

**GEOCHEMICAL REPORT
ON THE
CASTOR, POLLUX & RAF 1 - 4 CLAIMS,
PERRY CREEK, BRITISH COLUMBIA**

PROPERTY:

The claims, located in the Perry Creek Valley, are centered approximately 20 kilometers west of Cranbrook, in southeastern British Columbia

Latitude 49°28' N

Longitude 116°07' W

NTS: 82 F 08 E

Fort Steele Mining Division

WRITTEN FOR:

MADMAN MINING CO. LTD.

548 Beatty Street

Vancouver, B.C.

V6B 2L3

WRITTEN BY:

LLOYD C. BREWER

548 Beatty Street

Vancouver, B.C.

V6B 2L3

DATE:

August 20, 1997

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,118

TABLE OF CONTENTS

	Page
<i>Summary</i>	i
<i>Conclusions</i>	i
<i>Recommendations</i>	i
Introduction	1
Location and Access	1
Property Description and Ownership	2
Physiography	5
History	5
Regional and Property Geology	6
Survey Procedure	7
Control Grid	7
Geochemical Survey	7
Selected Bibliography	9
Statement of Qualifications	10

LIST OF FIGURES

Figure 1. Property Location Map	3
Figure 2. Claim Map	4
Figure 3. Soil Geochemistry Grid with Values Plotted for Gold	8

APPENDICES (at rear of report)

Appendix I	Statement of Costs
Appendix II	Geochemical Soil Sample Analysis Results
Appendix III	Statement of Exploration & Development and Notice to Group

SUMMARY

This report discusses an exploration program carried out on the Castor, Pollux and Raf #1 - #4 claims, located in the Perry Creek area of the Fort Steele Mining Division. The field portion of the program was carried out between March 15, 1997 - March 20, 1997 under Department of Mines work permit number 97-0600418-001-M48. The program consisted of the emplacement of flagged control grid and the collection of 84 soil samples utilizing hand augers. All samples were analyzed for gold+34 element at Bondar Clegg laboratories in North Vancouver.

CONCLUSIONS

The program located three areas with elevated gold values present in the soil samples. The first area consists of two adjoining sample sites (8+00 and 8+25) with gold values obtained 6ppb at both sites. The second area, 9+75, is a single point anomaly of 9 ppb. The third and most significant area is located between 12+50 and 13+50 where the four sample sites returned gold values of 10ppb, 6 ppb, 12ppb and 11 ppb respectively. The total width of the third anomaly 100 metres.

RECOMMENDATIONS

The following recommendations for continued exploration on the Castor/Pollux group of claims are a result of this exploration program as well as exploration data previously gathered within the Perry Creek area.

A flagged and blazed grid with 50 meter cross lines and 25 meter station be emplaced over the entire property. The base line(s) should have an orientation of $115^{\circ}/295^{\circ}$ and the cross lines should be oriented at $205^{\circ}/25^{\circ}$. Detailed geological mapping together with geochemical soil sampling should be conducted over the entire grid area.

Trenching using a Cat 235 or equivalent excavator should be carried out in areas defined during the above noted phase of exploration. Additional recommendation including further trenching and diamond drilling will be based on the results of the foregoing.

INTRODUCTION

The claims of the Perry Creek Project cover four known gold showings and include a portion of a past producing mine. The combination of the known mineralization and local geological features provide extremely favorable indicators for the successful location of additional gold mineralization.

LOCATION AND ACCESS

The Perry Creek property is located at the confluence's of Walsh, Manchester and Liverpool Creeks with Perry Creek, approximately 20 kilometers west of Cranbrook in southeastern British Columbia (Figure No. 1). The property is centered on Latitude 49°28'N and 116°07'W within the National Topographic Survey map area 82F/8E. Access to the property from Highway 95A, which runs between Cranbrook and Kimberly, is via the Wycliffe Road and 30 km of gravel logging road along Perry Creek to Walsh, Manchester and Liverpool Creeks. The Perry Creek road provides access to the eastern portions of Property. The property is situated within the Moyie range of the Purcell Mountains. Topography is steep and elevations range from 1,500m to 2,000m A.S.L. Vegetation at lower elevations is mature spruce, fir, pine whilst ridge tops support only alpine grasses and lichen. Annual precipitation averages about 120 cm and winter snow pack is moderate to heavy.

PROPERTY DESCRIPTION

The Perry Creek Project is comprised of six claims totaling 44 claim units. The claims are further described as follows:

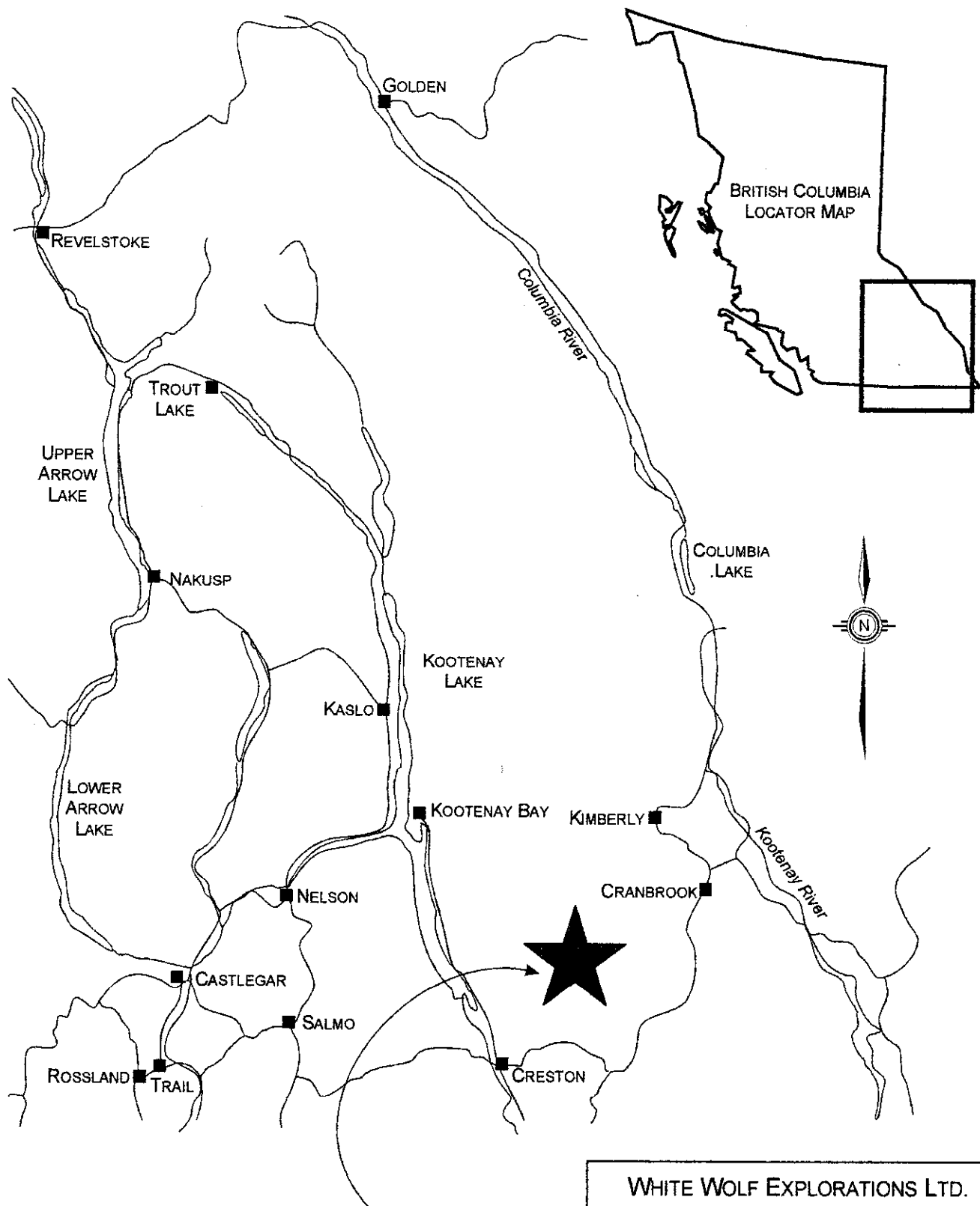
CLAIM NAME	TENURE NUMBER	NUMBER OF CLAIM UNITS	EXPIRY DATES *
Pollux	345328	20	April 9, 1998
Castor	345327	20	April 10, 1998
Raf - 1	345323	1	April 7, 1998
Raf - 2	345324	1	April 8, 1998
Raf - 3	345325	1	April 8, 1998
Raf - 4	345326	1	April 8, 1998
TOTALS		44	

* The expiry dates listed above take into account the exploration program described herein as being accepted for assessment credits.


An additional 14 claims, comprising of 31 units, have been acquired by staking. These claims are outside of the scope of this report, however, they have been listed to reflect the current claim holdings in the Perry Creek Project.

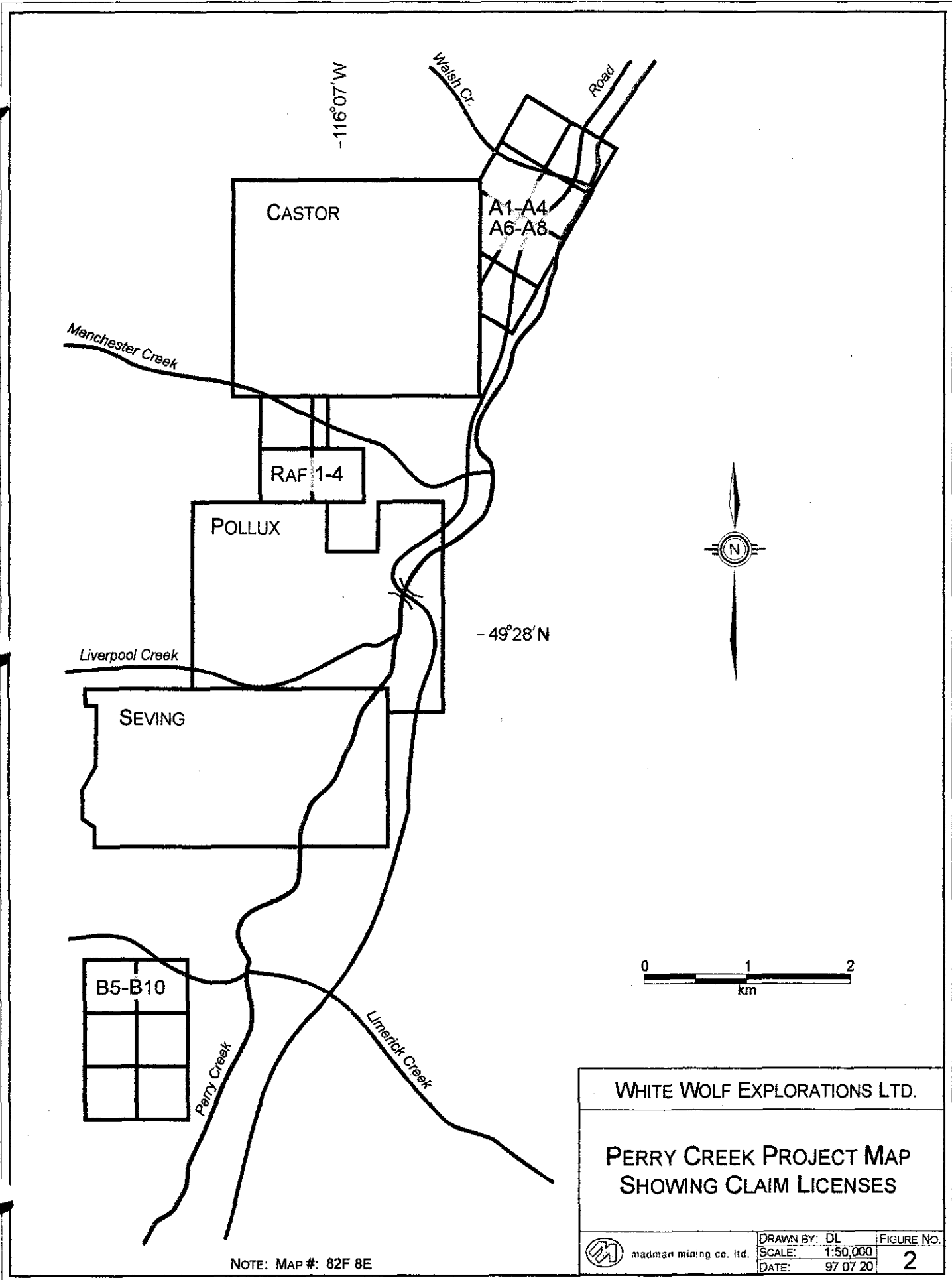
CLAIM NAME	TENURE NUMBER	NUMBER OF CLAIM UNITS	EXPIRY DATES	CLAIM NAME	TENURE NUMBER	NUMBER OF CLAIM UNITS	EXPIRY DATES
Seving	354966	18	March 28, 1998	B - 5	354974	1	March 28, 1998
A - 1	354967	1	March 29, 1998	B - 6	354975	1	March 28, 1998
A - 2	354968	1	March 29, 1998	B - 7	354976	1	March 28, 1998
A - 3	354969	1	March 29, 1998	B - 8	354977	1	March 28, 1998
A - 4	354970	1	March 29, 1998	B - 9	354978	1	March 28, 1998
A - 6	354971	1	March 29, 1998	B - 10	354979	1	March 28, 1998
A - 7	354972	1	March 29, 1998	Total		31	
A - 8	354973	1	March 29, 1998				

The claims are owned by Western American Resources Inc. of Edmonton, Alberta.




PROJECT AREA

WHITE WOLF EXPLORATIONS LTD.		
PERRY CREEK PROJECT LOCATOR MAP		
 madman mining co. ltd.	DRAWN BY: DL	FIGURE NO.
	DATE: 97 07 12	1



NOTE: MAP #: 82F 8E

WHITE WOLF EXPLORATIONS LTD.	
PERRY CREEK PROJECT MAP SHOWING CLAIM LICENSES	
 madman mining co. ltd.	DRAWN BY: DL SCALE: 1:50,000 DATE: 97 07 20
FIGURE No. 2	

HISTORY

The Perry Creek Property is situated near the headwaters of Perry Creek, which was the subject of a major gold rush near the turn of the century, and has been the most significant placer gold producer in the East Kootenay District to date. Several previous attempts to locate bedrock sources for the gold have been only partially successful. A number of old gold prospects have been exploited on both sides of the creek over the past 90 years. The BCDM "MinFile" lists five mineral occurrences within the Perry Creek Property. The BCDM "MinFile" reference numbers are 082FSE No's 009, 012, 119, 120 & 121. A brief description of the showings follows:

082FSE 009 - "Columbia"

The Columbia Mines workings consist of a 150 metre long adit (now caved), a 15m deep shaft and several hundred feet of surface trenches and pits. The adit known as the "Scorgie tunnel" has gold values obtained throughout the tunnel as high as 50.15 g/t Au with an average apparent grade of 9 g/t Au. Sampling by Gallant Gold Mines in 1981 confirmed the presence of gold, assays of 13.1g/t and 9.77g/t were obtained from the Columbia workings. The Columbia Vein is on average 9 - 12 metre wide in this area. Limited production in the form of bulk mill test runs were carried out in the 1920's when a five stamp mill was erected 6 kilometers northeast of the claims.

082FSE 119 - "Shakespeare"

Gold Values to 32 g/t are reported in old government reports. The showing consists of two silicified zones 15 and 30 meters wide on the Big Ledge within a "Miner's Porphyry Dyke". The old workings appear to have concentrated on a shear zone with wall rock silicification and irregular quartz veins. The quartz filled shear zone parallels the Perry Creek Fault system.

082FSE 120 - "McIntosh, (Annie) Annie, Anna (L10224)"

a Southwesterly extension of the Shakespeare showing, located on a series of quartz ledges or silicified zones 15 to 30 meters wide ("the Big Ledge") the ledges are subparallel to the Perry Creek fault.

082FSE 121 - "Petra, B.A. Corp., British American Corp."

located immediately south of Liverpool Creek, it is located on a series of subparallel veins, mineralized quartz veining occurs in both "stockworks" and within silicified quartz ledges. Trench sampling yielded assays up to 3.9 grams/tonne over 10 meters.

082FSE 012 - "Homestake"

The Homestake showing is located 300 meters south of the southern edge of the Castor claim, however the Castor covers the northeasterly strike extension of the showings. The deposit characteristics are classified as vein and disseminate. Gold assays to 96.45 g/t in select grab samples with one drill intersection reported 9.46 g/t over 1 meter. Again, the main target is a large low-grade gold zone within the quartz ledges, this is substantiated with numerous assays of 3.25 g/t Au over 1.5 meters.

The lode gold potential of the area was "rediscovered" in the early 1980's and a staking rush climaxed in mid-1984. At this time, the entire divide between Perry Creek and Hellroaring Creek was covered by claims along a 25 kilometer length from North Moyie Creek to St. Mary's River. Subsequent exploration work, largely undertaken by junior resource companies, has proceeded erratically with relatively few results reaching the public domain. During this period the Hughes-Lang Group controlled most of the ground currently covered by the Perry Creek Project.

GEOLOGY

Regional and Property

The Perry Creek Project lies within a north-northeast trending segment of the Proterozoic portion of the Kootenay Arc which originated as a thick prograding clastic wedge along the western margin of the North American continental plate. Subsequent accretion of allochthonous plates has created major faulting within the arc. Brittle faulting has continued almost to the present day in response to development along major structural zones which include the Rocky Mountain Trench.

The Perry Creek Project is underlain by clastic rocks of the Purcell Supergroup of Proterozoic age. Grey, green white and purple quartzite and siltstones with minor interbedded argillite which underlie most of the property belong to the Creston Formation. These strongly bedded rocks strike N30°E and dip steeply to the northwest.

Gold mineralization in the Perry Creek area occurs in three different geological settings. Large quartz veins up to 20 meters wide generally carry gold values but in sub-economic amounts. Smaller quartz veins up to 2 meters wide cut both the country rock and the larger quartz veins. These smaller veins carry significant amounts of gold and assays up to several ounces per ton have been reported. A third, and perhaps most significant, setting for gold mineralization is in major shear (fault) zones up to 100 meters in width which incorporate both brecciated quartz veins and host rock. These zones are weakly pyritized and are known to contain gold but systematic sampling and assaying have not been recorded in the public realm. Dandy and Troup (1985) suggest that gold distribution is related to quartz vein stockworks in siliceous zones adjacent to microdiorite bodies which are intrusive into the shear zones. These zones are frequently topographically recessive.

Geological mapping was not part of the exploration work described herein, however the property has been mapped by various geologists within the past twenty years. The following is a series of excerpts from Dandy/Troup (1985) Geological report for Gallant Gold Mines Ltd., on the Perry Creek claims, which are now covered by the Castor, Pollux and Raf claims.

Luke (Homestake) area

“a wide diorite dyke cutting blue limey quartzites and limestone in contact with thin bedded siltstone is exposed. The contact trends north northeasterly with a steep southerly dip. Hydrothermal alteration and contact metasomatism are evident. Quartz as stringers and lenses is exposed. Indications of shearing and gouge along the footwall is observeable, but sloughing obliterated the structural features.....”

Coulumbia-Homestake area:

“Minor sulphides are present as dissemination's within quartz and dyke rock and sheared, brecciated and quartz veined sediments are common. Vein walls are well-defined with areas of talcose gouge. The shear itself, strikes N30°E/85°E and is reported to be 3-5 metres in width with workings over a 700 metre strike length but directly traced for <5m.”

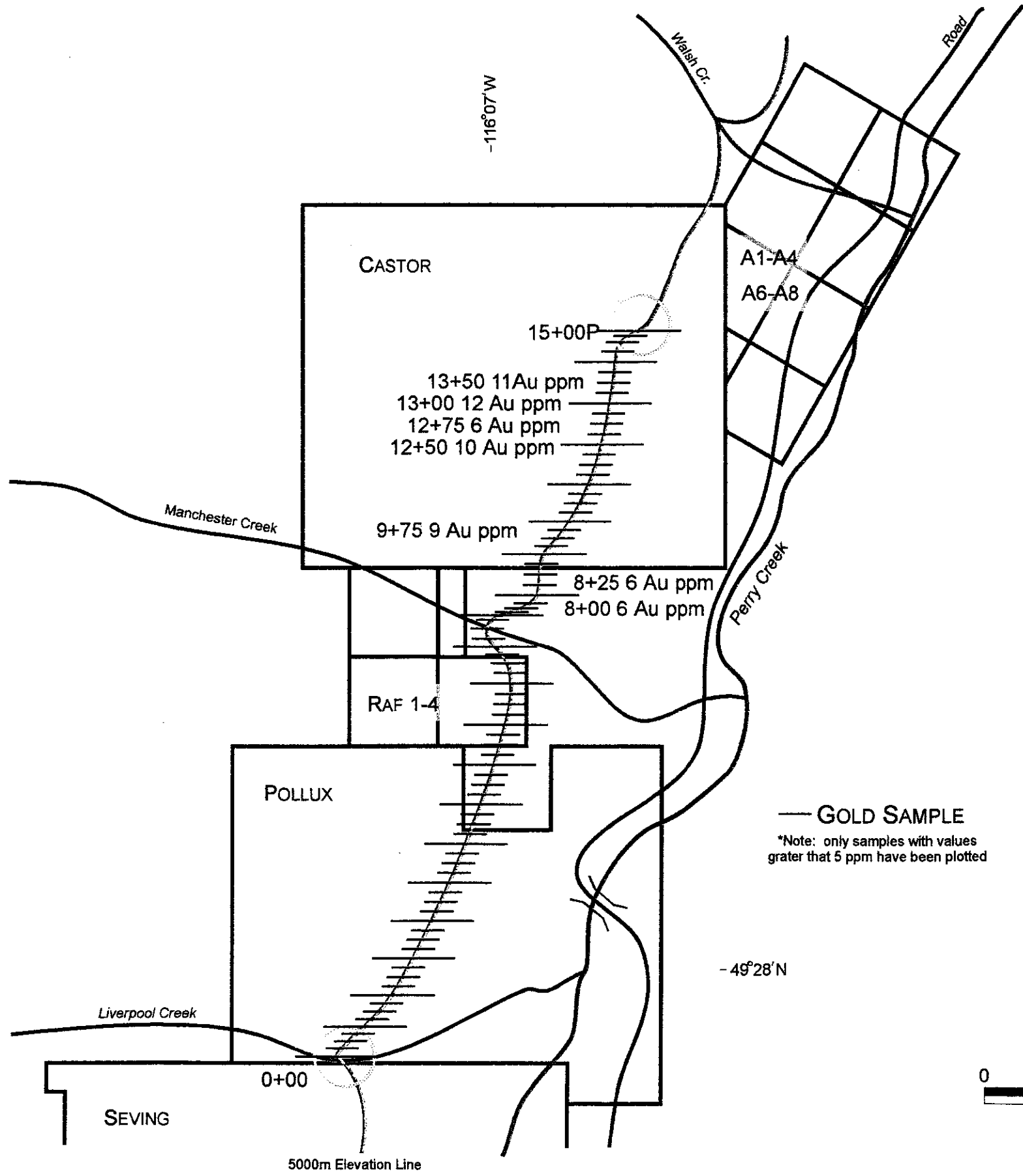
SURVEY PROCEDURES

Control “grid”

A single line of grid was established during the coarse of this survey. The control grid consisted of flagged labeled with black permanent felt marker with the grid reference. The grids' point of origin is the 5,000 foot (1525m) elevation mark within Liverpool Creek. The grid followed the 5,000 foot (1525m) elevation contour to the north with an average bearing of 25° T.N. A total of 2,500 meters of flagged grid was emplaced.

Geochemistry Survey

Soil samples from the “C” horizon were collected utilizing a hand auger. Samples were collected at a depth varying from 30 cm to 150 cm. The depth of the samples was dictated by the soil depth as well as the amount of roots and boulders in the soil. A total of 84 samples were collected during the coarse of the survey. All samples were placed in a gaussetted kraft paper soil sample bag which was labeled with the corresponding grid coordinate. All samples were submitted to Intertek Testing Services Bondar Clegg, North Vancouver were they were dried, disaggreaged, and sieved to minus 80 mesh. The samples were analyzed using geochemical ICP techniques for Gold + 34 element package. The results of the analysis are attached in appendix II at the rear of this report.



GEOCHEMICAL LAB REPORT DATA

Intertek Testing Services by Bondar Clegg & Co. Ltd.

L5000	Au ppm	L5000	Au ppm
0+00	<5	2+00P	<5
0+25	<5	2+25P	<5
0+50	<5	2+50P	<5
0+75	<5	2+75P	<5
1+00	<5	3+50P	<5
1+25	<5	3+25P	<5
1+50	<5	3+75P	<5
1+75	<5	4+00P	<5
2+00	<5	4+25P	<5
2+25	<5	4+50P	<5
2+75	<5	4+75P	<5
3+25	<5	5+75P	<5
3+75	<5	6+00P	<5
4+00	<5	6+50P	<5
4+25	<5	6+75P	<5
4+50	<5	7+00P	<5
4+75	<5	7+75P	<5
5+00	<5	8+00P	<5
5+25	<5	8+50P	<5
5+50	<5	9+25P	<5
5+75	<5	9+50P	<5
6+00	<5	9+75P	9
6+50	<5	10+25P	<5
6+75	<5	10+50P	<5
7+00	<5	10+75P	<5
7+25	<5	11+00P	<5
8+00	6	11+25P	<5
8+25	6	11+50P	<5
8+50	<5	11+75P	<5
8+75	<5	12+00P	<5
9+00	<5	12+25P	<5
9+50	<5	12+50P	10
10+00	<5	12+75P	6
0+25P	<5	13+00P	12
0+50P	<5	13+50P	11
0+75P	<5	13+75P	<5
1+00P	<5	14+25P	<5
1+25P	<5	14+50P	<5
1+50P	<5	14+75P	<5
1+75P	<5	15+00P	<5

— GOLD SAMPLE
 *Note: only samples with values greater than 5 ppm have been plotted

WHITE WOLF EXPLORATIONS LTD.

PERRY CREEK PROJECT MAP
 SOIL SAMPLE LOCATIONS

	DRAWN BY: DL	FIGURE No.
	SCALE: 1:10,000	3
	DATE: 97 07 20	

SELECTED BIBLIOGRAPHY

BCDM - B.C. Mineral Inventory data files for section 82FSE (showing numbers) 009, 012, 117, 119, 120, 121;

BCDM Assessment reports 7103, 7723, 8598, 13007, 14212, 15649, 23022;

BCDM Exploration Review - 1978-E58; 1979-64;

BCDM annual reports, 1898, pg. 1016; 1900, pg. 797; 1909, pg. 275; 1911, pg. 288; 1915, pgs 108, 109; 1916, pg. 190; 1921, pg. 127; 1922, pg. 188; 1923, pg.207; 1925, pg.230; 1926, pg. 243; 1929, pg.297; 1930, pg. 242; 1938, pg. E15;

Geological Survey of Canada - Bulletin 193;

Geological Survey of Canada Memoir 228, Geology of the Cranbrook Area;

Geological Survey of Canada - Open File 820;

Westerman, C.J. - Summary Report on the Gold Run Creek Property. for Partners Oil & Minerals Ltd. 1987.

QUALIFICATIONS

I, Lloyd C. Brewer, of 548 Beatty Street, in the City of Vancouver, British Columbia, do hereby certify:

1. THAT I am president and owner of White Wolf Explorations Ltd. and have worked in the mining industry on a full time basis since 1981;
2. THAT this report is based on an exploration program carried out under my indirect supervision by crews of White Wolf Explorations Ltd. on the Castor, Pollux and Raf 1 - 4 claims between March 15 and March 20, 1997.

Dated at Vancouver, British Columbia, this 20th day of August 1997.



Lloyd C. Brewer

APPENDIX I

Statement of Costs

STATEMENT OF COSTS

I, Lloyd C. Brewer, President of White Wolf Explorations Ltd. hereby certify that the following is a true and accurate cost statement for the charges incurred on the Pollux, Castor and Raf Claims from March 15, 1997 to March 20, 1997.

CREW COSTS

Dean Bowra	5 days @ \$165.00	\$ 825.00
Glen MacKay	4 days @ \$125.00	500.00

ASSAYS & ANALYSIS:

84 soil samples @ \$16.25	1,365.00
---------------------------	----------

TRANSPORTATION:

4 x 4 truck rental (include mileage)	375.00
Ski doo c/w dog sled	220.00

EXPENSES:

(including hotel, meals, fuels and survey supplies)	798.00
---	--------

OFFICE:

Project supervision and overhead	450.00
Report Preparation	<u>667.00</u>

COST OF ASSESSMENT PROGRAM:	\$5,200.00
------------------------------------	-------------------



APPENDIX II

Soil Sample Geochemical Analysis



Intertek Testing Services
Bondar Clegg

Geometrical
Lab
Report

+

+

+

+

WHITE WOLF EXPLORATION
MR. LLOYD BREWER
548 BEATTY STREET
VANCOUVER, B.C.
V6B 2L3



Intertek Testing Services

Bondar Clegg

Geochemical
Lab
Report

REPORT: V97-00649.0 (COMPLETE)

REFERENCE:

CLIENT: WHITE WOLF EXPLORATION

SUBMITTED BY: L. BREWER

PROJECT: HOMESTAKE

DATE PRINTED: 28-APR-97

ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION	EXTRACTION	METHOD
1 Au30 Gold	84	5 PPB	Fire Assay of 30g	30g Fire Assay - AA
2 Ag Silver	84	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
3 Cu Copper	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
4 Pb Lead	84	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
5 Zn Zinc	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
6 Mo Molybdenum	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
7 Ni Nickel	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
8 Co Cobalt	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
9 Cd Cadmium	84	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
10 Bi Bismuth	84	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
11 As Arsenic	84	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
12 Sb Antimony	84	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
13 Fe Iron	84	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
14 Mn Manganese	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
15 Te Tellurium	84	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
16 Ba Barium	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
17 Cr Chromium	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
18 V Vanadium	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
19 Sn Tin	84	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
20 W Tungsten	84	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
21 La Lanthanum	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
22 Al Aluminum	84	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
23 Mg Magnesium	84	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
24 Ca Calcium	84	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
25 Na Sodium	84	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
26 K Potassium	84	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
27 Sr Strontium	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
28 Y Yttrium	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
29 Ga Gallium	84	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
30 Li Lithium	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
31 Nb Niobium	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
32 Sc Scandium	84	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
33 Ta Tantalum	84	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
34 Ti Titanium	84	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
35 Zr Zirconium	84	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
S SOIL	84	1 -80	84	DRY, SIEVE -80	84

REPORT COPIES TO: MR. LLOYD BREWER

INVOICE TO: MR. LLOYD BREWER



CLIENT: WHITE WOLF EXPLORATION
REPORT: V97-00649.0 (COMPLETE)

PROJECT: HOMESTAKE
DATE PRINTED: 28-APR-97
PAGE 3

SAMPLE NUMBER	ELEMENT																																		
	Au ₃₀	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr
	UNITS	PPB	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PCT	PCT	PCT	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM
PC-5000 7+75P	<5	0.3	21	36	74	<1	25	11	<.2	6	<5	<5	2.31	183	<10	285	17	26	<20	<20	<1	3.02	1.00	0.23	0.03	0.21	22	3	6	21	4	<5	<10	0.10	16
PC-5000 8+00P	<5	0.3	26	34	74	1	23	12	<.2	9	<5	<5	2.37	160	<10	209	18	26	<20	<20	2	2.90	0.98	0.22	0.02	0.21	27	3	6	21	5	<5	<10	0.10	20
PC-5000 8+50P	<5	<.2	18	18	63	<1	19	9	<.2	<5	<5	<5	2.22	149	<10	67	18	25	<20	<20	8	1.66	1.17	0.16	0.01	0.19	13	4	3	18	5	<5	<10	0.08	11
PC-5000 8+75P	<5	0.3	24	33	82	<1	22	10	<.2	<5	<5	6	2.11	300	<10	254	16	23	<20	<20	2	3.07	0.87	0.23	0.03	0.21	31	5	2	21	6	<5	<10	0.10	24
PC-5000 9+25P	<5	0.3	33	15	58	<1	16	8	<.2	<5	<5	<5	2.60	372	<10	48	20	28	<20	<20	14	1.65	1.87	1.11	0.01	0.25	13	24	<2	18	24	<5	<10	0.09	10
PC-5000 9+50P	<5	0.3	37	16	46	<1	18	10	<.2	<5	<5	<5	2.16	192	<10	45	19	27	<20	<20	9	1.67	1.63	0.24	0.01	0.17	9	6	2	18	7	<5	<10	0.08	4
PC-5000 9+75P	9	<.2	28	21	51	<1	18	12	<.2	6	<5	<5	2.39	197	<10	63	19	29	<20	<20	6	1.74	1.57	0.22	0.01	0.16	9	5	2	19	6	<5	<10	0.08	3
PC-5000 10+25P	<5	<.2	31	19	45	<1	16	10	<.2	<5	<5	<5	2.46	196	<10	39	20	28	<20	<20	11	1.55	1.54	0.22	0.01	0.20	10	5	<2	16	6	<5	<10	0.08	3
PC-5000 10+50P	<5	<.2	29	22	50	<1	17	11	<.2	<5	<5	<5	2.61	196	<10	47	21	31	<20	<20	6	1.81	1.86	0.24	0.01	0.21	10	6	3	19	6	<5	<10	0.08	3
PC-5000 10+75P	<5	<.2	32	18	49	<1	16	9	<.2	<5	<5	<5	2.41	206	<10	42	22	28	<20	<20	9	1.64	1.66	0.25	0.02	0.22	10	7	<2	18	8	<5	<10	0.08	3
PC-5000 11+00P	<5	<.2	20	16	36	<1	13	7	<.2	5	<5	<5	2.10	173	<10	34	20	24	<20	<20	11	0.99	0.88	0.23	0.01	0.21	9	5	<2	10	5	<5	<10	0.06	3
PC-5000 11+25P	<5	<.2	21	15	36	<1	14	8	<.2	6	<5	<5	2.19	174	<10	36	21	25	<20	<20	10	1.04	0.88	0.23	0.01	0.20	9	5	2	11	5	<5	<10	0.06	4
PC-5000 11+75P	<5	<.2	23	15	41	<1	15	9	<.2	6	<5	<5	2.20	218	<10	51	18	24	<20	<20	8	1.27	1.20	0.23	0.01	0.22	10	7	<2	15	7	<5	<10	0.07	6
PC-5000 12+00P	<5	<.2	22	17	44	<1	16	10	<.2	6	<5	<5	2.24	211	<10	56	18	26	<20	<20	10	1.48	1.44	0.22	0.01	0.20	9	7	<2	16	8	<5	<10	0.07	5
PC-5000 12+25P	<5	<.2	16	23	58	<1	17	9	<.2	<5	<5	<5	1.94	256	<10	124	17	24	<20	<20	3	1.95	0.84	0.19	0.02	0.13	13	3	<2	16	4	<5	<10	0.07	5
PC-5000 12+50P	10	<.2	12	10	33	<1	10	7	<.2	<5	<5	<5	1.51	141	<10	65	13	18	<20	<20	8	0.98	0.54	0.14	<.01	0.13	7	3	<2	12	4	<5	<10	0.05	3
PC-5000 12+75P	6	<.2	15	10	31	<1	11	7	<.2	<5	<5	<5	1.67	161	<10	37	15	19	<20	<20	11	0.85	0.63	0.19	<.01	0.17	8	4	<2	12	5	<5	<10	0.06	2
PC-5000 13+00P	12	<.2	12	4	23	<1	8	6	<.2	<5	<5	<5	1.50	133	<10	31	13	18	<20	<20	19	0.64	0.42	0.21	<.01	0.17	9	5	<2	9	5	<5	<10	0.05	2
PC-5000 13+50P	11	<.2	28	18	50	<1	16	10	<.2	6	<5	<5	2.45	291	<10	48	17	25	<20	<20	10	1.57	1.52	0.52	0.01	0.26	12	9	<2	16	10	<5	<10	0.07	5
PC-5000 13+75P	<5	<.2	19	13	42	<1	15	8	<.2	6	<5	<5	2.23	146	<10	36	17	25	<20	<20	11	1.34	1.34	0.18	0.01	0.22	9	5	3	15	6	<5	<10	0.07	5
PC-5000 14+25P	<5	<.2	16	13	40	<1	16	7	<.2	<5	<5	<5	2.09	124	<10	37	17	22	<20	<20	9	1.47	1.28	0.17	0.01	0.21	10	5	3	17	5	<5	<10	0.07	7
PC-5000 14+50P	<5	0.3	17	22	62	<1	18	8	<.2	<5	<5	<5	1.80	266	<10	156	14	20	<20	<20	7	2.24	0.79	0.43	0.03	0.20	34	7	<2	17	9	<5	<10	0.08	9
PC-5000 14+75P	<5	<.2	14	13	45	<1	16	8	<.2	<5	<5	<5	2.09	129	<10	35	19	22	<20	<20	9	1.35	1.27	0.15	0.01	0.19	10	4	3	17	5	<5	<10	0.06	5
PC-5000 15+00P	<5	0.3	28	17	48	<1	14	11	<.2	<5	<5	<5	2.45	324	<10	41	16	25	<20	<20	5	1.43	1.61	4.43	0.01	0.27	21	8	<2	15	8	<5	<10	0.05	4



Intertek Testing Services

Bondar Clegg

Geochemical Lab Report

CLIENT: WHITE WOLF EXPLORATION
REPORT: V97-00649.0 (COMPLETE)

PROJECT: HOMESTAKE
DATE PRINTED: 28-APR-97 PAGE 4

STANDARD NAME	ELEMENT UNITS	Au	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr	
		PPB	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PCT	PCT	PCT	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM
ANALYTICAL BLANK		<5	<2	<1	<2	<1	<1	1	<1	<2	<5	<5	<5	<.01	<1	<10	<1	1	<1	<20	<20	<1	<.01	<.01	<.01	<.01	<.01	<1	<1	<2	<1	<1	<5	<10	<.01	<1	
ANALYTICAL BLANK		<5	<2	<1	<2	<1	<1	2	<1	<2	<5	<5	<5	<.01	<1	<10	<1	4	<1	<20	<20	<1	<.01	<.01	<.01	<.01	<.01	<1	<1	3	<1	<1	<5	<10	<.01	<1	
ANALYTICAL BLANK		<5	<2	<1	<2	<1	<1	<1	<1	0.3	<5	<5	<5	<.01	<1	<10	<1	1	<1	<20	<20	<1	<.01	<.01	<.01	<.01	<.01	<1	<1	2	<1	<1	<5	<10	<.01	<1	
ANALYTICAL BLANK		<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Number of Analyses		4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean Value		3	0.1	0.5	1	0.5	0.5	1	0.5	0.2	3	3	3	.005	0.5	5	0.5	2	0.5	10	10	0.5	.005	.005	.005	.005	.005	0.5	0.5	2	0.5	0.5	3	5	.005	0.5	
Standard Deviation		-	<.1	-	-	-	-	0.8	-	0.1	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
Accepted Value		5	0.2	1	2	1	1	1	1	0.1	2	5	5	0.05	1	.01	.01	1	1	.01	.01	.01	<.01	<.01	<.01	<.01	<.01	.01	.01	.01	.01	.01	.01	.01	.01	<.01	.01
Gannet Standard	396	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Analyses	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean Value	396	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCC GEOCHEM STD 4		-	1.0	272	30	239	2	35	9	<2	5	23	<5	2.52	544	<10	57	78	6	<20	<20	<1	0.73	1.42	1.35	0.05	0.14	36	3	<2	6	1	<5	<10	<.01	9	
Number of Analyses		-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mean Value		-	1.0	272	30	239	2	35	9	0.1	5	23	3	2.52	544	5	57	78	6	10	10	0.5	0.73	1.42	1.35	0.05	0.14	36	3	1	6	1	3	5	.005	9	
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accepted Value		-	0.8	290	33	255	4	42	9	0.8	1	30	1	2.40	600	0.1	55	80	9	5	1	4	0.77	1.34	1.43	0.04	0.14	39	4	2	7	1	12	1	0.01	8	
Gannet Standard	2606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Analyses	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean Value	2606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	2520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gannet Standard	1044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Analyses	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean Value	1044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	1080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intertek Testing Services

Bondar Clegg

Geochemical Lab Report

CLIENT: WHITE WOLF EXPLORATION
 REPORT: V97-00649.0 (COMPLETE)

PROJECT: HOMESTAKE
 DATE PRINTED: 28-APR-97 PAGE 5

STANDARD NAME	ELEMENT UNITS	Au30	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr
		PPB	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PCT	PCT	PCT	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM
BCC GEOCHEM STD 6		<.2	137	18	145	4	128	32	<.2	6	133	<5	6.58	1389	<10	7	185	42	<20	<20	<1	1.80	2.34	3.71	0.01	0.05	76	3	<2	22	2	7	<10	<.01	6	
Number of Analyses		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mean Value		0.1	137	18	145	4	128	32	0.1	6	133	3	6.58	1389	5	7	185	42	10	10	0.5	1.80	2.34	3.71	0.01	0.05	76	3	1	22	2	7	5	.005	6	
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accepted Value		0.2	140	18	140	4	135	35	0.2	1	145	1	6.50	1450	-	6	170	50	5	12	-	1.80	2.70	4.00	0.01	0.04	70	3	-	24	2	6	1	.003	5	
Gannet Standard	190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Number of Analyses	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mean Value	190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accepted Value	206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BCC GEOCHEM STD 5		0.6	94	25	79	2	34	17	<.2	5	<5	<5	4.38	693	<10	199	53	118	<20	<20	<1	3.15	1.87	1.01	0.06	0.33	35	7	<2	26	7	9	<10	0.21	10	
Number of Analyses		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mean Value		0.6	94	25	79	2	34	17	0.1	5	3	3	4.38	693	5	199	53	118	10	10	0.5	3.15	1.87	1.01	0.06	0.33	35	7	1	26	7	9	5	0.21	10	
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accepted Value		0.7	90	11	80	2	40	18	0.1	1	8	1	4.74	720	0.2	200	54	133	4	2	5	3.09	1.83	1.08	0.06	0.32	39	9	4	-	1	18	1	-	9	



Intertek Testing Services

Bondar Clegg

Geochemical Lab Report

CLIENT: WHITE WOLF EXPLORATION
REPORT: V97-00649.0 (COMPLETE)

PROJECT: HOMESTAKE
DATE PRINTED: 28-APR-97 PAGE 6

SAMPLE NUMBER	ELEMENT UNITS	Al ₂ O ₃ PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT	Zr PPM
PC-5000 2+50		<5	<.2	18	36	84	<1	21	10	<.2	<5	<5	<5	1.83	505	<10	169	15	20	<20	<20	6	2.27	1.23	0.54	0.02	0.25	23	3	<2	19	4	<5	<10	0.08	7
Duplicate		<5	<.2	17	35	80	<1	20	10	<.2	<5	<5	<5	1.80	497	<10	166	14	19	<20	<20	6	2.23	1.20	0.53	0.02	0.24	23	3	<2	19	3	<5	<10	0.08	7
PC-5000 3+00		<5	<.2	8	28	58	<1	15	7	<.2	5	<5	<5	1.72	326	<10	135	12	18	<20	<20	3	2.06	0.94	0.29	0.02	0.21	17	2	<2	19	2	<5	<10	0.07	4
Duplicate		<5	<.2	8	28	58	<1	15	7	<.2	5	<5	<5	1.72	326	<10	135	12	18	<20	<20	3	2.06	0.94	0.29	0.02	0.21	17	2	<2	19	2	<5	<10	0.07	4
PC-5000 7+75		<5	0.3	10	22	62	<1	15	8	<.2	5	<5	<5	1.94	840	<10	194	14	21	<20	<20	7	1.87	1.80	0.37	0.02	0.23	24	3	<2	16	3	<5	<10	0.06	3
Duplicate		<5	0.3	10	22	60	<1	15	8	<.2	5	<5	<5	1.93	832	<10	192	14	21	<20	<20	8	1.86	1.77	0.36	0.02	0.23	24	3	<2	16	3	<5	<10	0.06	3
PC-5000 0+00P		<5	0.3	7	34	71	<1	15	7	<.2	8	<5	<5	1.70	676	<10	221	10	21	<20	<20	<1	2.58	0.54	0.30	0.03	0.14	23	2	<2	16	2	<5	<10	0.09	8
Duplicate		<5	0.3	7	34	71	<1	15	7	<.2	8	<5	<5	1.70	676	<10	221	10	21	<20	<20	<1	2.58	0.54	0.30	0.03	0.14	23	2	<2	16	2	<5	<10	0.09	8
PC-5000 3+00P		<5	<.2	16	23	60	<1	18	10	<.2	<5	<5	<5	2.11	187	<10	69	19	25	<20	<20	10	1.83	1.75	0.17	0.01	0.20	11	4	<2	19	4	<5	<10	0.07	7
Duplicate		<5	<.2	16	16	58	<1	17	10	<.2	5	<5	<5	2.15	185	<10	71	17	25	<20	<20	7	1.85	1.67	0.17	0.01	0.20	10	4	3	20	5	<5	<10	0.07	6
PC-5000 5+00P		<5	<.2	21	23	78	<1	17	8	<.2	<5	<5	5	1.76	157	<10	140	13	22	<20	<20	2	2.67	0.73	0.23	0.04	0.10	24	5	5	16	9	<5	<10	0.10	25
Duplicate		<5	<.2	21	23	78	<1	17	8	<.2	<5	<5	5	1.76	157	<10	140	13	22	<20	<20	2	2.67	0.73	0.23	0.04	0.10	24	5	5	16	9	<5	<10	0.10	25
PC-5000 8+75P		<5	0.3	24	33	82	<1	22	10	<.2	<5	<5	6	2.11	300	<10	254	16	23	<20	<20	2	3.07	0.87	0.23	0.03	0.21	31	5	2	21	6	<5	<10	0.10	24
Duplicate		<5	0.3	24	35	82	<1	23	11	<.2	<5	<5	5	2.16	305	<10	259	17	24	<20	<20	2	3.12	0.89	0.24	0.03	0.21	32	5	2	22	6	<5	<10	0.11	23
PC-5000 9+75P		9	<.2	28	21	51	<1	18	12	<.2	6	<5	<5	2.39	197	<10	63	19	29	<20	<20	6	1.74	1.57	0.22	0.01	0.16	9	5	2	19	6	<5	<10	0.08	3
Duplicate		9	<.2	28	21	51	<1	18	12	<.2	6	<5	<5	2.39	197	<10	63	19	29	<20	<20	6	1.74	1.57	0.22	0.01	0.16	9	5	2	19	6	<5	<10	0.08	3
PC-5000 15+00P		<5	0.3	28	17	48	<1	14	11	<.2	<5	<5	<5	2.45	324	<10	41	16	25	<20	<20	5	1.43	1.61	4.43	0.01	0.27	21	8	<2	15	8	<5	<10	0.05	4
Duplicate		<5	0.4	28	18	49	<1	15	11	<.2	5	<5	<5	2.51	329	<10	41	16	26	<20	<20	5	1.47	1.64	4.46	0.01	0.27	21	8	<2	15	8	<5	<10	0.06	5