## GEOLOGICAL ASSESSMENT REPORT

### on the

## BLUEBERRY CLAIM GROUP LILLOOET MINING DIVISION SETON LAKE, B.C. AREA

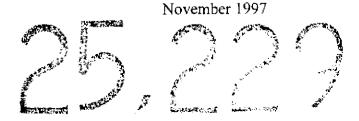
by

PAUL D. GRAY, B.Sc. and KENNETH A. WILLIAMS, B.Sc.

## SOUTHERN GOLD RESOURCES LTD.

<u>CLAIMS:</u>	BLUEBERRY, and SUSAN, 2-post mineral claims
•	and JAMIE 4-post mineral claims (20 units)
LOCATION:	The Blueberry Claim Group is located 25 km northwest
	of Pemberton B.C., and 4 km west of Tenquille Lake.
	Lat. 50°31'; Long. 123°00';
	N.T.S. Map 92 J/10 and 92/J 11
<u>OWNER:</u>	Southern Gold Resources Limited
OPERATOR:	Southern Gold Resources Limited
DATE COMMENCED:	September 1, 1997
DATE COMPLETED:	September 24, 1997

GEOLOGICAL SURVEN REANCH ASSESSMENT REFERENCE



Vancouver B.C.

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## **SUMMARY**

The Blueberry Claim Group is comprised of 20, 4-post mineral claim units, and 2, 2-post mineral claims located 27 km northwest of Pemberton, B.C., 4 km west of Tenquille Lake (See Figure 1). The property was staked by Michael Renning (F.M.C. # 122573) under a grubstake agreement with Southern Gold Resources Ltd. Staking was conducted to cover shear-zone hosted pyrite, gold, and copper bearing gossanous felsic dykes discovered by the staker. Prospecting was initiated to follow up base metal stream geochemical anomalies that government Regional Geochemical Survey (RGS) had revealed. Up stream and up-slope exploration led to the discovery of several mineralized felsite zones. The two, 2-post fractional unit claims (the Blueberry and the Susan) were staked initially to cover the "main showing" and immediate area, the additional 20 unit 4post mineral claim was added later to ensure complete coverage.

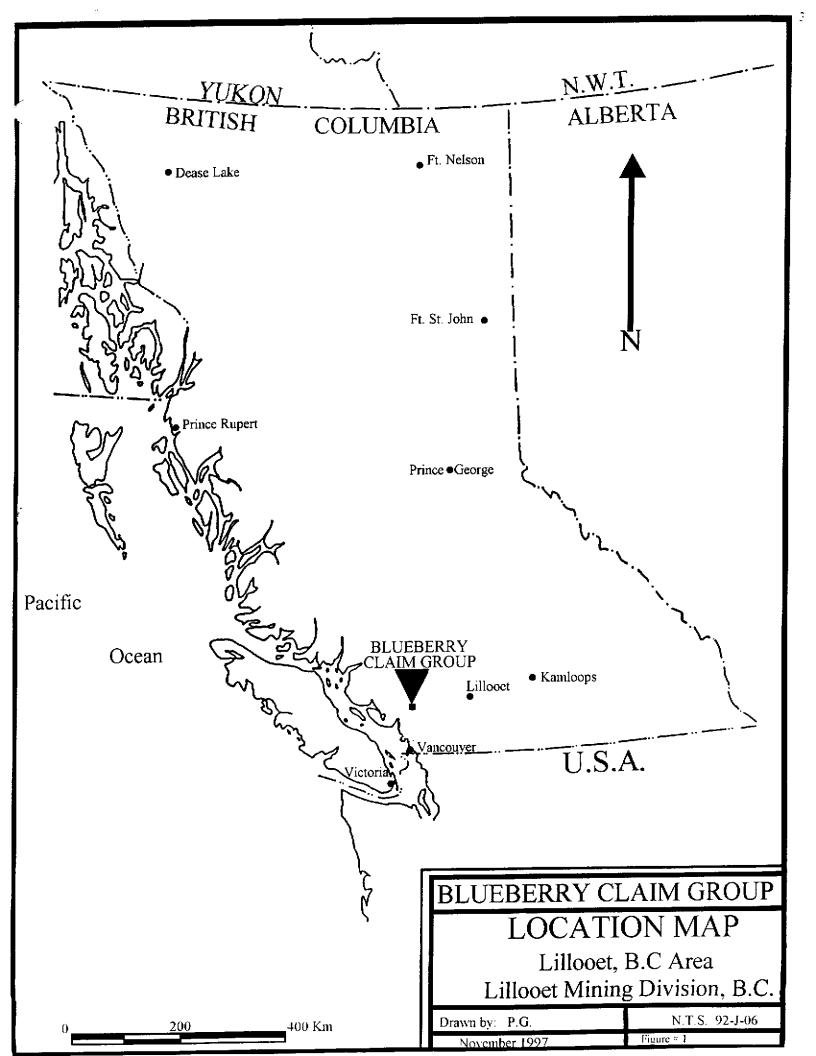
Southern Gold Resources Ltd.'s 1997 program was aimed at evaluating the economic potential of possible epithermal gold bearing systems on the property. A 4 day geological (mapping and rock chip sampling) program was conducted from September 1<sup>st</sup> to September 24<sup>th</sup>, 1997. The program was concentrated chiefly on the sheared felsic gossans (specifically the "main showing") which yielded highly anomalous gold and copper results. The property was examined to a) prospect for extensions to the main gossan or any uncovered mineralized zones, b) grubbed and systematically sample (for subsequent analysis) the main showing; a felsic gossan, and c) geologically map the main

showings on the property. 32 *in situ* rock chip samples were collected over the course of the program by Southern Gold Resources Ltd. and analyzed for 31 element ICP plus gold by fire assay. A Trimble Scoutmaster Global Positioning System (GPS) was used to determine the sample locations of the 32 rock samples. 14 additional rock samples were collected and analyzed by Michael Renning before staking was initiated (included herein, but not costed toward the assessment credits).

Geological mapping identified the main rock types on the property as Cadwallader Group mafic to intermediate massive flows with abundant porphyritic phases and intrusive felsic dykes. The intermediate porphyrys on the property are variably altered and sheared, the well sheared and altered intrusive felsic dykes are gossanous and metaliferous (chiefly pyrite and chalcopyrite assaying up to 1.67% Cu, and 0.290 oz/t Au).

Minor historically producing areas such as Tenquille Lake, Copper Mound, Donelly Creek, and the more northern Engineer and Railroad Properties are all proximal to this property. Such properties lie within the same geological framework as the Blueberry Claim Group, Triassic roof pendant lithologies proximal to Jurassic intrusives.

Favorable geology, significant geochemical values, and a location close to highways, power, and the community of Pemberton, B.C. render the Blueberry Claim Group an attractive target for further, more detailed exploration and work.



## **INTRODUCTION**

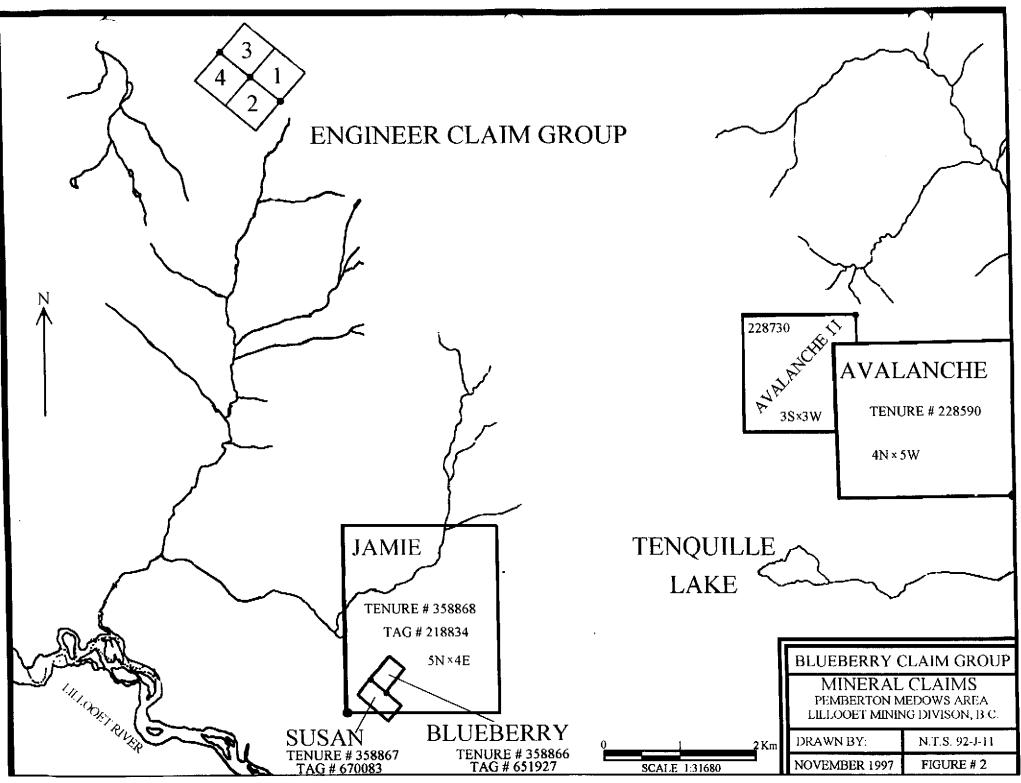
This report, written for government assessment work requirements, discusses the results of a 4 day geological and prospecting program conducted on the Blueberry Claim Group in September, 1997 by Southern Gold Resources Ltd.

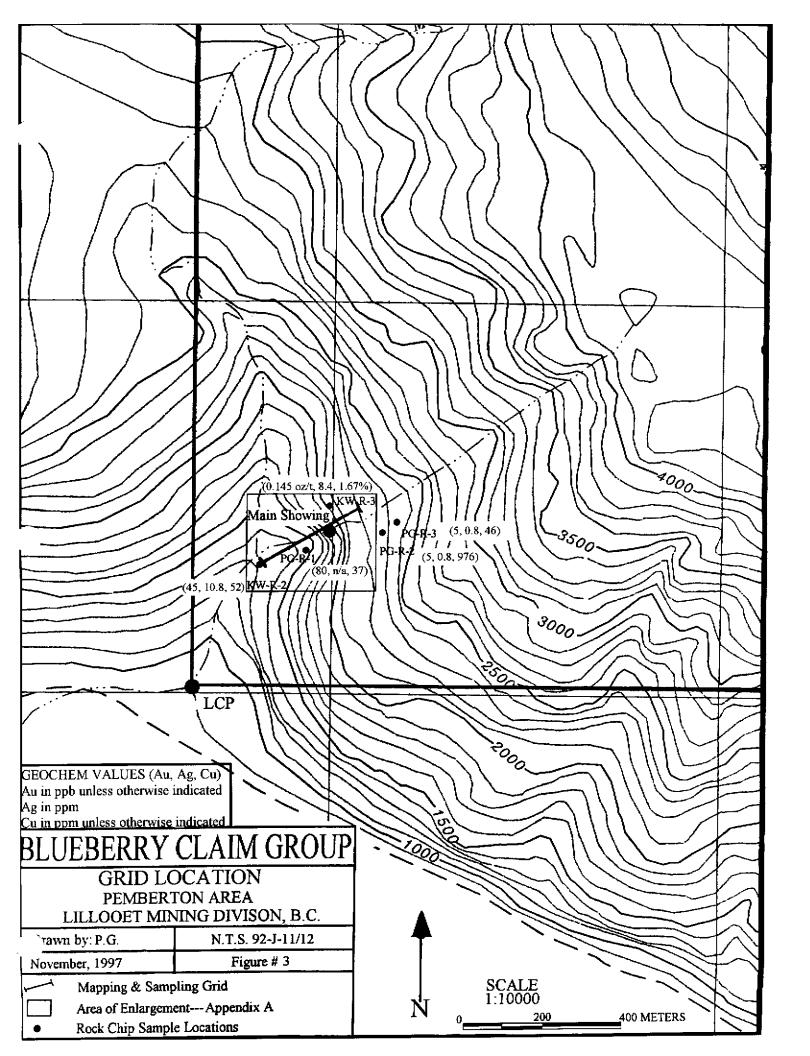
This year's program concentrated on the southeast corner of the Jamie mineral claim, near the "main showing," a gossanous sheared felsic zone (See Figure 2 and Figure 3). The 20 unit, 4-post Jamie mineral claim was staked by Michael Renning acting as an agent for Southern Gold Resources Ltd. to cover the gossanous zone which yielded significantly anomalous gold and copper values( 0.290 oz/t Au and 1.6% Cu).

The property is one of a number of gold-base metal prospects lying along the eastern edge of the Coast Plutonic Complex. Bralorne-Pioneer Mine (past production of 7.95 million tons @ 0.552 oz/ton Au recovered grade) lies 25 kilometers northeast, and the Northair Mine (345,700 tons @ 0.34 oz/ton Au recovered grade) lies 47 kilometers south. The proximal Tenquille Lake area (4 km northeast) is known to host skarn and epithermal gold mineralization within the same Cadwallader Group rock sequence.

Prospecting on the property revealed few significant extensions to the main gossan on the property. Several small metaliferous veins (approximately 1 centimeter average width, assaying 70 ppb Au and 100 ppm Cu) with a parallel strike to the major mineralized zones were located 200-300 meters from the main showing. Further, additional sheared and altered felsic zones were discovered within 30-50 meters of the main showing; again paralleling the strike of the Main gossan. These widespread mineralized veins and dykes yielded anomalous mineral content (70 ppb Au and 100 ppm Cu), could indicate a substantial epithermal system at depth on the property.

The Blueberry Claim Group covers an area of steep topography (25-35% grade), with little soil or vegetation. Exposure is dominant throughout the claim, and steep talus slope gullies cross-cut the entire southern portion of the property.





## LOCATION AND ACCESS

The Blueberry Claim Group is located 25 kilometers northwest of Pemberton, B.C., and 4 kilometers west of Tenquille Lake (Lat. 50°31'; Long. 123°00'; N.T.S. Map 92 J/10 and 92/J 11). Property access is feasible via B.C. Highway 99 from Vancouver to Pemberton B.C., the Hurley River Road north of Pemberton Meadows BC. offers the final access. 3.8 kilometers from the beginning of the well maintained gravel Hurley River Road lies a forestry sorting yard to the north. 1.2 kilometers upstream of the small Mowich Creek which flows through the sorting yard lies a large waterfall (20-35 meters high), the main showing is an additional 300 meters up slope from the waterfalls. Steep slopes make access treacherous, however the steep talus slope dominated gullies provide reasonable access. The legal corner post of the main, 20 unit, 4-post Jamie claim lies on the creek bank at the very eastern edge of the sorting yard (See Figures 2 and 3).

## PHYSICAL FEATURES AND CLIMATE

The Blueberry Claim Group covers the southeast side of the steep Tenquille Mountain slope, with precipitous grades on the property ranging from 25-35%. Talus slopes dominate the slide gullies that constitute the bulk of the property; vegetation is limited to small scrubby brushes within these gullies. Ridges between the gullies do have some minor soil coverage (> 1 meter), and are sparsely forested with large Spruce and Fir trees. Exposure is predominant, as little overburden exists on such declivitous slopes. Large moss mats (up to 20 centimeters thick) cover some outcrops.

The Tenquille Mountain slope is one of many situated in the steep Coast Mountain Range of the region. These mountains are characterized by rugged ice capped peaks and heavily forested valleys. Elevations in the region range from 300 meters to over 2700 meters, property elevation ranges from 350 meters to 1250 meters above sea level. The Lillooet River represents the major drainage for this area, and drains into the Lillooet Lake approximately 30 kilometers southeast. Lower lying parts of the property are covered with thick glacial overburden, as is the entire Lillooet River flood plain.

Summer temperatures can reach 35 °C plus, while winter temperature can fall to -20 °C. Snow beings to accumulate in late October and can linger in secluded shady spots until mid-June.

## **CLAIM STATUS**

The Blueberry Claim Group is comprised of 1, 20 unit, 4-post mineral claim (Jamie; 5N×4E) and two additional fractional unit 2-post mineral claims, Blueberry and Susan respectively. The properties were staked by Michael Renning for Southern Gold Resources Ltd. and recorded in the Lillooet Mining Division of B.C.

The underlying table lists the mineral claims of the Blueberry Claim Group:

CLAIM <u>NAME</u>	<u>UNITS</u>	TENURE <u>NO.</u>	RECORDED OWNER	DATE OF <u>RECORD</u>	EXPIRY* <u>DATE</u>
Jamie	20	358868	Southern Gold	Aug. 24, 1997 /	Aug. 24, 1999
Susan	1	358867	Southern Gold	Aug. 23, 1997	Included
Blueberry	1	358866	Southern Gold	Aug. 23, 1997	Included

\*(Expiry dates are based upon the acceptance of this report for assessment work credits)

The Susan and Blueberry Claims have been filed for inclusion into the Jamie claim, and will therefore not be reported on further.

## **HISTORY**

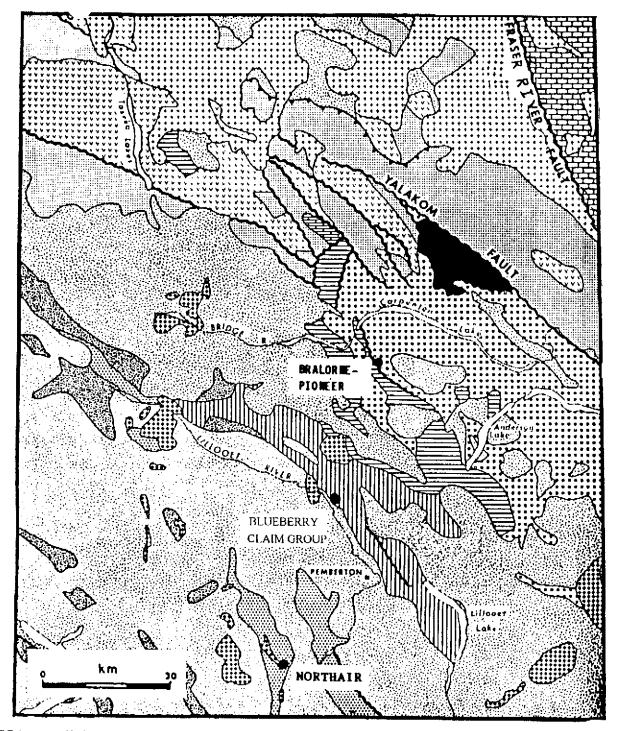
Pemberton B.C. and surrounding areas have been the target of mineral exploration since the 1890's, most intensely from 1900 to 1930 when the Pacific Great Eastern Railway was under construction. Early exploration was focused specifically on skarntype deposits offered by the limestone interbeds of the Cadwallader Group. The Tenquille Lake area received significant attention from early prospectors. The Gambier Group metasediments, adjacent and associated with the Cadwallader Group rocks, were an additional exploration target from the 1900's through to the present. The major exploration and production activities of the area were centered in the northern area of Bralorne-Goldbridge. An excellent synopsis of early exploration in the region is presented in Cairnes (1925).

Proximal properties to the Blueberry Claim Group include: The Railroad Property (10 kilometers northwest), the Avalanche Properties (4 kilometers east), and the Engineer Claim Group (5 kilometers north). The Railroad property is located on Grouty Peak, and covers rusty, gossanous felsics within basaltic andesites and feldspar-porphyry dikes. The Avalanche Properties cover the area just north of Tenquille Lake, which overlies a skarntype Cadwallader Group Au, Cu, Zn, and Mo deposit. Exploration continues through the present in this entire region.

## **REGIONAL GEOLOGY**

The region surrounding the Blueberry Claim Group is located on the eastern margin of the Jurassic to Tertiary Coast Intrusive Plutonic Complex, a Canadian Cordilleran north-west trending tectonic belt (Cairnes, 1924). Within this belt, the structural grain is characterized by northwest-striking faults, pendants, and structures. A north-west trending roof pendant of upper Triassic volcanic and sedimentary rocks (andesite flows, tuffs, breccias, and rhyolitic flows); the Cadwallader Group, is entrained within the granitic to granodioritic Coast Plutonic Complex (Woodsworth, 1977). The Cadwallader Group represents a Triassic island-arc assemblage, now a roof pendant, with occurrences of volcanic felsites. The Upper Triassic and batholithic rocks occupy the greater part of the regional map area, and intruded. deformed, and metamorphosed the volcanic and sedimentary sequences of the Cadwallader Group. An extensive northwest trending fault (the Owl Creek Fault: northeast side up sense of motion) bisects the region and separates the Cretaceous Gambier Group metasediments (footwall) from the Cadwallader roof pendant (hanging wall) (Riddell, 1992). The Owl Creek Fault terminates in the upper Lillooet River Valley. The Owl Creek Fault appears to be offset by a number of distinct conjugate faults that trend northeast. See Figure 4 for illustrated regional geology and rock descriptions.

Regional mineralization is chiefly genetically related to adjacent batholithic intrusives (a large heat source), and occurs historically in both the Cadwallader and Gambier Group rocks. Bralorne and Goldbridge are examples of such mineral deposits located in the Coast Plutonic Complex proximal Cadwallader and Gambier Group metasediments.



### LEGEND

#### TERTIARY

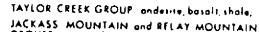
Bosalt, andesite, docite

GARIBALDI GROUP and related rocks andesste,

### UPPER CRETACEOUS

KINGSVALE GROUP andesite basali orkose. KKXXXII conglamerate, greywacke

### JURASSIC and/or LOWER CRETACEOUS



GROUPS greyworke, orkose, conglomerate

Undivided andesite basali, shale, greewacke

Metamorphosed sediments and volcanics

UPPER TRIASSIC

ET ITAUGHTON GROUP limestone

CADWALLADER GROUP orgiliste, greenstone, limestone, diorite

Melamorphosed sediments and volcanics, in part equivalent to Cadwollader Group

MIDDLE TRIASSIC and (?) OLDER

BRIDGE RIVER GROUP cheri, orgilfite, bosali,

PERMIAN and TRIASSIC

Ultramatic rocks

## PENNSYLVANIAN and TRIASSIC

CACHE CREEK and PAVILION GROUPS greenstone, argillite, basalt, limestone, chert

AGE MOSTLY UNKNOWN

Plutonic rocks, mainly granadiarite and quartz

Migmatitic complexes

Fault ~~

Thrust fault

FIGURE #4 REGIONAL GEOLOGY OF PEMBERTON AREA (AFTER WOODSWORTH, 1977)

## **PROPERTY GEOLOGY**

A sequence of Triassic age Cadwallader Group rocks have been identified to underlie the Blueberry Claim Group (Cairnes, 1925; Roddick and Hutchinson, 1973; Woodsworth. 1977, and Riddell, 1992). A mafic volcanic unit of dark green to black basaltic andesite dominates the property's geology; along with lesser feldspar-porphyry phases. Felsic flows and dykes intrude this formation, and trend northwest across the property. Quartz feldspar porphyrys on the property are variably altered and sheared, the well sheared and altered intrusive felsic dykes are gossanous and metaliferous (chiefly pyrite, chalcopyrite, and anomalous gold). A entire range of porphyritic rocks lie within claim boundaries, from unaltered massive porphyrys to sheared, altered, and disseminated pyrite bearing rocks. The porphyritic rocks adjacent to the metaliferous felsite dykes, are sheared parallel to the strike of the veins, and are mineralized with disseminated pyrite. This would indicate a possibly violent intrusion (injection ?) of these felsite dykes into the porphyrys. The unaltered Cadwallader mafic (basaltic-andesite) is preferentially fractured around 040° throughout the property; and fracture filling sulphide mineralization (pyrite and chalcopyrite) is evident within gossans proximal to the mafic host rock.

The mafic hosted mineralized zones are of two main types; gossanous felsic zones and massive pyritic veins. Mineralization on the property occurs in significant quantities, only at the contacts between the felsite and porphyry. These metaliferous contact zones can range in width from >1 centimeter to greater than 2.5 meters, including a mineralized alteration halo. Small (>3 centimeter) mineralized veinlets (green with malachite staining) strike parallel (040°) to sub-parallel with the large gossanous mineralized zones, and are abundant within 10-15 meters of such major mineralized zones. The main showing, a limonitic gossan is characterized by abundant disseminated pyrite, chalcopyrite, arsenopyrite, and extreme silicification and alteration. High precious metal values of up to 0.29 oz per ton Gold and 1.67 % Copper have been found within the gossanous zone. Assay results are inconsistent, but maintain anomalous values, along the length of the gossan, results 97-PG-6-R-4 through 97-PG-6-R-24; appendix B represents a 40 meter transect along strike of the gossan.

Pyrite is undoubtedly the most abundant sulphide on the property, and occurs chiefly as disseminations within the sheared limonitic gossans as elongate blebs to coarse cubic form (5-8 mm). Chalcopyrite occurs as associated disseminations, or as fracture filling mineralization within fresh unaltered mafics. Highly anomalous Au and Ag values are also obtained from the main showing.

The massive pyritic veins are best exposed at station 0+00E on the mapping baseline (See Appendix A), they strike at approximately 040° and pinch and swell along strike from 1 cm to 15 cm, with an average width of 10 cm. The mafic Cadwallader host rock is penetratively altered (red-orange rusty alteration with associated disseminated pyrite) for approximately 4 meters on either side of the pyritic veins. The central portion of these pyritic veins is hosted within a cherty zone (gray white to green on fresh surface) coeval with the pyrite veins. Unaltered mafic Cadwallader (dark, fine grained, crystalline, and black-green) surround the pyritic chert. Small fracture surfaces within the mafic Cadwallader rocks do contain some minor mineralization proximal to any alteration zones.

The sulphide mineralization appears to accompany the most recent mineralizing event on the property, and appears syngenetic with possible remobilization and concentration of metals due to the heat generated by the late intrusive felsic dykes. All significant mineralization is constricted to lithological contacts between the felsites and the porphyry. The Cadwallader mafic and porphyry are coeval, as small enclaves of porphyry (3-7 cm) are visible within the mafic near their contacts.

## **1997 WORK PROGRAM**

A total of 10 man days were spent on the Blueberry Claim Group between September 1<sup>st</sup> to 24<sup>th</sup>, 1997. Work included large scale geological mapping and prospecting of the property, with concurrent geochemical sampling. 32 rock samples were collected and sent for analysis to Eco-Tech Labs Inc., Kamloops B.C. for 31 element ICP plus gold fire assay (See Appendix C for analytical procedures). Figure 3 indicates the locations of all rock chip samples as located by the Trimble Scoutmaster Global Positioning System (GPS). All positions are accurate to within 35 meters, and were used in plotting sample locations. Rock samples 97-PG-6-R-4 to 97-PG-6-R-24 were collected every 2 meters over the width of the gossan, for the entire length of the exposed main showing; 40 meters (See Appendix B). A diagram of sample locations and gossan width variation was constructed, and is presented in appendix B.

A 230 meter baseline was laid down to tie together the two main metaliferous zones of the property (the massive pyritic veins and main showing), and for mapping control (See Appendix A).

## CONCLUSIONS AND RECOMENDATIONS

Exploration of the Blueberry Claim Group during the summer of 1997 has led to the discovery and analysis of a significantly sized sheared limonitic gold and copper bearing gossan. The lithology and 040° bearing shear structures in the area provide a favorable geological environment for hosting an epithermal precious metal deposit. The combination of highly anomalous gold and copper values, and the relatively convenient location of this property to access is justification for further work. It is the authors' belief that a larger extension of the main showing's surface expression may lie at depth, so more intensive and detailed geological mapping, rock chip sampling, and a low cost trenching program are warranted for next season's program.

Geological mapping has outlined an area of sheared and altered rock with associated intrusions of felsic dykes. The so called "main showing" gossan represents the most interesting economic target yet revealed on the property. The gossan is at least 40 meters long (to the limits of excavation) and averages around 1 meter wide over its length (See figure 4). Anomalous Au, Ag, Cu values were encountered over the entire 40 meters of sampling (see Appendix D).

Trenching or blasting are recommended to further constrain the shape, size, and distribution of the main gossan at depth. Further, more accurate knowledge of the structures controlling mineralization may be attained by more detailed mapping over more of the property.

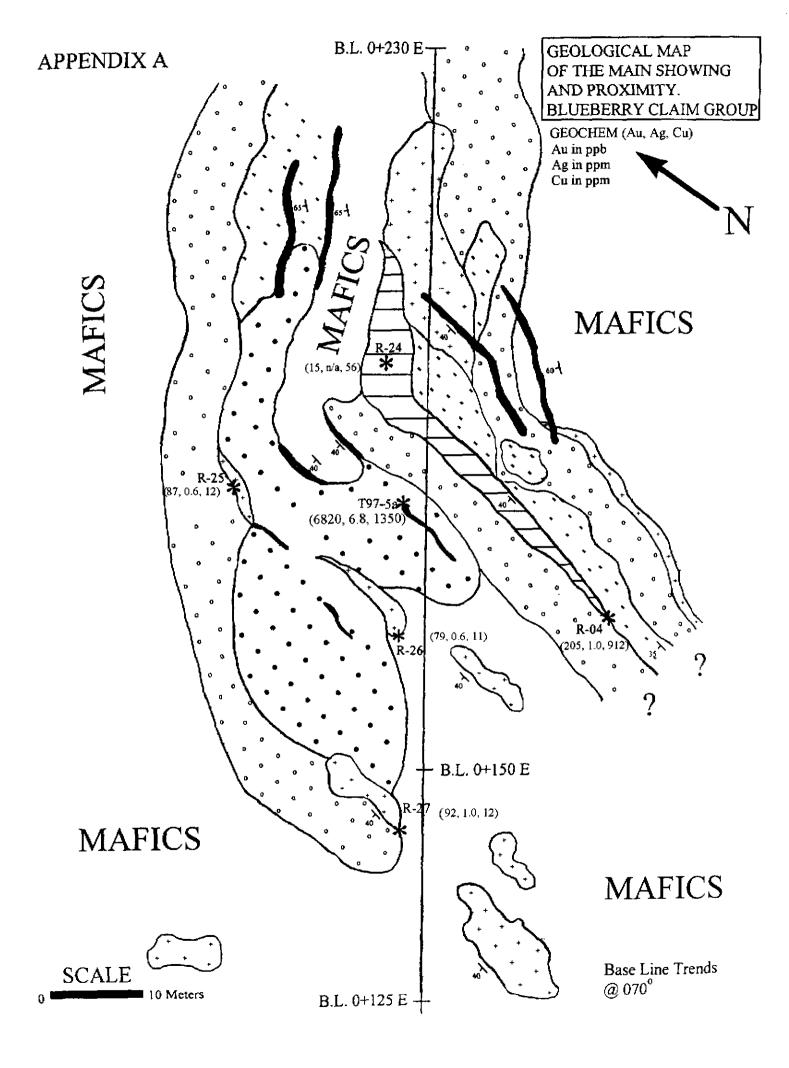
Previous exploration may have concentrated too far up slope and not on this specific geological situation. Research for any mention of this location, similar gossans, or indeed any performed work on this area proved to be fruitless.

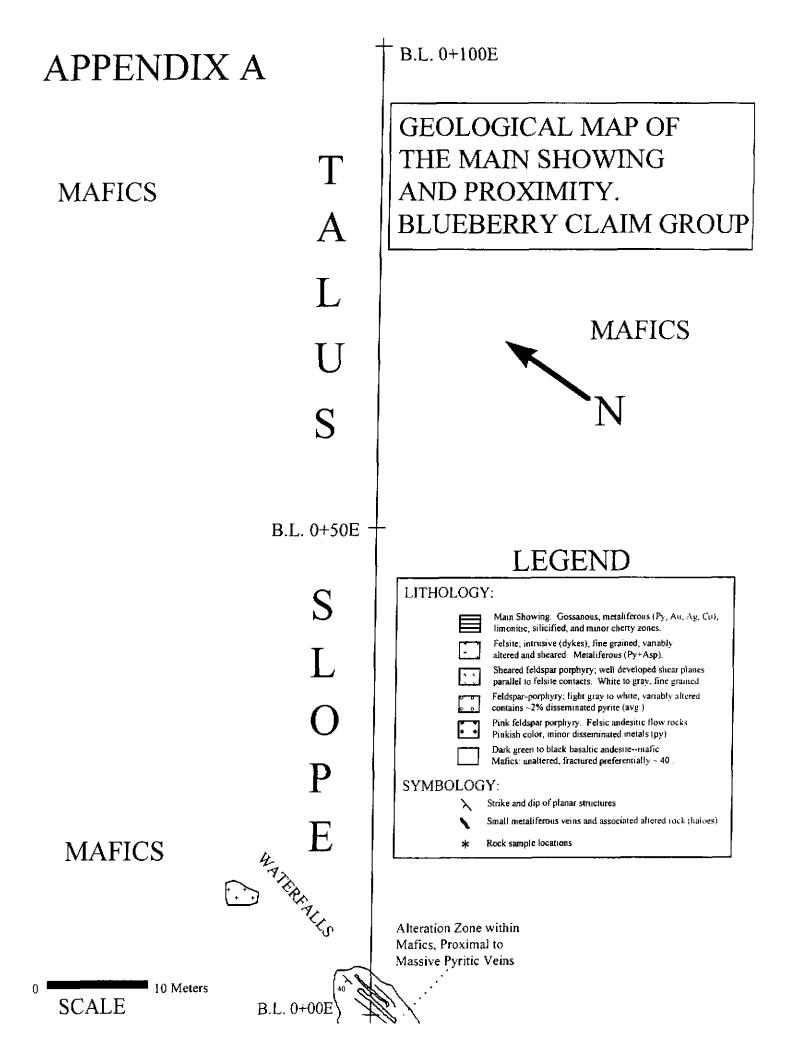
Vancouver, B.C.

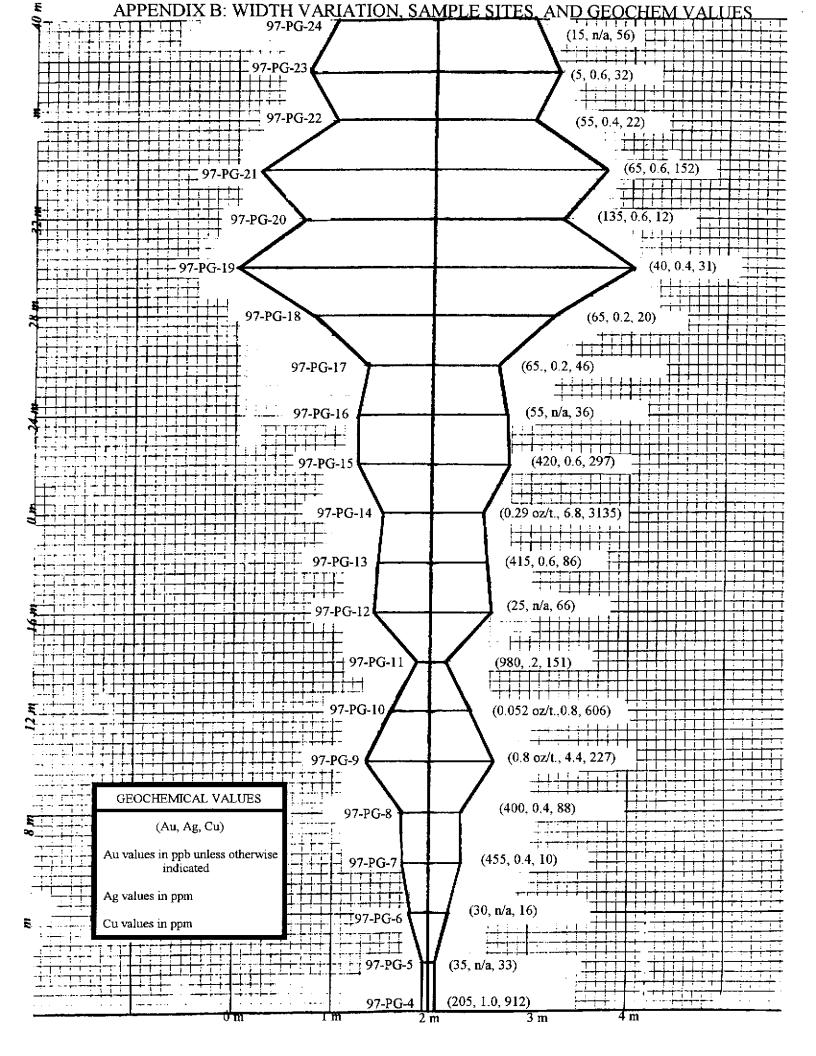
November 1997

## REFERENCES

- 1925 Cairnes, C.E. Pemberton Area, Lillooet District, B.C., Geological Survey of Canada Summary Report 1924, Part A, pp. 77-99.
- 1973 Roddick, J.A. and Hutchison, W.W. Pemberton (East Half) map area, British Columbia, Geological Survey of Canada, Paper 73-17, 21 pages.
- 1977 Woodsworth, G.J. Pemberton (92J) map area, British Columbia; Geological Survey of Canada, Open File 482.
- 1992 Riddell, Janet, M. Structure, Stratigraphy, and contact Relationships in Mesozoic Volcanic and sedimentary Rocks, East of Pemberton, Southwestern British Columbia. Masters Thesis
- 1994 J.M. Journeay and J.W.H. Monger, Geology and crustal structure of the southern Coast and Intermontaine Belts, southern Canadian Cordillera, British Columbia; Geological Survey of Canada, Open file ???, scale 1:500,000.







## <u>APPENDIX C</u> ANALYTICAL RESULTS

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10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 6T4 Phone (250) 573-5700 Fax (250) 573-4557

## CERTIFICATE OF ASSAY AK 97-1008

SOUTHERN GOLD RESOURCES 1540-750 WEST PENDER VANCOUVER, BC V6C 2T8

### ATTENTION: ALAN SAVAGE

No. of samples received: 35 Sample type: Rock PROJECT #:AL - 95 SHIPMENT #: Not Given Samples submitted by: Rob Shepard

		· Au	Au	Cu		
ET #.	Tag #	(g/t)	(oz/t)	(%)		
9	97-PG-6-R-09	2.75	0.080		· · · · ·	
10	97-PG-6-R-10	1.79	0.052			
14	97-PG-6-R-14	9.95	0.290			
32	97-KW-6-R-03	4.96	0.145	1.67	-	

### QC/DATA:

Standard:

CPB-1

0.25

XLS/97 fax: 604-681-1339 cc: southern gold whistler - fax: 604-905-4185

ECO-TECH LABORATORIES LTD

ECO-TECH LABORATORIES LTD Frank J. Pezzotti, A.Sc.T. B.C. Certified Assayer

22-Sep-97



# **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: SOUTHERN GOLD

1540 - 750 W. PENDER ST. VANCOUVER, BC V6C 2T8 Page Number 1-A Total Pages 1 Certificate Date05-SEP-07 Invoice No. I-9739836 P.O. Number ; Account ;

Project :

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Comments: ATTN: ALAN SAVAGE CC: MICHAEL RENNING

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SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Au FA g/t	Ag ppm	A1 3	As ppm	Ba PPm	Be ppm	Bi pp <b>n</b>	Ca 1	Cd ppn	Co ppn	Cr ppu	Cu ppm	Fe 1	Ga ppm	Hg	K ł	La ppm	Mg
<b>F97 - 5A</b> F97 - 5B F97 - 5C F97 - 5D F97 - 5B	205 226 205 226 205 226 205 226 205 226 205 226	>10000 5740 1900 1335	•••••	6.8 9.4 8.2 1.8 2.2	1.47 0.77 1.12 1.33 1.68	< 2 34 64 < 2 < 2	110 120 230	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	282 222 112 100 26	0.17 0.08 0.24 0.39 0.44	<pre>&lt; 0.5 0.5 0.5 &lt; 0.5 &lt; 0.5 &lt; 0.5</pre>	64 23 20 17 19	39 77 31 31 45	1350 1055 303 359 713	6.76 6.97 5.87 6.19 5.99	<pre> &lt; 10  &lt; 10 &lt;&lt; 10</pre>	<pre></pre>	0.30 0.45 0.20 0.41 0.43	<pre></pre>	0.54 0.13 0.56 0.70 1.00
T97-57 T97-56 T97-56 M97-9 M97-10 M97-12	205 226 205 226 205 226 205 226 205 226 205 226	920 95 < 5 5		1.4 0.8 0.4 < 0.2 0.2	1.71 0.91 1.24 0.17 2.38	<pre></pre>	270 140 20	<pre>&lt; 0.5 &lt; 0.5 &lt; 0.5 &lt; 0.5 &lt; 0.5 &lt; 0.5 &lt; 0.5</pre>	24 6 6 < 2 2	0.15 0.01	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	20 24 35 25 26	34 37 36 71 108	137 17 14 19 15	7.29 5.37 5.84 6.39 6.26	<pre> 10   &lt; 10</pre>	<pre>&lt; 1 &lt; 1</pre>	0.34 0.37 0.40 0.14 0.30	< 10 < 10 < 10 < 10 < 10 < 10 < 10	0.98 0.43 0.63
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CERTIFICATION:



# **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Asseyers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: SOUTHERN GOLD

1540 - 750 W. PENDER ST. VANCOUVER, BC V6C 2T8 Page Number 1-B Total Pages 1 Certificate Date 05-SEP-97 Invoice No. I-9739836 P.O. Number : Account :

Project :

Comments: ATTN: ALAN SAVAGE CC: MICHAEL RENNING

	<u> </u>	··							CERTIFICATE OF ANALY							A973	9836	
SAMPLE DESCRIPTION	P B R P CODB	Mn ppm	No Ppm	Ja t	Ni ppm	P PPm	Pb Ppm	Sb PPm	Sc ppm	Sr ppm	Ti 1	T1. ppu	U D	V PPm	W Ppm	Zn ppm		
T97-5A T97-5B T97-5C T97-5D T97-5E	205 226 205 226 205 226 205 226 205 226 205 226	1895 925 820 695 925	L 3 1 2 3	0.02 0.02 0.03 0.03 0.04	8 3 6 8 13	720 540 680 810 870	28 98 72 6 < 2	< 2 < 2 < 2 < 2 < 2 < 2	1 1 1 3 5	- 11 <	0.01 0.01 0.01 0.05 0.05	<pre>&lt; 10 &lt; 10</pre>	<pre></pre>	22 12 22 36 49	10 260 320 160 10	58 78 94 52 70		
T97-5P T97-5G T97-5H M97-9 M97-10	205 226 205 226 205 226 205 226 205 226 205 226	975 570 615 5 570	7 15 3 49 4	0.03 0.03 0.03 0.02 0.03	16 9 13 2 48	820 700 780 180 900	2 18 2 < 2 < 2 < 2	<pre></pre>	4 3 3 < 1 7	14 20 45 6 < 19 <	10.0 10.0 10.0 10.0 10.0	<pre></pre>	<pre>&lt; 10 &lt; 10</pre>	49 29 30 2 75	10 10 < 10 < 10 < 10	94 66 62 < 2 66		
м97–12 Falls IMW Г97–6а Г97–6в	205 226 205 226 205 226 205 226 205 226	2610 785 845 290	< 1 87 5 15	0.02 0.03 0.02 0.03	18 6 6 3	810 940 600 570	6 428 136 96	< 2 2 6 6	5 1 1 < 1	28 < 14 <	0.01 0.01 0.01 0.01 0.01	< 10 < 10 < 10 < 10 < 10	<pre>&lt; 10 &lt; 10 &lt; 10 &lt; 10 &lt; 10 &lt; 10 &lt; 10</pre>	30 18 9 8	< 10 < 10 < 10 < 10 < 10 < 10	166 334 92 52		
				·														

ECO-TECH LABORATORIES LTD. 10041 East Trans Canada Highway KAMLOOPS, B.C. V2C 6T4

Phone: 604-573-5700 Fax : 604-573-4557

### ICP CERTIFICATE OF ANALYSIS AK 97-1008

SOUTHERN GOLD RESOURCES LTD. 1540-750 WEST PENDER VANCOUVER, BC V6C 1T8

#### ATTENTION: ALAN SAVAGE

No. of samples received: 35 Sample type: Rock PROJECT #:AL - 95 SHIPMENT #: Not Given Samples submitted by: Rob Shepard

### Values in ppm unless otherwise reported

Et #	i. Tag #	Au(ppb)	Ag	AI %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Мо	Na %	Ni	Р	Pb	Sb	Sn	Sr Ti%	U	۷	W	Y	Zn
1	97-PG-6-R-01	75	<0.2	0.98	<5	45	30	0.96	<1	68	85	37	4.48	<10	0.57	367	72		23	1440	14	<5	<20	38 0.40	<10	87	<10	13	27
2	97-PG-6-R-02	5	0.8	0.37	30	620	<5	1.17	<1	2	33	976	1.01	<10	0.04	1021	2	0.02	<1	350	34	<5	<20	17 <0.01	<10	2	<10	2	69
3	97-PG-6-R-03	5	0.8	0.41	<5	715	<5	>10	12	37	10	46	8.76	<10	4.77	5430	5	0.02	24	210	30	<5	<20	261 0.02	<10	57	<10	<1	809
4	97-PG-6-R-04	205	1.0	1.96	<5	100	<5	0.62	<1	22	47	912	6.64	<10	1.17	1718	7	0.05	14	890	8	<5	<20	26 0.05	<10	51	<10	<1	110
5	97-PG-6-R-05	35	<0.2	0.82	<5	320	10	0.13	<1	14	38	33	5.91	<10	0.41	673	27	0.02	9	850	4	<5	<20	<b>14 &lt;</b> 0.01	<10	26	60	<1	48
																			_		-	. –		40.004		40	420	~4	10
6	97-PG-6-R-06	30	<0.2	0.50	<5	250	5	0.04	<1	3	33	16	4.27	<10	0.19	95	13	0.04	<1	640	6	<5	<20	18 < 0.01	<10	13	130	<1 <1	13 15
7	97 <b>-PG-6-</b> R-07	455	0.4	0.32	<5	155	10	0.05	<1	5	35	10	2.88	<10	0.06	143	8	0.03	<1	600	4	<5	<20	10 <0.01	<10		<10	<1	21
8	97-PG-6-R-08	400	0.4	0.57	<5	85	<5	0.10	<1	8	39	88	3.54	<10	0.18	195	10	0.02	<1	560	6	<5	<20	21 < 0.01	<10	9	20 70	<1	184
9	97-PG-6-R-09	>1000	4.4	0.95	<5	80	65	0.26	<1	30	41	227	7.42	<10	0.39	834	14	0.03	3	710	332	<5 - 6	<20	25 0.02	<10	26	110	-1	69
10	97-PG-6-R-10	>1000	0.8	1.48	<5	105	<5	0.58	<1	28	49	606	6.37	<10	0.99	980	5	0.05	8	1000	10	<5	<20	28 0.08	<10	44	r iu	•	05
												. – .				700	~	0.04	-	1040	6	<5	<20	30 0.02	<10	36	<10	<1	57
11	97-PG-6-R-11	980	0.2	1.38	<5	115	<5	0.42	<1	15	44	151	8.01	<10	0.70	798	9	0.04	э 14	1040 1140	8	~⊃ <5	~20 <20	108 0.12	<10	- 30 - 81	<10	-1	65
12	97-PG-6-R-12	25	<0.2	1.95	<5	85	10	1.01	<1	26	28	66	7.27	<10	1.42	1139	3	0.06	14	860	-	~\$ <5	~20 <20	92 0.04	<10	48	100	<1	57
13	97-PG-6-R-13	415	0,6	1.48	5	110	15	0.21	<1	30	32	86	5,19	<10	1.02	652	9	0.04	6	790	10	~5 <5	<20 <20	16 0.03	<10	50	<10	<1	81
14	97-PG-6-R-14	>1000	6.8	1.36	<5	80	495	0.25	<1	19	33	3135	8.76	<10	0.65	932	8	0.05	38	1260	34 8	<5	<20	27 0.05	<10	84	<10	<1	132
15	97 <b>-PG-6-</b> R-15	420	0.6	2.63	<5	85	<5	0.67	<1	20	46	297	8.01	<10	2.12	1640	6	0.05	30	1200	0	~0	~20	27 0.03	510	04	-10	- 1	
					_							20	C 60	<10	1.53	1430	9	0.05	18	890	4	<5	<20	111 0.05	<10	74	<10	<1	85
16	97-PG-6-R-16	55	<0.2	2.01	<5	150	10	1.00	<1	30	45	36	6.69 7 72	<10	1.12	778	17	0.03	13	980	10	<5	<20	37 0.10	<10	76	<10	<1	71
17	97-PG-6-R-17	65	0.2	1.73	<5	90	15	0.50	<1	97	48	46	7.73	<10	0.93	933	12	0.03	12	840	8	<5	<20	19 0.03	<10	52	40	<1	67
18	97-PG-6-R-18	65	0.2	1.39	<5	125	10	0.28	<1	83	31	20	6.88	<10	0.93	903	10	0.04	3	830	6	<5	<20	17 <0.01	<10	26	50	<1	61
19	97-PG-6-R-19	40	0.4	0.64	<5	255	5	0.18	<1	17	46	31	4.88 4.71	<10	0.30	905 456	8	0.03	3	780	6	<5	<20	12 < 0.01	<10	15	<10	<1	40
20	97-PG-6-R-20	135	0.6	0.43	<5	100	10	0.23	<1	18	41	12	4.71	~10	0.19	450	0	0.05	5	700	•	·••	-20	12 0.01	0	10			
										60	42	152	7.84	<10	1.23	2263	10	0.03	34	1160	10	<5	<20	18 0.02	<10	57	<10	<1	97
21	97-PG-6-R-21	65	0.6	1.43	<5	80	<5	0.53	<1	53		22	5.77	<10	0.43	808	9	0.03	15	950	.0	<5	<20	9 <0.01	<10	23	<10	<1	57
22	97-PG-6-R-22	55	0.4	0.72	<5 -5	90	10	0.24	<1 -1	29 42	49 44	32	5.77 7.37	<10	0.43		9 8	0.02	26	1130	10	<5	<20	13 0.02	<10	49	<10	<1	108
23	97-PG-6-R-23	5	0.6	1.48	<5	280	10	0.45	<1	42	44 61	રૂ∠ 56	7.33	<10	1.30	1565	7	0.02	34	1340	8	<5	<20	15 0.02	<10	81	10	1	110
24	97-PG-6-R-24	15	<0.2	1.79	<5	170	10	0.39	<1	29 17	61 43	33	3.95	<10	1.30	626	, <1	0.04	7	780	10	<5	<20	23 0.12	<10	30	<10	<1	41
25	97-PG-1-R-50	10	<0.2	1.76	<5	65	5	0.38	<1	17	40	33	9.90	~10	1.49	020		0.04	•	.00	10	÷Ų	20						. •

Et #	. Tag #	Au(ppb)	Ag	AI %	As	Ba	BI	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Мо	Na %	Ni	P	Pb_	Sb	Sn	Sr	TI %	U	۷	w	Y	Zn
26	97-PG-1-R-51	5	<0.2	0.98	<5	20	<5	0,29	<1	7	126	13	2.04	<10	0.75	259	2	0.02	9	370	4	<5	<20	17	0.11	<10	17	<10	1	27
27	97-PG-1-R-52	5		2.00	<5	50	<5	0.66	<1	18	67	100	2.99	<10	1.74	479	<1	0.02	11	750	6	<5	<20	32	0.16	<10	32	<10	3	64
28	97-PG-1-R-53	5	<0.2	0.79	<5	10	<5	0.39	<1	6	124	4	2.12	<10	0.48	149	4	0.02	4	220	4	<5	<20	43	0.05	<10	32	<10	<1	16
29	97-PG-1-R-54	5	<0.2	0.27	<5	<5	<5	0.31	<1	<1	124	18	0.40	<10	0.05	58	4	0.01	<1	40	<2	<5	<20	26	<0.01	<10	13	<10	<1	<1
30	97-KW-6-R-01	5	<0.2	0.68	<5	235	<5	1. <b>48</b>	<1	19	93	17	2.80	10	0.60	571	5	0.07	5	890	36	<5	<20	45	0,04	<10	36	<10	8	70
31	97-KW-6-R-02	45	10.8	0.21	<5	45	25	0.34	28	789	65	52	>10	<10	0.03	489	44	0.01	33	250	1938	<5	<20	13	<0.01	<10	4	520	<1	2141
32	97-KW-6-R-03	>1000	8.4	0.21	60	25	<5	0.07	<1	46	48	>10000	7.88	<10	<0.01	84	12	0.01	1	<10	90	<5	<20	3	<0.01	<10	4	20	<1	56
33	97-KW-6-R-04	30	0.2	0.28	<5	580	<5	1.58	<1	2	53	129	1.62	10	0.03	1065	4	0.03	<1	590	8	<5	<20	22	<0.01	<10	5	<10	2	53
34	97-KW-6-R-05	15	<0.2		<5	45	<5	1.70	<1	18	32	179	5.43	<10	1.31	903	3	0.05	<1	1540	6	<5	<20	39	0.12	<10	88	<10	4	51
35	97-KW-1-R-32		<0.2	1.05	<5	10	<5	0.08	<1	9	153	14	2.93	<10	0.44	354	6	0.02	8	230	4	<5	<20	1	<0.01	<10	22	<10	<1	42
OC DATA:																														
Repeat:																														
1	97-PG-6-R-01	80	<0.2	0.92	<5	35	30	0.94	<1	67	83	37	4.38	<10	0.55	350	69	0.10	21	1430	14	<5	<20	33	0.40	<10	86	<10	14	28
10	97-PG-6-R-10	>1000	0.6	1.57	<5	105	<5	0.61	<1	29	51	628	6.61	<10	1.03	1018	4	0.06	10	1040	8	<5	<20	30	0.08	<10	47	120	1	72
19	97-PG-6-R-19	30	0.4	0.73	<5	270	10	0.19	<1	18	49	29	5.06	<10	0.31	935	10	0.04	6	860	6	<5	<20	19	0.01	<10	28	50	<1	63
28	97-PG-1-R-53	-	<0.2	0.87	<5	10	<5	0.45	<1	7	133	7	2.28	<10	0.51	154	4	0.03	5	210	4	<5	<20	51	0.06	<10	35	<10	<1	18
<b>Standard:</b> GEO'97		140	1.0	1.63	50	140	<5	1.62	<1	18	54	80	3.82	<10	0.87	631	<1	0.03	21	610	20	<5	<20	55	0.10	<10	71	<10	5	67

df/998 XLS/97 fax: 604-681-1339 cc: southern gold whistler - fax: 604-905-4185 - Contr

ECO-TECH LABORATORIES LTD. Frank J. Pezzotti, A.Sc.T. B.C. Certified Assayer 16-Oct-97

ECO-TECH LABORATORIES LTD. 10041 East Trans Canada Highway KAMLOOPS, B.C. V2C 6T4

Phone: 604-573-5700 Fax : 604-573-4557

ICP CERTIFICATE OF ANALYSIS AK 97-1140

SOUTHERN GOLD RESOURCES LTD. 1540-750 WEST PENDER VANCOUVER, BC V6C 1T8

ATTENTION: ALAN SAVAGE

No. of samples received: 12 Sample type: Rock PROJECT #: AL-95 SHIPMENT #:Not Given Samples submitted by: Rob Shepard

Values in ppm unless otherwise reported

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Value	s in ppm unless other	rwise rep	Dettod										_				N #/	NI	р	РЪ	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
Et #	Tag #	Ag	AI %	As	Ba	Bi	Ca %	Cd	Co	Cr		Fe %	<u></u> <10	Mg % 0.48	<u>Mn</u> 486		Na % 0.01	17	100	10	<5	<20		<0.01	<10	11	<10	3	<b>26</b>
1	97-KW-4B-R-30	<0.2		- জ	40		2.65	<1	5	123	45	1.50 1.52	<10	0.48	491	3	0.01	17	100	12	<5	<20	138	<0.01	<10	11	<10	3	27 38
2	97-KW-4B-R-31	02	0.64	<5	40	<5	2.64	<	5 10	158 123	57	1.73	<10	0.49	444	6	0.01	24	210	12	<5	<20	4	0.08	<10	22	<10 <10	12	78
3	97-KW-48-R-32	<0.2	0.79	10	150	<5 -	0.08 0.03	<1 <1	<1	64	10	1.48	50	0.14	212	3	0.06	2	10	8	-5	<20		<0.01	<10 <10	<1 14	<10	<1	40
4	97-KW-4B-R-33	<0.2	0.49	<5 -5	15 76	<5 <5	0.05	<1	5	114	43	1.67	<10	0.36	219	9	Q.01	12	190	6	<5	<20	3	0.02	~10	1-4	-14	-	
5	97-PG-4B-R-105	<0.2	0.66	<5	70	~	0.00	-	•							_		40	~~~	٥	<5	<20	72	0.01	<10	10	<10	2	18
_		<0.2	0.38	<5	85	<5	1.57	<1	4	172	33	1.01	<10	0.27	379	3	0.01	13 22	200 1160	R	~ ~	<20	2	0.02	<10	70	10	<1	114
6	97-PG-48-R-106	0.8	2.37	15	80	30	Ũ. <b>26</b>	<1	76	50	12	>10	<10		1162	15 12	0.04 0.06	3	150	14	<5	<20	_	<0.01	<10	3	<10	<1	7
7	97-PG-6-R-25 97-PG-6-R-26	0.6	0.22	<5	75	5	0.03	<1	11	101	11	3.27	<10	0.02	79 1891	14	0.04	22	1060	10	<5	<20	1	0.02	<10	77	<10	<1	128
0	97-PG-6-R-27	1.0	2.49	<5	75	- 30		<1	90	46	12	>10 4.03	<10 <10	2.02 0.75		3	0.13	7	620	8	<5	<20	65	0.17	<10	21	<10	9	86
10	97-KW-1-R-32	<0.2	1.80	<5	985	10	0.82	<1	7	179	13	4.03	~10	Q.10		•											-40		112
								-4	41	53	326	9.64	<10	2.62	1745	<1	0.12	11	330	8	<5	<20	36	0.27	<10	277	<10 <10	3 <1	7
11	97-KW-1-R-33	<0.2		<5	70	<5 4		<1 <1	41	46	16	3.83	<10	0.14	141	4	0.04	<1	190	6	<5	<20	5	0.10	<10	17	~10	-	• -
12	97-KW-1-R-34	<0.2	0.42	<5	35	-5	0.04	~1	4																				
	ATA:																										-46	•	27
Repe	et:		0.00	-E	35	<5	2.64	<1	5	134	43	1.56	<10	0.48	492	6	0.01	17	100	12	<5	<20	141	<0.01	<10	11	<10	3	21
1	97-KW-4B-R-30	0.2	0.63	<5	30		<u></u>		-																				
<u> Cínn</u>	dard:										70	0.04	<10	0.96	663	<1	0.03	25	620	18	<5	<20	59	0.11	<10	74	<10	6	61
GEO		1.2	1.71	50	155	4	1.88	<1	20	64	79	3. <b>94</b>	510	0.80		- •													

df/1140 XLS/97 fax: 604-681-1339 cc: southern gold whistler - fax: 604-905-4185

ECO-TECH LABORATORIES LTD. Frank J. Pezzotti, A.Sc.T. per B.C. Certified Assayer

Page 1

### <u>APPENDIX D</u>

## Sampling and Analytical Procedures

## **Multielement ICP Analysis**

Samples are catalogued and dried. Soil samples are screened to obtain a -80 mesh sample. Rock samples are 2 stage crushed to -10 mesh and pulverized on a ring mill pulverizer to -140 mesh, rolled and homogenized.

A 0.5 gram sample is digested with aqua regia with beryllium which acts as and internal standard. The sample is analyzed on a Jarrel Ash ICP unit. Repeats and standards are used every time to ensure quality control.

### Gold Geochemical Analysis

Samples are catalogued and dried. Soils are prepared by sieving through a +80 mesh screen to obtain a -80 mesh fraction. Rock samples are 2 stage crushed to -10 mesh and a 250 gram subsample is pulverized on a ring mill pulverizer to -140 mesh. The subsample is rolled, homogenized and bagged in a pre-numbered bag. The sample is weighed to 10 or 30 grams and fused along with proper fluxing materials. The bead is digested in aqua regia and analyzed on a Atomic Absorption Instrument. Over-range values for rocks are re-analyzed using gold assay methods. Appropriate reference materials accompany the samples through the process allowing for quality control assessment. Results are entered and printed along with quality control data.

## APPENDIX E

## STATEMENT OF QUALIFICATIONS

I, Paul D. Gray, of the city of Vancouver, in the Province of British Columbia, do hereby state that:

1. I graduated from Dalhousie University in 1996 with a B.Sc. Degree in Earth Science.

2. I am employed by Southern Gold Resources Ltd., at #1540-750 West Pender, Vancouver B.C. V6C 1T8.

3. I have worked as an exploration geologist since June of 1996.

4. Work conducted in this report was performed by Kenneth Williams, Rob Shepard, Jason McLaughin and myself.

November 1997 Vancouver, B.C.

Paul D. Gray, B.Sc.

## APPENDIX F

## STATEMENT OF EXPENDITURES -BLUEBERRY CLAIM GROUP

## FIELD WORK

.

P. Gray, geologist	4 days @ \$200.00/day	\$ 400
K. Williams, geologist	1 day @ \$200.00/day	200
R. Shepard, geologist	1 day @ \$100.00/day	100
J. McLaughin, geologist	4 days @ \$100.00/day	400
Truck, 4 x 4 (including gasoline and insurance)	4 days @ \$80.00/day + 1 day @ \$80.00/day	400
Meals and Lodging	3 days @ \$140.00/day + 1 day @ 280.00/day	420
Rock Assaying costs (including ship Flagging, belt chain thread, and	oping 32 samples @ \$13.00/sample)	416
miscellaneous field equipment		25
	Sub-total: \$	2361.00
REPORT PREPARATION COST	<u>`S</u>	
l geologist @ \$200/day for 7 days		1400
	TOTAL: \$	3761.00