILVER WING, SILVER CREST	Pb,Zn,Ag	169
82	OLH	Mo	-
83	SAN DIEGO	Cu	155
84	DEVLIN ZONE	Ag,Zn	-
85	PAY MASTER, ALICE	Ag	130
86	BEAVER EXTENSION	Au	137
87	IRON	Au Ag	136
88	MAC, SUNRISE, SILVER BAND	Zn	147
89	ANNA MACK	Ag	129
90	GOLDEN CREST	Cu	138
91	HORSESHOE	Cu	146
92	SILVER STAR	Ag,Pb	169
93	STANDARD	Zn	148
94	KENT, MAPLE LEAF	Zn	151
95	LONE MAID	Zn	128
96	HIGHLAND	Zn	150
97	BILLY MAC	Zn	149
98	ESPERANZA	Ag,Cu,Pb,Zn	126
99	ACADIA	Ag,Zn	127
100	BILLY BARTON	Ag,Pb,Zn	123
101	LONE STAR, ALAMOZA	Zn	153
102	UTOPIA, LYON	Ag,Pb,Zn	122
103	INGRAHAM'S	Ag,Pb	134
104	WOLF	Ag	125
105	SILVER LEAF	Ag	135
106	INDEPENDENT	Ag,Pb,Zn	131
107	COPPER CREEK	Pb	251
108	SILVER BELL	Pb,Zn	154
109	CASEY, BROWN BEAR	Pb	132
110	THREE MILE	Ag,Pb,Zn,Au	133
111	CARIBOU FRACTION	Ag	124

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FH CLAIMS
LEGEND FOR FIG. 3a

OAK RIVER, ALICE ARM AREA

N.T.S. 103P-11W SKEENA M.D., B.C.

SCALE : AS SHOWN	APRIL 1996	FIG. 3b
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PROPERTY GEOLOGY

The property is underlain by an elongate hornblende-feldspar diorite intrusion in fault contact with sediments and minor volcanic of the Hazelton Group (Figure 3 and 4). Unit descriptions are as follows (Savell, 1992).

Lithology

Unit 1: Argillites, wackes (1a) and conglomerate (1b) of unit 1 crop out in the west and east portions of the property as small cliff forming units. Conglomerates and pebbly sandstones overly black argillites and contain chips and pebbles of argillite.

Unit 2: Massive andesitic fine-grained rocks (flows?) crop out in one location as a small inconspicuous knob. Contact relations of it with 1 are unclear.

Unit 3: Blocky to locally strongly fractured diorite (microdiorite, feldspar porphyry, hornblende-feldspar porphyry)underlies the central portion of the property as a north-south intrusive body 100 to 500 m wide. The outer portion of the composite(?) intrusion is dominated by fresh feldspar porphyry.

Unit 4: Late dykes, believed to be Tertiary, occur as narrow steeply east dipping bodies. The dykes have a diabasic texture, are black and feldspar phyric.

Structure

Structurally the microdiorite body is interpreted to be mainly in fault contact with the adjacent sediments and volcanics. North-northeast and north-northwest trending faults appear to control the distribution of the microdiorite. Later northwest trending faults appear to offset the microdiorite with sinstral movement.

Two major fracture sets cut the Hazelton Group rocks. These parallel the fault trends. The north, northeast trend was the preferred host of the later diabasic dykes. Fracturing in the diorite intrusive and andesite favours these trends, although directions in intensely fractured zones appear to be random.

Alteration

Hydrothermal alteration is mainly observed within the microdiorite intrusive and the adjacent units near its contact. The core of the microdiorite intrusion is weakly to intensely altered to quartz-sericite-pyrite ± carbonate assemblages and moderate to strong fracture densities (<1 fracture/10cm) whereas the outer margins are characterized by sericite-pyrite ± quartz and weak to blocky fracture densities (>1 fracture/20cm).

Mineralization

Pervasive pyrite mineralization is present in all hydrothermally altered rocks on the property. Copper mineralization is observed at several locations along the length of the microdiorite and surrounding altered rocks. At the Red Bluff adit chalcopyrite occurs with pyrite over an area of about 10 by 20 metres. A similar occurrence is located about 500 metres to the south-southeast over about 4 metres and is open to the south. Weak chalcopyrite mineralization also occurs in small scattered outcrops in and just south of the Red Bluff Crown grants. Spotty chalcopyrite was observed in the outcrop of altered diorite in the Dak River, which is close to sloughed trenches where malachite staining has been reported.

GEOCHEMISTRY

1. Soil Geochemistry

A compass chain and flagged grid line was established at the north end of the known broad copper-gold soil anomaly along line 115+00N from 111+00E to 117+00E. This line, run at approximately 045°, filled in a 400 metre gap between previous Hemlo soil lines.

Soil samples were collected from the lower B to upper C soil horizon to depths of 40 centimetres with a mattock and placed in kraft soil bags. Sample preparation and analysis was completed at Acme Analytical Laboratories Ltd. in Vancouver, B.C. Analytical procedures are described in Appendix 3.

A total of 600 metres of new grid was established in 1996 over which 13 soil samples were collected. Copper-gold soil results are plotted on Figure 4 with geochemical result in Appendix 3.

Results of the 1996 geochemical sampling program reflects a positive correlation between anomalous copper-gold results and the underlying altered and fault bounded microdiorite. Six samples from a 250 metre wide section along line 115+00N returned copper values between 163 ppm - 688 ppm and gold values from 54 - 470 ppb.

2. Rock Geochemisty

A total of 10 rocks were collected on the FH 1 claim and submitted for 32 element ICP analysis (see Appendix 3 for analytical procedures). The purpose of the rock sampling was to detect significant or elevated concentrations of copper and gold.

Rock geochem results include copper values ranging from 37 to 5654 ppm and gold values ranging from 2 to 267 ppb with most values < 100 ppb. The highest results for both copper and gold were returned from the altered pyritic microdiorite with local malachite staining. Sample locations are shown on Figure 4, while analytical results and rock descriptions can be found in Appendix 3 and 4 respectively.

CONCLUSION

It is concluded that the FH claims are underlain by geology favourable for hosting bulk tonnage copper-gold mineralization and/or vein-type mineralization. It is further concluded that the property is very unexplored and warrants a major exploration program.

RECOMMENDATION

It is recommended that a program of detailed geological mapping, soil sampling, and I.P. surveys be conducted on the FH claims, followed by diamond drilling of significant anomalous areas.

REFERENCES

Alldrick, D.J., Dawson, G.C., Bosher, J.A. and Webster, I.C.L. (1986) - Geology of the Kitsault River Area, NTS 103P, Ministry of Energy, Mines and Petroleum Resources, Open File Map 1986/2.

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Jones, H. M (1996) - Report on the FH Claims, Dak River, Alice Arm Area, B.C., Skeena M.D., Private Report.

Kemp, Rick (1993) - Geological and Geochemical Report on the Red Bluff Property, Skeena M.D., Assessment Report for Noranda Exploration Company, Limited.

Savell, M. (1992) - Geological and Geochemical Report on the Red Bluff Property, Skeena M.D., Assessment Report for Noranda Exploration Company, Limited.

APPENDIX 1

STATEMENT OF QUALIFICAITONS

STATEMENT OF QUALIFICATION

I , Richard Kemp of the City of Vancouver, Province of British Columbia, do hereby certify that:

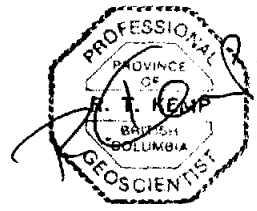
1) I am a registered Professional Geologist in the Province of British Columbia. My address is 524 West 21 street, North Vancouver.

2) I am a graduate of the Haileybury School of Mines (1974), and am a certified Mining Technician. I hold a B.Sc. degree in Geology from Lakehead University (1981).

3) I have been continuously employed in the Mining Industry in Canada and Internationally since 1974.

4) The work described in this report was conducted under my supervision and I have prepared this report based on my field observations and those contracted by Atna Resources Ltd.

5) I have no interest in the property nor do I expect to receive any.



Vancouver, B.C

Rick Kemp
P.Geo

APPENDIX 2

STATEMENT OF EXPENDITURES

Statement of Expenditures

Claims: FH1, FH2

Manpower:	5 days at $350/day (N. Reardon)	$ 1,175.00
	4 days at $350/day (R. Kemp)	1,140.00
	5 days at $250/day (P. MacDonald)	1,250.00
Camp Costs:	Groceries	143.66
	Room and Board	603.63
	Supplies	348.74
Transportation:	Car Rental	957.33
	Airfare	1,174.12
	Fuel	121.83
	Helicopter (Highland/VIH)	3,190.42
Analytical Charges		344.47
Report Preparation, Drafting, Secretarial etc.		1,500.00
	TOTAL COSTS	$12,784.20

APPENDIX 3

ANALYTICAL RESULTS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT RED BLUFF File # 96-4955 Page 1

1550 - 409 Granville St., Vancouver BC V6C 1T2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppm	Au* ppb
A 70601	3	5654	6	56	1.3	31	67	506	12.17	9	<5	<2	4	39	1.4	<2	<2	322	2.20	.073	8	12	1.82	31	.03	11	2.57	.05	.22	2	<5	1	267
A 70602	24	3009	<3	77	.7	23	41	445	9.09	22	<5	<2	4	18	.3	2	<2	156	.61	.080	5	46	2.31	33	.18	<3	2.72	.04	.12	<2	<5	1	77
RE A 70602	22	2896	<3	74	.6	23	41	430	8.69	18	<5	<2	3	17	.2	<2	2	150	.58	.075	5	46	2.19	29	.18	<3	2.61	.04	.12	<2	<5	<1	60

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: P1 ROCK P2 SOIL AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: OCT 2 1996 DATE REPORT MAILED: Oct 8/96 SIGNED BY..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppm	Au* ppb
RB 11500N 11100E	3	74	12	164	<.3	38	9	506	4.74	21	<5	<2	2	8	.4	<2	<2	97	.07	.030	9	45	.95	119	.02	3	2.59	.01	.07	<2	<5	<1	8
RB 11500N 11150E	5	73	14	166	1.0	5	28	2949	10.29	72	<5	<2	3	7	.7	<2	<2	264	.05	.172	8	32	.57	112	.03	4	5.34	.01	.03	<2	<5	<1	25
RB 11500N 11200E	6	64	34	124	1.2	19	4	324	8.86	40	<5	<2	4	5	.5	3	2	122	.03	.057	7	52	.41	62	.02	<3	3.47	.01	.04	3	<5	<1	5
RB 11500N 11250E	13	76	18	166	1.1	23	10	737	6.70	160	<5	<2	<2	46	.8	3	<2	158	1.13	.074	7	40	.40	141	.02	<3	2.03	.01	.06	<2	<5	<1	8
RB 11500N 11300E	5	70	13	166	1.2	15	13	2711	8.76	23	<5	<2	2	8	.4	<2	2	173	.14	.210	11	59	.68	102	.08	<3	5.76	.02	.10	<2	<5	<1	5
RB 11500N 11350E	44	174	9	73	3.2	7	10	1599	5.86	12	<5	<2	3	6	.7	2	<2	199	.05	.279	8	22	.21	87	.03	3	4.04	.01	.04	<2	<5	<1	81
RB 11500N 11400E	29	625	<3	49	1.1	5	11	485	8.51	24	<5	<2	3	4	.7	2	6	92	.04	.118	6	9	.30	141	.01	<3	5.43	.01	.05	<2	<5	<1	146
RB 11500N 11450E	13	163	6	35	.4	2	5	186	7.74	<2	<5	<2	3	18	.6	<2	<2	159	.10	.105	7	11	.23	157	.04	<3	7.00	.01	.02	2	<5	1	54
RE RB 11500N 11500E	50	682	5	45	.6	6	29	863	18.06	6	<5	<2	7	12	.9	3	5	126	.06	.178	8	13	.70	164	.13	<3	6.98	<.01	.03	2	<5	<1	470
RB 11500N 11500E	51	688	7	45	.3	4	28	852	18.08	5	<5	<2	6	11	.5	<2	<2	124	.06	.177	9	12	.70	156	.14	6	6.87	<.01	.03	<2	<5	<1	358
RB 11500N 11550E	10	684	3	39	.5	5	25	526	9.52	14	<5	<2	4	8	.5	<2	<2	96	.05	.303	8	8	.39	229	.01	3	4.51	.01	.08	<2	<5	<1	191
RB 11500N 11600E	23	209	19	44	.7	8	19	535	8.93	30	<5	<2	4	4	.2	<2	9	152	.02	.134	7	14	.54	172	.01	4	4.71	<.01	.04	<2	<5	1	134
RB 11500N 11650E	3	82	12	147	.5	36	15	422	5.45	14	<5	<2	3	5	.7	<2	<2	147	.04	.038	9	60	.69	116	.03	<3	4.05	.01	.05	<2	<5	<1	14
RB 11500N 11700E	3	70	11	92	.8	26	8	301	5.14	20	<5	<2	4	4	.2	2	<2	135	.03	.033	8	45	.58	130	.04	5	2.70	<.01	.06	<2	<5	<1	8
STANDARD C2/AU-S	19	61	38	141	7.3	71	35	1124	3.79	38	17	7	35	52	19.6	12	20	71	.52	.099	41	65	.96	205	.08	31	2.01	.07	.14	11	<5	2	45

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

...& Al...TIC... ...ABO...RIE... LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT RED BLUFF File # 96-3612

1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: Nancy Reardon

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppm	Au* ppb
A 70011	<1	116	<3	105	<.3	45	40	1188	7.79	52	<5	<2	<2	255	.3	<2	<2	121	7.16	.107	8	101	3.69	155	<.01	4	2.41	.02	.20	<2	8	<1	4
A 70012	10	37	13	77	3.4	27	6	123	2.13	16	<5	<2	<2	10	.4	8	<2	40	.42	.055	11	30	.41	88	<.01	<3	.74	.02	.20	<2	<5	1	12
A 70013	<1	96	<3	70	<.3	63	53	1225	7.42	<2	<5	<2	<2	135	<.2	<2	<2	229	6.31	.038	4	249	5.13	152	.01	7	4.35	.01	.17	<2	9	<1	2
A 70014	4	2061	17	122	2.8	98	77	354	8.76	107	<5	<2	<2	32	.6	<2	2	47	1.20	.088	5	45	.60	18	<.01	3	.81	.01	.23	2	10	1	43
A 70015	<1	144	4	56	<.3	48	47	1279	7.28	<2	<5	<2	<2	204	<.2	<2	<2	133	7.52	.068	4	136	4.53	55	.01	<3	2.07	.01	.14	<2	<5	<1	2
A 70016	<1	128	4	65	<.3	66	48	1058	6.66	<2	<5	<2	<2	228	<.2	<2	<2	46	8.07	.049	2	57	3.85	58	<.01	<3	.40	.02	.16	<2	6	<1	2
RE A 70016	<1	129	4	64	<.3	65	48	1051	6.63	<2	<5	<2	<2	231	<.2	<2	<2	46	8.10	.048	2	53	3.81	58	<.01	<3	.39	.02	.16	<2	6	1	2
A 70017	6	5350	6	11683	2.6	21	5	309	1.81	9	<5	<2	<2	52	126.5	<2	5	19	1.98	.011	1	23	.70	27	<.01	<3	.14	.01	.07	2	<5	<1	8
A 70018	1	80	<3	74	<.3	67	36	697	7.39	<2	<5	<2	<2	242	<.2	2	<2	41	5.94	.042	3	89	3.29	43	<.01	<3	.67	.01	.17	<2	7	<1	1

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: ROCK AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

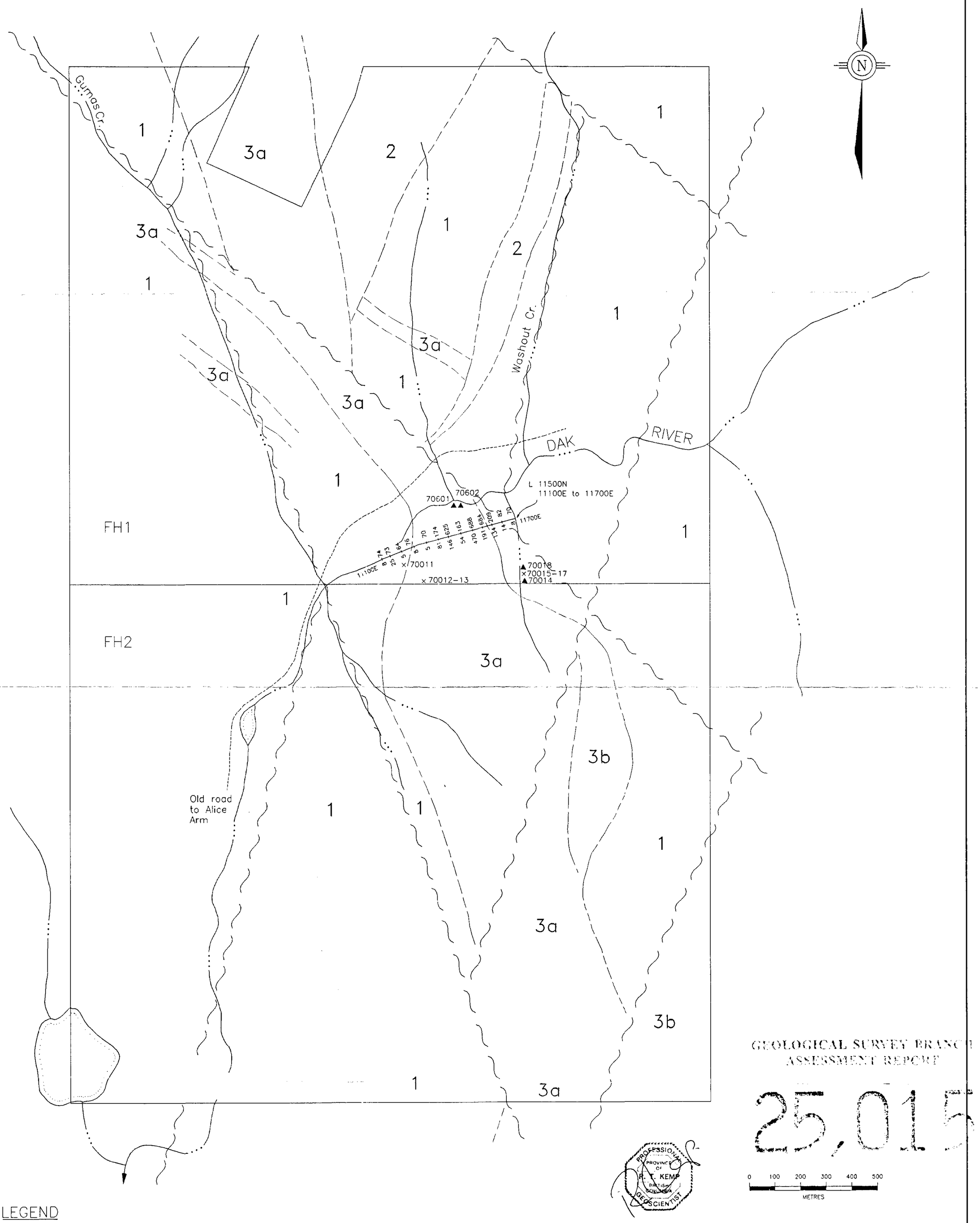
DATE RECEIVED: AUG 13 1996 **DATE REPORT MAILED:** Aug 20/96 **SIGNED BY** ..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

APPENDIX 4

ROCK SAMPLE DESCRIPTIONS

Sample No.	Sample Description	Au ppb	Ag ppm	Cu ppm (%)	Pb ppm (%)	Zn ppm (%)	As ppm
70011	Float Siliceous, pyritic argillite. Dark grey platy pyrite streaks and pods. 3-5% py.	4	<.3	116	<3	105	52
70012	Float Strongly oxidized, limonitic, black carbonaceous graphicitic argillite	12	3.4	37	13	77	16
70013	Float as per 70012	2	<.3	96	<3	70	<2
70014	Grab Strongly siliceous - pyritic argiliite/siltstone. Fault contact; argillite very graphitic, sheared. >5% dissemintated py; a few blebs cpy	43	2.8	201	17	122	107
70015	Float 1m angular boulder Massive andesite/dacite porphry with 10% dissem. Pyrite & dark green chlorite xstals	2	<.3	144	4	5	<2
70016	Float As per 70015. Cut by numerous < 3mm quartz stringers; foliated 10% py as dissem. & blebs	2	<.3	128	4	65	<2
70017	Float Black argillite/quartz breccia; open space filling. Minor limonite & malachite, chalcopyrite	6	2.6	5350	6	11683	9
70018	1.5m chip Massive, intermediate dyke, 1.5m wide oriented at 146/steep south. Cuts argillite ~15% py as dissem. Blebs	1	<.3	80	<3	74	<2
70601	Grab Disseminated py to 8%; occurs as fracture filling, clots and masses showing malachite stain locally. Hosted by microdiorite	267	1.3	5654	6	56	9

Sample No.	Sample Description	Au ppb	Ag ppm	Cu ppm (%)	Pb ppm (%)	Zn ppm (%)	As ppm
70602	Grab Microdiorite; pyrite to 15% as disem., fracture filling, silicified - malachite stained	77	.7	3009	<3	77	22



LEGEND

JURASSIC

- 3a Microdiorite
- 3b Feldspar Porphyry
- 2 Andesite
- 1 Black Argillite, Siltstone, Greywacke, Grit, Conglomerate

- Contact
- Fault
- ▲ Rock chip sample or grab
- × Float sample
- Cu / Au 81 | 174 Geochemical Soil Line

FH CLAIMS

FIGURE 4

PROPERTY GEOLOGY AND SAMPLE LOCATION MAP

DAK RIVER, ALICE ARM AREA

SCALE 1:10,000 | APRIL 1997