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GEOPHYSICAL, GEOLOGICAL, AND TRENCH SAMPLING REPORT

on the

MOUNTAIN CHIEF GROUP of MINERAL CLAIMS

MINERAL CLAIM MAPSHEET 82E/8E

TRAIL CREEK MINING DIVISION

prepared by

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ALPINE WEST MINERAL EXPLORATION SERVICES

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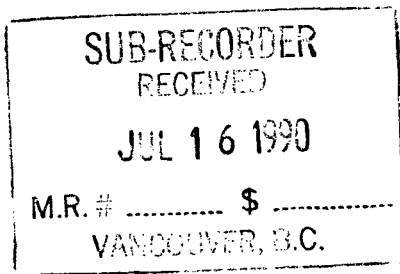
VANCOUVER, B.C.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

20,141

TABLE OF CONTENTS

	page
Summary	1
Introduction	3
Property Status	3
Access, Topography	4
History	4
Regional Geology	5
Description of Work	7
Program Establishment	7
Geophysical Survey Method	7
Geochemical Survey Method	8
Discussion of Results	9
Geophysical	9
Geochemical	9
Geological	10
Conclusions	12
Recommendations	13
References	14



FIGURES

		after page
Figure 1	Location / Regional Geology Map	1
Figure 2	Claim Map	3
Figure 3	VLF - EM Fraser Filter Map	9
Figure 4	Local Geology / Sample Map	11

APPENDIX

Appendix A	VLF - EM Field Results
Appendix B	Rock Sample Descriptions
Appendix C	Geochemical Assay Results
Appendix D	Statements of Qualifications

SUMMARY

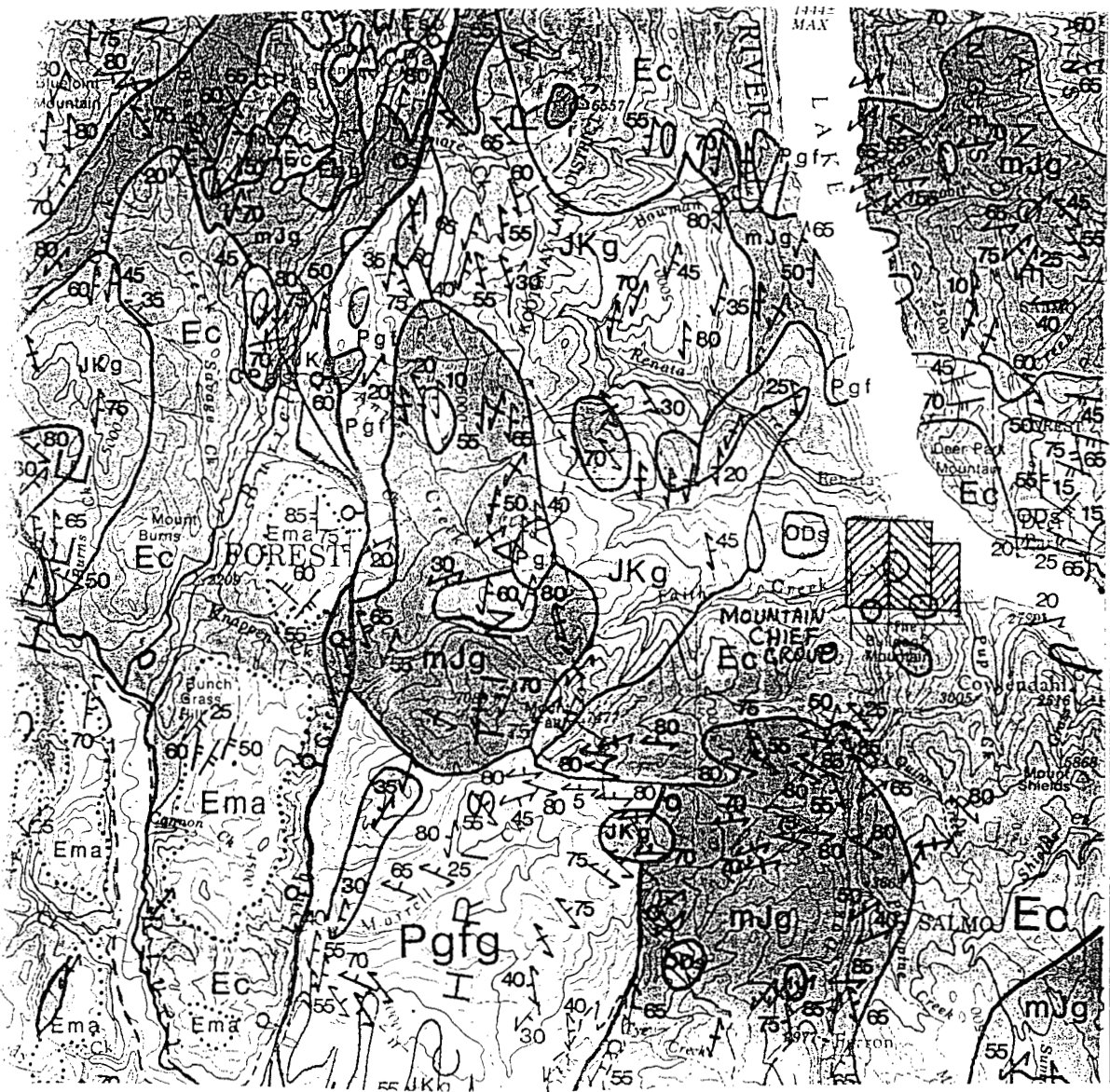
During the month of April, 1990, an exploration program was conducted on the Mountain Chief Group of mineral claims by Alpine West Mineral Exploration Services. This program consisted of a VLF - EM survey, trench sampling, and geological mapping.

The Mountain Chief Group is located approx. thirty kilometres west - northwest of Castlegar, B.C., on N.T.S. mapsheet 82E/8E. It is composed of the Mt. Roberts formation limestones, Coryell intrusive syenites, and the Nelson intrusive diorites.

The main area of interest is centred around the old mine workings on the Mountain Chief reverted crown grant, not held by the owner of the Mountain Chief group. The Mountain Chief mine produced 1080 tons of ore with average grades of 3.5 % copper and 2.8 oz / ton silver.

The geological mapping has determined that the economic mineralization seems to be associated with the contact between the Coryell syenite intrusives and the Mt. Roberts formation black limestones, and seems to be controlled by a series of parallel fault structures. Further geological mapping should be conducted in order to locate and study possible extensions of these contacts.

The VLF - EM survey has identified an anomalous linear trend with a similar signature to the trend evident over the old mine



CRETACEOUS AND/OR JURASSIC



OKANAGAN BATHOLITH: massive, light grey weathering, medium- to coarse-grained, equigranular to porphyritic, unfoliated to weakly foliated, fresh biotite granodiorite and granite; includes undifferentiated granodiorite of the Nelson suite; age poorly constrained



CORYELL SYENITE: alkalic to calc-alkalic, high level, pink and buff syenite and quartz monzonite and trachytic pink feldspar porphyry dykes; plutonic equivalent of the Marron Group especially the Kitey Lake Formation; gradational to pulaskite and to Shingle Creek Porphyry; probably includes JKg undifferentiated in East half of map area; poorly dated

MIDDLE JURASSIC



NELSON PLUTONIC ROCKS: massive, generally moderately foliated, medium grey weathering, medium- to coarse-grained, equigranular, hornblende-biotite granodiorite, quartz diorite and granite; includes undifferentiated biotite granite of the Valhalla suite; age poorly constrained

ORDOVICIAN (?) TO DEVONIAN (?)



Schist, thin bedded argillaceous limestone, slate and limestone includes metamorphosed equivalents mostly biotite-dioptide-quartz scharn and marble; age unknown

REGIONAL GEOLOGY

of the

MOUNTAIN CHIEF GROUP

Taken from : G.S.C. Map 1736A
 Drawn by : Dirk Tempelman-Kluit
 Date : 1986
 Scale 1 : 250,000

Figure # 1

workings. This trend peaks over a group of old trenches showing mineralization. These trenches should be expanded and subject to a detailed sampling program.

As a result of the geochemical assay results, the trench located 100 metres west - northwest of 8 + 00 N on L 13 + 00 W should be subject to a detailed sampling program.

The survey grid should be extended to cover the above mentioned trench, and to outline any extensions of the anomalous zones already located. The VLF - EM survey should be continued over the grid extensions.

A soil sampling program should be implemented over the entire survey area. Results should be compiled with this report in order to verify and expand possible targets.

INTRODUCTION

This report has been written as a result of a mineral exploration program conducted by Alpine West Mineral Services on the Mountain Chief group of mineral claims. The program consisted of a VLF - EM geophysical survey, trench sampling, and geological mapping. Field work was carried out during the month of April, 1990 by an Alpine West crew. The purpose of the program was to assess the Mountain Chief showing, and prospect the possibility of similar showings in the vicinity.

PROPERTY STATUS -

The Mountain Chief group is owned by one of the authors of this report, Randy Smallwood. It is located on the west shore of Lower Arrow Lake, approx. thirty kilometres west - northwest of Castlegar, B.C., on N.T.S. mapsheet 82E/8E. The group consists of three modern grid mineral claims, with pertinent information listed in table 1.

TABLE 1

Claim Name	Rec #	Units	Completion Date
MOUNTAIN CHIEF	1263	18	April 18, 1989
ARROW GOLD	1264	8	April 17, 1989
RENATA GOLD	1265	18	April 18, 1989

LOCATION MAP

for the
Mountain Chief Group

Drawn by ; RSM Figure # 2
Date : April, 1990 N.T.S. Mapsheet 82E/8E

SCALE



RENATA

LOWER

DEER PARK

ARROW

LAKE

RENATA
GOLD
6S X 3E

ARROW
GOLD
4S X 2E

MOUNTAIN
CHIEF
6S X 3W

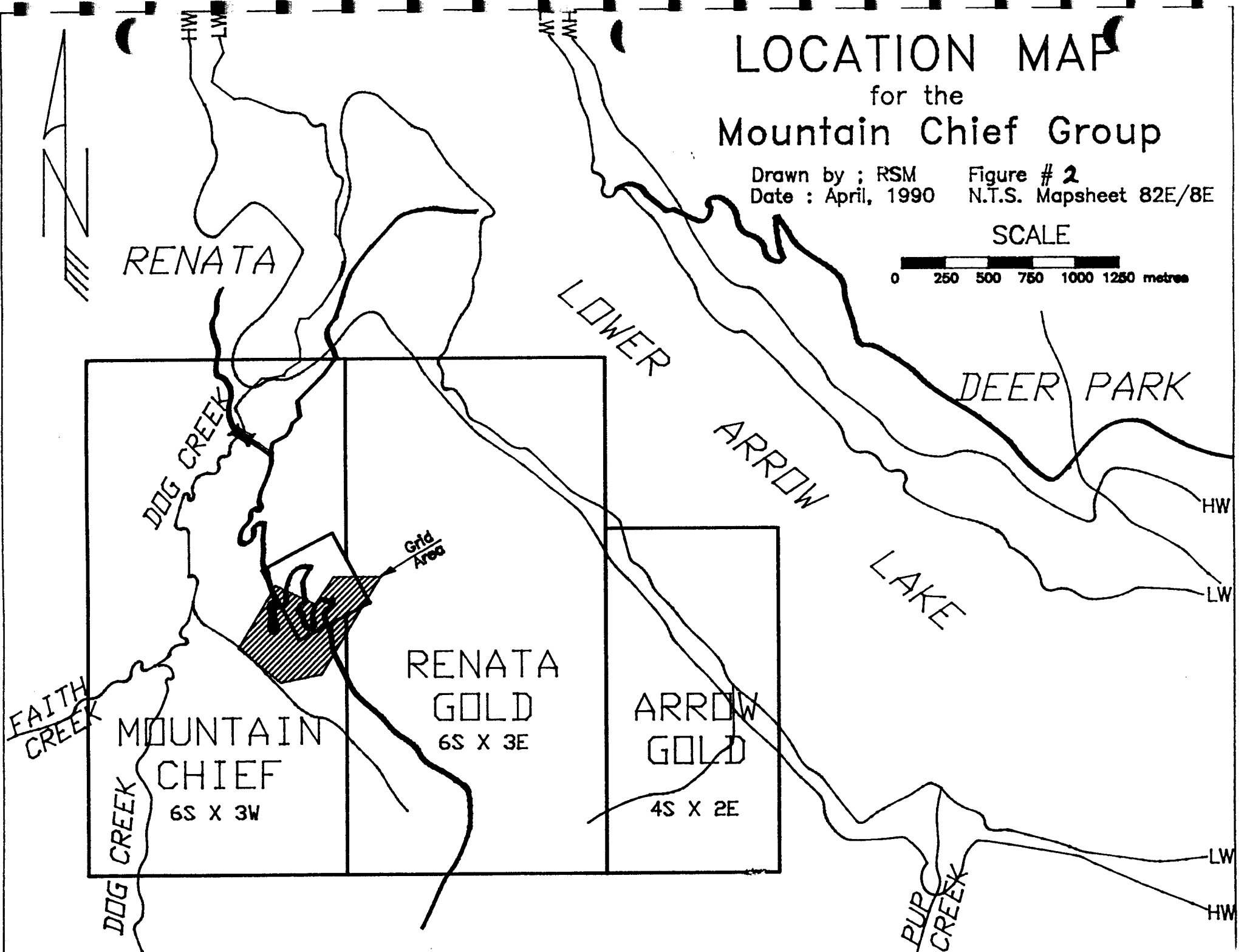
FAITH
CREEK

DOG CREEK

DOG CREEK

RUP
CREEK

Grid
Area



The Mountain Chief reverted crown grant (lot 2393) is located within the Mountain Chief group, but is not controlled by Randy Smallwood.

ACCESS, TOPOGRAPHY -

Road access to the Mountain Chief Group is possible during the snowfree months from both the north and south. From the north, access from Highway 6 and Edgewood is possible via approx. 95 kilometres on the Edgewood - Renata logging main. To the south, access from Paulson Summit on Highway 3 is possible via 32 kilometres on the Bulldog logging main. During this work program, both these routes were still snowbound. Year round access is possible by crossing Lower Arrow Lake from Deer Park by boat, the method used by the Alpine West crew. Please see figures #1 and #2.

Topography of the Mountain Chief Group ranges from precipitous on the east slope of Bulldog Mountain, steep on the valley walls of Dog Creek, and more of a rolling effect on top of the north ridge of Bulldog Mountain. Elevations range from 1450 to 4000 feet above sea level, and vegetation consists of a heavy covering of spruce, fir, birch, and some aspen.

HISTORY -

The area covered by the Mountain Chief Group has been prospected and explored since the turn of the century, with most of the activity centred around the Mountain Chief reverted crown

grant. It was initially granted on July 18, 1900 to J.S. Clute, and it went on to produce 1080 tons of ore averaging 3.5 % copper and 2.4 oz / ton silver between 1917 and 1922. The property sat idle until 1955, when United Estella Mines undertook 400 feet of underground drilling in the old workings and surface trenching in the surrounding area. Between 1967 and 1971, a series of geochemical rock and soil sampling, geological, and magnetometer surveys were implemented over the region with limited success. The property then sat idle until 1984, when P.J. Santos conducted a program consisting of rock sampling and mapping. The claims lapsed, and Randy Smallwood staked the Mountain Chief Group in 1989.

REGIONAL GEOLOGY -

The entire area of the claim block consists mainly of the most recent intrusive volcanics, with isolated inliers of Jurassic aged plutonics and older original limestones. The recent igneous rocks are those of the Coryell Syenites. Massive, resistant, and coarse grained, they are made up of mainly potassic feldspars, with minor plagioclase, \pm hornblende and biotite. These are the youngest rocks, but are poorly dated. The next oldest sequence is the Nelson Plutonics, which have been given a mid-Jurassic age (D. Tempelman-Kluit, GSC Map 1736A, 1989). Consisting mainly of massive diorites and granodiorites, it is less resistant than the syenite, and much less wide spread. The last set of rocks are the limestones. They have been roughly

dated as late Ordovician, but this is a best guess type estimate. The limestones are thinly laminated, with some shale interbedding and marbleized areas. They are likely isolated remnants of the original sedimentary sequence.

DESCRIPTION OF WORK

PROGRAM ESTABLISHMENT -

The geophysical part of the program consisted of implementing a VLF - EM survey over the area of interest. A grid was established, covering both the Mountain Chief mine workings and a number of trenches located 300 metres south west of the mine workings.

The grid consists of 350 metres of baseline and 4000 metres of crossline marked with 25 metre stations. VLF - EM readings were taken at every station.

GEOPHYSICAL SURVEY METHOD -

The VLF - EM survey was conducted using a Sabre Electronics Model 27 receiver. This instrument utilizes the primary electromagnetic fields that are generated by the U.S. Navy's VLF marine communication stations, which transmit at frequencies ranging between 15 and 25 kHz. Because these stations have a vertical antenna current, they produce a horizontal primary magnetic field. Secondary electromagnetic fields arise due to currents induced by buried conductors. The VLF - EM receiver measures the dip of the magnetic field resulting from the sum of the primary (transmitted) and secondary (induced) fields.

For best results, a transmitter located along the strike of the suspected conductors is selected. Since the geology of the

survey area is complex, a small survey was conducted over the known mineralization of the Mountain Chief mine workings prior to grid establishment. Four transmitting stations were tested, and their results compared for best response. The best results were received from Annapolis, Maryland, which transmits at 21.4 kHz, so the receiver was tuned to Annapolis for the duration of the survey. The results are discussed on page 9, and listed in Appendix A.

Instead of representing the results by the standard profile method, a filtering technique, described by D.C. Fraser (Geophysics, 1969, V.34 No. 6, pages 958-967) and referred to as the 'Fraser Filter', was used to show a map with conductive areas defined by positive contours. Please see figure # 3.

GEOCHEMICAL SURVEY METHOD -

A total of five rock samples were collected from the various showings on the property. Samples RS-001 and RS-002 were channel samples taken at the old Mountain Chief mine site. Sample RS-003 was taken from an outcrop at station 7 + 95 N on Line 10 + 50 W. Sample RS-004 was taken from the trench located 25 metres true east of station 5 + 50 N on Line 11 + 00 W, and RS-005 was taken from the trench located 100 metres north - northwest of station 8 + 00 N on Line 13 + 00 W. The samples were delivered to Acme Analytical Laboratories in Vancouver for assay. Please see figure # 4 for sample locations, and appendix B for sample descriptions.

DISCUSSION OF RESULTS

GEOPHYSICAL -

The VLF - EM survey results show two strong, linear anomalous trends both striking approx. 35 degrees west of north. The stronger of the two, located between 8 + 75 N on L 10 + 50 W and 8 + 00 N on L 9 + 00 N, peaks over the Mountain Chief mine workings, and is open ended in both directions. The other anomalous trend, located between 6 + 25 N on L 13 + 00 W and 4 + 75 N on L 10 + 50 W, shows a similar signature to the first. It peaks over the trench located at 5 + 25 N on L 11 + 00 W, and again is open ended.

GEOCHEMICAL -

A total of five rock samples were taken from the various showings of the property. Detailed descriptions are listed in appendix B, and assay results listed in appendix C.

Of the five rock samples, the most positive results were returned from RS-001, RS-002, and RS-005. Both RS-001 and RS-002 were continuous chip samples taken from the old mine site, and assayed 1.19 % copper, 0.349 oz / ton silver, and 2.85 % copper, 2.61 oz / ton silver respectively.

Sample RS-005 was a grab sample taken from the trench located 100 metres north - northwest of station 8 + 00 N on Line 13 + 00 W. It assayed 10.84 % copper and 2.55 oz / ton.

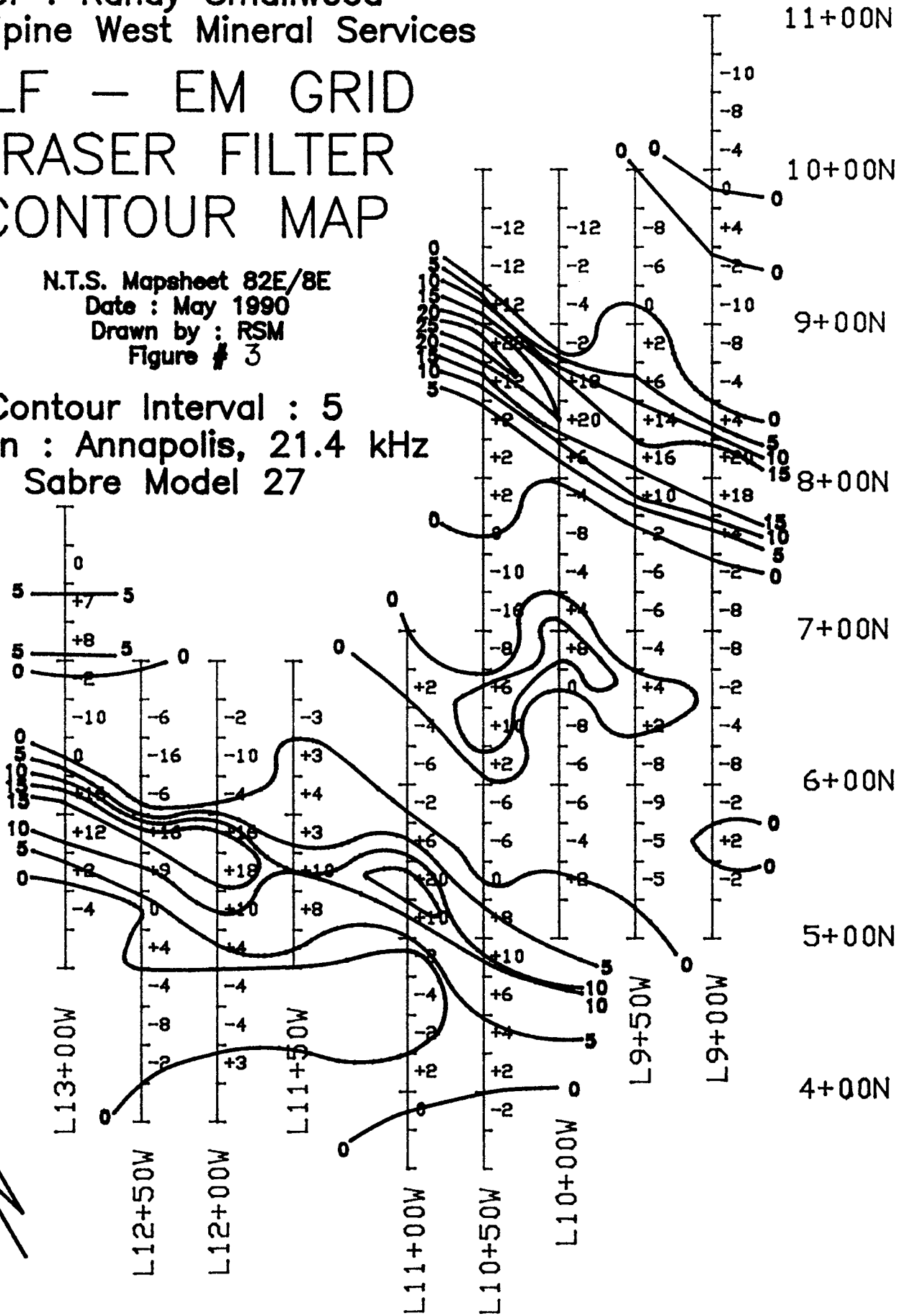
MOUNTAIN CHIEF GROUP

for : Randy Smallwood
by : Alpine West Mineral Services

VLF - EM GRID FRASER FILTER CONTOUR MAP

N.T.S. Mapsheet 82E/8E
Date : May 1990
Drawn by : RSM
Figure # 3

Contour Interval : 5
Station : Annapolis, 21.4 kHz
Sabre Model 27



GEOLOGICAL -

The area of the claim group has been mapped by the G.S.C. on a regional scale as recently as 1989, but at this level, it is difficult to get any sort of detail. Therefore, a series of ground checks and prospecting was done to get a more detailed picture of the geology of the area.

The first thing that is noticed about the claims is that most of the ground is covered in till and heavily wooded. The most obvious outcrops are a series of cliffs along the steep shoreline that forms the northeast edge of the claim group. On ground inspection, these are seen to be almost entirely made up of the Coryell group syenites. These are massive coarse grained intrusives, and along the shoreline, they overly a limestone bed. The limestone is black and silicified, with major chert stringers in some spots. The contact was traced along the bottom of the cliff face for several hundred metres, and was inferred in several other places.

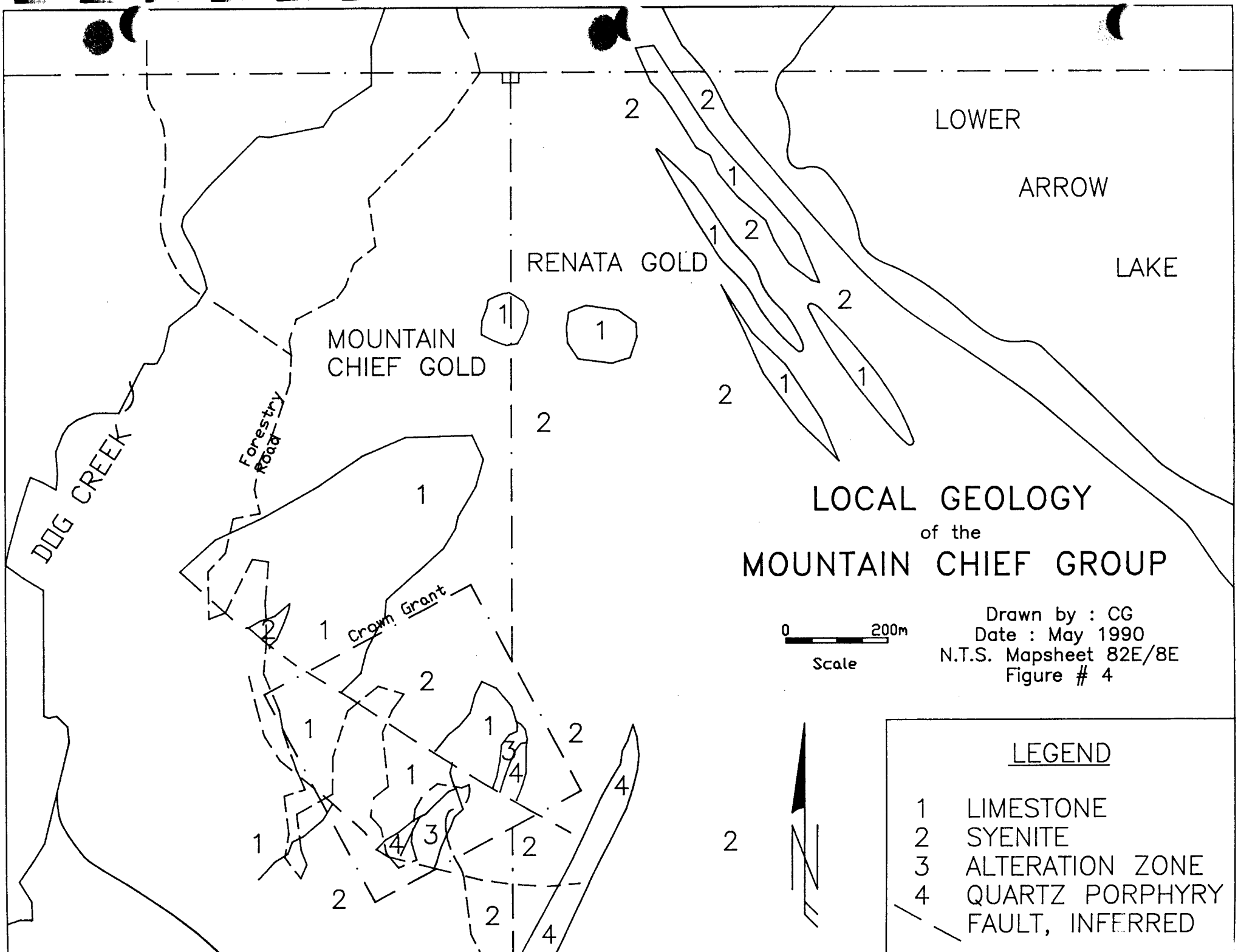
There is a carbonate deposition site approximately 500 metres southeast along the shore from the north claim boundary, where a spring surfaces and precipitates a travertine limestone out of solution. The spring exits from just below the base of another long series of cliff faces that descend the hillside. There is no obvious drainage channel so this implies that the carbonate solution drains from another basal limestone bed beneath the cliffs. Apparently the weathering of the softer limestone has undercut the more resistant syenite all along the

shore, leaving a series of sheer cliff faces.

There are several limestone outcrops along the road cut from Renata to the old mine site. They are black, thinly laminated, and silicified, very similar to the limestones at the base of the cliffs. Sample RS-005 was taken from an old trench at a contact between the limestone and the syenite intrusives above the road, 100 metres north - northwest of 8 + 00 N on L 13 + 00 W. The trench shows heavy malachite staining with some small chalcopyrite lenses and minor bornite along the contact.

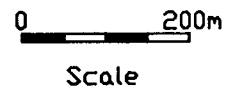
The old mine workings follow another exposure of the contact zone, again with very heavy malachite and some azurite staining, and lenses of massive chalcopyrite and bornite. Samples RS-001 and RS-002 were taken from wall rock in the main trench.

Sample RS-003 was taken from a cliff face formed of a greenish heavily silicified limestone, to the south of the old mine workings. This is a different type than the black limestone, and did not appear to be involved with the economic mineralization. Sample RS-004 was taken from another old trench, located 20 metres grid east from 5 + 75 N on L 11 + 50 W. The trench exposes a contact between the greenish limestone and the syenite, and shows minor pyritization. All of the interesting economic mineralization occurs along the contact between the syenite intrusives and the black limestones. There appears to be some faulting across the trend of the mineralization, so the lateral extent of any ore would probably be limited.



LOCAL GEOLOGY
of the
MOUNTAIN CHIEF GROUP

Drawn by : CG
Date : May 1990
N.T.S. Mapsheet 82E/8E
Figure # 4



LEGEND	
1	LIMESTONE
2	SYENITE
3	ALTERATION ZONE
4	QUARTZ PORPHYRY
- - -	FAULT, INFERRED

CONCLUSIONS

Geochemical assay of the trench rock samples returned positive results. Assays as high as 10.84 % copper and 2.61 oz / ton silver were returned, proving the possibility that further economic reserves exist. Because of the low number of samples, no evident geochemical patterns presented themselves.

Two strong, linear VLF - EM anomalous trends were located. Both these trends have a similar signature and are parallel in nature, therefore their geological settings should be similar. The trends seem to outline the assumed series of parallel control faults, and both peak over areas of known mineralization. One of the trends peaks over the Mountain Chief mine workings, and the other trend peaks over the trench located at 5 + 25 N on L 11 + 00 W. As the mineralization in the trench is not as abundant as at the mine workings, the area around the trench should be subject to further detailed trenching and sampling. The fact that both trends peak over areas of known mineralization should prove the effectiveness of further VLF - EM surveys.

The economic mineralization occurs along the contact between the syenite intrusives and the black limestones. A series of faults cross cut the area of interest, thereby limiting the lateral extent of any possible mineralized zones.

RECOMMENDATIONS

The trench located 100 metres north - northwest of 8 + 00 N on L 13 + 00 W should be subject to a detailed sampling program. The area should be covered by an extension of the survey grid, and should be included in any further geophysical and / or geochemical surveys.

The second anomalous trend should be subject to a detailed trenching and sampling program, in order to identify the source of the peak.

The existing survey grid should be expanded to locate extensions of the anomalous zones already located. The VLF - EM survey should be continued.

Detailed geological mapping should continue, with particular interest being paid to locating and studying the contact zones between the intrusive syenites and the black limestones.

As groundwater flows in the area do not seem excessive, soil geochemistry would be an effective method for outlining potential targets. A soil sampling program should be implemented over the entire survey area. The results should be compiled with this report to verify and expand possible target areas.

A prospecting program should be initiated in the northern portion of the claims, in order to confirm and expand reported mineralized zones.

REFERENCES

- | | |
|-------------------------|--|
| B.C. Minister of Mines | Annual Reports 1901, 1917, 1918,
1919, 1920, 1922, 1927, 1955.
Geology, Explor. and Mining 1971. |
| George L. Mill, P. Eng. | Assessment Report # 930, Sept. 1966 |
| F.L. Croteau, P. Eng. | Assessment Report # 3090, Aug. 1970 |
| P.J. Santos, P. Eng. | Assessment Report # 12936, Aug. 1984 |
| D. Tempelman - Kluit | G.S.C. Map 1736A, 1989 |

APPENDIX A

VLF - EM Readings Mountain Chief Group Station : Annapolis

	<u>Line 9 + 00 West</u>		<u>Line 9 + 50 West</u>	
<u>Station</u>	<u>F.S.</u>	<u>Dip Angle</u>	<u>F.S.</u>	<u>Dip Angle</u>
5 + 00 N	46	- 2	48	- 6
	48	- 4	50	- 4
	52	0	48	- 3
	50	- 4	49	- 2
6 + 00 N	50	- 2	48	0
	48	0	50	+ 4
	50	+ 2	53	+ 2
	52	0	54	0
7 + 00 N	53	+ 4	52	+ 2
	54	+ 6	56	+ 4
	53	+ 6	55	+ 4
	55	+ 6	53	+ 8
8 + 00 N	51	+ 2	52	+ 2
	49	- 8	48	0
	47	- 4	49	- 6
	50	- 6	51	- 6
9 + 00 N	52	- 2	54	- 6
	54	0	57	- 8
	58	+ 2	58	- 4
	61	- 2	53	- 4
10 + 00 N	57	0	52	0
	54	0		
	56	+ 2		
	52	+ 6		
11 + 00 N	52	+ 2		

Notes : Road at Road at

	<u>Line 10 + 00 West</u>		<u>Line 10 + 50 West</u>	
<u>Station</u>	<u>F.S.</u>	<u>Dip Angle</u>	<u>F.S.</u>	<u>Dip Angle</u>
3 + 50 N			50	+ 4
			47	+ 4
4 + 00 N			49	+ 6
			48	+ 4
			46	+ 4
			45	+ 2
5 + 00 N	46	0	46	0
	46	- 2	47	- 4
	47	- 2	47	- 2
	50	- 2	46	- 2
6 + 00 N	53	+ 2	44	+ 2
	54	0	54	0
	57	+ 6	53	- 2
	59	+ 4	52	- 6

VLF - EM Readings Mountain Chief Group Station : Annapolis

Line 10 + 00 West contd. Line 10 + 50 West contd.

Station	F.S.	Dip Angle	F.S.	Dip Angle
7 + 00 N	53	+ 2	50	- 2
	47	0	52	+ 2
	46	+ 2	54	+ 6
	46	+ 4	52	+ 4
8 + 00 N	46	+ 6	54	+ 4
	47	+ 4	53	+ 4
	52	0	54	+ 2
	48	- 10	62	+ 4
9 + 00 N	44	- 4	53	- 10
	46	- 4	52	- 12
	46	- 6	49	- 6
	46	0	47	- 4
10 + 00 N	42	+ 2	46	- 2

NOTES : Road at 7 + 80 N Road at 7 + 05 N
 Trench at 8 + 20 N Road at 7 + 30 N
 Mine at 8 + 80 N Road at 8 + 75 N
 Mine at 8 + 85 N

Line 11 + 00 West Line 11 + 50 West

Station	F.S.	Dip Angle	F.S.	Dip Angle
3 + 50 N	36	+ 4		
	38	+ 6		
4 + 00 N	40	+ 4		
	40	+ 4		
	42	+ 4		
	46	+ 6		
5 + 00 N	45	+ 6	44	+ 4
	45	+ 6	45	+ 4
	46	- 4	44	+ 3
	47	- 4	44	- 3
6 + 00 N	46	- 4	42	0
	44	- 2	43	- 3
	48	0	44	- 4
	47	- 2	46	- 2
7 + 00 N	54	- 2	45	- 2

Notes : Trench at 5 + 50 N

VLF - EM Readings Mountain Chief Group Station : Annapolis

	<u>Line 12 + 00 West</u>		<u>Line 12 + 50 West</u>	
<u>Station</u>	<u>F.S.</u>	<u>Dip Angle</u>	<u>F.S.</u>	<u>Dip Angle</u>
4 + 00 N	46	+ 7	47	-- 2
	46	+ 6	45	0
	48	+ 4	42	- 2
	44	+ 6	44	+ 2
5 + 00 N	45	+ 8	46	+ 4
	45	+ 6	44	0
	46	+ 4	44	+ 2
	47	0	43	+ 2
6 + 00 N	46	- 8	42	- 9
	44	- 4	43	- 3
	45	0	48	+ 2
	46	- 2	47	+ 2
7 + 00 N	48	0	46	+ 3

Notes : Road at Road at
 Road at Road at

	<u>Line 13 + 00 West</u>	
<u>Station</u>	<u>F.S.</u>	<u>Dip Angle</u>
5 + 00 N	41	+ 2
	39	+ 4
	42	+ 6
	37	+ 4
6 + 00 N	38	+ 4
	38	- 6
	42	- 2
	44	0
7 + 00 N	43	+ 2
	44	- 2
	42	- 4
	45	- 3
8 + 00 N	46	- 3

APPENDIX B

RS-004

Continuous chip sample across 1.0 metres in an old exploration trench located 20 metres grid east from 5 + 75 N on L 11 + 50 W. along one of the VLF survey location lines. The trench exposed the contact between the syenite and the greenish limestone. Some mineralization, including pyrite, was visible in small lenses along the contact. The sample was taken across the contact, and included the limestone and the intrusive. Very little alteration was visible along the contact.

RS-005

This was a grab sample from the old trench along the road to Renata, located approx. 100 metres north - northwest of 8 + 00 N on L 13 + 00 N. The trench showed malachite and azurite staining, and was apparently dug to expose the contact between the black limestone and the syenite. The two rock types can be clearly seen in the surrounding rock outcrops. The sample was part of a massive sulphide lens, and showed pyrite, malachite, azurite, chalcopyrite, and some bornite.

SAMPLE DESCRIPTIONS

RS-001

This sample was taken as a continuous chip across 0.8 metres of the wall in the main trench of the mine workings. It includes rock from the alteration zone and the limestone host as well as a small lens of chalcopyrite. Taken from a point about 15 metres north from the south end of the trench.

RS-002

Continuous chip across 1.5 metres at the north end of the main trench. Includes the altered contact and some limestone host rock. It showed malachite and azurite staining, as well as brown iron oxide staining. No pyrite lenses were seen, but finely disseminated grains could be seen with a hand lens.

RS-003

Continuous chip across 1.0 metres from an outcrop at 7 + 95 N on L 10 + 50 W. This was a cliff face formed of the green silicified limestone. There appeared to be some pyritization when examined with a hand lens.

APPENDIX C

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Alpine West Mining File # 90-1080

914 - 510 W. Hastings St., Vancouver BC V6B 1L8

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	Au* ppb
RS 001	43	10576	27	206	10.9	30	9	1479	3.17	5	<6	<2	<2	72	2.1	5	41	54	3.82	.188	9	36	.52	37	.13	<3	1.22	<.02	.04	<2	11
RS 002	23	30513	166	379	68.0	12	18	936	4.94	5	<6	<2	<2	149	2.7	5	153	40	4.96	.116	5	25	.13	41	.11	<3	1.01	<.02	.03	5	40
RS 003	2	209	5	54	.3	22	5	160	.96	7	<6	<2	<2	109	.3	<3	7	26	2.87	.124	8	12	.11	33	.13	4	1.50	.03	.06	<2	2
RS 004	2	1303	19	99	1.9	22	10	340	1.89	<3	<6	<2	4	250	.9	<3	8	29	4.61	.132	17	14	.33	120	.16	6	2.22	.09	.14	<2	3
RS 005	7	99999	11	1104	68.1	56	132	149	10.07	<3	<6	<2	<2	85	17.0	<3	58	8	1.28	.056	8	<2	.21	33	.03	<3	.49	<.02	<.02	5	3
STANDARD C/AU-R	18	57	40	133	6.7	67	31	1053	3.98	38	18	7	37	48	18.0	16	20	58	.50	.095	38	56	.94	172	.08	39	1.92	.06	.13	11	510

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. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: Rock AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: APR 26 1990 DATE REPORT MAILED: *May 2/90* SIGNED BY: *C. Leong* D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

✓ ASSAY RECOMMENDED

RS001 Cu 1.19% Ag
 RS002 2.85% 2.61 oz/tm
 RS005 10.84% 2.55 oz/tm

APPENDIX D

Statement of Qualifications for Colin Green.

I, Colin Green, certify the following to be true:

- I have worked in mineral exploration part time for eight years,
- I have finished the first year of the Mining Technology program at BCIT,
- I have taken two years in the Science program at the University of Alberta, including courses in mapping and geology.

Signed

A handwritten signature in cursive script that reads "Colin Green". The signature is written in black ink and is positioned above the printed name.


Colin Green.

STATEMENT OF QUALIFICATIONS

I, Randy Vernon Joseph Smallwood, of 6293 - 173 A St., Cloverdale, B.C., hereby state that I :

- have been involved in mineral exploration on a full time basis since March, 1987.
- have been involved in mineral exploration on a part time basis since December, 1984.
- have been conducting geochemical surveys since June, 1987.
- have been conducting electromagnetic and magnetic geophysical surveys since August, 1987.
- have been compiling field interpretations of geophysical data since February, 1988
- am presently enrolled in the Mining Engineering program at the British Columbia Institute of Technology in Burnaby B.C.
- have written this report based on sample assays and data collected by myself and an Alpine West crew in April of 1990.

Respectfully Submitted


Randy Smallwood