

GEOLOGICAL REPORT

on the

JODY

PEPPER

SARAH

BO

MINERAL CLAIMS

SLOCAN MINING DIVISION

BRITISH COLUMBIA

50 02' N - 117 10' W

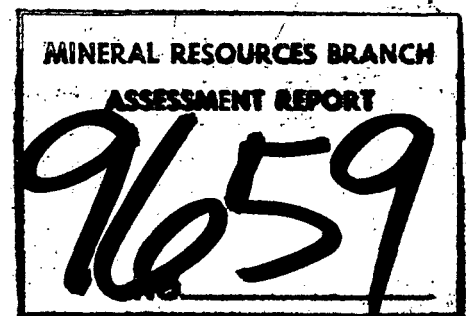
82 K 3 E

for

Tri County Holdings Ltd.

Box 546

Kaslo, B. C. VOG 1MO



August, 1980

James C. Snell, P.Eng.

Geological Engineer.

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INTRODUCTION

The writer has been requested by Mr. Gerry Mossman of Tri County Holdings Ltd., Kaslo, B. C., to conduct a geological investigation of the Jody, Pepper, Sarah and Bo mineral claims and to complete a report on the same, giving conclusions as to potential and recommendations for a work program.

In 1978, the writer completed a research investigation and a report on the area. In summary, this report detailed open pit potential of the lower basal shale unit of the Slocan Sediments in the Retallack-Zincton district and included an air photo interpretation of fault patterns in the area. The Jody and Pepper claims cover an area of ground that was observed to have this potential. Air photo interpretation of these claims is included with this report.

LOCATION AND ACCESS (50 02'N - 117 10'W)

The claims are located in the Slocan Mining Division of British Columbia, midway between New Denver and Kaslo and approximately 130 km north of Trail, B. C. The property is centered on Jackson Basin on the north slope of Reco Mountain between Zincton and Retallack. The White-water Mine is located to the northeast and the Lucky Jim Mine is located just to the west. Considerable mineral production has also been achieved from Reco Mountain to the southwest.

Access is from New Denver by paved road, a distance of approximately 10 miles. Access is good through the claims via the Jackson Creek road.

CLAIMS

Pepper	No. 1891	3 units
Jody	No. 1892	10 units
Sarah	No. 1972	20 units
Bo	No. 1874	5 units

TOPOGRAPHY

The claims run from the valley of Kaslo Creek up the steep slope of Reco Mountain. Topography is moderate to steep. Elevations rise from 3,500 feet at the valley floor to a height of 6,000 feet in Jackson Basin.

WATER AND POWER

Sufficient water for all phases of exploration, development, and production is available from water courses on the property. Diesel-electric power would be required in the initial development stages.

CLIMATE

The area is within a relatively heavy snowfall belt. However, lower elevations should be snow free for a period of up to seven months duration. The heavy snowfall would not prevent work from being conducted through most of the year as maintaining access would not be costly in this area.

TRANSPORTATION AND SUPPLIES

The highway from New Denver to Trail, a distance of 120 km, is paved and maintained throughout the year. Most of the supplies would be purchased in New Denver, Nelson, or Trail. Castlegar, 32 km north of Trail, has daily airline service from Vancouver.

## HISTORY

Mining commenced in the Slocan Camp in the 1890's with the height of activity lasting into the 1920's. Metal markets and production declined during the depression period to only sporadic production.

Recently, with the higher silver prices, a great increase in activity has been observed in the camp by both individuals and major companies such as AMOCO, B.P., Riocanex, and ASARCO. At the present time there is one steady producer, Silvana Mines Ltd. at Sandon.

Both the Lucky Jim and the Whitewater Mines were large producers, the Lucky Jim being Canada's largest zinc producer at one time. The Lucky Jim produced one million tons of zinc ore and the Whitewater Mine produced over a half million tons of silver-lead-zinc ore in total. The Lucky Jim Mine is adjacent to the property on the west and the Whitewater Mine is adjacent to the property on the northeast.

The Hillside Group is located within the claim boundaries. The following comments on this property are taken from Memoir 184, Slocan Mining Camp, by C. E. Cairnes.

Hillside Group

The Hillside Group, consisting of the Hillside, Galt and Last Chance Crown-granted claims, is situated southwest of and a few hundred feet above the railway at Retallack and is accessible by the road up Jackson Creek. It has reverted to the Crown.

The property is underlain by slaty and calcareous Slocan sediments penetrated by a small granodiorite stock and by a few dykes of quartz porphyry.

Three short adits aggregating about 600 feet in length explore a vein lode striking northeasterly and dipping southeast. Shipments amounting to 2½ tons were made in 1900. The ore is stated to have carried 191 oz. in silver to the ton, 29.7% lead, and 21.5% zinc. So far as is known no work has been done since 1900.



GEOLOGY

The claims are located near the top of the lower basal shale unit of the Slocan Sediments of Triassic age. The basal unit consists essentially of thin-bedded, grey to black shales and argillites, some limestone beds and minor quartzites near the top of the unit, striking northwesterly and dipping to the southwest. These rock types play host to mineral deposits in the region and have been intruded by sills, dykes and stocks of rhyolite and quartz diorite related to the underlying Nelson Batholith. The area has been extensively faulted between Bear Lake and Retallack. These fault patterns trend east-west and northwest and are parallel faults to the main valleys of Kaslo Creek and Seaton Creek.

East-west faults crosscutting a north-south band of limestone provided access and host for mineralization at Lucky Jim, and northwest faults parallel to bedding in slates provided access and host for mineralization at Whitewater. The intersecting fault patterns between Fish Lake and Retallack are therefore of interest as a possible host for similar ore bodies.

Generally in the Slocan Camp, crosscutting tear faults play host to mineralization. Hence the east-west faults have good potential to be ore bearing.

On the Hillside property a northeasterly striking cross fault is mineralized and has been explored by a short adit. A small shipment of silver-lead-zinc ore made in 1900 carried high silver values.

## CONCLUSIONS AND RECOMMENDATIONS

To a great extent the Jody and Pepper claims overly a section of the upper basal shale unit of the Slocan Sediments that have been rather intensely faulted and fractured by intersecting east-west, north-west, and north-south faults. A small area east of Fish Lake and south of the mouth of Goat Creek has a good three-directional fault pattern. As the basal shale unit may in fact be the original source of silver-lead-zinc elements, these being of sedimentary origin, remobilization of these elements and concentration within these fault systems may provide the necessary environment for a large body of low grade mineralization. It is therefore recommended that this area be investigated initially.

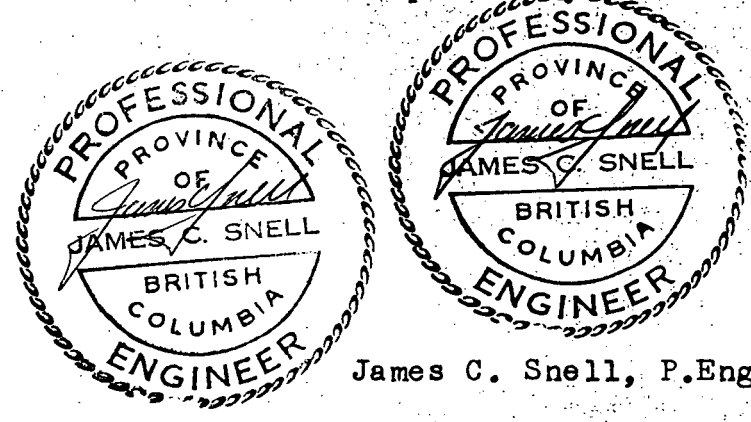
Further to the south and east, cross faulting is less intense. However, strong directional faults persist and may play host to individual mineral zones as at the Hillside. It is therefore recommended that this area further to the south and east along the south and east boundaries of the Jody claim be investigated as a second phase of exploration.

The Hillside property itself can be investigated as a third phase of exploration. General surface prospecting and reconnaissance soil sampling should be conducted east of Bear Lake and Fish Lake and on lower Jackson Creek. This should provide initial and necessary information relating to possible targets for more detailed follow up work.

PROGRAM

Surface prospecting and reconnaissance soil sampling	-	<u><u>\$ 10,000.00</u></u>
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Respectfully submitted,

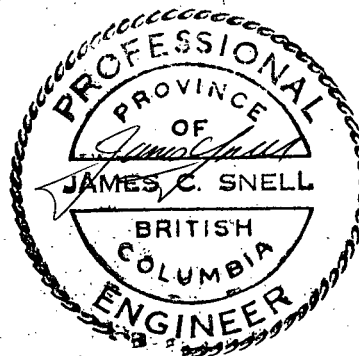


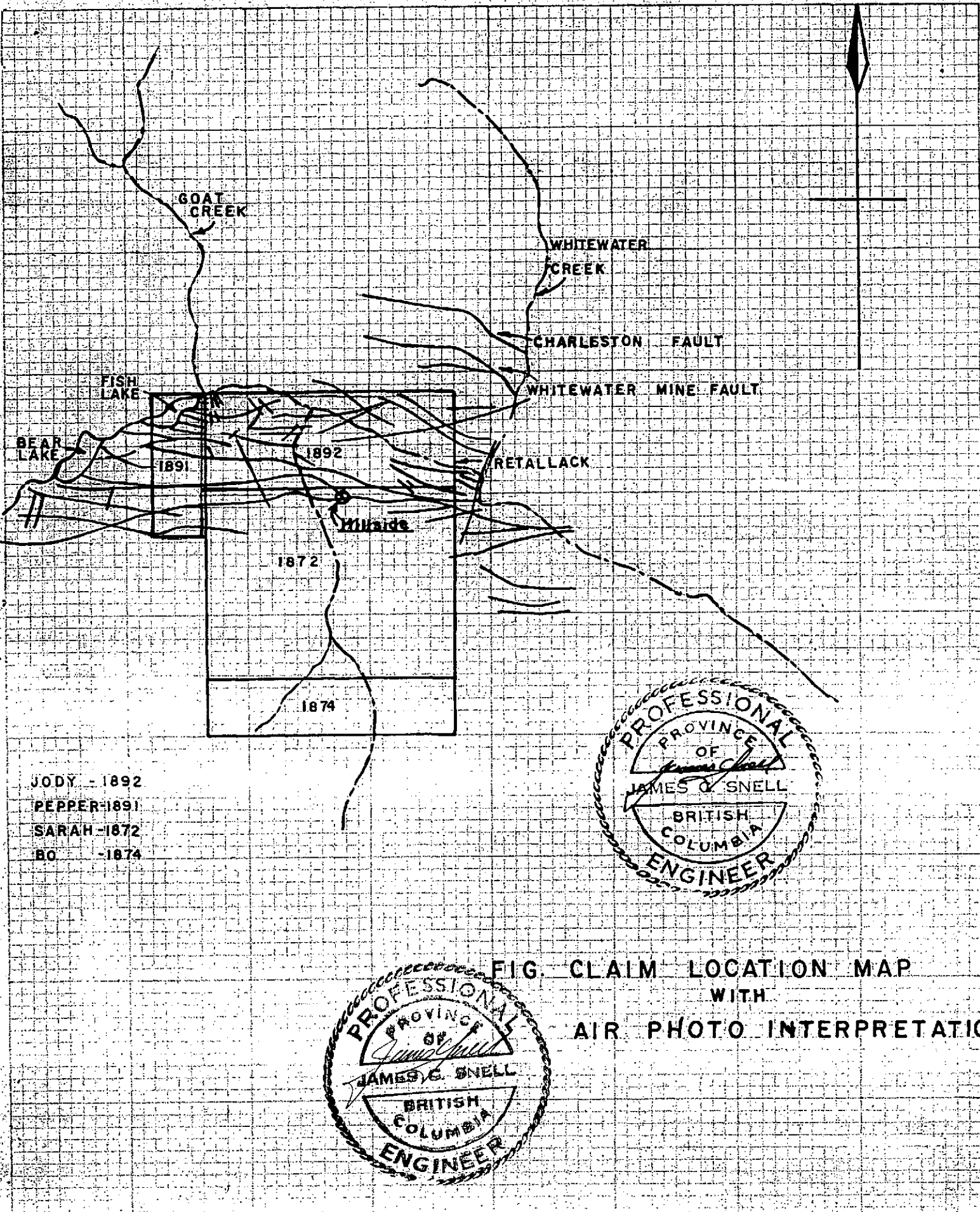
James C. Snell, P.Eng.

DECLARATION

I, James C. Snell, with business and residential address in British Columbia, do hereby certify that

- 1) I am a geological engineer.
- 2) I am a graduate of the University of Alaska, School of Earth Science and Mineral Industry, Fairbanks, Alaska, U.S.A.
- 3) I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario, Canada.
- 4) I have received a Bachelor of Science Degree in the Geological Sciences in 1964.
- 5) I am registered as a Professional Engineer of the Province of British Columbia.





JODY - 1892  
 PEPPER - 1891  
 SARAH - 1872  
 BO - 1874

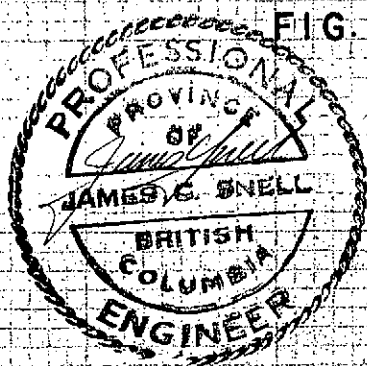
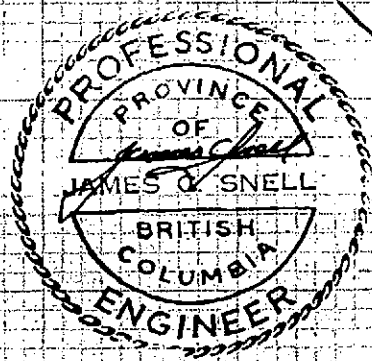


FIG. CLAIM LOCATION MAP  
 WITH  
 AIR PHOTO INTERPRETATION

SUMMARY REPORT  
PRELIMINARY GEOCHEMICAL  
SOIL SURVEY  
ON THE  
JODY AND PEPPER CLAIMS  
SLOCAN MINING DIVISION, B. C.  
FOR  
TRI-COUNTY RESOURCES LTD.  
KASLO, B. C.

January 1981

James C. Snell, P. Eng.  
Geological Engineer

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## INTRODUCTION

Tri-County Resources Ltd. owns a group of located mineral claims between Kaslo and New Denver in the Slocan Mining Division of B.C. The property consists of four claims with a total of 38 metric units. A report written by the writer dated August 1980 recommended a preliminary geochemical survey over a part of the Jody and Pepper claims, east of Fish Lake.

An air photo survey over the area, was completed by the writer in 1978. This survey indicated fault structure running in an east-west direction, easterly from Fish and Bear Lake. As this structure appears to be similar to that associated with the nearby Whitewater Mine, the potential exists in this area for mineralization to be associated with the major faults.

The lower portion of the Jody and Pepper claims are, in fact, traversed by cross-cutting and intersecting fault patterns, with predominant structure being east and west. The property lies directly between two old producing mines, the Lucky Jim to the west and the Whitewater to the northeast.

It can be expected that the area was thoroughly prospected in the early days of the camp, without results. The potential therefore is that mineralization, if it exists on the claim group, will be covered with surface debris and glacial till.

The air photo survey, with follow up reconnaissance soil sampling, was suggested as exploration tools for this property.

LOCATION AND ACCESS (50 02'N - 117°10'W)

The claim group is located in the Slocan Mining Division of British Columbia midway between New Denver and Kaslo, east of Fish Lake on the Kaslo, New Denver Highway and south on Jackson Basin and the north slope of Rico Mountain. Access is from either New Denver or Kaslo.

CLAIMS

Pepper	1891	3 units
Jody	1892	10 units
Sarah	1972	20 units
Bo	1874	5 units

COMMENTS

Comments have been made in the previous report in regards to Topography, Water and Power, Climate, Transportation and Supplies, History and Geology.

A program of surface prospecting and reconnaissance soil sampling was recommended.

RESULTS OF SOIL SURVEY

A preliminary soil sample program was conducted by Tri-County Resources Ltd. on a part of the Pepper and Jody Claims over the faulted ground east of Fish Lake and Bear Lake.

In general, the background conditions appear to be quite low, however anomalous conditions appear to exist in the south-

western part of the surveyed area. The east-west base line was sampled at 25 meter intervals over a length of 975 meters. North-south lines were sampled at 0, 100 meters, 200 meters, 400 meters, 500 meters and north lines were sampled at 600 meters and 700 meters along the base line. The samples were taken on the cross lines generally at regular 25 meter intervals. A total of 146 samples were taken and analyzed for silver and zinc.

Two apparent and coincidental zinc and silver anomalies occur. The first anomaly has a strong east-west strike and parallels the base line and is 25 meters to the south between 0 and 200 meters east. Zinc concentration reaches a high of 475 parts per million.

The second anomaly is south of the first and trends in a north easterly direction. Zinc reaches a high of 255 parts per million and silver reaches a high of 6.5 parts per million.

None of the sampled values are considered to be exceptionally high, however, the higher values can be regularly plotted, providing definite trends. Dependent upon the depth of overburden these trends may be significant.

RECOMMENDATIONS

It is recommended that:

## PHASE I

- a) A survey grid be established, to the west and south of the present grid. This can be an extension of the present grid to the west and south at 100 meter line intervals.
- b) Prospecting be carried out over the grid.
- c) A further geochemical soil survey program be conducted over the new grid to the west and south. It is important that the anomalous trends be traced to their fullest extent in a westerly direction. Sample interval @ 25 meters. Sample, B horizon.

## PHASE II

- a) An electromagnetic survey be carried out over both the old and the new grid.
- b) A preliminary diamond drill program be carried out on anomalies discovered in the geochemical and geophysical surveys.

## PHASE III (if results are favourable)

- a) Additional diamond drilling.

BUDGET

## PHASE I

a) Establish grid, 100 meter line intervals	= \$ 2,000.00
b) Prospecting	= 2,000.00
c) Geochemical Survey	= 3,000.00
d) Sample Analysis	= 2,000.00
e) Travel and Accommodation	= 2,000.00
f) Engineering, Geology	= <u>2,000.00</u>
Sub Total	= \$13,000.00
10% Contingencies	= <u>1,300.00</u>
Phase I Total	= <u><u>\$14,300.00</u></u>

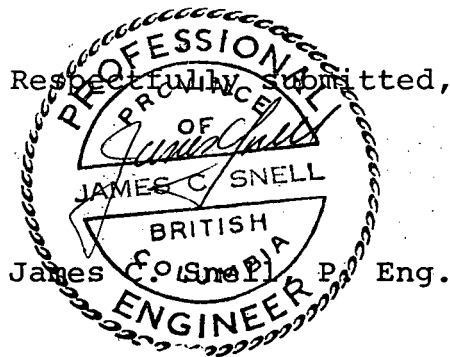
## PHASE II

a) Electromagnetic Survey	= \$ 3,000.00
b) Diamond Drilling - 1000feet @ \$25.00	= 25,000.00
c) Engineering, Geology, Accommodation	= 5,000.00
d) Assays	= <u>1,000.00</u>
Sub Total	= \$34,000.00
15% Contingencies	= <u>5,100.00</u>
Phase II Total	= <u><u>\$39,100.00</u></u>

PHASE III (if results from Phase I and Phase II  
are favourable)

a) Diamond drilling - 2,000' @ \$25.00	= \$50,000.00
b) Engineering Geology	= 5,000.00
c) Travel and Accommodation	= 2,000.00
d) Assays	= <u>1,000.00</u>
Sub Total	= \$58,000.00
15% Contingencies	= <u>8,700.00</u>
Phase III Total	= <u>\$66,700.00</u>

A sum of \$55,000.00 should be made available at this time to carry out Phase I and II of the above program.



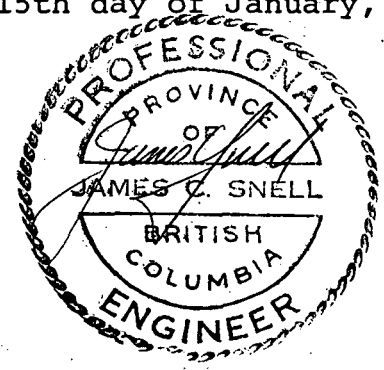
CERTIFICATE

I, JAMES C. SNELL with business and residential address in British Columbia, do hereby certify that:

1. I am a consulting geological engineer.
2. I am a graduate of the University of Alaska School of Earth, Science and Mineral Industry, Fairbanks, Alaska, USA.
3. I am a graduate of The Provincial Institute of Mining, Haileybury, Ontario.
4. I have received a Bachelor of Science Degree in the Geological Sciences in 1964.
5. I am a registered Professional Engineer of the Province of British Columbia.
6. I have examined the geochemical results contained in this report from Tri-County Resources Ltd. properties in the Slocan Mining District, British Columbia.
7. I have arrived at the conclusions and have made the recommendations outlined in this report.

DATED at Vancouver, British Columbia, this 15th day of January, 1981.

RESPECTFULLY,



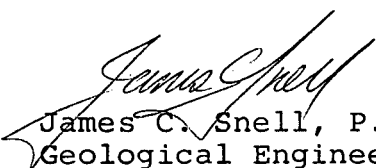
James C. Snell, P. Eng.

COST STATEMENT FOR TRI-COUNTY RESOURCES

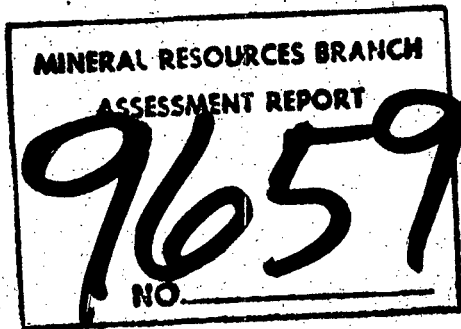
TO: JODY & PEEPER CLAIMS - WORK PROGRAM

- 1) Initial Engineers Report - August 1980 \$ 500
- 2) Geochemical Soil Survey - October - November \$4,350  
labour, truck, rental, gas 1980
- 3) Soil analyses \$ 406
- 4) Engineers summary report - January 1981 \$ 800

TOTAL \$6,056

  
James C. Snell, P.Eng.  
Geological Engineer





James C. Snell, P. Eng  
P.O. Box 10353  
609 Granville Street  
Vancouver, B.C.  
V7Y 1G5

February 23, 1982

Chief Gold Commissioner  
Parliament Buildings  
Victoria, B.C.

2050

Dear Sir:

Re: Summary Report, Preliminary Geochemical Soil Survey on the Jody and Pepper Claims Slokan Mining Division, B.C. for Tri-County Resources Ltd., Kaslo, B.C. January 1981 - James C. Snell, P. Eng.

Please find enclosed with this letter as per your request, deficiencies in the report as noted.

- 1) Copy of Geochemical Lab Report.
- 2) As noted the Laboratory is Kamloops Research & Assay Laboratory Ltd.
- 3) The method of extraction is Hat Acid Extraction Atomic Absorption
- 4) Analysis is for silver and zinc.
- 5) B. Horizon soil type.

It is anticipated that this information should cover the deficiencies as required.

Sincerely yours,

*James C. Snell*  
James C. Snell, P. Eng.  
Geological Engineer  
Reg 970  
MINISTRY OF ENERGY, MINES  
AND PETROLEUM RESOURCES

JCS/mc

Enclosure

REFERRED TO	DATE	INITIALS
C.O.C.		
D.O.G.C.		
G.C.		
F.A.I.C.		
M.I.D.A.		
P.L.C.R.		
G.O.A.L.		
D.S.C.		
BC / GEO	Mar 5	BC
FILE NO.		
FILING CLERK		

MAR 4 1982

MINERAL TITLES FILE ROOM





# GEOCHEMICAL LAB REPORT

FILE NO. G-497

PAGE 2

KRAL NO.	IDENTIFICATION	ppm Ag	ppm Zn		KRAL NO.	IDENTIFICATION	ppm Ag	ppm Zn	
61	1E 50N	1.4	64	✓	91	2E 100S	1.3	96	
62	75N	.5	170		92	4E 25N	1.7	125	
63	100N	1.0	158		93	50N	1.5	100	
64	125N	.9	78		94	75N	1.2	82	
65	150N	1.0	105		95	100N	1.0	41	
66	175N	2.6	69		96	125N	1.0	25	
67	200N	1.0	147		97	150N	1.5	82	
68	1E 25S	2.1	289		98	175N	2.0	83	
69	50S	1.3	141		99	200N	2.0	98	
70	75S	2.0	116		100	225N	1.2	66	
71	100S	1.6	255		101	250N	1.3	132	
72	125S	5.6	186		102	4E 25S	1.6	81	
73	150S ✓	6.5	123		103	100S	.5	49	
74	175S	1.9	181		104	125S	1.1	28	
75	200S	1.1	126		105	150S	1.9	111	
76	225S	.7	41		106	200S	.7	43	
77	250S	.7	109		107	225S	.9	93	
78	2E 25N	1.8	90		108	250S	1.6	41	
79	50N	.7	135		109	5E 25N	1.3	89	
80	75N	1.8	84		110	75N	5.0	131	
81	100N	1.3	109		111	100N	2.8	53	
82	125N	.9	163		112	125N	1.3	65	
83	150N	2.5	128		113	150N	1.8	142	
84	200N	1.0	57		114	175N	2.6	145	
85	200N Float	.4	128		115	200N	1.3	76	
86	225N	.7	130		116	250N	1.6	79	
87	250N	1.4	118		117	5E 25S	NO SAMPLE		
88	2E 25S	.9	120		118	50S	1.3	69	
89	50S	.9	108		119	75S	2.3	148	
90	75S	2.2	94		120	100S	1.9	101	

Kamloops Research  
&  
Assay Laboratory  
LTD.



TRI COUNTY RESEARCH LTD  
B.C. CERTIFIED ASSAYERS

2095 West Trans Canada Highway — Kamloops, B.C. V1S 1A7

Phone: 372-2784

Telex: 048-8320

GEOCHEMICAL LAB REPORT

Tri-County  
Suite 1000 - 789 W. Pender St.  
Vancouver, B.C.  
V6C 1H2

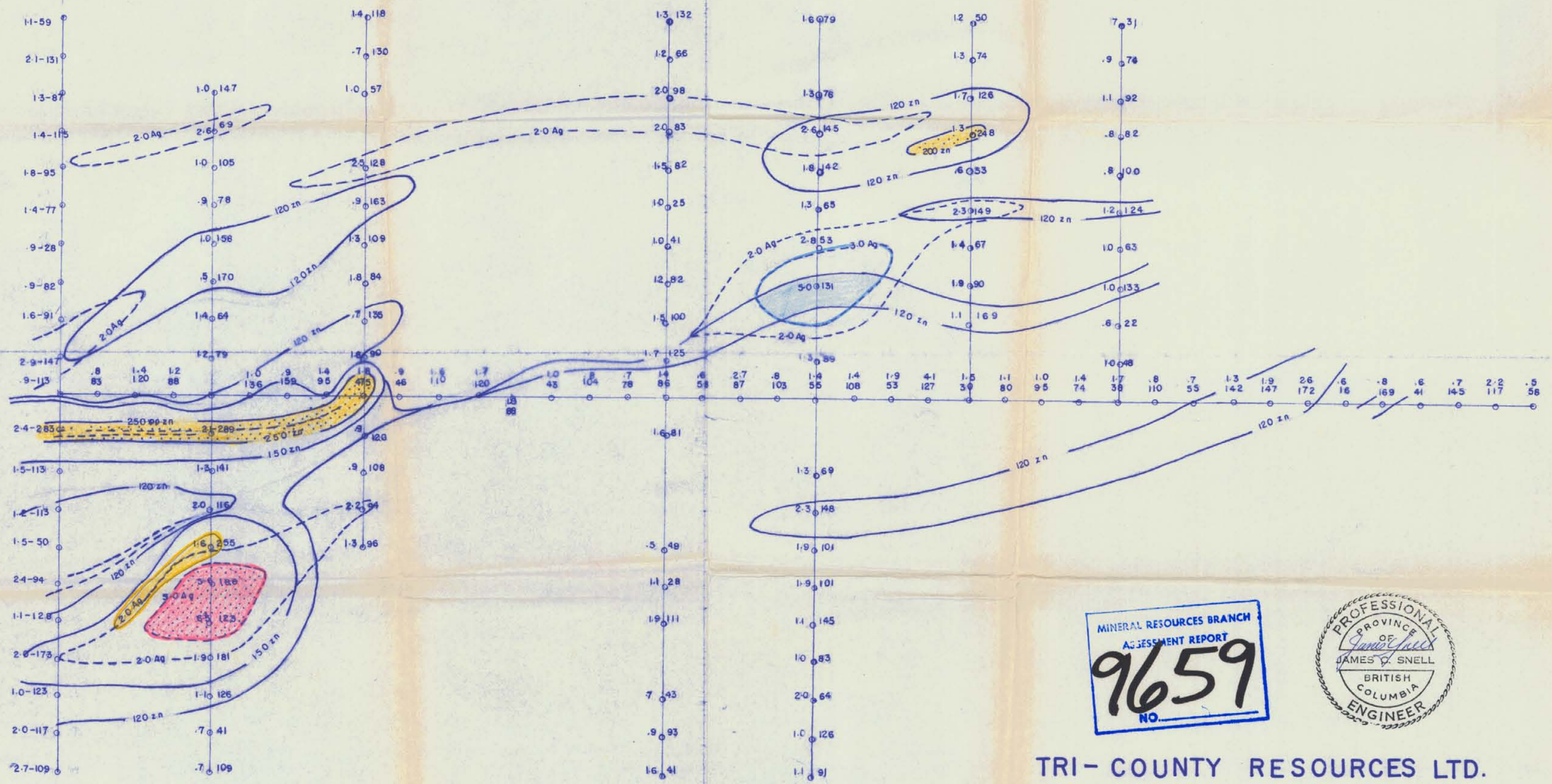
DATE December 10, 1980

ANALYST CK

FILE NO. G-497

KRAL NO.	IDENTIFICATION	ppm Ag	ppm Zn		KRAL NO.	IDENTIFICATION	ppm Ag	ppm Zn	
1	BL 00E	.9	113		31	BL 775E	1.3	142	
2	25E	.8	83		32	800E	1.9	147	
3	50E	1.4	120		33	825E	2.6	172	
4	75E	1.2	88		34	850E	.6	16	
5	125E	1.0	136		35	875E	.8	169	
6	150E	.9	159		36	900E	.6	41	
7	175E	1.4	95		37	925E	.7	145	
8	200E	1.8	475		38	950E	2.2	117	
9	225E	.9	46		39	975E	.5	58	
10	250E	1.6	110		40	OE 25N	2.9	147	
11	275E	1.7	120		41	50N	1.6	91	
12	300E	1.0	88		42	75N	.9	82	
13	325E	1.0	43		43	100N	.9	28	
14	350E	.8	104		44	125N	1.4	77	
15	375E	.7	78		45	150N	1.8	95	
16	400E	1.4	86		46	175N	1.4	115	
17	425E	.6	58		47	200N	1.3	87	
18	450E	2.7	87		48	225N	2.1	131	
19	475E	.8	103		49	250N	1.1	59	
20	500E	1.4	55		50	LO(OE)25S	2.4	283	
21	525E	1.4	108		51	50S	1.5	131	
22	550E	1.9	53		52	75S	1.2	113	
23	575E ✓	4.1	127		53	100S	1.5	50	
24	600E	1.5	30		54	125S	2.4	94	
25	625E	1.1	80		55	150S	1.1	128	
26	650E	1.0	95		56	175S	2.0	173	
27	675E	1.4	74		57	200S	1.0	123	
28	700E	1.7	38		58	225S	2.0	117	
29	725E	.8	110		59	250S	2.7	109	
30	750E	.7	55		60	1E 25N	1.2	79	

map Jody



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**9659**  
NO.



TRI-COUNTY RESOURCES LTD.  
GEOCHEMICAL MAP  
PEPPER and JODY CLAIMS, SLOCAN, B.C.

SCALE 1" = 50 meters INTERPRETATION BY JC SNELL P.ENG.  
DRAWN BY JC SNELL P.ENG. DATE JANUARY 1980