

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

PROGRAM YEAR: 1994/95

REPORT #: PAP 94-10

NAME: GORDON JOHNSTONE

P29

94-10

**PROSPECTORS  
ASSISTANCE PROGRAM  
1994-1997**

**PROGRAM COMPLETION**

**RECEIVED**  
P. 29  
**DEC 23 1994**  
**PROSPECTORS PROGRAM  
MEMPR**

**AUTHOR  
GORDON JOHNSTONE**

**DATE  
NOV.19th / 94**

## INDEX

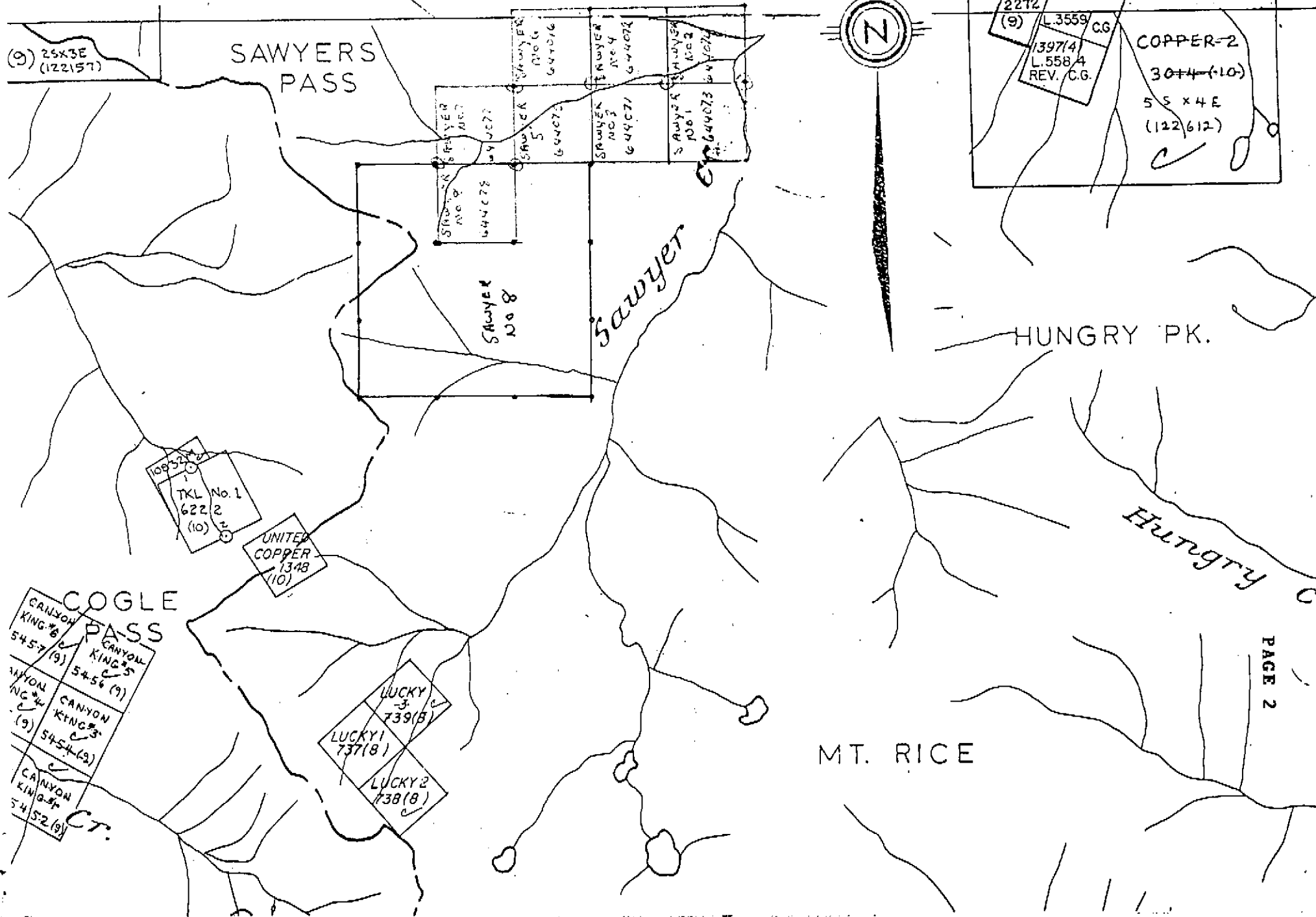
PROPERTY LOCATION MAP	pg. 1
CLAIMS MAP	pg. 2
NOTICE OF WORK & RECLAMATION	pg. 3,4,5,6
A. SUMMARY REPORT	pg. 7,8
B. TECHNICAL REPORT	pg. 9
ACCESS & PROSPECTING ACTIVITIES	pg. 10
SAMPLES & DESCRIPTION	pg. 11,12
ASSAYS	pg. 13,14, 15, 16, 17
EXPENDITURES	pg. 18,19
REPORT BY BAPTY RESEARCH	pg. 20
COMMENTS ON PROSPECTING GRANT	pg. 21



# LOCATION MAP



82F/15



**BRITISH COLUMBIA  
PROSPECTORS ASSISTANCE PROGRAM  
PROSPECTING REPORT FORM (continued)**

**B. TECHNICAL REPORT**

- \* One technical report to be completed for each project area
- \* Refer to Program Requirements/Regulations, section 15, 16 and 17
- \* If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (see section 16) required with this TECHNICAL REPORT

Name GORDON JOHNSTONE Reference Number 94-95-P29

**LOCATION/COMMODITIES**

Project Area (as listed in Part A.) SAWYER CR. Minfile No. if applicable \_\_\_\_\_

Location of Project Area NTS 82F/10 Lat 49°45.5 Long 116°34

Description of Location and Access ST. MARY'S logging road for 51 KM. to SAWYER CR. RD. then 6.1 KM. of rough 4x4 road and 1500 meters of trail to steep rock chutes. Some of the area was prospected by rope & climbing gear.

Main Commodities Searched For SILVER, LEAD & ZINC

Known Mineral Occurrences in Project Area NONE

**WORK PERFORMED**

1. Conventional Prospecting (area) SAWYER CR.
2. Geological Mapping (hectares/scale) \_\_\_\_\_
3. Geochemical (type and no. of samples) 41 rock samples
4. Geophysical (type and line km) \_\_\_\_\_
5. Physical Work (type and amount) 8 days cutting trail with chainsaw
6. Drilling (no. holes, size, depth in m, total m) \_\_\_\_\_
7. Other (specify) \_\_\_\_\_

**SIGNIFICANT RESULTS (if any)**

Commodities silver, lead & zinc Claim Name SAWYER NO. 8

Location (show on map) Lat 49°45.5 Long 116°34 Elevation 1923 meters

Best assay/sample type Rock sample GJ.1026 (.01 % pb. / 50.44 % zn. / .29 oz. per ton ag. )

Description of mineralization, host rocks, anomalies Refer to write up by BAPTY

RESEARCH

Supporting data must be submitted with this TECHNICAL REPORT.

## SAWYER CREEK AREA

## ACCESS

Due to very bad forest fire conditions, helicopters were not available. Alders and windfalls were cut off old roadway for 7.5 kilometers and one culvert repaired. Four days for two men were spent building trail on the claims for prospecting access.

## PROSPECTING ACTIVITIES

Thirty eight days of prospecting and rock sampling were done. A lot of the property was inaccessible and climbing gear and rope had to be used to do some of the sampling. High grade silver and zinc float were found in large amounts. These samples were found in tight rock chutes, some of the samples were as large as 2x2 ft. of high grade zinc. Due to forest fires I was denied access to this area for part of the summer, because of this and such a short season in this area, I did not have the time to do grid line sampling.

Because of the intense folding and faulting the formations were almost impossible to identify, the samples were tested with hydrochloric acid which strongly indicated carbonates within the samples. Due to this I presume the formations to be mainly Mount Nelson.

I contacted BAPTY RESEARCH LIMITED about the Sawyer property and they are going to act on my behalf to have this property optioned off to one of the few exploration companies which are interested.

### SAMPLES AND DESCRIPTION

- GJ1001 Gray argillaceous siltstone with chalcopyrites
- GJ1002 Three foot quartz vein with chalcopyrites
- GJ1003 Two foot eight inch quartz vein with fine grain pyrites
- GJ1004 Red to white carbonate formation with bedded galena
- GJ1005 Brownish to cream colored float with seams of carbonates and zinc
- GJ1006 Brown weathering dolomite with lead and pyrites
- GJ1007 Grayish to black siltstone (very heavy )
- GJ1008 White to yellowish carbonaceous shist with pyrites
- GJ1009 Whiteish to gray tremolite
- GJ1010 White to blueish quartzite with fine grain pyrites
- GJ1011 Quartzite with thin seams of argillite and pyrites
- GJ1012 Six inch wide quartzite vein with fine grain pyrites
- GJ1013 Ten inch wide sugary quartz vein with pyrites
- GJ1014 Rusty quartz with pyrites
- GJ1015 One foot wide quartz vein with fine grain pyrites
- GJ1016 Argillaceous siltstone with seams of calcite and pyrites
- GJ1017 Ten foot wide quartz vein with pyrites and molybdenum
- GJ1018 Calcareous carbonates with thin beds of argillites and pyrites
- GJ 1019 Black argillites with pyrites ( very heavy )
- GJ1020 Gray argillite with pyrites



GJ1021 Rusty red quartz with seams of galena

GJ1022 Black argillite with pyrites

GJ1023 Grayish to yellow carbonates with zinc

GJ1024 Grayish to white carbonate with zinc

GJ1025 Grayish quartzite with fine grain pyrites

GJ1026 Rusty red carbonate with zinc

GJ1027 Grayish tremolite with whiteish seams of carbonate

FF001 Red to white quartz with pyrite

FF002 White quartz vein with massive pyrites

FF003 Grayish calcareous carbonate ( very heavy )

FF004 Yellowish carbonate with pyrites

FF005 Brown phyllite with pyrites

FF006 Conglomerate with pyrites

FF007 Quartzite with lead

FF008 Argillaceous siltstone with massive pyrites

FF009 Grayish argillite and pyrites

FF0010 Quartzite with pyrites

FF0011 Yellowish carbonate with zinc

GJ2001 Rusty carbonate with galena

GJ2002 Gray argillaceous siltstone ( very heavy )

GJ2003 Black argillites with seams of pyrites



GEOCHEMICAL ANALYSIS CERTIFICATE



Ram Exploration PROJECT SAWYER File # 94-2842 Page 1

1200 - 2nd Ave South, Cranbrook BC V1C 2B3 Submitted by: Gordon Johnstone

PAGE 13

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
FF001	18	5	<2	8	<.1	23	34	43	16.62	9	<5	<2	6	2	<.2	2	5	7	.02	.003	3	8	.24	3	.02	3	.37	.01	.27	2	4
FF002	38	3	<2	3	<.1	18	21	27	16.81	10	<5	<2	4	2	<.2	3	6	5	.02	.002	<2	9	.12	2	.01	4	.21	.01	.13	1	5
FF004	<1	527	1943	8620	9.4	17	6	2117	4.03	88	<5	<2	4	347	74.4	8	<2	11	7.63	.033	4	5	5.16	25	<.01	2	.16	.01	.13	<1	3
GJ1001	6	1215	2	58	.2	29	80	166	16.23	8	<5	<2	6	4	<.2	<2	9	19	.09	.017	6	14	.97	3	.06	4	1.12	.03	.77	2	2
GJ1002	6	43	19	75	.2	18	8	72	1.87	4	<5	<2	<2	4	.4	6	<2	2	.10	.013	2	10	.08	25	<.01	<2	.20	.02	.09	2	1
GJ1003	5	76	5	68	<.1	14	6	221	3.18	4	<5	<2	3	2	<.2	6	<2	8	.09	.035	10	15	.65	16	.06	2	1.03	.03	1.07	3	1
GJ1004	4	206	20239	90837	240.0	6	6	5044	2.31	10	9	<2	2	51	886.4	323	<2	<2	.50	.054	<2	5	.12	35	<.01	3	.13	<.01	.10	<1	12
GJ1005	6	178	8174	99999	21.7	6	23	1713	1.64	51	8	<2	<2	21	707.1	497	4	<2	1.03	.023	<2	2	.22	5	<.01	2	.03	<.01	.02	<1	46
RE GJ1005	7	186	8023	99999	22.4	6	23	1694	1.61	55	5	<2	<2	21	700.2	508	3	<2	1.02	.023	<2	1	.22	5	<.01	<2	.02	<.01	.02	<1	43
GJ1006	11	53	9887	670	27.6	86	14	422	1.99	13	<5	<2	<2	76	4.4	11	46	3	3.66	.065	4	13	2.92	27	<.01	<2	.31	.01	.11	<1	4
GJ1007	<1	12	252	395	1.3	57	6	1149	2.01	5	<5	<2	5	171	2.5	2	<2	2	13.25	.091	2	2	10.83	19	<.01	<2	.15	<.01	.06	<1	1
STANDARD C/AU-R	19	57	38	123	6.9	74	31	1029	3.96	42	16	6	36	50	19.0	16	20	60	.50	.091	42	56	.92	183	.08	38	1.88	.06	.15	11	470

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.  
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
 - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: AUG 25 1994

DATE REPORT MAILED: Aug 31/94

SIGNED BY: *C. Toy* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



WHOLE ROCK ICP ANALYSIS



Ram Exploration PROJECT SAWYER File # 94-2842 Page 2

1200 - 2nd Ave South, Cranbrook BC V1C 2B3 Submitted by: Gordon Johnstone

SAMPLE#

Ba  
ppm

FF003  
GJ1008  
GJ1009  
RE GJ1009

1224  
352  
1.6  
11

BA BY LIB02 FUSION, ANALYSIS BY ICP.

- SAMPLE TYPE: ROCK

Samples beginning 'RE' are duplicate samples.

PAGE 14

DATE RECEIVED: AUG 25 1994

DATE REPORT MAILED: Aug 31/94

SIGNED BY... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

PAGE 14



GEOCHEMICAL ANALYSIS CERTIFICATE



Ram Exploration PROJECT SAWYER File # 94-3126

1200 - 2nd Ave South, Cranbrook BC V1C 2B3 Submitted by: Gordon Johnstone

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	K	W	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppb	ppm	
FF008	4	1007	14	3	.8	19	146	31	19.70	4	<5	<2	6	3	<2	<2	38	2	.04	.003	2	6	.11	4	.01	5	.17	.01	.03	539	<1	-
FF009	7	13	12	28	<.1	16	2	218	4.65	5	<5	<2	3	24	<.2	<2	<2	17	1.27	.046	4	16	1.77	19	.09	2	2.98	.25	1.47	5	2	-
FF0010	153	80	6	3	.1	7	4	42	2.53	9	<5	<2	<2	1	<.2	5	<2	<2	.02	.001	<2	9	.01	8	<.01	<2	.04	.01	<.01	5	2	-
FF0011	3	68	6167	8106	21.5	25	12	2781	5.14	70	<5	<2	10	515	67.5	26	<2	13	10.49	.027	4	6	7.30	20	<.01	3	.14	<.01	.09	<1	6	-
FF 005	3	32	53	83	.1	43	52	180	7.44	95	<5	<2	7	7	<.2	<2	<2	5	.12	.025	9	12	.26	38	.01	<2	.57	.01	.41	<1	1	-
FF 006	4	11	21	34	<.1	26	7	669	1.92	9	9	<2	8	187	.2	<2	<2	4	7.41	.016	4	8	6.78	19	.01	3	.29	<.01	.21	4	2	-
FF 007	27	9	22194	76	93.0	9	1	115	.38	14	<5	<2	<2	16	1.6	8	298	<2	.92	.005	<2	9	.13	2	<.01	3	.02	<.01	<.01	3	7	-
GJ1010	7	158	25	6	.3	45	2	161	18.48	2	<5	<2	3	7	<.2	<2	4	9	.63	.018	3	8	.14	9	.04	3	.34	<.01	<.01	52	1	-
GJ1011	3	62	102	49	.1	18	5	190	2.91	14	<5	<2	8	24	<.2	<2	<2	27	1.26	.024	11	29	1.65	84	.12	<2	3.29	.29	1.12	<1	7	277
GJ1012	6	55	6	32	<.1	21	18	168	5.71	7	<5	<2	5	10	<.2	3	3	35	.32	.017	7	26	.96	24	.13	<2	1.50	.13	1.06	1	1	-
GJ1013	20	5	5	14	<.1	16	10	96	2.94	20	<5	<2	8	2	<.2	5	<2	7	.18	.054	11	10	.26	56	.04	2	.65	.03	.50	1	1	-
RE GJ1013	19	5	10	14	<.1	15	10	94	2.86	21	<5	<2	8	2	<.2	6	<2	6	.18	.053	10	9	.25	52	.04	<2	.64	.03	.51	2	1	-
GJ1014	2	19	15	24	<.1	27	8	130	3.83	5	<5	<2	8	2	<.2	4	2	14	.09	.026	8	12	.99	35	.07	<2	1.15	.03	.80	1	2	-
GJ1016	3	458	11	30	.2	16	12	328	3.72	5	<5	<2	2	21	<.2	<2	3	12	1.61	.013	5	15	.89	30	.07	3	2.91	.22	.56	2	2	-
GJ1017	2414	9	<2	1	<.1	10	15	18	9.52	3	<5	<2	2	2	<.2	3	2	<2	.02	.002	<2	8	.03	9	<.01	<2	.04	.01	.01	3	1	-
GJ1018	16	2	6	18	.1	17	4	354	1.63	2	<5	<2	8	498	<.2	2	<2	13	7.92	.024	9	32	7.60	10	.04	<2	.28	<.01	.26	3	1	-
GJ1019	4	44	13	29	<.1	35	11	23	2.08	<2	<5	<2	6	5	<.2	4	<2	11	.17	.051	13	15	.24	63	.02	2	.54	.02	.40	1	1	908
GJ1020	2	7	39	133	.2	14	5	161	1.84	23	<5	<2	<2	29	.5	5	<2	2	1.79	.018	2	5	1.15	34	<.01	2	.18	<.01	.15	1	1	-
GJ1015	54	52	<2	1	<.1	17	29	18	6.94	2	<5	<2	<2	1	<.2	2	<2	<2	.02	.003	<2	8	.02	3	<.01	<2	.01	.01	<.01	1	1	-
GJ2001	4	59	25117	1329	86.7	12	3	158	1.82	21	<5	<2	3	11	9.9	56	548	<2	.01	.001	2	13	.01	3	<.01	2	.03	<.01	<.01	4	25	-
GJ2002	2	24	615	129	1.9	34	19	481	4.18	13	<5	<2	10	54	<.2	<2	18	38	1.09	.077	28	22	2.36	81	.07	<2	2.23	.01	.61	<1	10	-
GJ2003	10	117	105	164	.4	102	23	37	6.14	87	<5	<2	10	6	.4	5	5	14	.18	.042	5	21	.34	27	.02	2	.69	.01	.52	<1	1	-
STANDARD C/AU-R	21	62	40	129	7.1	72	32	1045	3.96	42	16	9	38	52	17.5	14	22	60	.49	.090	41	60	.92	177	.09	34	1.88	.07	.15	10	460	-

PAGE 15

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 HG BA TI B W AND LIMITED FOR NA K AND AL.  
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
 - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.  
 BA\* .2 GM SAMPLE FUSED WITH 1.2 GM LIBO2, ANALYSIS BY ICP. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 13 1994 DATE REPORT MAILED: *Sept 21/94* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

PAGE 15

GEOCHEMICAL ANALYSIS CERTIFICATE

Ram Exploration PROJECT SAWYER File # 94-3865 Page 1

1200 - 2nd Ave South, Cranbrook BC V1C 2B3 Submitted by: Gordon Johnstone



PAGE 16

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm
GJ 1022	3	32	33	49	1.0	29	13	59	3.02	27	<5	<2	5	5	.3	2	<2	10	.13	.040	7	15	.19	43	.02	5	.47	.01	.32	3	<5	1
GJ 1023	<1	194	112	99999	4.7	16	4	13896	5.50	368	<5	<2	5	211	716.8	73	<2	3	7.07	.021	<2	3	3.59	28	<.01	5	.06	.01	.06	<1	<5	<1
GJ 1025	2	15	22	2200	.7	20	5	2256	4.09	33	<5	<2	6	181	16.6	<2	<2	4	8.72	.030	<2	4	8.14	40	.01	9	.31	.01	.26	<1	<5	<1
GJ 1027	<1	1	8	41	.5	4	<1	140	.26	<2	<5	<2	3	54	<.2	<2	<2	4	3.21	.007	<2	4	.82	11	.03	<2	.26	.01	.14	3	<5	<1
RE GJ 1027	<1	1	5	38	.6	2	<1	132	.25	<2	<5	<2	3	51	.2	<2	<2	4	3.06	.007	<2	3	.78	13	.03	3	.25	.01	.13	3	<5	<1
STANDARD C	19	60	38	126	7.0	69	31	1040	3.96	42	18	7	38	52	18.7	14	22	61	.49	.093	40	61	.91	185	.08	34	1.88	.07	.16	13	<5	4

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.  
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
 - SAMPLE TYPE: ROCK Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 26 1994 DATE REPORT MAILED: Nov 7/94 SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



SAMPLE#	Pb %	Zn %	Ag oz/t
GJ 1021	9.86	.07	1.80
GJ 1024	.12	20.02	.29
GJ 1026	.01	50.44	.12
RE GJ 1026	.01	50.12	.09

PAGE 17 Sample type: ROCK. Samples beginning 'RE' are duplicate samples.

**BAPTY RESEARCH LIMITED**

901 Industrial Rd. No. 2  
Cranbrook, B.C. V1C 4C9

Fax (604) 426-6219

Tel (604) 426-6277

**REPORT ON THE SAWYER PROPERTY**

**FORT STEELE MINING DISTRICT  
PROVINCE OF BRITISH COLUMBIA**

**LOCATION  
MAP 82F 10/E (TRIM 82F.078)  
LATITUDE: 49° 44' NORTH  
LONGITUDE: 116° 35' WEST**

**PREPARED BY**

**MICHAEL B. BAPTY, P.ENG.  
RICHARD T. WALKER, M.SC. P.GEO.**

**BAPTY RESEARCH LIMITED**

**OCTOBER 20, 1994**



### SUMMARY

The Sawyer Property includes a 16 claim block located just east of the Sawyer Pass, in the Purcell Mountains of southeastern B. C. It is a 'new' property in that there are no records of previous work, but there is some evidence of historical trenching over a quartz vein outcropping on the south edge of the claims.

Geographically, the property lies in an east-west mineralized trend extending from the Estella Kootenay King mines in the Rockies to the east, through the Sullivan cluster, and extending through the Bluebell Mine, and Ainsworth Camp to the west.

Geologically, the mineralization is contained at the Horsethief Creek-Mount Nelson Formation contacts, at the top of the Belt-Purcell Supergroup. The location is defined by the proximity of the Toby Conglomerate at the base of the Windermere series. The metallogeny is thought to be sedimentary/exhalite in origin, related to hydrothermal venting into shallow water, occasioned by tension cracks opening on the flanks of the deepening Aldridge Basin. Other known local strataformed sulphide deposits occur on Enterprise Creek, about 10 kilometers to the east, and at Lapointe Creek, approximately three kilometers to the west of the Sawyer group.

Sulphides are contained within a fine grained quartzite and quartz wacke, with bedding being the obvious control of mineralization. Considerable deformation is evident, with some remobilization of sulphides, and development of calcite veinlets.

Despite two visits to the property, precipitous slopes have limited outcrop access and in-situ lead and zinc mineralization has yet to be mapped and sampled. Mineralized float from avalanche chutes grades from 9% lead, 10 oz/ton of silver, and 2% zinc (Sample B52998); to 2% lead, 2 oz/ton of silver, and 20% of zinc (Sample B52999). Mineralized boulders over 0.6 meters diameter are evident.

An iron gossan has been located on a spur between two of the float bearing chutes, at 2010 m elevation. The unit was approximately 5 meters thick, and apparently gently dipping (Sample B52997). No lead or zinc was detected, but ICP analysis showed the leached residue graded from 25-30% Fe. We believe this represents the centre of the sulphide mineralization.

We recommend the property be optioned. Development will take place through:

- (1) Continued mapping and structural definition,
- (2) Prospecting, supported by rock climbing specialists,



and (3) Geochemical definition of mineralization in the south portion of the claim block, thought to be an extension of the north face outcrop.

Basic mapping, prospecting, and a geochemical survey will cost approximately \$35,000.

If results are favourable, a two stage drill program will follow.

The drill definition will cost approximately \$500,000 for initial work, with another \$500,000 for fill-in holes to define a reserve.

Ongoing engineering and development will require a separate budget.

The indicated grades, potential size of the deposit, and proximity to Cominco's Sullivan concentrator make this an attractive prospect.

## REPORT ON SAWYER PROPERTY

### INTRODUCTION

#### Location and Access

The Sawyer claims are located just east of the Sawyer Pass, about 45 km. west of Kimberley, B.C., and they straddle an unnamed mountain rising to 2399 meters. Geographically, they are referenced at 49° 44' north latitude, and 116° 35' west longitude.

Access is by logging road west from Kimberley until turning off onto the West Fork trunk road approximately 23 km past St. Marys Lake, and later south across the river onto the Sawyer Creek Forest road. Three kilometers beyond is the start of an old trail leading up to Sawyer Pass, which crosses the claim block. A 2.5 km. hike brings the viewer to the base of the avalanche chutes containing the mineralized float (Figure 1).

#### Physiography

The claim group covers alpine terrain near the top of the St. Marys River drainage. Approximately 80% of the block is forested by mature larch, pine and balsam to 2300 m, with the remainder largely unvegetated due to steep terrain and avalanche scour.

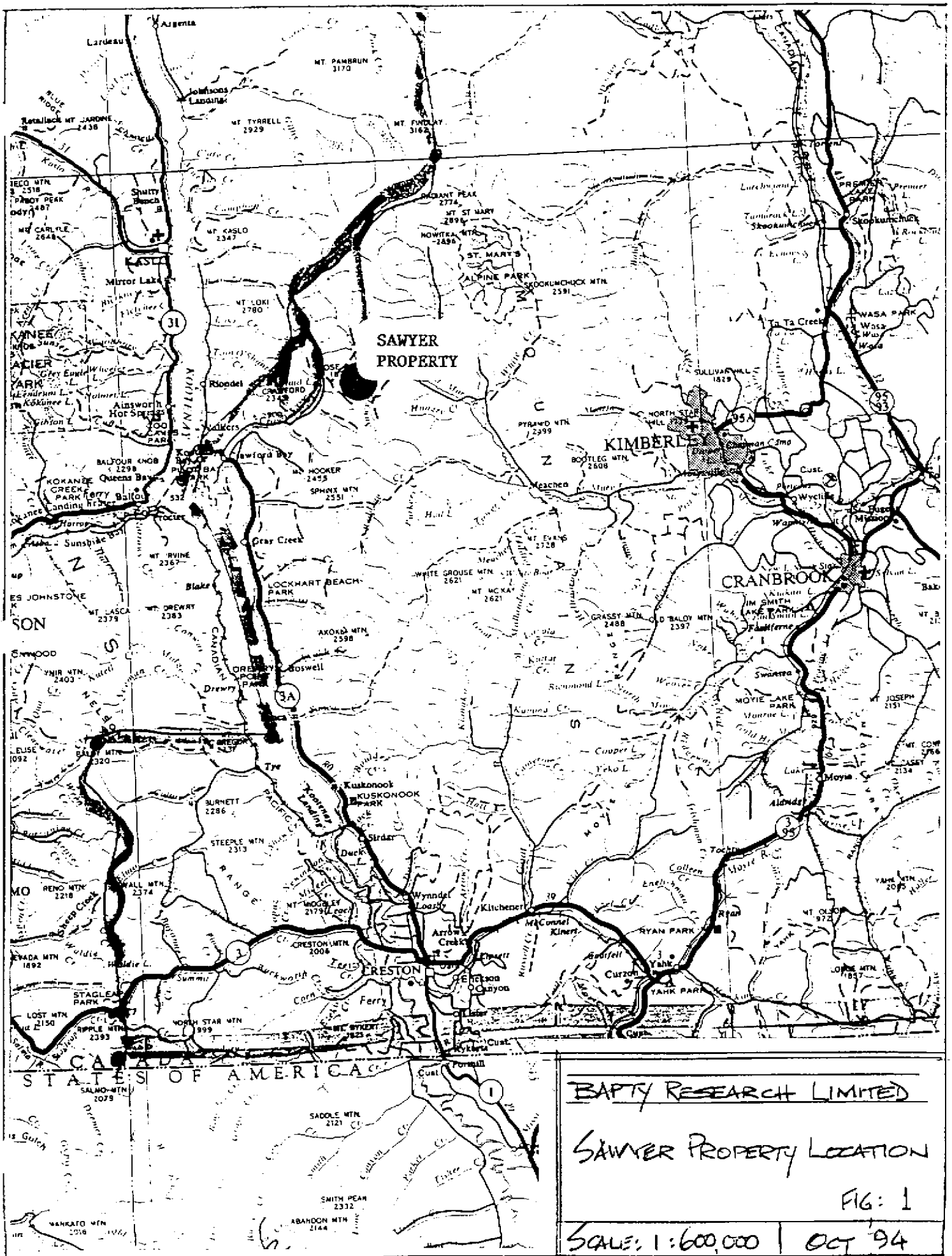
Rain and snowfall levels are above average with accumulated snowfalls reaching 5 meters. The property is free from snow between May and October.

#### Geological Target

The property is located midway between the Aldridge basin and the Kootenay Arc. The nearest producer is the now dormant Bluebell Mine, located approximately 20 km west of the claims which produced about 4.7 million tonnes of lead and zinc grading 14% combined metal.

Mineralogically, the occurrence is thought to represent a potentially significant strataformed deposit, similar in setting to the Lapointe Creek mineralization located about 3 km to the west (large surface expression grading 0.1% Zn, 5% Fe, Reference 1).

Genesis is thought to follow hydrothermal venting associated with block faulting along the edge of the Purcell basin, synchronous with rifting and deepening within the basin proper (Reference 2).



BAPTY RESEARCH LIMITED

SAWYER PROPERTY LOCATION

FIG: 1

SCALE: 1:600,000 | OCT '94

## CLAIM GROUP AND STATUS

The eight 2-post Sawyer claims were staked in 1993 by Gordon Johnstone for himself, and an additional 9 unit 4-post block was staked in 1994. The 2-post claim named Sawyer 8 was allowed to lapse, and the new block was named Sawyer 8. Frank Fairclough, a longtime friend and partner of Gordon has a 1/3 beneficial interest, but his name does not appear on the ownership documents.

Prospecting was carried out in 1993 and 1994 by Johnstone. As BRL was active with projects on the adjacent Lapointe Creek property, Johnstone approached Bapty in late summer of 1994 to assist with arranging an option and evaluation program. Bapty Research Limited subsequently signed an agreement with the vendor for exclusive right to place the option with a development company.

The terms of this agreement and the claim information are described in Appendix III.

The claims are in good standing until 1996 and 1997.

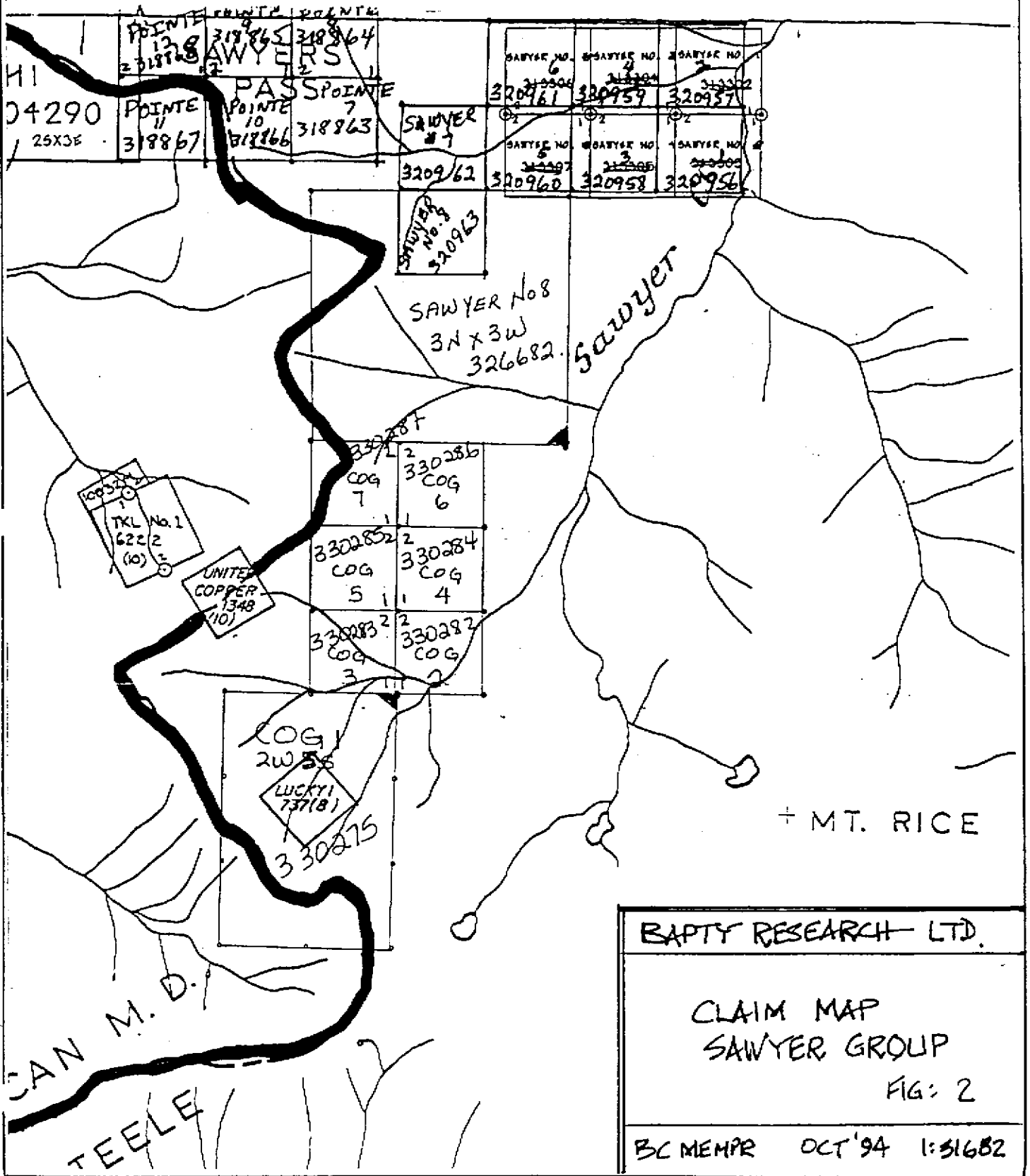
Figure 2 shows their configuration.

## PROGRAM

The examination was designed to locate and verify the source of mineralization, describe the structural controls, and define the economic potential.

Initial helicopter access located a landing site and provided a photographic montage to assist with structural definition. The first examination revealed no mineralization in the upper portion of the mountain, and the need for suitable safety equipment for access to examine the lower slopes.

The second flight included Mr. R. Walker, P. Geo. two mountain climbers, and the author. Roped descent through 300 meters of steep terrain, including traverses across areas of likely sources of mineralization revealed no likely sources. Late in the descent however, at 2010 meters of elevation, the forested slope was noted to be comprised of highly oxydized talus over a 10 m x 35 m area. Impending darkness prevented a wider search but a typical piece of scree, taken for later examination is thought to represent underlying outcrop.



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CLAIM MAP  
SAWYER GROUP  
FIG: 2

BC MEMPR OCT '94 1:51682

### General

The claims straddle stratigraphy identified as Horsethief Creek, characterized by pebble conglomerates and beds of unique blue grey limestone.

Regional mapping by Reesor (Figure 3) features the northerly trend of the steeply dipping beds, and the continuity of structure.

Field mapping showed fault repetition of the control sequence (Figure 4, E-W X-section). The gossan is located approximately 150 meters below the lower pebble conglomerate. Projections indicate that there may be about 300 meters of east side down displacement on a prominent thrust fault cutting through the mineralization. This fault is of importance because it is projected to down thrust a significant portion of mineralized horizon below the outcrop level.

The N-S section shows the axial continuity. If the downthrust model is verified, there is potential for a significant increase in volume of favourable stratigraphy.

### Mineralization

The float samples from scree indicate the mineralized horizon is broadly segregated into a lead rich band, combined lead and zinc, and a zinc rich band. The sulphides are contained within well defined bedding planes, with evidence of minor remobilization. The host sequence is a well graded quartzite, with increased dolomite in the zinc horizon.

The lead sulphides are disseminated with little iron mineral. Silver values accompany the lead.

<u>Pb%</u>	<u>(Ag oz/ton)</u>	<u>Ag/Pb value ratio</u>
2.31	2.26	0.98
9.06	10.05	1.11

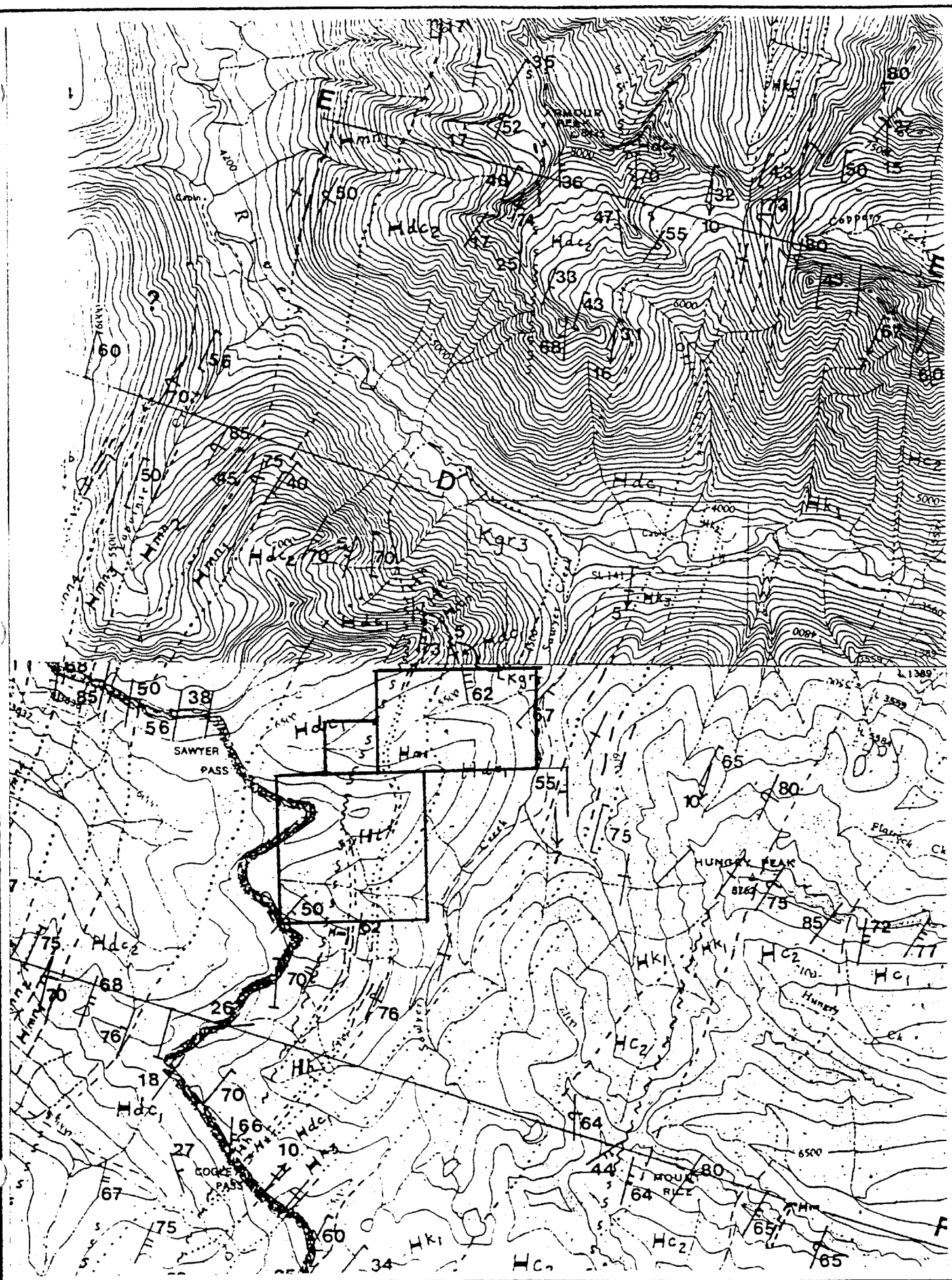
Gold values are of no consequence.

The zinc sulphide is a uniform dark brown colour. Iron values are minor.

<u>Zn%</u>	<u>Fe%</u>	<u>Cadmium (ppm)</u>	<u>Antimony (ppm)</u>
1.86	1.38	241	431
19.87	3.66	898	917

Cadmium and antimony appear in minor quantities.

Analysis of the gossan specimen revealed shards (to 5 cm) of quartzitic siltstone contained with flow patterns of porous limonite and siderite, with occasional slugs (to 2 cm) of goethite. ICP analysis revealed no lead/zinc, little feldspar, some dolomite, and iron in oxides grading 28% Fe (Sample B52997). Characteristic boxwork patterns in the limonite indicates the initial presence of iron sulphides.



**PLEISTOCENE AND RECENT**

Od Drift covered till, alluvium, colluvium

**BOCENE(?)**

Esy Syenite, anorthosite

**CRETACEOUS(?)**

KHhb Hornblende and diorite

**CRETACEOUS**

- Kgr Discrete shear zones and strong foliation
- Granite with accessory garnet
- Granite with many inclusions of metasediments
- Extensive pegmatite (and apatite)
- Kgd Biotite granodiorite
- Kgr<sub>1</sub> Biotite granite
- Kgr<sub>2</sub> Biotite leucogranite
- Kgr<sub>3</sub> Leucocratic granite with biotite and muscovite
- Kgr<sub>4</sub> Kgr<sub>3</sub> - foliated
- Kgr<sub>5</sub> Biotite granite with megacrysts of Potash Feldspar

**JURASSIC(?)**

JHgr Leucogranite sills and lenses (foliated and/or lineated)

JHgd<sub>1</sub> Biotite-hornblende granodiorite with megacrysts of potash feldspar

**JURASSIC**

Jgd<sub>1</sub> Biotite-hornblende (zoned) granodiorite

Jgd<sub>2</sub> Epidote-biotite granodiorite

**JURASSIC(?)**

Jub Ultrabasic, serpentized peridotite

**CAMBRIAN TO MISSISSIPPIAN**

**LARDEAU GROUP (P1)**

- Pz INDEX FORMATION: undivided
- Pz<sub>1</sub> Biotite-quartz-feldspar (± garnet) gneiss; amphibolite
- Pz<sub>2</sub> Marble with calc-silicate gneiss; amphibolite and schist layers; micaceous quartzites; Pz<sub>2a</sub> - calcitic marble
- Pz<sub>3</sub> Hornblende gneiss, amphibolites; calcitic marble
- Pz<sub>4</sub> Biotite-muscovite schist and gneiss

**CAMBRIAN**

**LOWER CAMBRIAN**

Cbm BADSPOT-MONKMAN FORMATION: calcite marble, dolomite; calcareous schist, quartzite

**LOWER CAMBRIAN AND HADRYNIAN(?)**

- Ch HAMELL GROUP: undivided
- Ch<sub>1</sub> Dark quartzites; quartz-rich schist
- Ch<sub>2</sub> White quartzites; q-white quartzites, but may not be Ch<sub>2</sub>
- Ch<sub>3</sub> Muscovite-biotite-chlorite schist, quartzite, siltstone
- Ch<sub>3a</sub> - epidote-chlorite-amphibolite gneiss (greenstone?)
- Ch<sub>3b</sub> - marble
- Ch<sub>4</sub> Massive white quartzites; micaceous quartzite
- Ch<sub>4a</sub> - pebbly and feldspathic quartzite
- Ch<sub>4b</sub> - pebble and cobble conglomerate
- Ch<sub>4c</sub> - calcitic and dolomitic marble.

**HADRYNIAN**

**WINDERMERE SUPERGROUP (Hh, H1)**

- Hh NORSETHREEP CREEK GROUP:
  - Hh<sub>1</sub> - Grey marble
  - Hh<sub>2</sub> - Pebble conglomerate
  - Hh<sub>3</sub> - Cobble conglomerate
- Hh<sub>4</sub> Quartzites; Hh<sub>4a</sub> - cobble conglomerate
- Hh<sub>5</sub> Phyllites; Hh<sub>5a</sub> - cobble conglomerate
- Hh<sub>6</sub> Grey limestone and marble
- Hh<sub>7</sub> Phyllites; Hh<sub>7a</sub> - cobble conglomerate
- Hh<sub>8</sub> Phyllite, grit and quartzites; Hh<sub>8a</sub> - pebble conglomerate
- Hh<sub>9</sub> White quartzite
- Hh<sub>10</sub> Phyllite

H1 TOBY FORMATION: polymict conglomerate, conglomeratic dolomite, conglomeratic pebbles

**MELBIAN**

Mgr Granite, pegmatite

**PURCELL SUPERGROUP (Hmn to Hn)**

- Hmn MOUNT NELSON FORMATION: undivided
- Hmn<sub>1</sub> Dolomite, white or dark grey, buff or brown weathering
- Hmn<sub>2</sub> Black argillite and argillaceous grey siltstone, thin-bedded
- Hmn<sub>3</sub> Dolomite, dolomitic siltstone, argillite
- Hmn<sub>4</sub> white or green, thick-bedded quartzite

**Hdc**

- DUTCH CREEK FORMATION: undivided
- Hdc<sub>1</sub> UPPER: siltstone, argillite, quartzite
- Hdc<sub>2</sub> 2a-carbonate bearing beds and dolomite
- Hdc<sub>3</sub> LOWER: black argillite and argillaceous grey siltstone, thinly interbedded; 1a-thin successions of dolomite and/or white quartzite

**Hm**

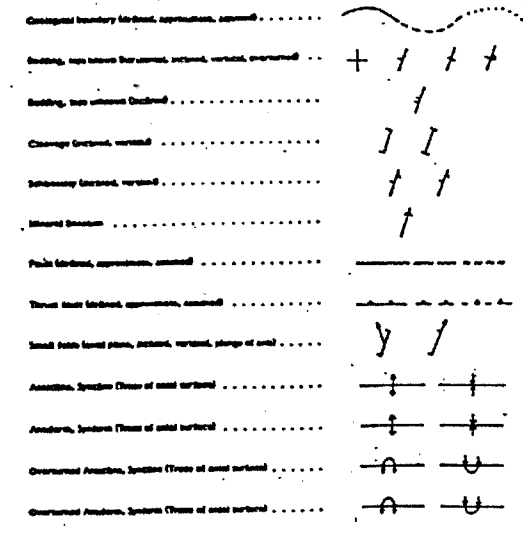
MOYIE INTRUSIONS: meta-diorite, meta-quartz diorite

**Hk**

- KITCHENER FORMATION: undivided
- Hk<sub>1</sub> Red weathering dolomite, black argillite, quartzite
- Hk<sub>2</sub> Black argillite, grey siltstone, tan siltstone all thinly interbedded; rare carbonate bearing horizons
- Hk<sub>3</sub> Dolomitic siltstone, dolomite, green argillite, black argillite.
- Hk<sub>4</sub> b-black argillite; buff dolomite and dolomitic siltstone, white siltstone
- Hk<sub>5</sub> a-green argillite, buff dolomitic siltstone, dolomite

**Hc**

- CRESTON FORMATION: undivided
- Hc<sub>1</sub> UPPER CRESTON: deep green siltstone, light and dark, thinly laminated argillite and siltstone; purple argillite.
- Hc<sub>2</sub> MIDDLE CRESTON: grey, blocky siltstone and very fine quartzite in beds to 30 cm or more, commonly ripple marked, and commonly purple lined or mottled; black to deep purple argillite and thin-bedded siltstone; white, medium-grained quartzite; commonly associated with purple mud-chip breccias.
- Hc<sub>3</sub> LOWER CRESTON: thin-bedded dark argillite and grey siltstone characterized by irregular pinching and swelling beds, ripple cross-lamination, mud-cracks, minor cut and fill features; green siltstone with thin interbeds of argillite.

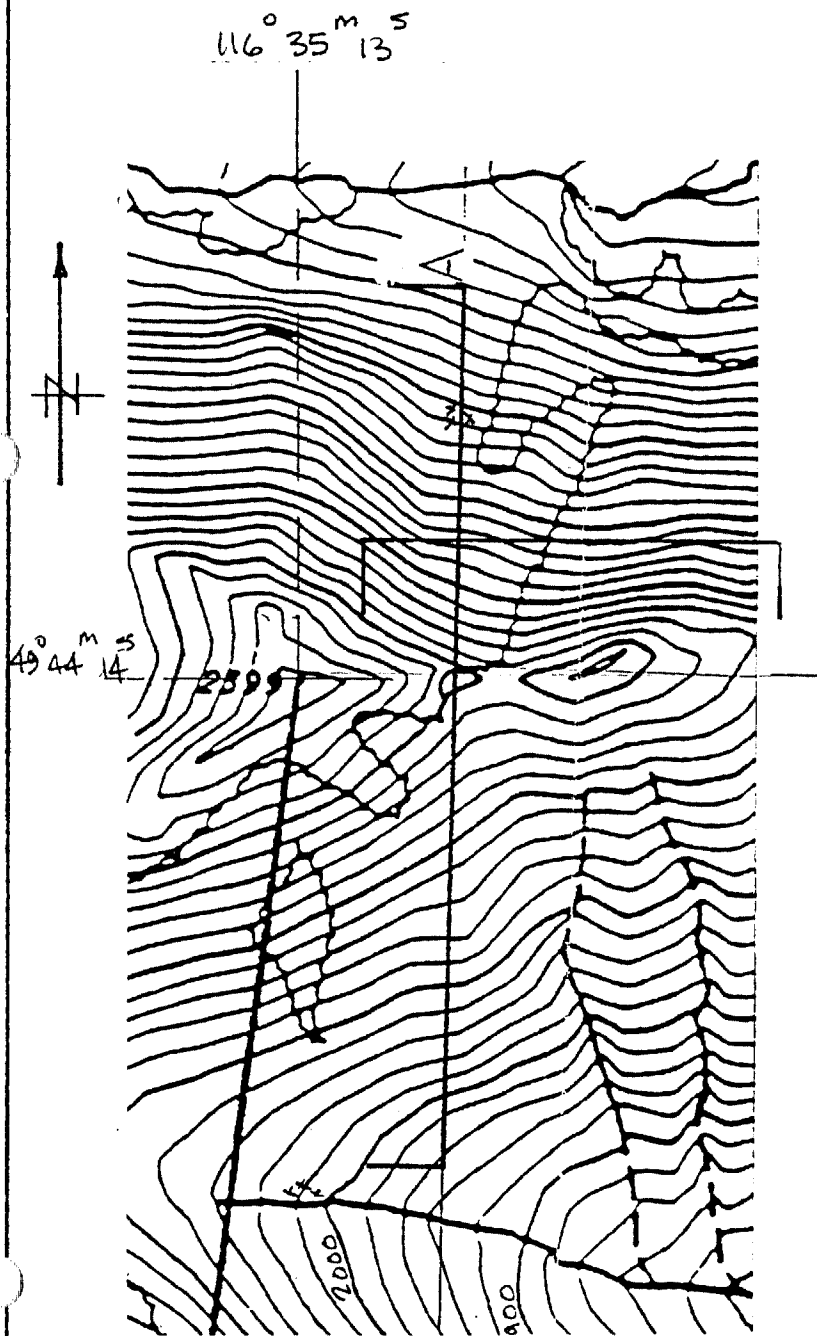


**BAPTYP RESEARCH LTD**

**SAWYER PROPERTY  
REGIONAL GEOLOGY**

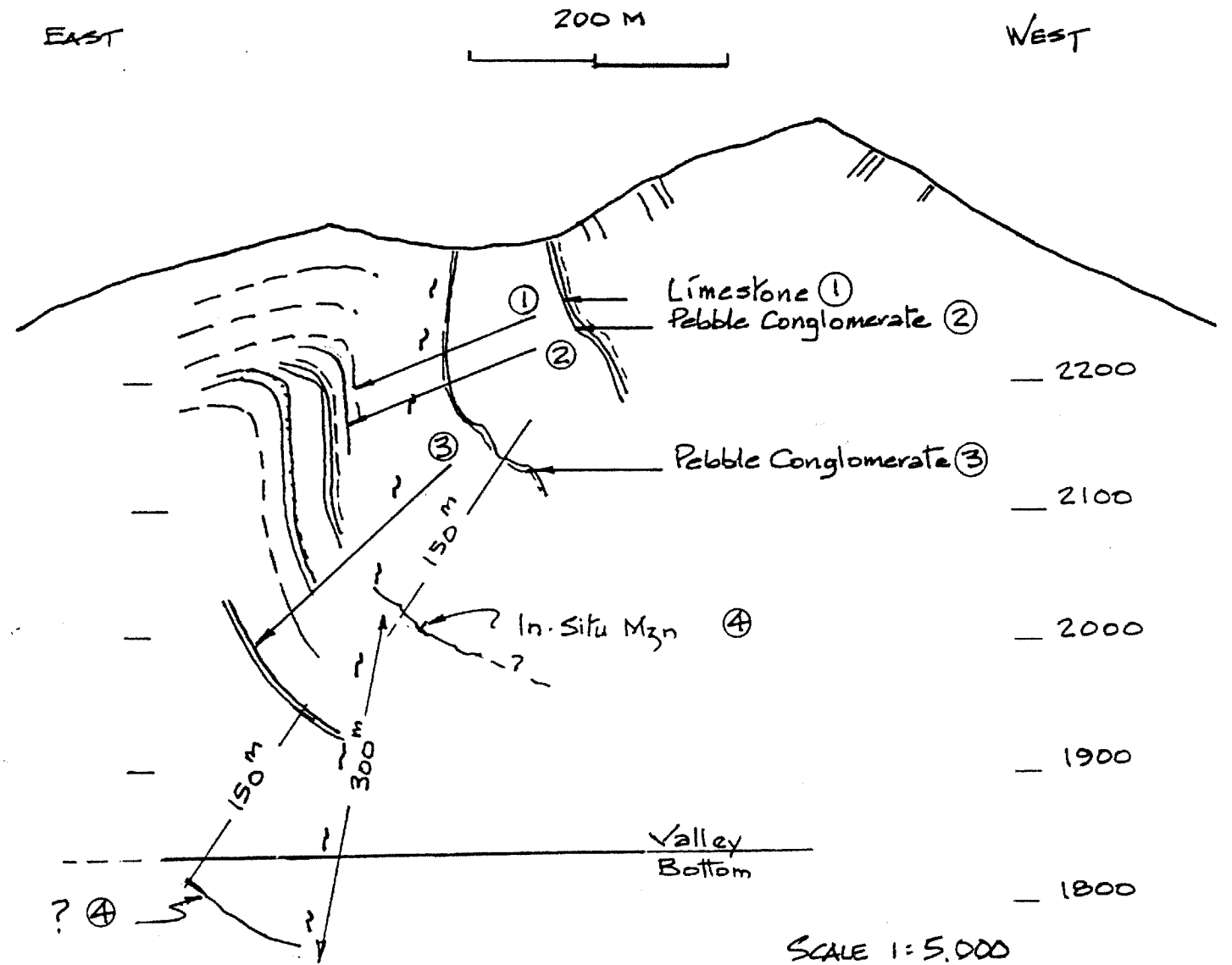
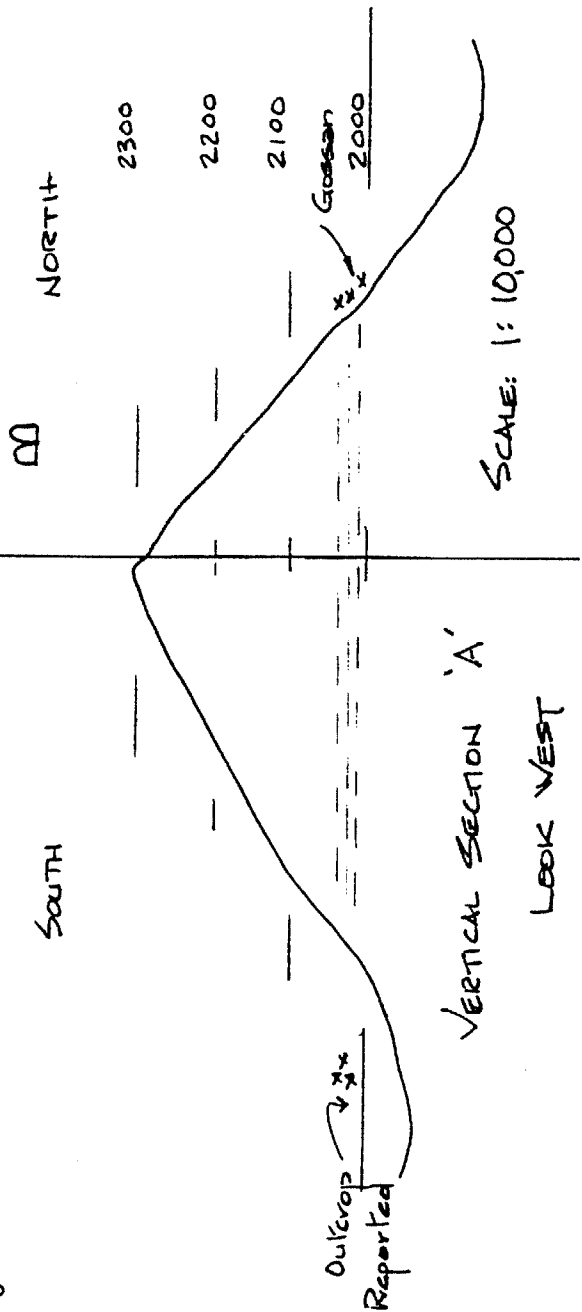
REF RESSOR 1968      OCT. 1994

SCALE 1:50,000      FIG. 3



PLAN

SCALE 1:10,000



BAPTY RESEARCH LIMITED	
SAWYER PROPERTY CROSS-SECTIONS	
MOE TRIM	SCALE: VAR
MBB	OCT 1994 FIG 4



Despite limited field evidence the property has much to commend it.

The sedimentary exhalite model for strataformed deposits typically favours iron production over base metals, and these are often found in quantity near the vent source.

1. In our examination, an iron gossan was passed through on the way down the slope at 2010 m. elevation. The extent of the scatter indicated a thickness of several meters.
2. Samples of significant grades of lead or zinc are observed across four avalanche chutes within the scree. A width of 150 meters is indicated to the projected fault plane.
3. A fold axis on the west side of the fault was observed to strike N-S and plunge at 0-10° to the south. The prospector vendor stated that he had picked up samples of lead and zinc in the outcrop at the same elevation, on the south side of the mountain. This establishes a possible 600 meter trend.
4. The mineralized potential may be estimated to size:  
 thickness x length x trend x density  
 = 5 m x 150 m x 600 m x 3.2 m  
 = 1.3 million tonnes.

Projected extension of mineralized structure on the east side of the fault is accessible from the lower side of the valley.

Potential to develop a reserve of 1-2 million tonnes is evident.

There is possibility of selling mined material to a local concentrator.

The grades of lead/zinc sample from float indicate that the occurrence could be of economic interest.

## CONCLUSIONS

Lead and zinc sulphides are appearing in avalanche chutes along a mountain face. Their grades are potentially of economic interest. The inferred size of the mineralized structure is adequate to support sustained production.

The property should be optioned and further explored.

Trenching, geochemical sampling, prospecting and structural mapping should be carried out. Outcrop exposure may show sufficient continuity to embark on an aggressive drill program. The drill program should be phased to revalue the results as successive sections are drilled off. It should be possible to quickly establish whether the potential resource is 1/2 or 2x the indicated size, for example.

An optioning company should be prepared to finance this work within a single season.

## RECOMMENDATIONS

Bapty Research Limited is acting on behalf of the vendor. Our interests in optioning the property are described in Appendix IV.

2. More work must be spent examining the showings and structure. This is budgetted to cost \$35,000 and could partially be completed this Fall.
3. Establishment of an ore reserve can only be accomplished by a drill program. This is relatively easy to define and budget for, but will be controlled by logistics and financing capability. The optioning company should be prepared to drill off the whole structure in one season, but approvals to carry out and continue a program of this magnitude should be based upon staged encouragement.

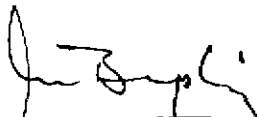
A drill program is estimated to cost \$1 million.

**QUALIFICATION STATEMENT**

I, Michael Bruce Bapty, of Cranbrook, in the Province of British Columbia, hereby certify that:

1. I am a Consulting Mining Engineer and Contractor at 901 Industrial Road #2, Cranbrook, B.C.;
2. I am a graduate of the University of British Columbia with a BAsC in Mineral Engineering, and have been active in mine exploration, development, operations and administration for twenty-six years;
3. I am a Member of the Association of Professional Engineers of British Columbia;
4. This report is based upon property fieldwork conducted by a consultant and myself from the period August to October, 1994.
5. My interest in this property is to recover our option cost and examination fee, and to secure a finders fee, to be determined by negotiation.

Dated at Cranbrook, British Columbia, this 25th day of October, 1994.



---

M. Bapty, P. Eng.

## APPENDIX I

### References

1. Bapty, M.; Lapointe Creek Period Development Report for Telstar Resources Ltd.; 1991.
2. Brown, D.A. and Klewchuck, P.; "Pb-Zn-Ba Mineralization at Wilds Creek: Relevance to Stratabound Deposits along the western Purcell Anticlinorium"; Paper contained within a Conference Publication "Metallogeny of the Belt-Purcell Basin" from a workshop held in Cranbrook, Sept. 1994, Published by Dept. of Earth Sciences, Montana State University, Bozeman. 1994
3. Fyles J.T.; Geology of the Ainsworth-Kaslo Area, B.C. B.C. Dept of Mines, Bulletin No. 53.; 1967

APPENDIX II

Assay Results

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE (604) 253-3158 FAX (604) 253-1716



## GEOCHEMICAL ANALYSIS CERTIFICATE



Bapty Research Limited File # 94-3636

901 Industrial Road #2, Cranbrook BC V1C 4C9

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
B 52997	4	68	2	52	<.1	70	19	140	27.94	5	<5	<2	9	7	<.2	<2	10	11	.04	.046	10	10	.36	55	.03	5	.53	.01	.22	<1
B 52998	4	301	28654	20749	126.2	12	4	1984	1.38	22	<5	<2	47	241.6	431	2	3	.36	.074	<2	11	.04	64	<.01	6	.24	.02	.15	3	
B 52999	1	869	17218	99999	60.2	9	11	7855	3.66	173	7	<2	6	102	898.5	917	5	2	4.60	.033	<2	<1	3.07	11	<.01	3	.05	.01	.04	<1
RE B 52999	1	843	16422	99999	59.0	8	10	7735	3.68	168	10	<2	5	99	858.0	900	5	<2	4.52	.033	<2	<1	3.06	11	<.01	<2	.05	<.01	.05	<1

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.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS &gt; 1%, AG &gt; 30 PPM &amp; AU &gt; 1000 PPB

- SAMPLE TYPE: ROCK Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 12 1994 DATE REPORT MAILED: Oct 18/94 SIGNED BY: D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE (604) 253-3158 FAX (604) 253-1716



## ASSAY CERTIFICATE



Bapty Research Limited File # 94-3636

901 Industrial Road #2, Cranbrook BC V1C 4C9

SAMPLE#	Pb %	Zn %	Ag** oz/t	Au** oz/t
B 52998	9.06	1.86	10.05	<.001
B 52999	2.31	19.87	2.26	<.001

1 GM SAMPLE LEACHED IN 75 ML AQUA - REGIA, DILUTE TO 250 ML, ANALYSIS BY ICP.

AG\*\* &amp; AU\*\* BY FIRE ASSAY FROM 1 A.T. SAMPLE.

- SAMPLE TYPE: ROCK

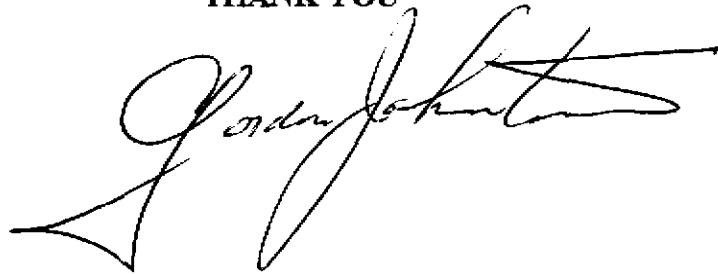
DATE RECEIVED: OCT 12 1994 DATE REPORT MAILED: Oct 18/94 SIGNED BY: D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

## COMMENTS

I would like to thank V.A. PRETO, Ph.,P.Eng. and everyone who helped in planning of the Prospecting Assistance Program, and a special thanks to H. PAUL WILTON, P.Eng. Regional Geologist of Cranbrook, who was more than helpful and ( I am sure ) went out of his way to accommodate the prospector.

Without the support from the prospecting grant, it would have been difficult to meet the costs of promoting the Sawyer property.

THANK YOU

A handwritten signature in black ink, appearing to read "Gordon Johnston". The signature is written in a cursive style with a large, sweeping initial "G" and a long horizontal stroke at the end.

# SAWYER CLAIMS 1994



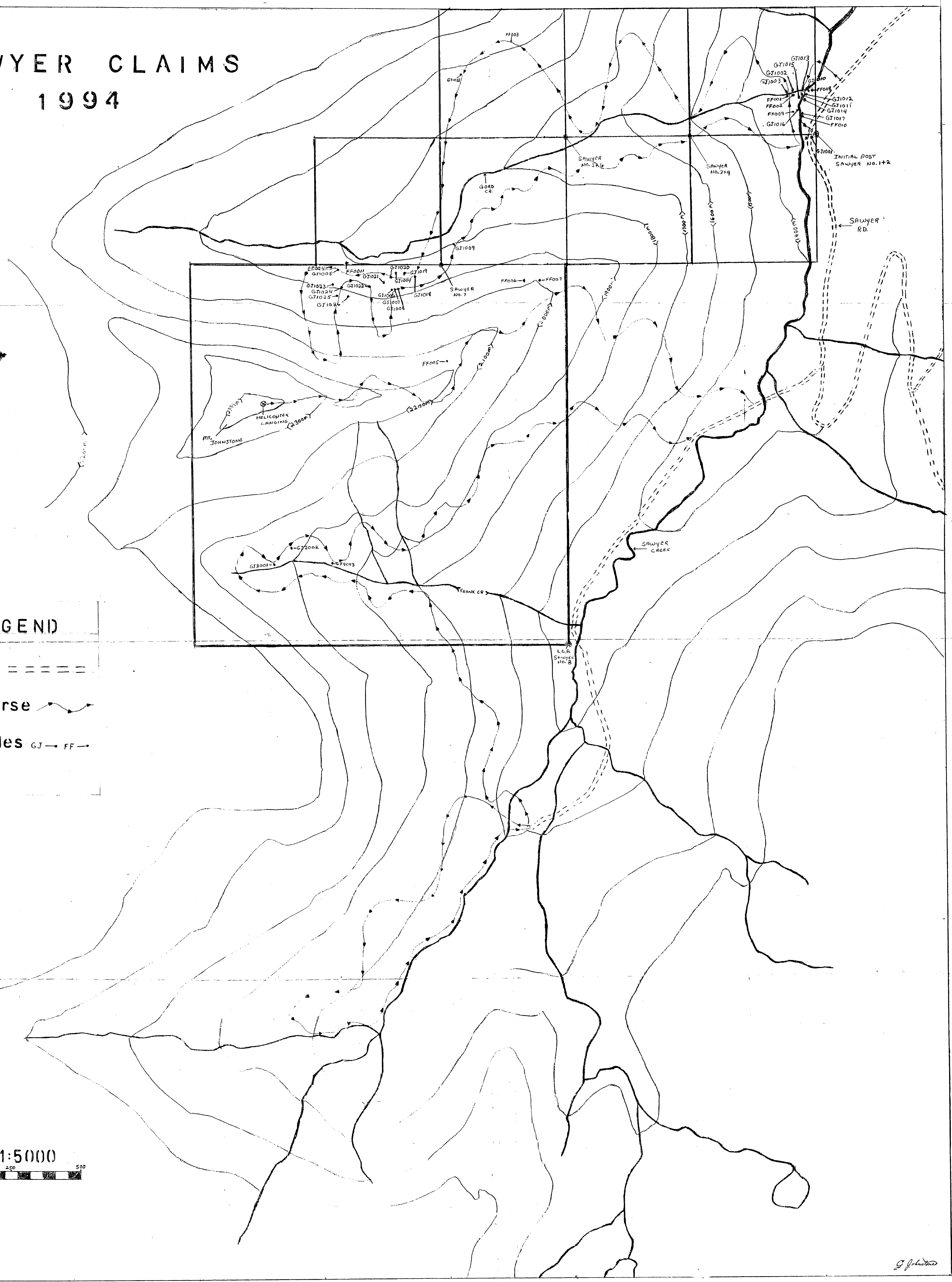
## LEGEND

road = = = =

traverse ~ ~ ~ ~

samples GJ → FF →

scale 1:5000  
50 0 50 500



G. J. ...