# BRITISH COLUMBIA PROSPECTORS ASSISTANCE PROGRAM MINISTRY OF ENERGY AND MINES GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR:1998/99REPORT #:PAP 98-12NAME:MARTIN PETER

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RESULTS OF THE 1998 PROSPECTORS ASSISTANCE PROGRAM WITHIN THE ANTLER FORMATION CENTRAL BRITISH COLUMBIA

By: Martin C. Peter

#### INTRODUCTION

1998 proved to be another successful exploration season within the Antler Formation as a further concentration of massive sulphide float was discovered and a 20 unit mineral claim (Lottie 1) was staked to surround the area. This float was found in an region which was described in the 1998 PAP Grant proposal as a good target area for the location of VMS-style mineralization. This discovery came approximately mid-way through the program so that some of the proposed study locations outlined in the 1998 Proposal could not be examined; however, the surrounding region was studied in greater detail and two areas of further potential were delineated within the southern half of the Antler Formation.

As described in previous reports, the Antler Formation has not attracted a lct of exploration scrutiny for a number of reasons, not the least of which is a lack of documented mineral occurrences. Since 1996, the author has discovered three new distinct concentrations of float boulders with economic levels of base and precious metals, none of which to date has been successfully traced back to a bedrock source. All the float boulders appear to have originated as part of volcanogenic massive sulphide mineralizing systems which lends credence to the idea that the rocks of the Antler Formation are good potential hosts for these types of deposits. Furthermore, the author now has a better grasp of the geology of the Formation and has outlined new areas of felsic volcanism which he believes to represent emergent island arcs within the interpreted back-arc basinal environment which constitutes the majority of the Antler Formation. These felsic volcanic rocks are an attractive exploration target and the potential of the entire Formation remains largely untapped.

Results of the 1998 season will be presented on an area-specific basis starting with the most southerly area examined and working towards the most northerly. As documented in previous PAP Grant proposals and reports concerning the Antler Formation, the general geology, location, physiography and exploration history will not be revisited in this current report.

#### AREA RESULTS

1) 29A Road Area: The 29A Road is reached by driving north from the Wells-Barkerville highway(26) towards Bowron Lakes Provincial Park, but turning east on to the road leading to Atan and Chisel Lakes which are situated just to the west of the Park boundary. Well before reaching the lakes, and before crossing Antier Creek, the 29A road branches off towards the south and at 9.8km where the road takes a sharp bend, on the slope above are exposed pieces of ferricrete and pale to dark grey mineralized chert with fine to medium grained disseminations and masses of pyrite with minor amounts of sphalerite. A total of three selected rock samples were taken: RK98 - 55, 56 and 102, with 55 returning 1250ppm Cu, 10.70% Fe and 1.65% Zn and 102 returning 772ppm Cu and 48ppm Zn.

However, a small stream flowing under the road just 100m south of the mineralization failed to give any anomalous results with only moderately elevated

mineralization failed to give any anomalous results with only moderately elevated levels of Fe and Mn.

Below the road is exposed in outcrop what appears to be a thick sequence of fractured and pyritic bedded chert, although not having the same tenor of mineralization as the float exposed on the road. The initial impression given by the style of mineralization is that it is not primary but rather has been introduced into the brittle and fractured chert at some later stage. Although this area would not be considered a high priority exploration target, the anomalous results in Zn anc Cu may merit further work in the future.

Within the same general region, but approximately 15km to the southeast on the Cunningham/Babcock Forest Service road is exposed an outcrop of pyritic, sheared pillow basalt which has been bleached and altered. Two rock samples were taken from the area: RK98 - 57 and 58 which while both containing 10% Fe, had only background levels of base metals.

2) Big Valley Creek/ Lottie Lake/ Westpass Area: Big Valley Creek flows northwest, then west into the northerly-flowing Willow River north of the town of Wells and west of the Bowron Lake Provincial Park. The valley is best reached by heading north on the 2400 Rd. at Beaver Pass House on highway 26. The 24A Rd. subsequently branches to the east, traveling up Big Valley Creek towards Westpass Valley and Lottie Lake; this area is located to the northwest of Two Sisters Mountain.

Current interest in the Lottie Lake-Westpass area began in 1993 when mineralized float was discovered at the side of a logging road on the east side of Westpass Valley. Here, mineralization consists of disseminations and patches of massive pyrite with chalcopyrite in a mafic volcanic host and was interpreted as pillow selvage and interpillow accumulations (replacement?) of sulphides, which resulted from hydrothermal fluids being vented into an actively forming submarine volcanic environment. This region was targeted in the 1998 PAP Grant proposal as a good candidate for the discovery of further VMS-style mineralization and on July 3, 1998 while investigating a relatively new clear cut 1.7km to the southwest of Lottie Lake, a small chalcopyrite-rich massive sulphide boulder was discovered adjacent to the logging road and this was associated with other, much larger boulders of mineralized chert and silicified volcanic rock, spread out over a roadside distance of approximately 75m. The massive sulphide boulder assayed an impressive 24.3% Cu and 19.6gm Ag while samples from the other material (wallrock?) ranged up to 1.77% Cu. After this discovery, a 20 unit mineral claim (Lottie 1) was staked surrounding the float. Subsequently, streams in the area were silt sampled, rock samples were collected and a number of soil samples were collected as well. Significant results of this program will be presented in a geographical format:

a) On the east side of the Westpass Valley the main area of interest is the location of the 1993 float discovery which could represent stringer-type mineralization which occurs stratigraphically below massive sulphide deposits. The angularity of the material as well as it's association with ferricrete probably means that the source

area is nearby. A total of three rock samples were taken from the cutbank (RK98 - 29, 30 and 31) as well as three soil samples taken 20m apart (SL98 - 04, 05 and 06). RK98-29 was semi-massive to massive crudely bedded sulphides in a chert and returned 2640ppm Cu, while RK98-30 and 31(altered basalt) contained 290ppm Zn and 426ppm Zn respectively. The soils returned up to 197ppm Cu and 148ppm Zn.

b) To the west of Westpass Lake, several target areas were defined which will require follow-up work. Silt sample ST98-27 was taken from a stream which is a tributary to a stream sampled as ST98-28. Silt sample ST98-27 gave 860ppm Ba, 91ppm Cu, 8770ppm Mn and 196ppm Zn while ST98-28 gave 900ppm Ba, 53ppm Cu, 8.17% Fe, >10000ppm Mn and 278ppm Zn. Both of these streams require regularly-spaced follow-up silt sampling to determine the extent and magnitude of the anomalies.

On the ridge to the north of these streams, soils SL98 - 01, 02 and 03 were sampled in areas of ferricrete concentrations. Results were up to 430ppm Ba, 331ppm Cu, 2420ppm Mn, 18ppm Mo, 34ppm Pb and 100ppm Zn.

Rock samples RK98 - 20, 21 and 22 were all taken from the same outcrop exposure and were of a dark pyritic chert unit which likely represents an exhalite. Results were up to 420ppm Ba, 511ppm Cu (very high for a chert) and 3400ppm Mn. Several hundred meters to the southeast of the RK98 - 20, 21 and 22 location, an outcrop of altered volcanic rock (basalt?) was sampled (RK98-28A) which gave a value of 370ppm Cu.

c) At the Lottie Lake float area, the focus is high-grade massive sulphide float as well as semi-massive float ( one piece of this style of mineralization has been found which assayed 4.51% Zn, 1.00% Pb, 9490ppm Cu and 40.6gm Ag - RK98-68). The massive sulphide boulder (RK98-32) was not fully exposed from the surrounding soil so it's true size is not known, but pieces from the top of the boulder assayed 24.3% cu, 400ppb Au, 19.6gm Ag, 532ppm As, 648ppm Co, 1165ppm Mo, 222ppm Pb and 426ppm Zn. The larger associated mineralized boulders are intensely propylitically altered and while the protolith is mainly a chert, at least a few of the pieces are volcanic rocks - whether they are mafic, felsic or intermediate rocks could not be determined visually due to the intensity of the alteration. A less altered boulder of chert was found which contained hematitic staining, was pyritic and also had streaks and veins of magnetitie - this could represent an oxide facies iron formation connected with the mineralized system and may give a good geophysical (magnetic) response.

From the limited number of soil samples taken (mainly from along roadcuts), no strongly anomalous areas or patterns were defined. However, sample EL 0+50 (close to the float by the road) gave 95pm Cu and SR 3+00 and SR 4+00 gave 139ppm Cu and 128ppm Cu respectively. These latter two samples were taken along a road traversing a hillside to the south of the float and could be caused by dispersion from further up the hill. In the Lottie float region, it would probably be advantageous to initiate a till sampling program to give an indication of the direction from which the float material was transported.

d) In the next clear cut to the west of the float occurrence, there are some interesting exposures of a clay-altered felsic intrusive and a pyritic flow-banded rhyolite (finegrained tuff?) which trends 280-300 degrees and dips to the north. The felsic intrusive is likely a sub volcanic sill-like body which is at least 350m long where it crocs out and although there is no contact exposed, the adjacent rhyolite could be a related extrusive component. Just to the north along the road, is exposed an unmineralized mafic sill or dike. These felsic volcanic rocks could be an extension to the east of a long and fairly broad belt of porphyritic dacitic to rhyolitic volcanic and volcaniclastic and related detrital rocks including limestone, which runs WNW along the ridge directly to the north of Big Valley Creek. This belt of felsic volcanic rocks was previously undocumented and was discovered by the author. The NNW-trending structure represented by the Westpass Valley and upper course of Big Valley Creek is likely a fault which may have offset the strata to some degree. In any case, the region is situated near the base of the Antler Formation (from mapping done by Bert Struik of the GSC). Where exposures have been examined, the previously mentioned belt of felsic volcanic rocks is characteristically unmineralized. One exception to this is in the area of rock samples RK98-64 and RK98-65 (situated 15km WNW from the Lottie float) which were taken from a bleached, altered and somewhat schistose felsic bedrock with sparse quartz eyes and up to several percent pyrite; however, base metal levels within the samples are actually depleted (this could be a result of weathering processes). RK98-65 was taken in the same area as 64 but was actually from a pyritc chert subcrop and again, metal levels are very low.

On the hillside above this site, are largely sedimentary rocks such as argillite, argillite matrix conglomerate, pelitic sediments, chert breccias and limestone. The conglomerates contain clasts of felsic volcanic rocks, chert and argillite and even one of the clasts noted was a 2cm piece of massive fine-grained pyrite. Clast shape varies from elongate and angular to rounded, while density also varies greatly from sparse to crowded. The felsic volcanic rocks and tuffs are generally light to dark grey with mostly small quartz eyes which are mainly sparse to moderate in number but can also be very crowded in certain outcrops. The best exposures of the felsic volcanic rocks are directly along the top of the ridge paralleling Big Valley Creek to the north and have been traced along strike for a minimum distance of 7.5 kilometers. This belt is one of at least several belts of felsic to intermediate volcanic rocks known to occur throughout the Antler Formation and they often appear to be associated with conglomerates and also limestone. This association suggests a topographically raised, shallower water environment (emergent?) than the predominantly mafic, deeper water areas of the basin.

3) 24P Road, NE OF Ahbau Lake: This region again is located very close to the western contact of the Antler Formation and this is seen by the strained appearance of the rocks on this SW -facing slope above the Willow River. Most of the rocks can be described as being sheared mafic volcanic rocks where many of the primary features have been obliterated. Discovered mineralization to date consists of limonitic quartz vein material containing patchy galena and rare grains of chalcopyrite. One of the

samples (RK98-14) returned a value of 57.4gm Ag; however, Au was negligible and Pb was only 7890ppm. Samples were mainly taken from float boulder concentrations; but, one outcropping vein was also sampled and many quartz sweats were noted. Two streams in the region were silt sampled and significantly, RK98-26 returned 222ppm Pb. Because of the low Au values and only moderate Ag levels, further exploration work in the 24P Road area is not considered to be a high priority.

4) Stephanie Creek Valley: This valley is situated two valleys to the north of Big Valley Creek and flows towards Stephen Lake to the northwest which in turn empties in to Stoney Lake which is a large lake in the region. On the north side of Stephen Lake are exposed bluffs of Quartz Feldspar porphyry rhyolite which were originally noted by BP Resources Canada in 1984 and these can be traced in places further to the northwest along the north and south sides of Stoney Lake. Five kilometers to the southeast of Stephen Lake, by the side of the road is an area with an abundance of pyritic guartzeye rhyolite float which was sampled in 1997 with negligible results. However, a closer examination of the region was warranted and it was discovered that most of the southeast-trending ridge to the north (uphill) is comprised of felsic and intermediate volcanic rocks; however, it is not known how far to the southeast (along Stephanie Creek valley) this belt extends. Most of the creeks draining the ridge from the north were silt sampled but access to the south side of the valley was not gained due to a bridge washout. Although results were largely disappointing with no obvious anomalous returns, further investigation especially on the south side of the valley is recommended.

**5)** Indianpoint Creek/18-Mile Creek Area: This area is situated to the northwest of the Bowron Lakes Provincial Park . Just to the south of where the Frontier Road crosses 18-Mile Creek adjacent to the Bowron River, is a resistant knoll of a felsic pyroclastic flow with sericitic and chloritic alteration and minor pyrite on fracture surfaces. This outcrop most likely represents the eastern continuation of felsic volcanic rocks documented in 1984 and 1985 by BP Resources Canada in the Slender Lake/18-Mile Creek region. As Randy Farmer noted in his excellent assessment report, the 18-Mile Creek felsic belt could be on a separate stratigraphic level or it could be an easterly extension of the aforementioned felsic volcanic rocks in the Stoney Lake area. On the east side of the Bowron River to the south of Indianpoint Creek, is an old roadside quarry which exposes pyritic chloritized pillow basalt. Two rock samples were taken (RK98 - 03 and 04) which returned 549ppm Cu, 180ppm Zn and 329ppm Cu, 130ppm Zn respectively.

6) Narrow Lake/ Wendle Lake Area: This area represents the central region of the Antler Formation and is easily accessible via the Narrow Lake Forest Service Road. Interest was originally drawn to this area by the 1997 discovery late in the season of boulders of pyritic, brecciated, silicified volcanic rock with local thick accumulations of ferricrete in a clearcut above the upper part of Narrow Lake Creek. This area was followed-up with a program of mainly roadside soil sampling and further rock

sampling. While pyrite mineralization appears to be widespread and has also been traced to the opposite (west) side of the valley, this type of mineralization has no base or precious metal association. As well, no anomalous results were obtained from the soil samples so no further work is contemplated.

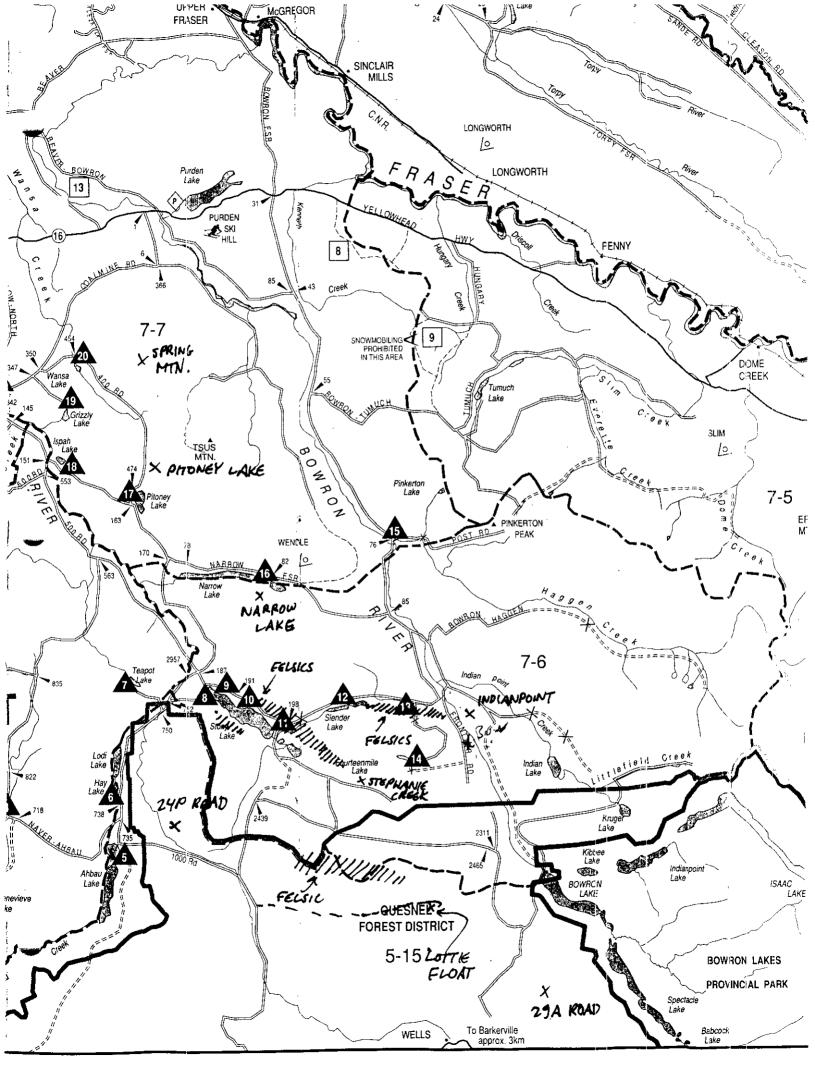
7) Pitoney Lake Region: On a fork off of the 400 Road at 1.0km, a new logging road has exposed a large Fe-carbonate alteration zone. Several rock samples were taken and several streams draining Tsus Mountain were silt sampled, but no encouraging results were obtained.

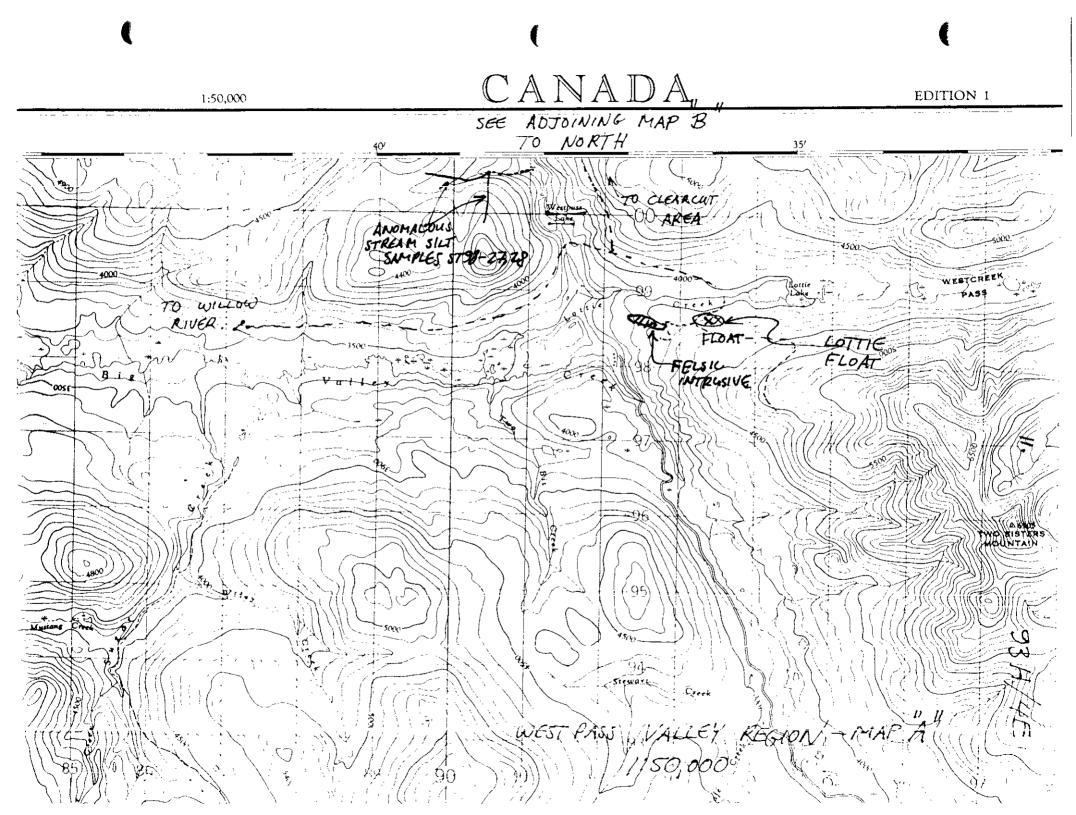
8) Spring Mountain: Streams draining the west side of Spring Mountain were silt sampled in an effort to follow up anomalous samples obtained in the1984 GSC regional survey. A total of 6 silt samples were taken from a number of streams; however, none of the 1984 results were duplicated.

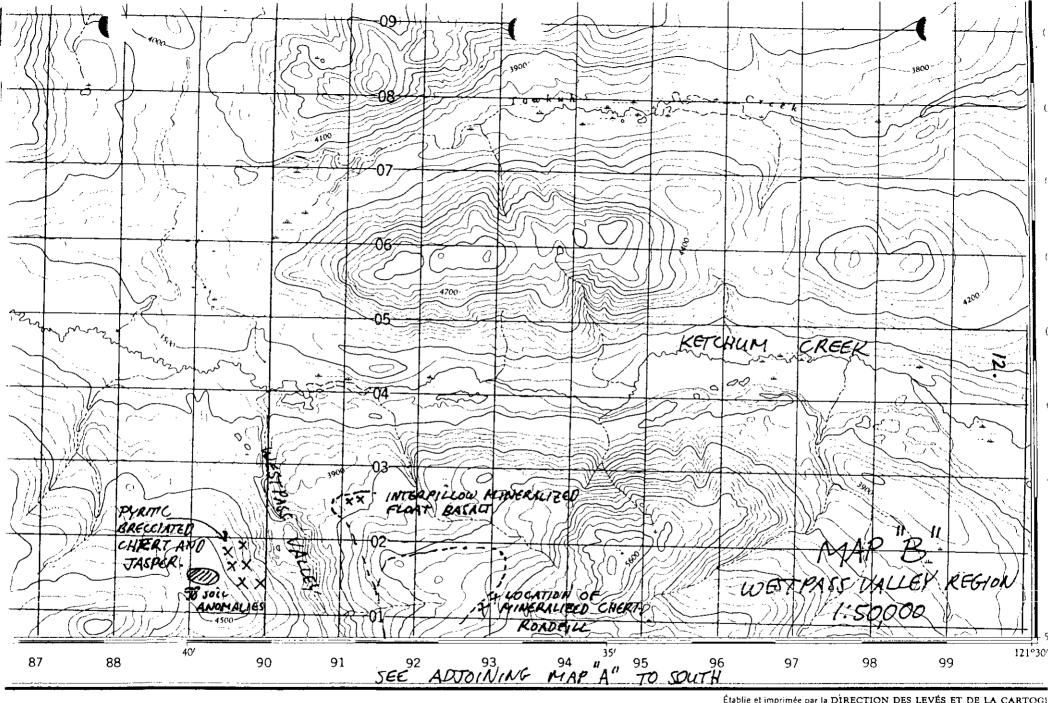
**9)** In the course of regional prospecting, many other stream, rock and soil samples were taken in order to generate further areas of interest but the preceding examples formed the main areas of concentration during the 1998 season.

#### CONCLUSION

The 1998 PAP Grant Program within the Antler Formation was successful in that further economic grade mineralization (albeit float) of possible VMS type was uncovered in an area in the vicinity of felsic intrusive and extrusive rocks. This has already generated interest from a junior mining exploration company which plans a work program in the spring and summer of 1999. Thanks are due to the PAP Program for providing funds crucial to the 1998 exploration program.



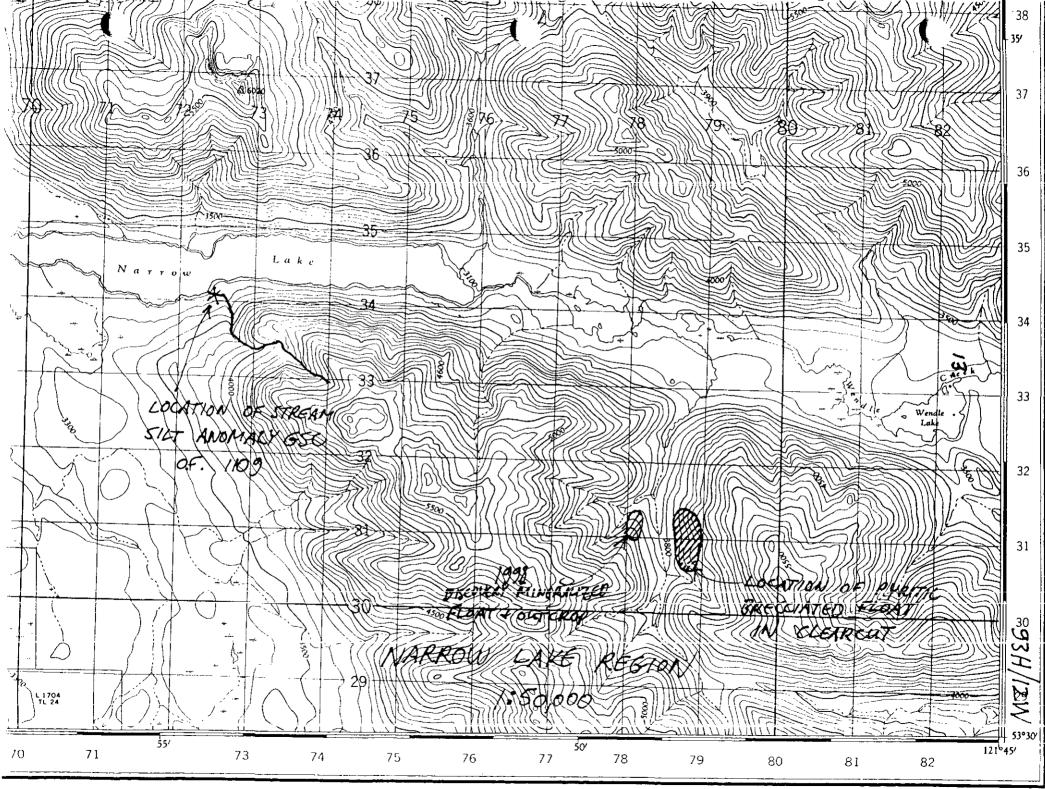




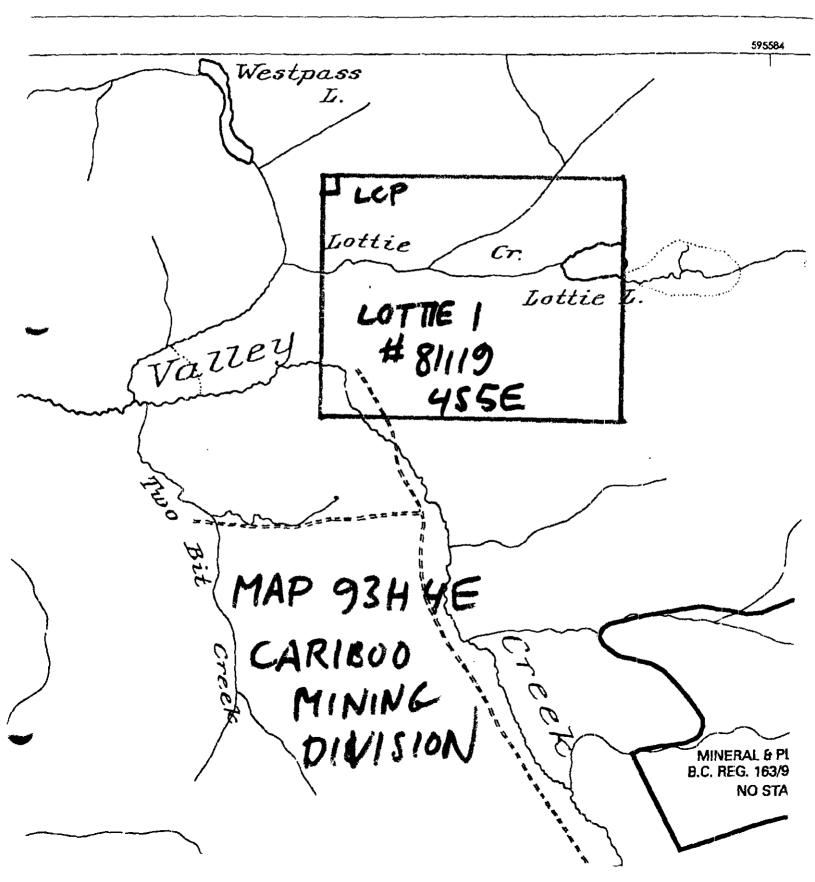
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Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 io: PETER, MARTIN

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		CERTIFICATE OF ANALYSIS	A9824604
PREP SAMPLE CODE	Cu %		
RK98-32 244	24.3 Cottie Float Assay		



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: PETER, MARTIN

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SAMPLE	PREP CODE	Au ppb FA+AA	Pb %	Zn %							
RK98-56 RK98-68	244 244	< 5	1.00	1.65 4.51	- 29A	Road . TIE FLO					
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Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 o: PETER, MARTIN

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SAMPLE	PREP CODE	Ag ppm	Al %	As ppm	Ba ppm	Ве ррщ	Bi ppm	Ca گ	Cđ ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Мо ррш
RK98-100 RK98-101 RK98-102	205 226 205 226 205 226	< 0.2 < 0.2 0.4	2.11 0.36 0.46	< 2 236 12	70	< 0.5 < 0.5 < 0.5	< 2 < 2 < 2	0.08	< 0.5 < 0.5 < 0.5	101 35 78	670 69 145	107 54 772	6.35 3.25 7.35	< 10 < 10 < 10	< 1	< 0.01 0.18 0.01	< 10 < 10 < 10	4.19 0.08 0.21	320 35 1655	< 1 11 1
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Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: PETER, MARTIN

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SAMPLE	PREP CODE	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U ppm	V ppm	W ppm	Zn ppm	
RK98-100 RK98-101 RK98-102	205 226 205 226 205 226	5 0.01 5 < 0.01 5 < 0.01	682 20 54	230 60 180	< 2 6 2	< 2 < 2 < 2	1 2 1	- 2 < 1 ·	0.10 0.06 < 0.01	< 10 < 10 < 10	< 10 < 10 < 10	44 14 95	< 10 < 10 < 10	46 2 48	

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Analytical Chemists \* Geochemists \* Registered Assavers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1

PHONE: 604-984-0221 FAX: 604-984-0218

PETER, MARTIN 1

> 2787 MOUNT SEYMOUR PKWY. NORTH VANCOUVER, BC V7H 1E8

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SAMPLE	PREI		Au ppb FA+AA	PE	g	A1 %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cđ pom	oD mqq	Cr ppm	bba Cn	Fe %		EE mqq	K %	La ppm	Mg %	Mn ppm
NL98RK-CLRCT	205	226	< 5	< 0.	2	3.87	< 2	< 10	< 0.5	< 2	2.67	< 0.5	25	159	64	7.61	10	< 1	< 0.01	< 10	1.95	695
NL98RK-4+50	205		10	< 0.		3.66	< 2	30	< 0.5	< 2	2.05	< 0.5	27	188	74	6.16	10		< 0.01	< 10	2.72	300
NLW98-2+50FLOAT	205 2	226	< 5	< 0.	2	3.44	< 2	40	< 0.5	< 2	2.68	< 0.5	25	142	57	4.33	< 10	< 1		< 10	1.83	245
RK98-01	205	226	< 5	< 0.	2	0.48	28	10	< 0.5	< 2	0.09	< 0.5	11	229	3	2.47	< 10			< 10	0.09	735
RK98-02	205	226	< 5	< 0.	2	1.29	< 2	100	< 0.5	< 2	0.82	< 0.5	11	44	15	2.73			0.37	20	0.39	565
RK98-03	205 2	226		0.	2	3.50	6	10	< 0.5	< 2	2.94	< 0.5	34	126	549	8.66	10		< 0.01	< 10	1.92	360
RK98-04	205 2		< 5	< 0.		3.72	< 2	10	< 0.5	2	3.99	< 0.5	48	146	329		< 10	< 1		< 10	1.49	330
RK98-05	205 2		< 5	< 0.	_	5.47	< 2	20	< 0.5	< 2	7.69	0.5	18	39	31	3.82	30	< 1	0.01	< 10	0.59	565
RK98-06	205 2	26	< 5	< 0.		2.66	< 2	50	< 0.5	< 2	1.52	< 0.5	4	105	71	1.83	< 10	< 1	0.09	10	0.64	635
RK98-10	205 2	26	< 5	< 0.	2	0.40	56	30	< 0.5	< 2	6.43	< 0.5	36	235	46	4.66	< 10	< 1	0.03	< 10		1240
RK98-11	205 2	26	< 5	< 0.	2	0.64	< 2	30	< 0.5	< 2	8.00	< 0.5	23	42	< 1	5.53	< 10	< 1	0.03	< 10	4.25	1245
RK98-12	205 2	226	< 5	< 0.		1.01	< 2	100	< 0.5	< 2	4.09	< 0.5	33	52	6	5.86	< 10	< 1		< 10	2.96	1380
RK98-13		·-	NotRed			tRcd	NotRed 1	NotRed	NotRed	NotRed	NotRed	NotRed	NotRcd	NotRed	NotRed	NotRed	NotRed	NotRed	NotRcd	NotRcd	NotRed	NotRed
RK98-14	205 2		15	57.		0.07	10	10	< 0.5	128	0.05	0.5	2	266	14	0.90	< 10	< 1	0.02	< 10	0.03	35
RK98-15	205 2	226	< 5	0.	6	0.07	8	10	< 0.5	< 2	0.04	0.5	4	237	47	0.80	< 10	< 1	0.01	< 10	0.03	65
RK98-16	205		< 5	2.		0.03	14	< 10	< 0.5	< 2	0.01	< 0.5	1	272	199	0.74	< 10	< 1	< 0.01	< 10	< 0.01	50
RK98-17		226	< 5	< 0,		0.84	4	< 10	< 0.5	< 2	0.54	< 0.5	1	226	4	1.64	< 10	< 1	0.03	< 10	0.31	205
RK98-18		26	< 5	< 0.	-	0.96	< 2	20	< 0.5	< 2	0.14	< 0.5	71	90	25	6.83	< 10	< 1		10		405
RK98-19		26	< 5	< 0.		1.98	14	180	< 0.5	< 2	0.89	< 0.5	13	87	124	5.54	< 10	< 1		10 10		1165 775
RK98-20	205 2	26	< 5	0.	6	1.41	< 2	70	< 0.5	< 2	0.51	< 0.5	14	170	268	5.48 -WP	< 10	< 1	0.04		0.03	
RK98-21	205 2	226	< 5	< 0.	2	1.76	< 2	420	< 0.5	< 2	0.09	< 0.5	9	64	86	2.68	< 10	< 1	0.10	10		3400
RK98-22	205 2	226	< 5	Ο.	8	1.01	< 2	70	< 0.5	< 2	0.57	< 0.5	28	150	511	3.43	< 10	< 1		10	0.73	1130
RK98-23	205 2		< 5	< 0,		0.37	< 2	40	< 0.5	< 2	7.26	< 0.5	7	127	A 1	2.85	< 10	< 1	0.01	< 10	1.67	1800
RK98-24	205 2		< 5	< 0.		0.15	< 2	40	< 0.5	< 2	14.00	< 0.5	5	85	< 1	2.66	< 10		< 0.01	< 10	3.04	2090
RK98-25	205 2	226	10	< 0.	2	3.44	2	90	< 0.5	< 2	2.29	< 0.5	18	140	/ 108	4.70	< 10	< 1	< 0.01	10	1.35	1570
RK98-26		26	< 5	< 0.		1.08	< 2	60	< 0.5	< 2	0.63	< 0.5	16	13B	1 20	1.54	< 10	< 1		< 10		1360
RK98-27		26	< 5	< 0,		0.76	< 2	100	< 0.5	< 2	0.45	< 0.5	11	52	20	1.39						1040 1935
RK98-28A	205 2		< 5	0.		4.97	< 2	60	< 0.5	2	1.68	< 0.5	65	130	370	) B.29	10		0.10	< 10 < 10		25
RK98-28B	205 2		45	< 0.		0.04	64	10	< 0.5	6	0.01	< 0.5	1	217	2	0.89 15.00<	< 10 < 10					270
RK98-29	205 2	26	< 5	1.	2	2.49	6	< 10	< 0.5	16	1.99	< 0.5	45	90	<b>∡</b> 640	>15.00	< 10	<u> </u>	0.02			
RK98-30	205 2	226	20	0.	6	3.10	40	30	< 0.5	< 2	1.69	< 0.5	16	94	85	12.70	10	< 1				465
RK98-31	205 2		< 5	< 0.		2.77	< 2	10	< 0.5	< 2	1.91	0.5	21	43	121	4.72				< 10		590
RK98-32	205 2	26	400	19.	6	0.18	532	10	< 0.5	Intf*	0.09		648			>15.00				< 10		30 235
RK98~33	205 2		175	< 0.		1.56	< 2	70	< 0.5	12	0.61			99	2340	5.97	< 10					
RK98-34	20512	26	1 15	- 0.	2	0.31	2	80	< 0.5	< 2	0.09	< 0.5	31	75	388	3.36	< 10	- 1	0.13	< 10		د <u>م</u>
RK98-35	205 2	26	< 5			2.93	< 2	10	< 0.5	< 2	1.64	< 0.5	43	74	211	6.30	< 10	1 < 1	< 0.01	. < 10	1.77	530
		ļ	5	(9.6	9m	.41	Ag.															
				0.4	gri	+. A	lu l															
· · · · · · · · · · · · · · · · · · ·					<u></u>															12	06	4

### \* PLEASE NOTE

\* INTERFERENCES: Cu ON BI AND P.



Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 o: PETER, MARTIN

2787 MOUNT SEYMOUR PKWY. NORTH VANCOUVER, BC V7H 1E8 \*\*

Page per :1-B Total Pages :1 Certificate Date: 14-JUL-98 Invoice No. : 19823861 P.O. Number : Account :HUW

Project : 98 Comments: ATTN: MARTIN PETER

* PLEASE NOT	E										CE	RTIF	ICATE	OFA	NALY	/SIS	A9823861
SAMPLE	PRI COI		Мо ррш	Na %		P	dq ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U ppm	V ppm	W ppm	Zn ppm	
NL98RK-CLRCT		226	< 1	0.04		580	< 2	< 2	12	11	0.49	< 10	< 10	194	< 10	52	
NL98RK-4+50 NLW98-2+50FLOAT	205	226	< 1 1	0.02		320 400	< 2 < 2	< 2 < 2	16 5	2 4	0.33 0.30	< 10 < 10	< 10 < 10	163 98	< 10 < 10	10 2	
RK98-01	205			< 0.01		50	< 2	< 2	ž	3	0.01	< 10	< 10	47	< 10	14	
RK98-02	205	226	< 1	0.01	13	630	26	< 2	1	63 -	< 0.01	< 10	< 10	9	< 10	30	
RK98-03	205		5	0.01		440	4	< 2	12	5	0.39	< 10	< 10	178	< 10	180	
RK98-04		226		< 0.01		350	< 2	< 2	17	5	0.50	< 10	10	179	< 10	130	
RK98-05 RK98-06	205 205		< 1	< 0.01		460 1010	< 2	< 2 < 2	3 5	< 1 121	0.33 0.12	< 10 < 10	10 < 10	91 46	< 10 < 10	60 56	
RK98-10	205			< 0.01		20	< 2	50	28		< 0.01	< 10	< 10	103	< 10	42	
RK98-11	205			< 0.01		240	< 2	10	20		< 0.01	< 10	10	125	< 10	42	
RK98-12	205		< 1			400	< 2	8	29		< 0.01	< 10	< 10	150	< 10	46	
RK98-13 RK98-14	205	226		< 0.01		NotRcd < 10	NotRcd 7890	NotRed 2	NotRed I < 1		VotRcd < 0.01	NotRcd < 10	NotRcd 1 < 10	NotRcd ] 3	NotRed N < 10	NotRed < 2	
RK98-15		226		< 0.01		60	220	< 2	< 1		< 0.01	< 10	< 10	3	< 10	126	
K98-16	205	226	1	< 0.01	8	60	362	2	< 1	< 1 -	< 0.01	< 10	< 10	1	< 10	18	· · · · · · · · · · · · · · · · · · ·
RK98-17	205		1			290	< 2	< 2	1	29	0.11	< 10	< 10	14	< 10	10	
RK98-18	205			< 0.01		610	2	< 2	3	6	0.09	< 10	< 10	40	< 10	6	
RK98-19 RK98-20	205	226		< 0.01		770 670	18 2	< 2 < 2	6 6	94 8	0.20	< 10 < 10	< 10 < 10	100 53	< 10 < 10	40 26	
																	·····
RK98-21	205		< 1	0.01		510	< 2	< 2			< 0.01	< 10	< 10	44	< 10	38	
RK98-22 RK98-23	205 205			< 0.01		1660 130	< 2 < 2	< 2 < 2	3	10 53 ·	0.04	< 10 < 10	< 10 < 10	29 41	< 10 < 10	14 10	
RK98-24	205			< 0.01		190	< 2	< 2	7		< 0.01	< 10	10	36	< 10	12	
RK98-25	205			< 0.01		780	16	< 2	8	56	0.23	< 10	< 10	149	< 10	54	
K98-26	205			< 0.01		130	4	< 2	5	28	0.10	< 10	< 10	21	< 10	32	
RK98-27	205			< 0.01		220	4	2	5	26	0.16	< 10	< 10	12	< 10	30	
1K98-28A 1K98-28B	205 205			< 0.01		290 < 10	< 2 8	< 2 < 2	17 < 1	4	0.41	< 10 < 10	< 10 < 10	169 3	< 10 < 10	40 < 2	
RS8-29	205			< 0.01		60	22	4	7	1	0.37	< 10	10	106	< 10	22	
K98-30	205		< 1	0.03	28	470	30	< 2	÷.	15	0.44	< 10	< 10	188	< 10	290	
RK98-31		226	1	0.15		440	< 2	< 2	7	14	Ú.44	< 10	< 10	149	< 10	426	
RK98-32	205			< 0.01		Intf*	222	< 2	< 1	1	0.01	< 10	< 10	15	< 10	418	
RK98-33 RK98-34	205 205			< 0.01 < 0.01		2330 50	< 2 8	< 2 < 2	5 1	16 3	$0.14 \\ 0.06$	< 10 < 10	< 10 < 10	74 10	< 10 < 10	2 < 2	
3898-35	205	226	< 1	0.04	37	480	14	< 2	8	5	0.51	< 10	< 10	159	< 10	24	

+ Jant Bidle CERTIFICATION:\_



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave. North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 : PETER, MARTIN

2787 MOUNT SEYMOUR PKWY, NORTH VANCOUVER, BC V7H 1E8 • \*

Page Numr : 1-A Total Page : 1 Certificate Date: 22-SEP-1998 Invoice No. : 19831196 P.O. Number : Account : HUW

Project :

Comments: ATTN: PETER MARTIN

K98-51   K98-52   K98-53   K98-54   K98-55   K98-56   K98-57   K98-58   K98-60   K98-61   K98-62   K98-63   K98-65   K98-66   K98-67   K98-67	PREP CODE 205 226 205 226		Ag ppm 0.6 < 0.2 < 0.2 1.0 0.4 0.2 < 0.2 < 1.2 1.0 1.6 1.2 1.4 < 0.2	Al % 0.65 1.51 1.81 0.81 1.45 0.46 0.99 1.39 0.90 0.87 0.11 0.17	As ppm 6 10 6 146 6 10 48 20 14 < 2 20	170 10 20 2470 130 < 10 10 30	Be ppm < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	Bi ppm 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Ca % 0.08 0.29 0.18 0.03 0.06 0.05 0.05 0.05 0.65 0.03	Cd ppm < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	Co ppm 3 12 6 19 6 19 6	Cr ppm 95 70 119 131 81 81	Cu ppm 8 14 11 37 27 57 1250	Fe % 2.41 2.12 4.85 8.28 2.27 3.96 10.70	Ga ppm < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10	Hg ppm 1 < 1 < 1 < 1 < 1 < 1 < 1 < 1 ] 1 21	K % 0.48 0.44 0.01 0.03 0.23 0.08	La ppm 10 10 30 < 10 10 < 10	Mg % 0.05 0.65 0.40 0.32 0.81 0.14	M pp 1 15 21 9 8
K98-51   K98-52   K98-53   K98-54   K98-55   K98-56   K98-57   K98-58   K98-60   K98-61   K98-62   K98-63   K98-65   K98-66   K98-67   K98-67	205   226     205   226		< 0.2 < 0.2 0.2 < 0.2 < 0.2 < 0.2 1.0 0.4 0.2 < 0.2 < 0.2 1.6 1.2 1.4 < 0.2	1.51 1.81 0.81 1.45 0.46 0.99 1.39 0.90 0.87 0.11 0.17	10 6 146 6 10 48 20 14 < 2 20	170 10 20 2470 130 < 10 10 30	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	2 <	0.29 0.18 0.03 0.06 0.05 0.04 0.65	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 <u>53.5</u> 0.5	12 6 19 6 1 145	70 119 131 81 86 143	14 11 37 27 57	2.12 4.85 8.28 2.27 3.96	< 10 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1	0.44 0.01 0.03 0.23	10 30 < 10 10	0.65 0.40 0.32 0.81	11
K98-52   K98-53   K98-54   K98-55   K98-56   K98-57   K98-59   K98-60   K98-61   K98-62   K98-63   K98-65   K98-66   K98-67   K98-67	205 226   205 226		< 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.4 0.2 0.2 1.6 1.6 1.2 1.4 < 0.2	1.51 1.81 0.81 1.45 0.46 0.99 1.39 0.90 0.87 0.11 0.17	10 6 146 6 10 48 20 14 < 2 20	10 20 2470 130 < 10 10 30	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.18 0.03 0.06 0.05 0.04 0.65	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 <u>53.5</u> 0.5	6 19 6 1 145	119 131 81 86 143	11 37 27 57	4.85 8.28 2.27 3.96	10 < 10 < 10 < 10	< 1 < 1 < 1 1	0.01 0.03 0.23	30 < 10 10	0.40 0.32 0.81	21
K98-53   K98-54   K98-55   K98-56   K98-57   K98-59   K98-60   K98-61   K98-62   K98-63   K98-64   K98-65   K98-66   K98-67   K98-68	205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226	   	0.2 < 0.2 1.0 0.4 0.2 < 0.2 1.6 1.2 1.4 < 0.2	0.81 1.45 0.99 1.39 0.90 0.87 0.11 0.17	146 6 10 48 20 14 < 2 20	20 2470 130 < 10 10 30	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.03 0.06 0.05 0.04 0.65	< 0.5 < 0.5 < 0.5 <u>53.5</u> 0.5	19 6 1 145	131 81 86 143	37 27 57	8.28 2.27 3.96	< 10 < 10 < 10	< 1 < 1 1	0.03 0.23	< 10 10	0.32	1
K98-54   K98-55   K98-56   K98-57   K98-59   K98-60   K98-61   K98-62   K98-63   K98-64   K98-65   K98-66   K98-67   K98-68	205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226   205 226		< 0.2 < 0.2 1.0 0.4 0.2 < 0.2 1.6 1.2 1.4 < 0.2	1.45 0.46 0.99 1.39 0.90 0.87 0.11 0.17	6 10 48 20 14 < 2 20	2470 130 < 10 10 30	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.06 0.05 0.04 0.65	< 0.5 < 0.5 53.5 0.5	6 1 145	81 86 143	27	2.27	< 10 < 10	< 1	0.23	10	0.81	
K98-55   K98-56   K98-57   K98-58   K98-59   K98-61   K98-62   K98-63   K98-64   K98-65   K98-66   K98-67   K98-68	205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226		< 0.2 1.0 0.4 0.2 < 0.2 1.6 1.2 1.4 < 0.2	0.46 0.99 1.39 0.90 0.87 0.11 0.17	10 48 20 14 < 2 20	130 < 10 10 30	< 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2	0.05 0.04 0.65	< 0.5 53.5 0.5	1 145	86 143	57	3.96	< 10	1	0.08			
K98-56   K98-57   K98-59   K98-60   K98-61   K98-62   K98-63   K98-64   K98-65   K98-66   K98-67   K98-68	205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226     205   226		1.0 0.4 0.2 < 0.2 1.6 1.2 1.4 < 0.2	0.99 1.39 0.90 0.87 0.11 0.17	48 20 14 < 2 20	< 10 10 30	< 0.5 < 0.5 < 0.5	< 2 < 2 < 2	0.04	<u>53.5</u> 0.5	145	143						< 10	0.14	3
K98-57   K98-58   K98-60   K98-61   K98-62   K98-63   K98-64   K98-65   K98-66   K98-67   K98-68	205 226 205 226 205 226 205 226 205 226 205 226 205 226 205 226 205 226 205 226		0.4 0.2 < 0.2 1.6 1.2 1.4 < 0.2	1.39 0.90 0.87 0.11 0.17	20 14 < 2 20	10 30	< 0.5 < 0.5	< 2 < 2	0.65	0.5			1250	10.70	< 10					
K98-58   K98-60   K98-61   K98-63   K98-63   K98-64   K98-65   K98-66   K98-67   K98-68	205 226 205 226 205 226 205 226 205 226 205 226 205 226 205 226		0.2 < 0.2 1.6 1.2 1.4 < 0.2	0.90 0.87 0.11 0.17	14 < 2 20	30	< 0.5	< 2			34		·				0.03	< 10	0.50	25
K98-59   K98-60   K98-61   K98-62   K98-63   K98-64   K98-65   K98-66   K98-67   K98-68	205 226 205 226 205 226 205 226 205 226 205 226 205 226		< 0.2 1.6 1.2 1.4 < 0.2	0.87	< 2				0.03			35	34	9.74	< 10	3	0.58	< 10	0.31	
K98-60   K98-61   K98-62   K98-63   K98-64   K98-65   K98-66   K98-67   K98-68	205 226 205 226 205 226 205 226 205 226 205 226		1.6 1.2 1.4 < 0.2	0.11 0.17	20	360				< 0.5	86	39	54	9.53	< 10	1	0.55	< 10	0.09	1
K98-61 K98-62 K98-63 K98-64 K98-65 K98-66 K98-67 K98-68	205 226 205 226 205 226 205 226		1.2 1.4 < 0.2	0.17			< 0.5	< 2	0.11	< 0.5	10	61	20	2.20	< 10	< 1	0.16	< 10	0.62	
K98-62 K98-63 K98-65 K98-66 K98-66 K98-66 K98-67 K98-68	205 226 205 226 205 226		1.4 < 0.2			70	< 0.5	< 2	0.08	< 0.5	1	189	32	3.33	< 10	1	0.01	< 10	0.07	33
K98-63 K98-65 K98-65 K98-66 K98-67 K98-68	205 226 205 226		< 0.2		26	200	< 0.5	< 2 ·	0.01	< 0.5	2	151	31	1.96	< 10	< 1	0.04	< 10	0.01	12
K98-64 K98-65 K98-66 K98-67 K98-68	205 226			0.57	30	60	< 0.5	2		< 0.5	1	137	12	6.09	< 10	2	0.06	< 10	0.07	5
K98-65 K98-66 K98-67 K98-68		<b></b>		1.11	10		< 0.5	< 2		< 0.5	8	83	62	2.35	< 10	< 1	0.17	10	0.56	1
K98-66 K98-67 K98-68	205 226		0.4	0.60	14	210	< 0.5	< 2	0.11	< 0.5	7	50	5	2.04	< 10	< 1	0.39	30	0.04	
K98-67 K98-68			< 0.2	0.10	6		< 0.5	< 2		< 0.5	1	159	3	0.38	< 10	1	0.06	< 10	0.01	
K98-68	205 226		0.6	2.23	18	20	< 0.5	< 2	0.29	< 0.5	11	41		>15.00	10	3	0.52	< 10	1.04	34
	205 226		< 0.2	1.85	14		< 0.5	< 2		< 0.5	35	160		7.31	10	1	0.19	10	1.12	4
K98-69	205 226		40.6	3.76	120		< 0.5	76	0.20	133.5	66	51	9490	9.88	10	19	0.11	< 10	1.61	9
. <u></u>	205 226	90	0.2	0.93	16	< 10	< 0.5	2	0.62	0.5	642	93	21	>15.00	< 10	4	0.03	< 10	0.39	1

CERTIFICATION: Wartfulle



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

.o: PETER, MARTIN

2787 MOUNT SEYMOUR PKWY. NORTH VANCOUVER, BC V7H 1E8

Page Ne er : 1-6 Total Pages : 1 :1-B Certificate Date: 22-SEP-1998 Invoice No. :[9831196 P.O. Number :HUW Account

Project : Comments: ATTN: PETER MARTIN

### **CERTIFICATE OF ANALYSIS**

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A9831196

									;=							
SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U ppm	V ppm	м БЪш	Zn ppm	
(798-50) (798-51) (798-52) (798-53) (798-54)	205 226 205 226 205 226 205 226 205 226 205 226	3 3 2	< 0.01 0.01 0.09 0.01 < 0.01	4 9 12 18 23	560 580 670 220 330	30 20 12 50 2	< 2 4 2 8 4	< 1 2 8 1 2		.10 .06 .01	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	1 5 43 51 26	< 10 < 10 < 10 < 10 < 10	20 44 74 32 50	
98-55 98-56 98-57 98-57 98-58 98-59	205 226 205 226 205 226 205 226 205 226 205 226	< 1 4 5	< 0.01 < 0.01 0.01 0.01 < 0.01	6 95 38 66 10	340 390 2670 360 260	8 8 14 4 2	< 2 < 2 2 < 2 2 2	1 2 5 1 2	18 0 3 < 0	.01 .09	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	36 283 43 25 13	< 10 < 10 > < 10 < 10 < 10 < 10	74 10000 68 62 12	
798-60 798-61 798-62 798-63 798-63	205 226 205 226 205 226 205 226 205 226 205 226	1 3	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 0.04	7 9 28 32 8	80 40 210 120 680	2 8 < 2 8 32	12 8 48 < 2 6	< 1 1 2 1 1	6 < 0 3 < 0 4 < 0 13 < 0 15 < 0	.01 .01 .01	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	24 14 29 44 5	< 10 < 10 < 10 < 10 < 10 < 10	18 26 30 52 12	
K98-65 K98-66 K98-67 K98-68 K98-68 K98-69	205 226 205 226 205 226 205 226 205 226 205 226	< 1 5 < 1	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 0.01	3 113 37 22 5	< 10 840 3800 560 > 110	14 16 6 10000 8	< 2 4 6 < 2 < 2	< 1 4 5 3 1	30 0 21 0	.01 .04 .07 .07 .05	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	16 121 166 89 31	< 10 < 10 < 10 < 10 = 10 = 170	4 50 20 10000 66	
															<u> </u>	Havit Fichler



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave.,North VancouverBritish Columbia, CanadaV7J 2C1PHONE: 604-984-0221FAX: 604-984-0218

To: PETER, MARTIN

2787 MOUNT SEYMOUR PKWY NORTH VANCOUVER, BC V7H 1E8 ..

Page Jer :2-A Total Pages :2 Certificate Date: 29-JUL-98 Invoice No. : 19825376 P.O. Number : Account : HUW

Project :

Comments: ATTN: PETER MARTIN

#### CERTIFICATE OF ANALYSIS A9825376 Bi Mn Mo PREP A1 Ca Cđ Co Fe Ga Ħд ĸ Lа Mg Ag As Ba Be CrCu % SAMPLE CODE ppm % ppm ppm ppm % ppm ppm ppm % ppm ppm % ppm ppm ppm ppm ppm SL98-06 201 202 < 0.2 2.87 < 2 130 < 0.5 < 2 1.15 < 0.5 58 29 4.12 < 10 < 1 0.03 < 10 0.90 530 1 16 < 10 1.38 1125 2 ST98-01 201 202 0.2 3.99 < 2 70 0.5 < 2 1.57 < 0.5 24 71 50 4.97 10 < 1 0.05 ST98-02 201 202 < 0.2 3.30 8 140 < 0.5 < 2 1.33 < 0.5 20 85 44 4.15 10 < 1 0.05 10 1.12 920 2 ST98-03 201 202 < 0.2 3.56 10 130 0.5 < 2 1.48 < 0.5 28 91 51 5.13 10 < 1 0.05 < 10 1.49 1205 2 1200 1 ST98-04 201 202 < 0.2 2.42 6 260 < 0.5 < 2 1.15 < 0.5 19 90 41 3.58 < 10 < 1 0.05 10 0.95 1 765 ST98-05 201 202 < 0.2 2.82 4 170 < 0.5 < 2 1.66 < 0.5 21 89 37 3.84 < 10 < 1 0.04 < 10 1.20 ST98-06 201 202 < 0.2 3.91 < 2 170 < 0.5 < 2 2.04 < 0.5 29 94 55 5.01 10 < 1 0.04 < 10 2.22 1245 2 201 202 47 0.04 < 10 1.32 1415 1 ST98-07 < 0.2 3.44 < 2 160 < 0.5 2 1.77 < 0.5 26 72 4.01 < 10 < 1 201 202 4.77 < 10 1380 ST98-08 3.10 360 31 61 < 1 0.05 < 10 1.58 1 < 0.2 2 < 0.5 < 2 1.80 < 0.5 104 201 202 4960 2 ST98-09 3.59 470 30 110 51 5.22 10 < 1 0.06 10 1.21 < 0.2 16 0.5 < 2 1.42 0.5 3 201 202 < 2 < 10 2.34 1115 ST98-10 < 0.2 4.66 110 < 0.5 < 2 2.51 < 0.5 28 80 54 5.73 10 < 1 0.04 ST98-11 201 202 < 0.2 3.84 < 2 490 0.5 < 2 1.61 < 0.5 21 74 66 4.33 10 < 1 0.06 10 1.35 1240 1 2790 3 ST98-12 201 202 0.2 3.18 < 2 410 0.5 < 2 1.19 3.0 18 51 32 3.59 < 10 < 1 0.08 30 0.78 0.98 1015 2 ST98-13 201 202 < 0.2 2.94 10 600 < 0.5 < 2 1.28 0.5 15 65 48 3.40 < 10 < 1 0.09 10 2290 2 ST98-14 201 202 < 0.2 3.18 < 2 450 0.5 < 2 1.32 0.5 24 64 40 4.06 < 10 < 1 0.11 30 1.12 201 202 20 1225 2 ST98-15 < 0.2 3.42 < 2 52 4.04 < 10 < 1 0.06 1.10 8 420 0.5 1.44 0.5 19 93 201 202 3.80 < 10 20 0.98 1005 2 ST98-16 < 0.2 2,98 6 270 < 2 20 99 51 < 1 0.04 < 0.5 1.38 < 0.5 201 202 < 10 10 0.90 2010 1 ST98-17 < 0.2 2.08 280 < 2 < 0.5 17 47 28 3.26 < 1 0.09 6 < 0.5 1.12 201 202 3.09 190 41 3.75 < 10 < 1 0.04 < 10 1.18 755 1 ST98-18 < 0.2 4 < 0.5 < 2 1.52 < 0.5 18 64 2500 2 ST98-19 201 202 < 0.2 3.66 20 340 < 0.5 < 2 1.44 < 0.5 28 84 41 5.54 10 < 1 0.04 < 10 1.75 ST98-20 201 202 < 0.2 1.05 0.5 77 83 3.60 < 10 < 1 0.05 20 0.87 2400 2 2.51 6 560 0.5 < 2 21 ST98-21 201 202 < 0.2 < 2 160 < 2 1.18 < 0.5 31 73 38 4.82 < 10 < 1 0.04 < 10 1.22 2280 2 3.48 0.5 < 10 1085 2 ST98-22 201 202 < 0.2 4.20 110 0.5 < 2 1.29 < 0.5 25 91 36 4.86 10 < 1 0.04 1.41 6 10 < 10 1.70 1840 1 ST98-23 201 202 0.2 4.29 < 2 100 0.5 < 2 1.64 < 0.5 34 90 49 5.81 < 1 0.06 201 202 120 37 137 55 6.89 10 0.06 < 10 1.60 1750 2 ST98-24 < 0.2 5.09 < 2 0.5 < 2 1.46 < 0.5 < 1 201 202 2.57 45 3.86 0.06 < 10 1.36 880 2 ST98-25 0.2 8 90 < 0.5 < 2 0.98 < 0.5 22 90 < 10 < 1 ST98-26 201 202 28 150 0.75 33 63 73 4.88 < 10 < 1 0.04 10 0.76 1995 3 0.2 1.72 < 0.5 < 2 1.5 8770 ST98-27 201 202 < 0.2 3.39 24 860 0.5 < 2 1.10 1.5 35 75 91 5.80 < 10 < 1 0.09 20 1.25 4 1.08 ST98-28 201 202 < 0.2 3.07 32 900 0.5 < 2 2.0 56 59 53 8.17 10 < 1 0.07 30 0.81 >10000 6 2 10 0.93 ST98-29 201 202 0.4 2.31 < 2 310 < 0.5 < 2 1.58 0.5 12 73 43 2.57 < 10 < 1 0.06 640 < 10 1.72 1710 1 ST98-30 201 202 < 0.2 3.71 < 2 270 < 0.5 < 2 1.69 < 0.5 32 79 43 5.19 10 < 1 0.05 201 202 < 0,2 3.52 420 < 2 27 72 63 4.73 10 < 1 0.07 10 1.38 1830 2 ST98-31 < 2 0.5 1.65 < 0.5 1520 2 201 202 0.2 3.80 290 66 5.16 10 < 1 0.06 < 10 1.33 ST98-32 < 2 0.5 < 2 1.61 0.5 26 84 10 201 202 < 0.2 < 10 1.80 2160 2 ST98-33 3.92 2 300 1.73 < 0.5 32 76 52 5.41 < 1 0.05 0.5 < 2 1235 2 5798-34 201 202 < 0 2 3.66 < 2 330 < 2 1.45 < 0.5 27 33 55 4.92 10 < 1 0.10 20 1.70 0.5 10 1.45 1295 1 ST98-35 201 202 < 0.2 3.38 < 2 230 0.5 < 2 1.06 0.5 28 89 49 4.78 10 < 1 0.08 ST98-36 201 202 < 0.2 1.94 6 270 < 0.5 < 2 0.53 < 0.5 24 49 40 4.16 < 10 < 1 0.13 30 1.00 1385 1

Hantsielle CERTIFICATION:



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave. North Vancouver V7J 2C1 British Columbia, Canada PHONE: 604-984-0221 FAX: 604-984-0218

PETER, MARTIN To:

> 2787 MOUNT SEYMOUR PKWY. NORTH VANCOUVER, BC V7H 1E8

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:2-B Page Jer Total Pages :2 Certificate Date: 29-JUL-98 :19825376 Invoice No. P.O. Number Account :HUW

A9825376

Project :

Comments: ATTN: PETER MARTIN

CERTIFICATE OF ANALYSIS

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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: PETER, MARTIN

2787 MOUNT SEYMOUR PKWY. NORTH VANCOUVER, BC V7H 1E8 \*\*

Page Jer : 1-A Total Pages :2 Certificate Date: 22-SEP-1998 Invoice No. : 19831200 P.O. Number : Account : HUW

Project :

Comments: ATTN: MARTIN PETER

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SAMPLE	PREP CODE	Ag ppm	A1 %	As ppm	Ba pp <u>m</u>	Be ppm	Bi ppm	Ca %	Cđ ppm	Со ррш	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm
EL 0+25 EL 0+50 EL 1+00 EL 1+25 EL 1+75	201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	1.81 2.30 2.27 2.34 2.58	8 6 8 6	200 320 120 260 280	< 0.5 0.5 0.5 0.5 0.5 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.36 0.87	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	4 15 6 16 12	36 84 48 67 67	7 95 13 41 29	2.44 2.41 3.38 2.87 3.26	< 10 < 10 < 10 < 10 < 10 10	< 1 < 1 < 1 < 1 < 1 < 1	0.03 0.04 0.02 0.03 0.05	10 10 < 10 10 10	0.36 0.57 0.42 0.97 0.84	145 555 155 450 345	< 1 1 < 1 < 1 < 1 < 1
EL 2+00 EL 2+25 EL 2+50 EL 2+75 EL 3+00	201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.03 3.18 2.55 2.36 2.08	10 4 6 2 < 2	300 350 330 260 150	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.90 0.95 0.65	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	10 21 16 15 9	56 90 85 70 58	29 56 61 47 32	2.44 3.96 3.63 3.04 2.88	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.07 0.09 0.05 0.05 0.05	10 10 20 20 10	0.49 0.92 1.01 0.81 0.64	400 1260 680 480 275	1 < 1 < 1 < 1 < 1 < 1
ML 0+25 ML 0+50 ML 0+75 ML 1+00 ML 1+25	201 202 201 202 201 202 201 202 201 202 201 202	0.2 0.2 0.2 < 0.2 < 0.2 < 0.2	2.49 2.68 2.43 2.97 2.57	< 2 < 2 4 < 2 < 2 < 2	180 130 150 270 190	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.57 0.53 0.41	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	8 8 11 11 10	61 62 61 61 62	16 13 18 19 17	4.02 4.00 3.56 4.07 4.53	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.03 0.04 0.04 0.03 0.03	10 10 10 10	0.66 0.58 0.73 0.69 0.71	375 305 385 315 390	< 1 < 1 < 1 < 1 < 1 < 1
ML 1+50 ML 1+75 ML 2+00 SL 98-50 SR 0+50	201202201202201202201202201202	0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.48 2.04 2.24 2.82 2.73	< 2 < 2 2 < 2 2 2	210 140 180 120 160	< 0.5 < 0.5 < 0.5 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.50 0.59 0.73	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	10 8 11 24 10	60 54 55 117 58	13 15 26 62 16	4.63 4.23 3.97 6.95 4.36	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1 < 1	0.01 0.04 0.02 0.07 0.04	< 10 < 10 < 10 10 10	0.66 0.57 0.72 0.92 0.63	270 230 300 425 320	< 1 < 1 < 1 < 1 < 1 < 1 < 1
SR 1+00 SR 1+50 SR 2+00 SR 2+50 SR 3+00	201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.79 2.28 3.01 2.71 3.38	< 2 < 2 12 8 < 2	200 100 200 150 320	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.47 0.72 0.82	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	12 10 18 23 25	61 60 85 74 105	27 20 35 53 139	3.55 3.52 4.33 3.90 4.01	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.06 0.05 0.03 0.04 0.05	10 10 10 10 40	0.84 0.70 1.08 0.91 0.88	340 290 470 710 720	< 1 < 1 < 1 < 1 < 1 < 1 < 1
SR 3+50 SR 4+00 SR 4+50 SR 5+00 ST 98-50	201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.72 4.00 3.07 2.52 2.99	< 2 6 < 2 < 2 < 2 < 2	150	< 0.5 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.86 0.76 0.95	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	23 34 18 22 19	86 88 58 74 64	80 128 31 39 65	3.92 4.77 3.65 4.24 3.55	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.04 0.06 0.03 0.04 0.04	20 10 < 10 10 < 10	1.23 1.22 0.97 0.98 1.13	760 915 475 795 1235	< 1 < 1 < 1 < 1 < 1 < 1 < 1
ST 98-51 ST 98-52 ST 98-53 ST 98-54 ST 98-55	201 202 201 202 201 202 201 202 201 202 201 202	0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	1.72 1.91 2.05 1.83 2.04	8 2 14 40 6	200 160 220	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.70 0.83 0.50	< 0.5 < 0.5 < 0.5 < 0.5	19 15 18 24 19	50 39 52 30 47	19 31 31 25 29	3.85 3.12 3.40 3.80 2.31	< 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1	0.04 0.11 0.11 0.15 0.09	10 30 30 30 20	0.79 0.74 0.92 0.55 0.93	1495 655 885 3280 740	< 1 < 1 < 1 1 < 1
ST 98-56 ST 98-57 ST 98-58 ST 98-59 ST 98-60	201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.07 2.67 2.13 2.03 2.14	6 8 2 20 < 2	<u>940</u> 300 280	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.77 0.86 0.84	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	18 20 16 15 18	53 60 38 38 54	42 52 32 33 32	3.48 3.52 3.15 3.12 3.85	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.08 0.05 0.07 0.09 0.10	10 10 10 20 30	0.98 1.07 0.83 0.78 1.14	805 1915 940 975 955	1 < 1 < 1 < 1 < 1 < 1
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Hartfielle CERTIFICATION:



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave..North VancouverBritish Columbia, CanadaV7J 2C1PHONE: 604-984-0221FAX: 604-984-0218

To: PETER, MARTIN

2787 MOUNT SEYMOUR PKWY. NORTH VANCOUVER, BC V7H 1E8 \*\*

Page ber :1-B Total s :2 Certificate Date: 22-SEP-1998 Invoice No. : 19831200 P.O. Number : Account :HUW

Project : Comments: ATTN: MARTIN PETER

SAMPLE   PBEP CODE   Na   Ni   P   Pb   Sb   Sc   Sr   Ti   Ti <thti< th="">   Ti   Ti</thti<>											CE	RTIFI	CATE	OF A	NALYSIS	A9831200
bit 0 + 50 201 20.01 24 50 8 + 2 18 17 0.13 < 10 85 < 10 68   bit 1 + 15 201 202  0.01 17 470 6 < 2 3 7 0.16 < 10 70 < 10 50 52   bit 1 + 15 201 202  0.01 14 51 16 0.16 <10 10 80 < 10 50 52   bit 2 + 200 202  0.01 14 51 16 0.16 <10 10 66 <10 58   bit 2 + 200 202  0.01 14 50 2 5 16 0.15 <10 10 90 <10 80 <10 10 50 50 10	SAMPLE		i													
Li Javis 101 101 101 101 101 101 102 100 102 100	EL 0+50 EL 1+00 EL 1+25	201 202 201 202 201 202	2 < 0.01 2 < 0.01 2 < 0.01 2 < 0.01	41 17 47	580 470 390	8 6 4	< 2 < 2 < 2	18 3 10	17 7 9	0.13 0.16 0.22	< 10 < 10 < 10	< 10 < 10 < 10	85 70 83	< 10 < 10 < 10	68 42 52	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	EL 2+25 EL 2+50 EL 2+75	201 202 201 202 201 202	2 < 0.01 2 < 0.01 2 < 0.01	48 46 34	840 530 410	10 6 8	2 2 < 2	13 13 8	25 21 16	0.15 0.23 0.15	< 10 < 10 < 10	< 10 < 10 < 10	92 89 71	< 10 < 10 < 10	106 88 80	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	ML 0+50 ML 0+75 ML 1+00	201 203 201 203 201 203	2 < 0.01 2 < 0.01 2 < 0.01	21 30 30	610 560 490	4 4 < 2	< 2 < 2 2	4 4 4	12 11 8	0.21 0.20 0.16	< 10 < 10 < 10	< 10 < 10 < 10	82 75 73	< 10 < 10 < 10	66 66 136	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	61L 1+75 41L 2+00 3L 98-50	201 20 201 20 201 20	2 < 0.01 2 < 0.01 2 < 0.01	23 31 54	1020 300 610	4 6 2	2 < 2 < 2	3 4 15	8 10 24	0.20 0.21 0.19	< 10 < 10 < 10	< 10 < 10 < 10	102 82 163	< 10 < 10 < 10	48 58 86	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	SR 1+50 SR 2+00 SR 2+50	201 20 201 20 201 20	2 < 0.01 2 < 0.01 2 < 0.01 2 < 0.01	31 53 64	400 550 580	6 < 2 8	< 2 < 2 < 2	4 6 10	9 13 20	0.16 0.20 0.19	< 10 < 10 < 10	< 10 < 10 < 10	74 88 79	< 10 < 10 < 10	76 82 86	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	SR 4+00 SR 4+50 SR 5+00	201 20 201 20 201 20	2 < 0.01 2 < 0.01 2 < 0.01	95 42 39	510 430 650	10 2 4	< 2 < 2 < 2	10 5 6	18 11 19	0.21 0.24 0.23	< 10 < 10 < 10	< 10 < 10 < 10	97 85 101	< 10 < 10 < 10	154 84 92	
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ST 98-59 201 202 < 0.01 40 560 14 < 2 5 36 0.11 < 10 < 10 52 < 10 108 ST 98-60 201 202 < 0.01 59 590 14 < 2 4 44 0.08 < 10 < 10 44 < 10 108	ST 98-57 ST 98-58 ST 98-59	201 20 201 20 201 20	2 < 0.01 2 < 0.01 2 < 0.01 2 < 0.01	48 34 40	580 580 560	4 14 14	< 2 2 < 2	9 6 5	34 25 36	$0.13 \\ 0.14 \\ 0.11$	< 10 < 10 < 10	< 10 < 10 < 10	84 64 52	< 10 < 10 < 10	154 106 108	

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Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 o: PETER, MARTIN

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Page Jer :2-A Total Pages :2 Certificate Date: 22-SEP-1998 Invoice No. :19831200 P.O. Number : Account :HUW

Project : Comments: ATTN: MARTIN PETER

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SAMPLE	PREP CODE	Ag ppm	A1 %	As ppm	Ba ppm	В <b>е</b> ppm	Bi ppm	Ca %	Cđ ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm
ST 98-61 ST 98-62 ST 98-63 WL 0+25 WL 0+50	201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.55 2.81 1.65 2.25 1.87	10 14 20 10 12	230	< 0.5 0.5 < 0.5 < 0.5 < 0.5 < 0.5	2 2 < 2 < 2 < 2 < 2 < 2	1.30 0.61 0.62	< 0.5 < 0.5 1.0 < 0.5 < 0.5	20 25 15 14 7	64 62 40 62 48	44 44 43 18 13	3.65 4.84 2.99 5.26 3.47	< 10 < 10 < 10 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1 < 1	0.06 0.08 0.06 0.03 0.03	10 10 10 < 10 10	1.20 1.09 0.86 0.57 0.46	985 1545 575 1230 295	1 1 3 3 1
WL 0+75 WL 1+00 WL 1+25 WL 1+50 WL 1+50 WL 1+75	201 202 201 202 201 202 201 202 201 202 201 202	0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.21 2.33 3.00 2.63 2.72	12 6 14 12 6	210	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 2 4 2	0.58 0.66 0.53	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	10 8 13 10 14	51 55 63 65 77	19 16 21 25 30	3.23 3.35 3.71 3.74 3.47	< 10 < 10 < 10 10 10	< 1 < 1 < 1 < 1 < 1 < 1	0.04 0.02 0.02 0.03 0.05	10 10 < 10 10 10	0.59 0.66 0.73 0.68 0.90	315 305 255 255 475	< 1 1 3 < 1 2
WL 2+00 WL 2+25 WR 0+50 WR 1+00 WR 1+50	201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	2.76 2.45 1.99 2.74 2.74	8 4 12 22 6	210 280 200 120 120	0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.82 0.49 0.83	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	15 15 9 15 13	78 89 43 66 70	36 47 14 27 24	3.41 3.17 2.84 3.81 4.21	10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.03 0.05 0.04 0.05 0.04	10 10 10 10	0.79 0.87 0.44 0.90 0.89	335 1165 330 455 420	2 2 1 2 1
WR 2+00 WR 2+50 WR 3+00 WR 3+50 WR 4+00	201 202 201 202 201 202 201 202 201 202 201 202	< 0.2 0.2 < 0.2 0.2 < 0.2 < 0.2	2.76 2.87 2.97 2.53 3.05	10 8 2 10 4	180	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.75 0.73 0.69	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	12 13 17 12 13	60 64 66 52 64	20 20 27 23 23	3.62 3.86 4.24 3.55 4.42	< 10 < 10 < 10 < 10 < 10 10	< 1 < 1 < 1 < 1 < 1 < 1	0.03 0.02 0.03 0.03 0.03	10 < 10 < 10 < 10 < 10 < 10	0.81 0.79 0.87 0.73 0.80	305 345 425 350 340	1 < 1 2 1 < 1
WR 4+50 WR 5+00	201 202 201 202	< 0.2 < 0.2	2.98 3.19	< 2 8	170 160	< 0.5 < 0.5	< 2 < 2		< 0.5 < 0.5	16 12	59 58	21 21	3.56 3.71	< 10 < 10	< 1 < 1	0.05	10 10	0.78	440 340	< 1 < 1



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave.,North VancouverBritish Columbia, CanadaV7J 2C1PHONE: 604-984-0221FAX: 604-984-0218

To: PETER, MARTIN

2787 MOUNT SEYMOUR PKWY. NORTH VANCOUVER, BC V7H 1E8 4 ±

Page ber :2-B Total Pages :2 Certificate Date: 22-SEP-1998 Invoice No. : 19831200 P.O. Number : Account :HUW

Project : Comments: ATTN: MARTIN PETER

										CE	RTIFI	CATE	OF A	NALYSIS	A9831200
SAMPLE	PREP CODE	Na %	Ni ppm	P	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U ppm	V ppm	W	Zn ppm	·
т 98-61 т 98-62 т 98-63 п. 0+25 п. 0+50	201 202 201 202 201 202 201 202 201 202 201 202	< 0.01 < 0.01	51 46 47 21 20	890 840 730 1740 930	12 10 8 6 6	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	8 10 4 4 3	49 27 32 11 10	0.25 0.21 0.08 0.22 0.17	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	92 101 48 129 87	< 10 < 10 < 10 < 10 < 10 < 10	128 122 138 74 70	
nL 0+75 nL 1+00 nL 1+25 nL 1+50 nL 1+75	201 202 201 202 201 202 201 202 201 202 201 202	< 0.01 < 0.01	30 26 37 33 40	820 430 480 460 390	14 6 2 8 8	2 < 2 < 2 2 2 2	4 4 5 6	12 10 13 11 12	0.20 0.20 0.22 0.21 0.16	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	79 84 82 97 85	< 10 < 10 < 10 < 10 < 10 < 10	68 54 64 56 72	
TL 2+00 TL 2+25 TR 0+50 TR 1+00 TR 1+50	201 202 201 202 201 202 201 202 201 202 201 202	< 0.01 < 0.01	35 47 19 39 38	360 350 550 620 490	6 8 4 6 6	< 2 < 2 2 2 2	9 12 3 5 4	12 19 10 13 12	0.17 0.18 0.18 0.28 0.26	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	93 83 77 98 94	< 10 < 10 < 10 < 10 < 10 < 10	64 64 72 88 80	
IR 2+00 IR 2+50 IR 3+00 IR 3+50 IR 4+00	201 202 201 202 201 202 201 202 201 202 201 202	< 0.01 < 0.01	38 35 41 36 37	580 550 630 600 930	6 < 2 2 8 4	< 2 < 2 4 < 2 < 2 < 2	4 5 5 4 5	14 10 10 10 11	0.21 0.26 0.28 0.21 0.22	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	79 101 100 83 98	< 10 < 10 < 10 < 10 < 10 < 10	82 86 100 86 94	
TR 4+50 TR 5+00	201 202 201 202	< 0.01 < 0.01	35 33	570 510	2 2	< 2 < 2	55	17 15	0.23 0.21	< 10 < 10	< 10 < 10	81 80	< 10 < 10	84 80	

Hasterlo. CERTIFICATION:\_\_\_\_



Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver

British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 o: PETER, MARTIN

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2787 MOUNT SEYMOUR PKWY. NORTH VANCOUVER, BC V7H 1E8

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Page I er :1-A Total Pages :1 Certificate Date: 14-OCT-1998 Invoice No. :19833081 P.O. Number : :HUW Account

Project : LOT Comments: ATTN: MARTIN PETER

			A1			Be ppm	Bi ppm	Ca %		CE	CERTIFICATE OF AN				'SIS	A9833081				
SAMPLE	PREP CODE	Ag ppm		As ppm	Ba ppm				Cđ ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm
SL98-100 SL98-101 SL98-102 ST98-100 ST98-101	201 202 201 202 201 202 201 202 201 202 201 202	0.2 0.2 < 0.2	2.60 2.41 3.05 2.10 2.71	4 6 < 2 6	600 830 320	< 0.5 < 0.5 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.25 0.25 1.21	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	10 8 15 13 22	59 53 67 50 58	21 22 49 36 26	4.42 4.71 4.72 2.73 5.40	< 10 < 10 < 10 < 10 10	< 1 < 1 < 1 < 1 < 1	0.06 0.06 0.05 0.04 0.05	10 10 < 10 < 10	0.68 0.50 0.70 0.91 1.33	365 240 365 670 1495	2 1 1 3
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CERTIFICATION: Hartfulle



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: PETER, MARTIN

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2787 MOUNT SEYMOUR PKWY. NORTH VANCOUVER, BC V7H 1E8 \*\*

Project : LOT Comments: ATTN: MARTIN PETER Page .ber :1-8 Total Fages :1 Certificate Date: 14-OCT-1998 Invoice No. :19833081 P.O. Number : Account :HUW

SAMPLE SL98-100 SL98-101 SL98-102 ST98-100 ST98-101											CE	RTIF	CATE	OF A	A9833081	
	PREP CODE		Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U ppm	ndd N	M W	Zn ppm	
	201 201 201	201 202 < 201 202 <	2 < 0.01 2 < 0.01 2 < 0.01	29 24 53 41 48	620 970 560 460 770	10 10 12 2 6	< 2 2 < 2 < 2 < 2 < 2	4 4 5 7 10	13 11 11 22 18	0.16 0.12 0.16 0.26 0.36	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	84 88 85 91 134	< 10 < 10 < 10 < 10 < 10 < 10	152 182 124 56 126	
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CERTIFICATION: Hartfichle