

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 90.03.17

ASSESSMENT REPORT 18686

MINING DIVISION: Liard

PROPERTY: Bikpenny
LOCATION: LAT 57 07 00 LONG 131 21 00
UTM 09 6332611 357700
NTS 104G03W
CLAIM(S): Penny 6, Penny 8, CC 1, Bik 2
OPERATOR(S): Cons. Silver Standard Mines
AUTHOR(S): Folk, P.G.
REPORT YEAR: 1989, 15 Pages
COMMODITIES
SEARCHED FOR: Copper
KEYWORDS: Permian, Limestones, Shales, Triassic-Jurassic, Pyroclastics
Intrusives, Syenites
WORK
DONE: Geochemical
ROCK 9 sample(s) ;ME
SILT 1 sample(s) ;ME
SOIL 36 sample(s) ;ME

LOG NO: 0426	RD.
ACTION:	
FILE NO:	
LOG NO: 0731	RD. 3
ACTION: Date received report back from amendments.	M.R. # CASSIAR, B.C.
FILE NO:	

DEPT. OF MINES
RECEIVED and RECORDED
APR 27 1989

REPORT ON A ROCK AND SOIL GEOCHEMICAL SURVEY

ON THE PENNY AND BIK CLAIMS

LIARD MINING DIVISION

FILMED

104-G/3W

57° 07' N 131° 21' W

OWNED AND OPERATED BY

CONSOLIDATED SILVER STANDARD MINES LIMITED

400 - 1199 West Hastings Street

Vancouver, B.C.

V6E 3T5

under supervision of
Peter G. Folk, P. Eng.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,686

February 1989

INTRODUCTION

Location and Access (Figure 1)

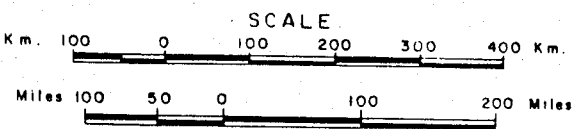
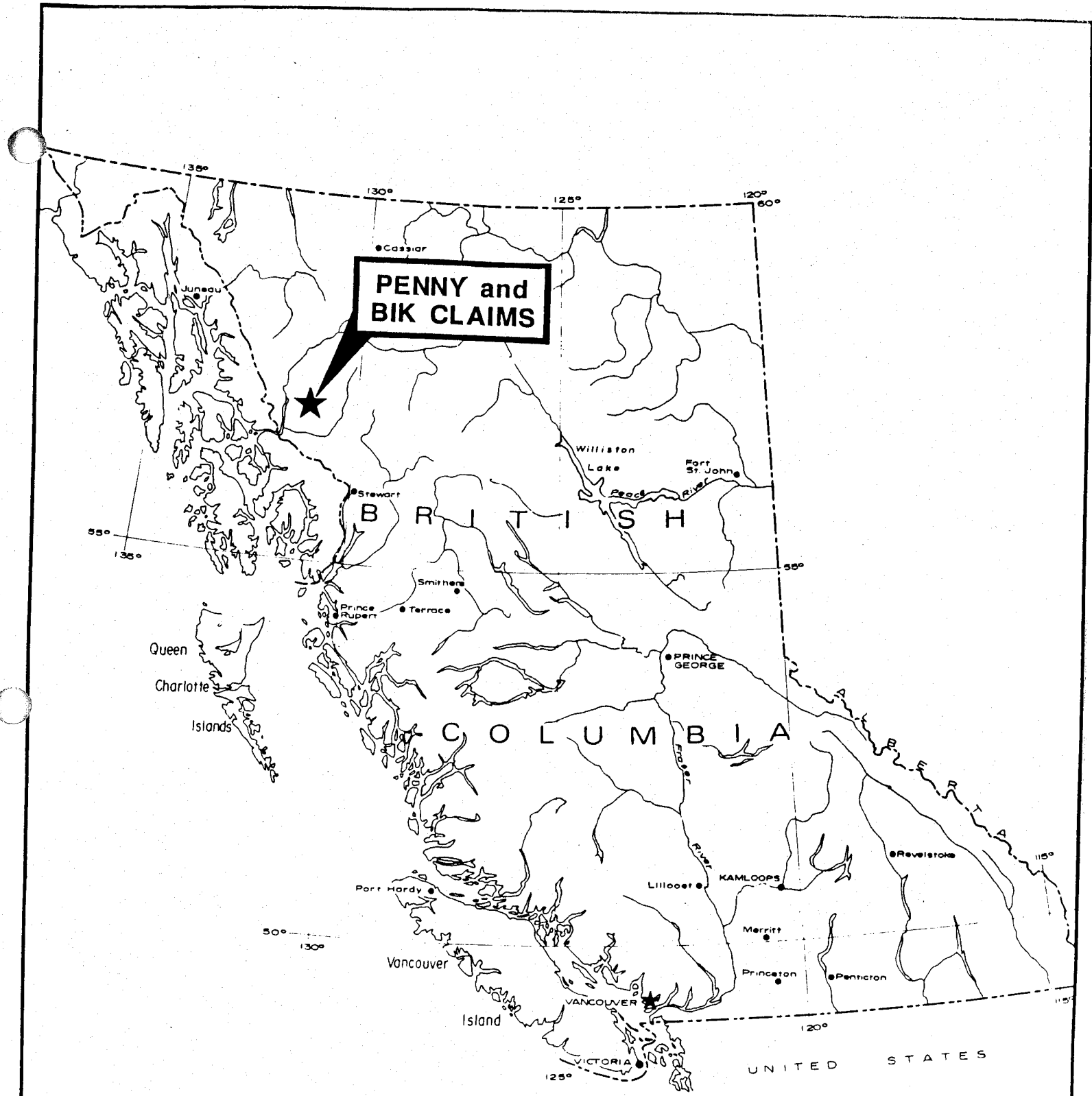
The Penny and BIK claims are situated on the northern flank of the Copper Canyon Glacier, Stikine River area, $57^{\circ} 07'$ North, $131^{\circ} 21'$ West, map sheet 104G/32. The claims are peripheral to the CC claims which cover the central portion of the Copper Canyon alkalic porphyry copper deposit. Access is only by helicopter from temporary bases at the Forrest Kerr, Bronson Creek or Scud River air strips. The Stewart-Cassiar Highway is about 60 kilometers to the east.

Terrain is rugged and precipitous with only limited local access on the lateral moraine of the glacier or on the gentler slopes by Copper Canyon Creek. There are no trees present in the area which ranges in elevation from about 800 to 1900 meters above sea level. A few mountain goats were noted on the grassy ridge above Copper Canyon Creek.

History

The Copper Canyon deposit was discovered in the mid 1950's when a large pyritic gossan zone containing patches of bright green malachite was noted from the air. It was staked by Amax and was subsequently tested in 1957 by seven small diameter diamond drill holes. A probable reserve of 8.1 million tons grading 1.08% Cu, 0.45 O.P.T. Ag, 0.02 O.P.T. Au was outlined with abundant lower grade material inferred.

A syndicate operated by Silver Standard Mines staked the Penny and BIK claims in 1964 to cover a portion of the deposit left unstaked by Amax at that time.



**CONSOLIDATED SILVER
 STANDARD MINES LTD.**

**Location Map
 PENNY & BIK CLAIMS**
 LIARD MINING DIVISION

104G/3W FIG. 1

Claims (Figure 2)

Eleven two-post claims and fractions remain under the control of Consolidated Silver Standard Mines Ltd. The claims are shown on Figure 2 and are detailed as follows:

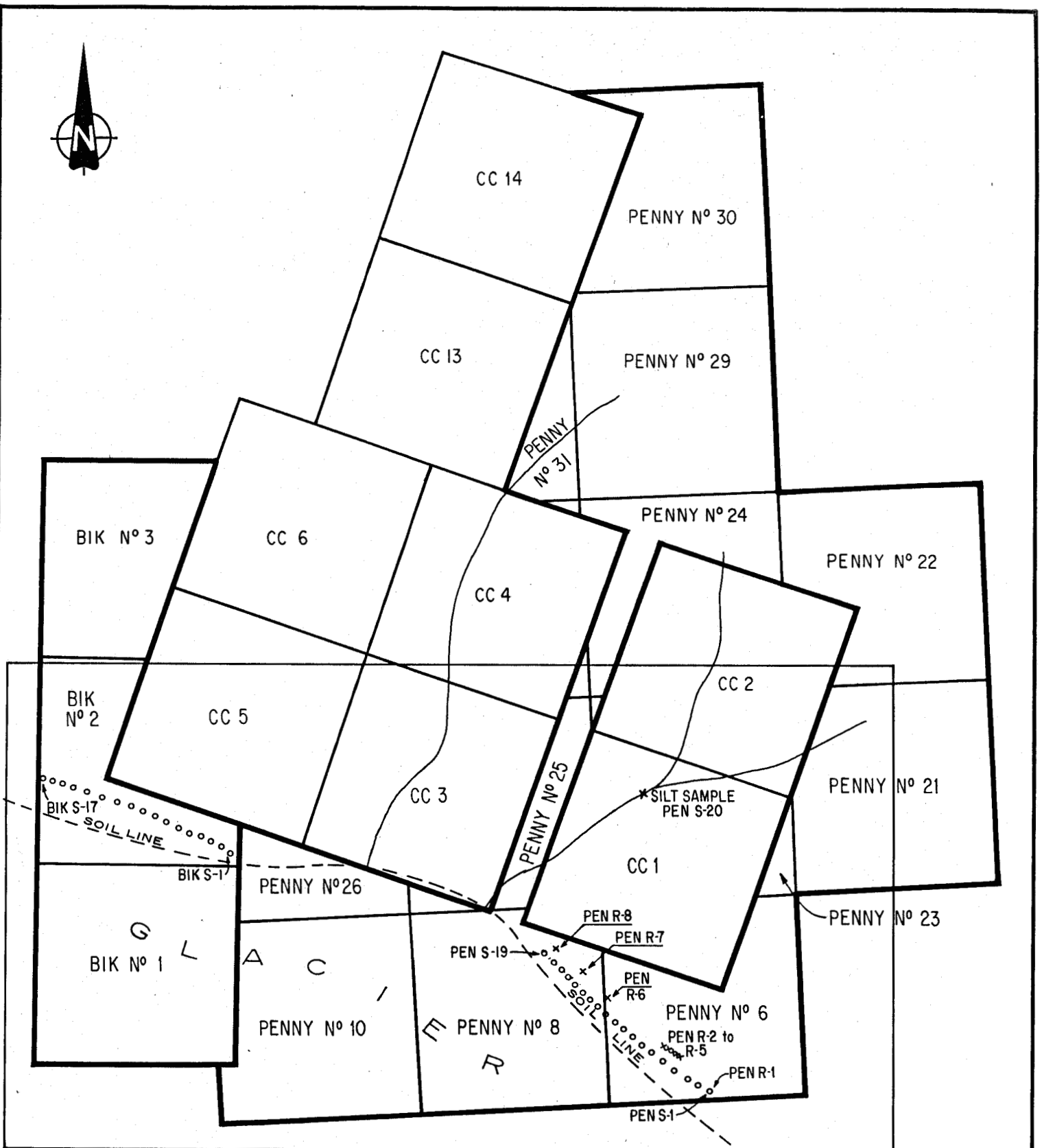
		<u>Record #</u>	<u>Date Recorded</u>
PENNY	8	13057	17 March 1964
PENNY	10	13059	17 March 1964
PENNY	24	13073	17 March 1964
PENNY	25	13074	17 March 1964
PENNY	26	13075	17 March 1964
PENNY	29	13078	17 March 1964
PENNY	30	13079	17 March 1964
PENNY	31	13080	17 March 1964
BIK	1	12830	17 March 1964
BIK	2	12831	17 March 1964
BIK	3	12832	17 March 1964

Work Done

A total of 36 soil samples and nine rock samples were taken for the purpose of evaluating the possibility that gold mineralizations might occur peripheral to the Copper Canyon deposit.

General Geology

Permian limestones, carbonaceous shales and Triassic or Jurassic pyroclastic volcanics have been intruded by syenites and orthoclase porphyries similar to those at Galore Creek. The style and grade of mineralization at Copper Canyon are also similar to the Galore Creek deposits.



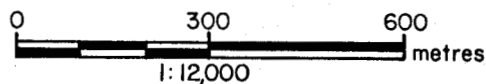
ENLARGEMENT FIG. 3

CONSOLIDATED SILVER
STANDARD MINES LTD.

CLAIM MAP &
SAMPLE LOCATIONS

**PENNY & BIK
CLAIMS**

LIARD MINING DIVISION



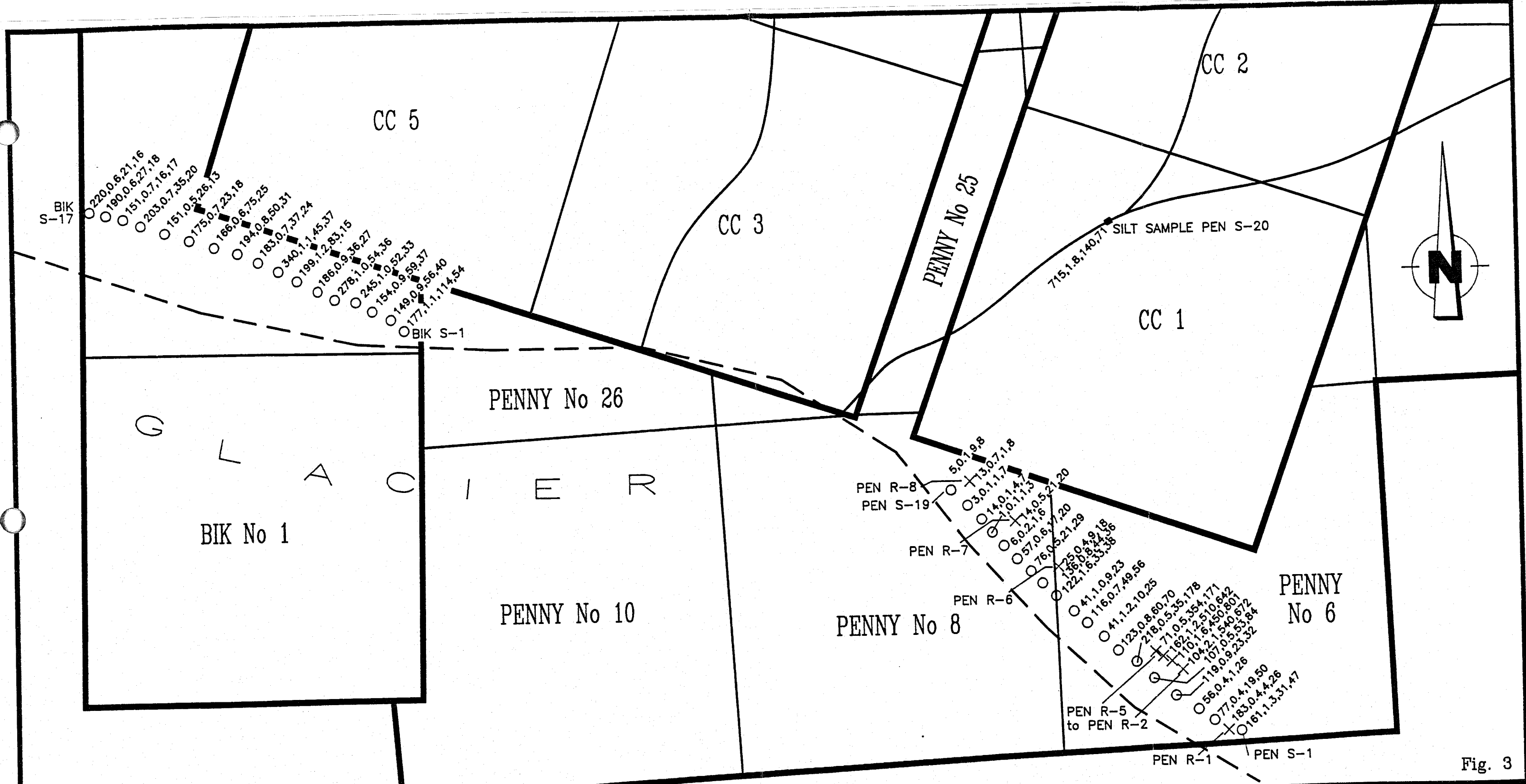
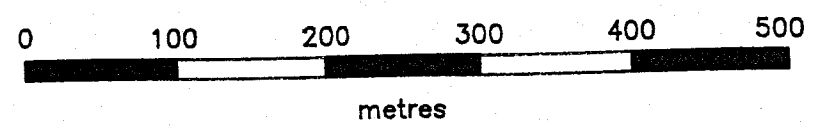


Fig. 3

LEGEND

- SAMPLE No's**
- PEN R-1 X ROCK SAMPLE
 - PEN S-19 O SOIL SAMPLE
 - PEN S-20 ■ SILT SAMPLE
 - X 25,0,4,9,18 Cu ppm, Ag ppm, Au ppb, As ppm

CONSOLIDATED SILVER STANDARD MINES LTD.		
PENNY and BIK CLAIMS		
SOIL, SILT and ROCK ANALYSES Cu (ppm), Ag (ppm), Au (ppb), As (ppm)		
SCALE: 1:5000	DATE: JULY 26, 1989	ACAD10:CSS1.DWG



GEOCHEMICAL SURVEY

One traverse was run above the glacial moraine adjacent to the Copper Canyon Glacier from southeast to northwest. Predominantly "C" horizon talus fines were collected at 25 m intervals along the traverse. Rock chip samples were taken at areas of some interest - i.e., where sulfides were noted.

Standard kraft paper bags were used for the soil samples; the rock samples were collected in plastic bags. The material was assayed by standard ICP techniques at Acme Analytical Labs in Vancouver. A brief description of the analytical techniques applied to the screened soil samples and pulverized rock samples is located on the appended assay certificates

RESULTS

Sample locations are plotted on Figure 2 with analyses plotted on Figure 3. Multiple element ICP results are appended. For purposes of economic geology the most useful elements reported are Au, Ag, Cu and As, which in the soil samples average:

Cu - 146 ppm
Ag - 0.8 ppm
Au - 37 ppb
As - 34 ppm

As would be expected, near an alkaline porphyry deposit, most of the samples would be considered, on a regional scale, to be anomalous in the above elements. There are also interesting amounts of Mo and Ba. The best sample, Pen S20, with 140 ppb Au and 715 ppb Cu is the closest soil sample to known mineralization and is thought to reflect known bedrock mineralization up slope on the Penny #22 claim.

Rock sample results are tabulated below:

<u>Sample</u>	<u>Cu</u>	<u>Ag</u>	<u>Au</u>	<u>Notes</u>
No.	ppm	ppm	ppb	
CC R-1	8974	24.7	430	Typical "ore" Copper Canyon
PEN R-1	183	0.4	4	Hematitic limestone breccia
2	104	2.1	540	2 m chip, pyrite gossan
3	110	1.6	450	3 m chip, pyrite gossan
4	162	1.2	510	1.5 m chip, pyrite gossan
5	71	0.5	354	1.6 m chip, rusty outcrop
6	25	0.4	9	Limestone-ankerite breccia
7	14	0.5	21	Float, hematite-limestone breccia
8	13	0.7	1	Rusty black chert

Sample CC R-1 represents typical surface "ore" from the Copper Canyon deposit and contains 430 ppb (0.013 OPT) Au and 8974 (0.89%) Cu. Expressed as a ratio it could be said that 479 ppb Au can be expected to occur for 1% Cu. Samples Pen R-2 to Pen R-5 are taken from a small pyritic gossan at the eastern end of Penny #6 claim. The average gold content of these samples - 463 ppb exceeds that of the "ore" sample while containing almost no copper (112 ppm average). Expressed as a ratio 42768 ppb Au would be expected to occur with 1% Cu. This is nearly one hundred times the gold to copper ratio in typical "ore" and strongly suggests that gold occurs peripheral to the copper zone within pyritic gossan and structures.

CONCLUSIONS

The soil sampling did not produce any remarkable results. Rock sampling indicates that a small pyrite zone on the Penny #6 claim contains highly anomalous gold values with essentially no copper. This suggests that the pyrite halo of the Copper Canyon deposit and any satellite pyritic structures or zones should be examined for precious metals.

RECOMMENDATIONS

Sampling of all pyritic zones and structures in the area, whether or not copper is present is strongly recommended.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Peter Folk", written over a horizontal line.

P. Folk, P. Eng.

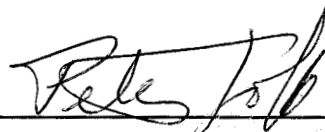
ITEMIZED COST STATEMENT

P. Folk, P. Eng.	17 August 1988	\$ 300.00
D. Nikirk, helper	17 August 1988	\$ 150.00
Helicopter		
Hughes 500, Northern Mountain Helicopters,		
based at Forrest Kerr Creek		
2.5 hrs @ \$675/hr including fuel		\$1,687.00
Assays		
29 geochemical analyses @ \$12		\$ 348.00
Transportation, Food, Communications, Expenses		\$ 500.00
Report preparations, drafting		<u>\$ 400.00</u>
TOTAL		\$3,385.00

9. STATEMENT OF QUALIFICATIONS

I, Peter G. Folk, do hereby certify that:

1. I received a B.A. Sc degree in geological engineering from the University of British Columbia in 1971 and have been a practising exploration and underground mine geologist in Canada and the United States since that time.
2. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
3. I supervised the work described herein.



P. Folk, P. Eng.

A P P E N D I X

Analytical Results

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: P1 SOIL P2 ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: AUG 24 1988

DATE REPORT MAILED: Aug 31/88

ASSAYER: *C. Long* D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

CONSOLIDATED SILVER PROJECT PENNY BIK File # 88-3846 Page 1

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Tb	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPB
BIK S1	5	177	37	101	1.1	13	20	1300	6.78	54	7	ND	1	80	2	8	2	153	1.08	.187	19	23	.67	519	.08	6	.74	.01	.15	1	114
BIK S2	4	149	28	84	.9	12	18	1028	6.17	40	5	ND	1	101	1	9	2	150	2.15	.177	16	22	.66	470	.07	4	.67	.01	.14	1	56
BIK S3	4	154	24	86	.9	11	18	1052	6.14	37	5	ND	1	90	2	8	2	154	2.35	.175	17	19	.65	490	.08	4	.71	.01	.12	2	59
BIK S4	5	245	30	120	1.0	19	27	1772	7.05	33	5	ND	1	124	3	11	2	200	1.23	.190	23	28	.88	673	.09	6	1.00	.01	.16	18	52
BIK S5	6	278	31	132	1.0	25	30	2031	7.70	36	5	ND	1	158	3	10	2	216	1.37	.185	24	36	1.12	618	.10	5	1.18	.01	.19	16	54
BIK S6	4	186	36	99	.9	15	21	1320	6.39	27	9	ND	1	149	3	10	2	179	2.20	.183	19	24	.75	455	.08	9	.89	.01	.14	3	36
BIK S7	3	199	19	79	1.2	11	17	1117	5.65	15	10	ND	6	175	11	2	2	155	1.27	.147	17	13	.64	383	.06	17	.68	.04	.56	1	83
BIK S8	6	340	27	112	1.1	18	32	2541	7.77	37	5	ND	1	221	2	14	2	223	.75	.184	26	24	.71	798	.07	8	.86	.02	.10	20	45
BIK S9	4	183	27	84	.7	13	20	1238	5.77	24	5	ND	1	147	1	7	2	157	2.47	.156	17	21	.70	515	.08	2	.81	.01	.13	1	37
BIK S10	5	194	24	89	.8	17	20	1282	5.95	31	9	ND	1	163	2	7	2	148	2.85	.158	16	27	.89	444	.09	5	.95	.01	.18	2	50
BIK S11	4	166	27	78	.6	14	21	1324	6.07	25	7	ND	1	154	1	7	2	169	2.25	.194	17	24	.76	519	.09	15	.80	.01	.14	1	75
BIK S12	3	175	30	87	.7	13	22	1292	6.31	18	7	ND	1	121	1	7	2	184	1.47	.188	20	21	.83	525	.10	4	1.02	.01	.12	1	23
BIK S13	2	151	18	71	.5	11	20	1241	6.03	13	6	ND	1	139	2	5	2	186	1.60	.211	18	18	.73	628	.09	7	.82	.01	.10	1	26
BIK S14	3	203	21	81	.7	17	20	1195	5.84	20	5	ND	1	146	2	6	2	164	2.31	.207	17	29	1.05	440	.09	6	.97	.01	.13	1	35
BIK S15	2	151	22	81	.7	13	19	1151	5.64	17	5	ND	1	149	2	7	2	159	2.82	.223	17	23	1.01	499	.09	5	.94	.01	.12	1	16
BIK S16	3	190	24	83	.6	18	22	1395	6.02	18	7	ND	1	165	1	7	2	170	1.95	.217	19	29	1.05	459	.10	7	1.07	.01	.12	1	27
BIK S17	3	220	18	92	.6	22	24	1538	6.40	16	8	ND	1	186	1	8	2	176	1.96	.201	19	35	1.26	460	.10	5	1.20	.01	.13	1	21
PEN S1	11	161	138	209	1.3	117	31	1718	6.58	47	5	ND	1	32	2	10	2	112	1.72	.109	14	170	2.80	279	.08	14	1.95	.01	.76	1	31
PEN S2	2	77	27	91	.4	246	39	915	5.22	50	5	ND	1	30	1	7	2	101	1.13	.071	4	195	5.46	194	.15	4	2.98	.01	1.39	1	19
PEN S3	1	56	23	117	.4	159	32	1058	4.94	26	5	ND	1	48	1	4	2	102	1.21	.049	4	211	5.19	398	.10	6	3.38	.01	1.73	1	1
PEN S4	3	119	36	191	.9	109	25	1105	5.24	32	5	ND	1	36	2	11	2	81	2.61	.126	14	122	2.20	161	.05	15	1.71	.01	.34	1	23
PEN S5	7	107	37	104	.5	157	33	1221	6.30	84	5	ND	1	27	1	7	2	153	.93	.098	7	252	3.54	169	.08	5	2.61	.02	.59	1	53
PEN S6	13	218	50	165	.5	72	39	3166	8.63	178	5	ND	1	16	1	9	4	194	.29	.181	26	211	1.26	263	.01	4	2.25	.03	.25	1	35
PEN S7	5	123	44	135	.8	81	31	1336	6.12	70	7	ND	1	49	1	8	2	122	1.36	.104	15	143	2.26	80	.05	7	2.37	.01	.14	1	60
PEN S8	1	41	22	133	1.2	76	25	1160	5.63	25	5	ND	1	41	1	4	2	124	.87	.043	8	128	2.77	64	.11	2	2.88	.02	.51	1	10
PEN S9	3	116	50	130	.7	97	27	997	5.70	56	5	ND	1	63	1	7	2	123	1.75	.138	5	138	3.55	64	.13	2	2.60	.01	1.03	2	49
PEN S10	2	41	30	157	1.0	31	11	707	4.37	23	7	ND	1	35	3	9	2	33	4.07	.108	23	48	.68	40	.01	7	.76	.01	.08	2	9
PEN S11	16	122	102	210	1.6	200	24	1733	5.83	38	5	ND	1	19	1	9	2	147	1.54	.091	14	343	3.95	410	.13	3	2.66	.02	.82	1	33
PEN S12	3	136	25	172	.8	63	22	742	6.01	36	5	ND	1	35	1	18	2	76	1.86	.124	16	85	1.40	102	.03	5	1.44	.01	.14	4	44
PEN S13	3	76	34	198	.5	124	25	1395	6.23	29	5	ND	1	19	1	10	2	102	1.33	.101	15	232	2.34	64	.06	2	2.05	.01	.11	1	21
PEN S14	2	57	47	117	.6	24	10	614	4.58	20	8	ND	1	23	2	5	2	64	1.65	.109	30	56	.56	61	.05	4	2.13	.03	.09	1	17
PEN S15	1	6	6	27	.2	4	2	203	.75	6	5	ND	1	135	1	2	2	4	23.42	.016	2	6	6.02	24	.01	2	.06	.01	.01	2	1
PEN S16	1	1	5	19	.1	3	1	178	.52	3	5	ND	1	123	2	2	2	2	26.10	.007	2	3	5.73	23	.01	2	.01	.01	.01	1	1
PEN S17	1	14	5	30	.1	7	2	313	.85	7	5	ND	1	95	1	2	2	5	23.48	.017	2	4	7.04	21	.01	2	.04	.01	.01	2	4
PEN S18	1	3	2	24	.1	7	3	300	.87	7	5	ND	1	89	1	2	2	8	25.09	.018	2	9	4.47	11	.01	2	.07	.01	.01	3	1
PEN S19	1	5	6	28	.1	5	3	264	.87	8	5	ND	1	116	1	2	2	8	24.13	.021	3	4	4.97	106	.01	2	.17	.01	.01	3	9
PEN S20	30	715	72	486	1.8	61	22	824	5.58	71	5	ND	2	77	7	20	2	106	2.09	.180	12	21	.54	190	.01	3	.70	.01	.22	1	140
STD C/AU-S	19	61	38	133	7.2	72	31	1035	4.33	41	23	8	37	49	20	18	19	60	.47	.089	42	64	.95	179	.07	32	1.98	.06	.15	12	53

CONSOLIDATED SILVER PROJECT PENNY BIK FILE # 88-3846

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
CC-R1	27	8974	1749	287	24.7	6	23	3529	7.34	376	5	ND	7	425	4	139	2	584	8.16	.685	94	3	.61	37	.07	13	.59	.02	.30	1	430
PEN-R1	3	183	36	30	.4	11	1	131	1.43	26	5	ND	1	23	1	7	2	14	5.91	.026	2	22	.04	.13	.01	8	.16	.01	.04	9	4
PEN-R2	84	104	101	27	2.1	53	8	83	7.18	672	5	ND	1	68	1	8	2	184	.08	.104	5	374	.74	44	.01	9	.53	.01	.54	1	540
PEN-R3	63	110	56	54	1.6	101	10	87	7.36	801	5	ND	1	68	1	7	2	184	.07	.142	4	431	2.40	27	.03	9	1.35	.01	.73	1	450
PEN-R4	41	162	71	40	1.2	54	11	403	6.71	642	5	ND	1	57	1	6	2	168	.07	.146	6	248	1.64	142	.02	7	1.06	.01	.37	1	510
PEN-R5	9	71	36	32	.5	11	3	178	4.79	171	5	ND	1	112	1	2	2	148	.08	.097	13	67	.78	327	.02	9	.64	.01	.29	1	354
PEN-R6	1	25	8	69	.4	9	2	299	1.51	18	5	ND	1	13	1	13	2	13	15.07	.916	2	12	.08	15	.01	16	.07	.01	.01	13	9
PEN-R7	1	14	8	53	.5	10	2	461	1.37	20	5	ND	1	45	1	10	2	19	33.21	.025	3	5	2.30	31	.01	5	.09	.01	.01	17	21
PEN-R8	2	13	3	24	.7	5	2	88	.99	8	5	ND	1	81	1	2	2	12	2.27	.628	12	4	.10	527	.01	32	.43	.01	.11	1	1
STD C/AU-R	18	64	38	134	6.7	68	29	1361	4.05	41	16	6	35	49	18	16	18	57	.48	.091	39	55	.90	177	.06	37	1.95	.06	.14	12	510