

GEOLOGICAL AND GEOCHEMICAL REPORT

on the  
ROMAN CLAIMS

Watson Lake Mining District

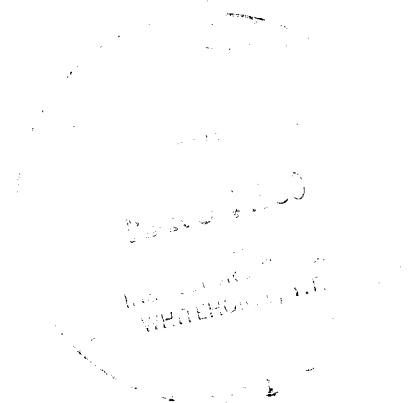


NTS 105-A-2-SE

Owner & Operator: St. Joseph Explorations

Report By: David A.R. Hendry, P. Eng.

Covering Field Work Completed August 26, 27, 29 & 30, 1979



0 90575

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$ 2,500.00

J A Moun

Resident Geologist or  
Resident Mining Engineer

Considered as representation work under  
Section 53 (4) Yukon Quartz Mining Act.

B R BAXTER

Supervising Mining Recorder

Commissioner of Yukon Territory

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## INTRODUCTION & SUMMARY

The sixteen Roman claims on Map 105-A-2, Watson Lake Mining District, were staked 7 June, 1979, and recorded 11 June, 1979, by Jake Melnychuk to cover a large barite-lead-zinc vein in rusty black Paleozoic shales. The claims lie 6 km southeast of the town of Watson Lake. During the summer of 1979 St. Joseph Explorations Ltd. entered into an agreement with Mr. Melnychuk to explore the claims. They were mapped by this author in late August and chip samples of mineralization sent out for assay.

## CONCLUSION & RECOMMENDATIONS

This barite showing appears to be a vein or replacement deposit. Assay grades obtained by this author are too low to sustain an economic operation in base metals or barite or a combination of both.

It is, however, recommended that a baseline be cut near the showing and soil samples taken to determine the extent of the vein. A 1 km baseline with samples at 25 m on lines 100 m apart would be adequate. This would total approximately 150 samples on 300 m long lines. Samples should be run for lead, zinc and barium.

This work should be done in the spring by helicopter out of Watson Lake. Estimated costs would be as follows:

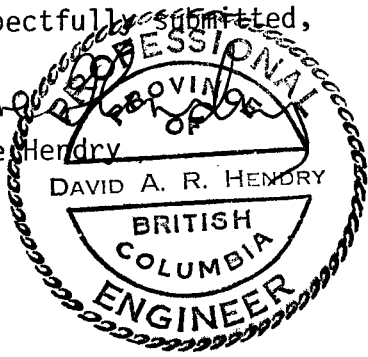
Line Cutting	1 km	\$ 300
Manpower	3 mandays	240
Helicopter	1 hour	400
Hotel & Food	3 days	150
Geochem Costs	150 x \$5.50	825
Report Writing	(manpower, drafting, typing, printing & assessment filing)	350
	TOTAL	\$ 2265

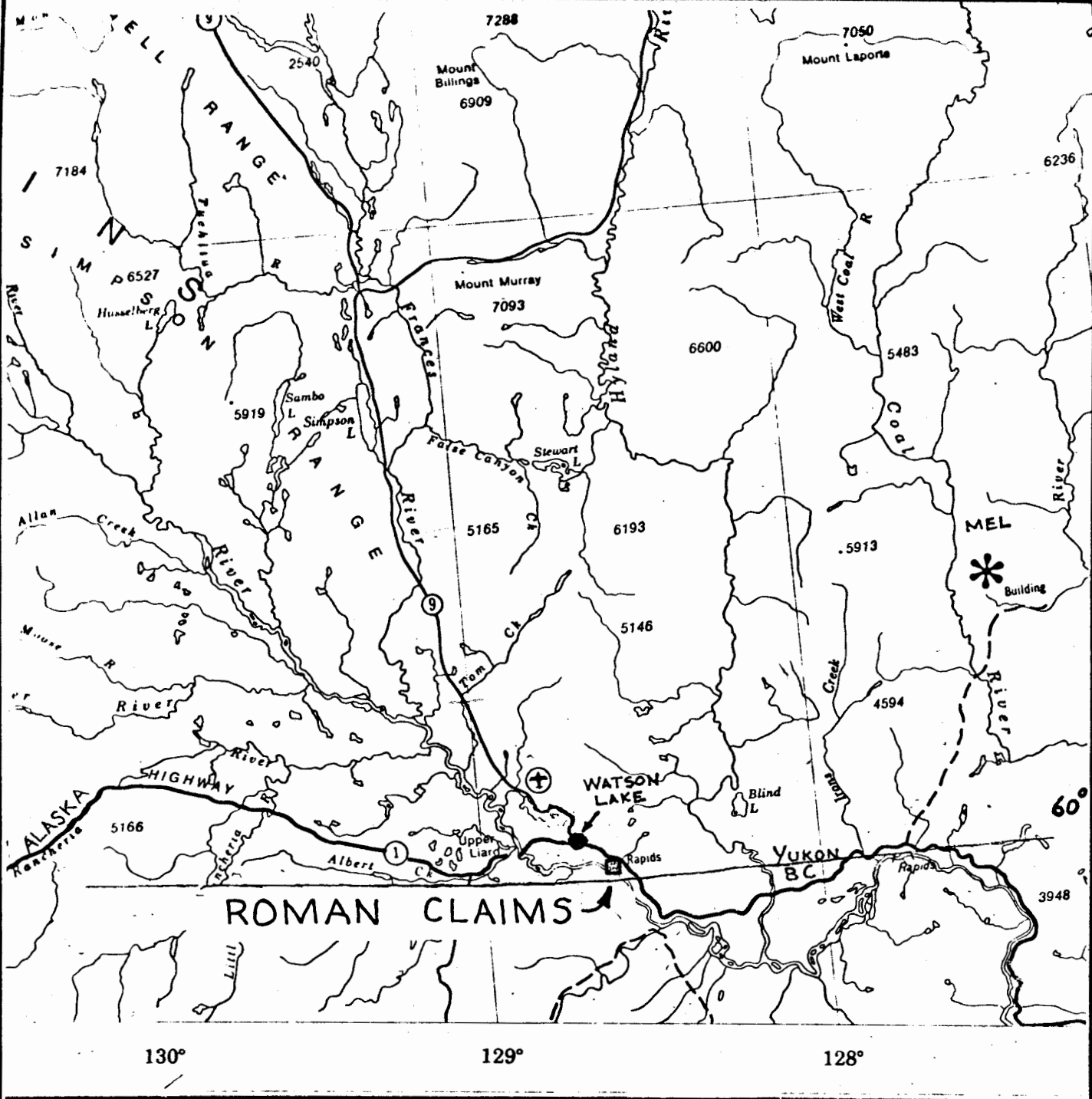
CONCLUSION & RECOMMENDATIONS (cont'd)

Respectfully submitted,

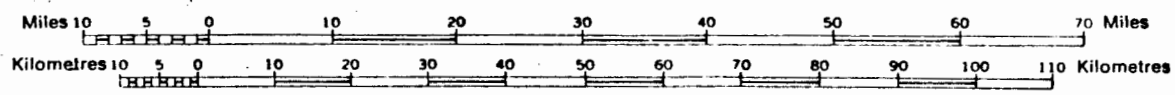
*David A. R. Hendry*

Dave Hendry





SCALE 1:1,000,000  
 1 INCH EQUALS 15.78 MILES



APPROX. LAT. & LONG. OF  
 LOWER RT. COR. OF DWG.  
 60° 00' 00" LATITUDE  
 126° 00' 00" LONGITUDE

PROJECT NO. 6270  
 FIGURE NO. 1

SHEET NO. \_\_\_\_\_  
 OF \_\_\_\_\_  
 N.T.S. 105-A-1

ROMAN  
 CLAIMS

ST. JOSEPH EXPLORATIONS LIMITED  
 TORONTO, CANADA

fig. 1

### LOCATION & ACCESS

The Roman claims lie 6 km southeast of the town of Watson Lake on a northern meander of the Liard River (both sides of the River), less than 1 km south of the Alaska Highway. Access to the claims is possible by helicopter from Watson Lake (Frontier Helicopter has a base in Watson) or by river boat from Upper Liard, 16 km west (about a 40 minute trip). The Liard River is in flood from approximately mid-May to mid-July making river travel difficult and helicopter landing sites along the river scarce. A walking trail (1 km) from Lucky Lake recreation site on the Alaska Highway to the Liard River crosses the northeastern portion of the claims.

### PHYSIOGRAPHY

The claims cover both sides of the Liard River as it meanders through the glacial till blanket of the Liard Plain (Bostock, 1948). East of the claims (downstream) a continuous outcrop canyon has 30 m cliffs. Outcrop and till cliffs on the claims are up to 20 m, commonly higher on the southern side (inside of the meander). River elevation is about 600 m on the claims with small hills up to 650 m. The claims are heavily treed in spruce with alder in wet areas.

Soils on the south higher bank are well developed on glacial till. On the northern lower bank most soils are river silt for up to 100 m back from the river.

### CLAIMS AND OWNERSHIP

Grant numbers, names and due dates for the Roman claims are summarized below:

<u>GRANT NO.</u>	<u>NAME</u>	<u>DUE DATE</u>
YA 36877-92	Roman 1 - 16	11 June, 1980

The 16 Roman claims form a contiguous block. St. Joseph Explorations Limited has purchased ownership of the claims from Jake Melnychuk for the duration of the agreement between these two parties.

### HISTORY

The showings have been staked intermittently since 1962 as follows:

*1962/October	Jim & Moose claims	by: F. Lutz
1965/January	Barite claim	by: R. Kirk
1968/April	Kirk claim	by: C. Rete
1969/May	Naza claim	by: N. Zinchuk
1975/June	N. claim	by: P. Kremar

\*Archer Cathro & Assoc., Northern Cordillera Mineral Inventory, 1979.

The only known work on the claims has been sampling of the showings for assaying.

### 1979 PROGRAMME

During August 26, 27, 29 & 30, 1979 outcrops along the Liard River, where it crosses the claims, were mapped on 1:50,000 government base maps. For access a Bell 206 helicopter was used one day, truck and footpath one day and a river boat was used for two days. Twenty-five soil samples were taken over and near the showings to determine if there is any geochem expression through the glacial till and river silt. Rock samples were taken of all the units for rock geochem and a total of five assays were done, three on the barite-

lead-zinc vein and two on quartz sphalerite galena chalcopryrite stringers.

### GEOLOGIC SETTING

The claims lie in the extreme southeastern corner of the Selwyn Basin where it extends through to the Kechika Trough in B.C. Sedimentary lithologies on the property comprise shale, chert and phyllite and are mapped as Cambrian and Ordovician by Gabrielse (1966).

Shales on the property are commonly black, carbonaceous non-calcareous rusty and locally contain pyrite bands up to 10 cm thick, marcasite nodules and very rarely white barite veins.

Chert is creamy to grey and commonly has pyrite crystals up to 2 mm and thin rusty streaks. Argillaceous partings, 1 mm apart, can be seen under the binocular microscope. This unit may in part be siliceous mudstone and siltstone, however no thin section work has been done and the unit is strongly jointed yielding poor hand specimens.

Phyllites on the property are usually grey, weathering, buff to rusty, variably calcareous and non-calcareous and without visible carbon. White and rusty contacted calcite veins are common in the phyllite. At one locality within beds of grey phyllite, wavy algal matting in calcareous phyllite with poorly developed graded bedding suggests tops to the west. Rusty weathering, contacted calcite veins are ubiquitous in this unit.

### MINERALIZATION

Interest in this property stems from both its barite potential

(because of its proximity to a road) and also the possibility of a buried higher grade lead, zinc and silver zone in the classical style of Hudson Bay Mining & Smelting's Tom deposit in MacMillan Pass, Yukon, and the Magnet Cove deposit of Magnet Cove Barium Corporation in Walton, Nova Scotia.

The main showings consist of one large and several small, white coarse crystalline barite veins lying roughly conformably with the foliation in black shales. The thickest barite body, approximately 4 m thick, is exposed in a cliff on the south bank of the Liard River. It strikes roughly  $150^{\circ}$  and is vertical, however, its contacts with enclosing strata are irregular. The average grades from 2 chip samples across the vein are: Barium 19.7%, Lead 0.88%, Zinc 0.25%, and Silver 0.09 oz./ton (assays appended).

Sulfides comprise sphalerite, galena and minor pyrite. One small malachite stain attests to small amounts of copper also. The outcrop appearance suggests that sphalerite has been weathered on surface and would be expected to increase slightly in grade at depth. Quartz and mud comprise the remaining constituents of the vein.

Small quartz veins containing sphalerite, galena and chalcopryrite cut poorly exposed black shale subcrop on the opposite bank of the river to the barite vein. Two chip samples of a one foot wide mineralized vein averaged 0.29 oz./ton silver, 0.17% lead, 14.44% zinc, 0.34% copper and less than 0.4% barium. Enclosing shale strata was not anomalous in any of these elements.

GEOCHEMISTRY

Four silt samples covering all the limited drainages on the property and twenty-two soil samples near showings were taken. The purpose of this stage of geochem was to determine if geochemistry would show the mineralization through the masking silts and till.

The average statistical parameters of the soil data are summarized below, noting, of course, that the population size is very small.

TABLE 1

	No. Samples	Mean (X)	Standard Deviations $\sigma$	Threshold (X + 2 $\sigma$ )	(X + 3 $\sigma$ )
Lead ppm	22	17.8	3.0	23.8	26.8
Zinc ppm	22	48.2	10.5	69.2	79.7
Barium ppm	22	129.1	156.1	312.2	597.40

Only one sample appears anomalous in lead and one in zinc. However, five samples are anomalous in barium. These can be seen on Map 3 to begin to trace a barium anomaly southward from the showing. No samples fall above the mean plus three standard deviations for any element.

The comparative high zinc and barium in silt number RS10 reflect black shales enveloping the barite vein.

COST STATEMENT

Roman Project

6270

St. Joseph Explorations Limited

The following costs were incurred by St. Joseph Explorations Ltd. in the examination of the Roman claims, YA 36877-92, between August 1 and December 30, 1979.

SALARIES

10 man days @ \$111.31 . . . . .	\$ 1113.10
1 man day @ \$50 . . . . .	50.00

TRAVEL

Kamloops - Watson Lake, return . . . . .	380.00
Tilden Truck Rental . . . . .	258.15
Frontier Helicopters . . . . .	148.80
Boat & motor rental: 2 days @ \$50 . . . . .	100.00

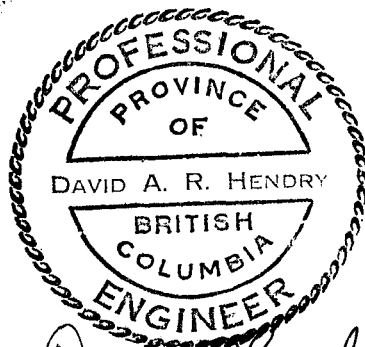
ACCOMODATION & FOOD

5 days . . . . .	246.28
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ASSAYS & GEOCHEM . . . . . 102.93

REPORT PREPARATION (Drafting, Typing, Copying, Etc.) . 250.00

\$ 2549.26

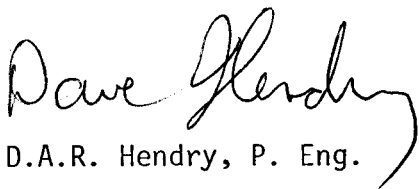


*David A. R. Hendry*

STATEMENT OF QUALIFICATIONS

I, DAVID A.R. HENDRY, of 672 Pleasant Street, Kamloops, B.C., do hereby certify that:-

1. I am a graduate of the University of British Columbia and obtained a B.A.Sc. degree in Geological Engineering in 1974.
2. I have had 4 years experience in mineral exploration.
3. I am a registered Professional Engineer in the province of British Columbia.
4. I have examined the property discussed in this report, and the report, dated December 30, 1979 is based on this examination.
5. I have no interest, directly or indirectly, in the property.

  
D.A.R. Hendry, P. Eng.

REFERENCES

Archer, A., Cathro, R.J.

1972: Northern Cordillera Mineral Inventory

Bostock, H.S.

1948: Physiography of the Canadian Cordillera with special reference to the area north of the fifty-fifth parallel; Geol. Surv. Can., Mem. 247

Gabrielse, H.

1966: Geology: Watson Lake, Yukon, Geol. Surv. Can., Map 19 - 1966

APPENDICES

## APPENDIX I

List of personnel, addresses and time employed on the project:

D.A.R. Hendry, P. Eng.

672 Pleasant Street, Kamloops, B.C., V2C 3B2

August 25 - 31, October 18, December 13 & 18, 1979

Jake Melnychuk

General Delivery, Watson Lake, Y.T.

August 27, 1979

APPENDIX II

GEOCHEM RESULTS



# Kamloops Research & Assay Laboratory Ltd.

B.C. LICENSED ASSAYERS  
GEOCHEMICAL ANALYSTS

2095 WEST TRANS CANADA HIGHWAY — KAMLOOPS, B.C. V1S 1A7  
TELEPHONE 372-2784 TELEX 048-8320

## CERTIFICATE OF ASSAY

TO St. Joseph Explorations Ltd.,  
970 Laval Crescent,  
KAMLOOPS, B. C.

Certificate No. K-2286

Date November 22, 1979.

Attention: Mr. D. Hendry

Project 6270  
ROMAN samples

I hereby certify that the following are the results of assays made by us upon the herein described

Kral No.	Marked	GOLD	SILVER	Pb	Zn	Cu	Ba	
		Ounces Per Ton	Ounces Per Ton	Percent	Percent	Percent	Percent	
	R 9 A	-	.03	.35	.27	-	31.1	(0-6') Chip Sample Ba-Pb-Zn
	R 9 B	-	.20	2.19	.27	-	8.3	(6-12') " " " " Vein
	R 10	-	.03	.11	.20	-	20.7	(0-12') " " " " "
	R 19	-	2.41	2.86	.98	-	4.1	Galena Pods in Quartz Vein
	R 24	Tr	.15	.29	19.17	.10	0.4	east of claims
	R 31	Tr	.42	.04	9.70	.58	-	12" chip Quartz Sphalerite Vein
								Similar to R24
	Tr denotes "trace"							

NOTE:  
Rejects retained three weeks.  
Pulps retained three months  
unless otherwise arranged.

  
Registered Assayer, Province of British Columbia

# Kamloops Research & Assay Laboratory LTD.



B.C. CERTIFIED ASSAYERS

2095 WEST TRANS CANADA HIGHWAY - KAMLOOPS, B.C. V1S 1A7  
PHONE 372-2784 - TELEX 048-8320

## GEOCHEMICAL LAB REPORT

DATE November 5, 1979.

St. Joseph Explorations Ltd.,  
970 Laval Crescent,  
Kamloops, B. C.

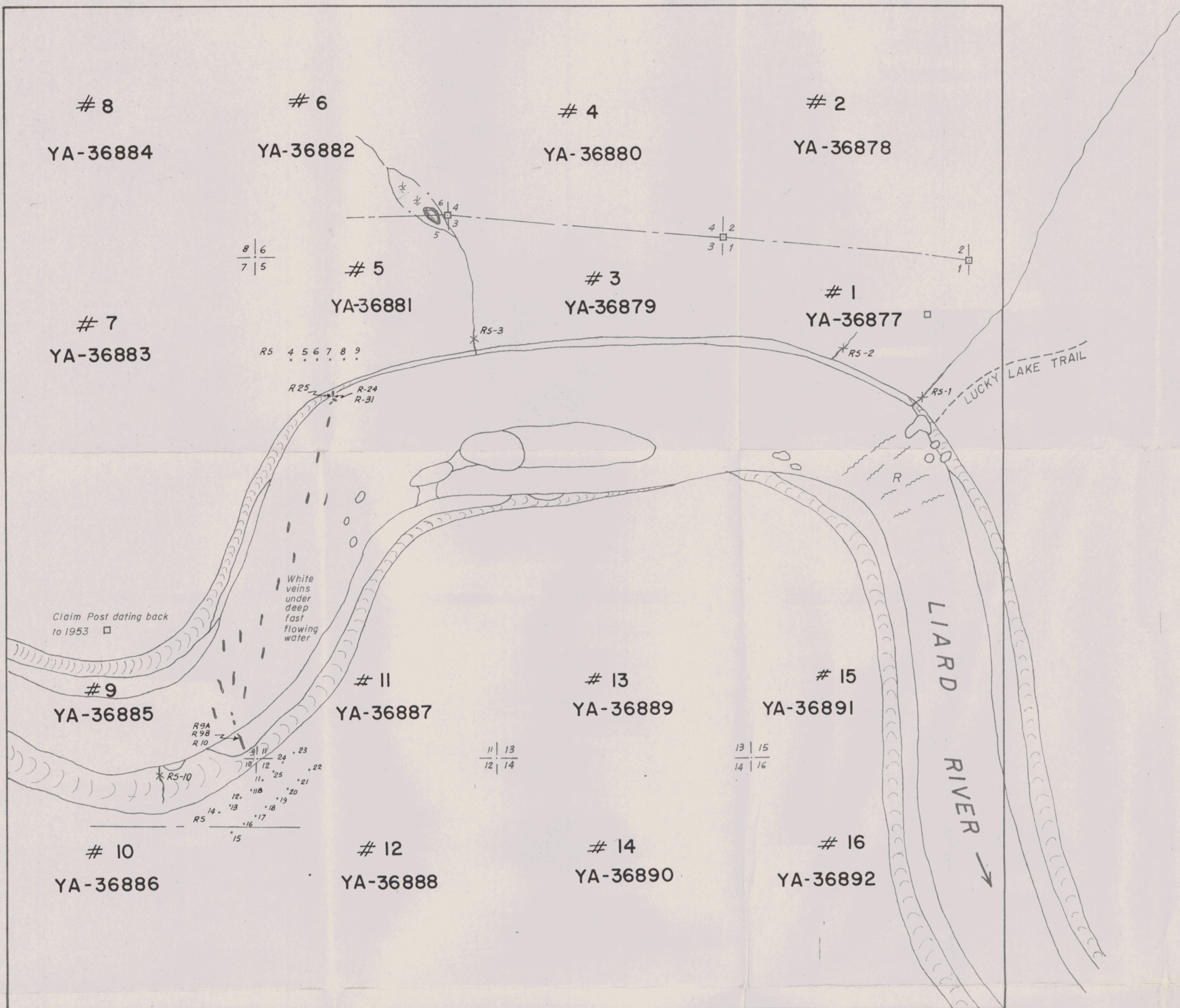
ANALYST TL

Attention: Mr. D. Hendry

FILE NO. G-311

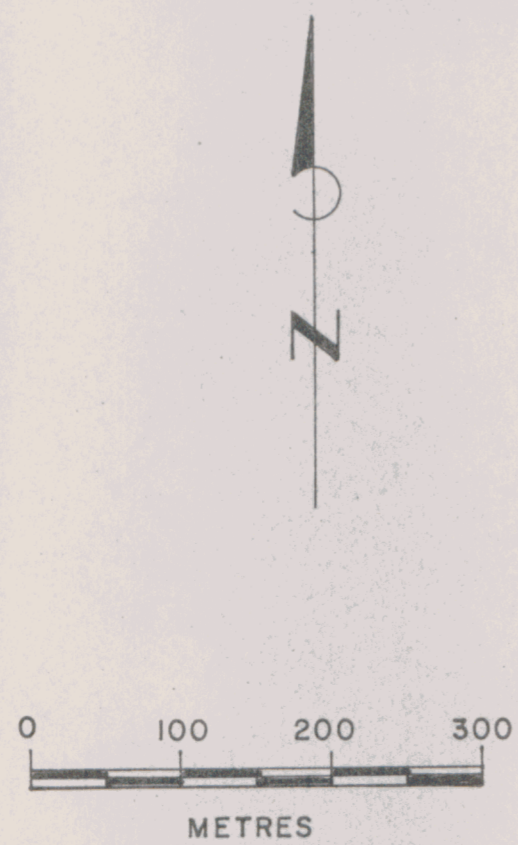
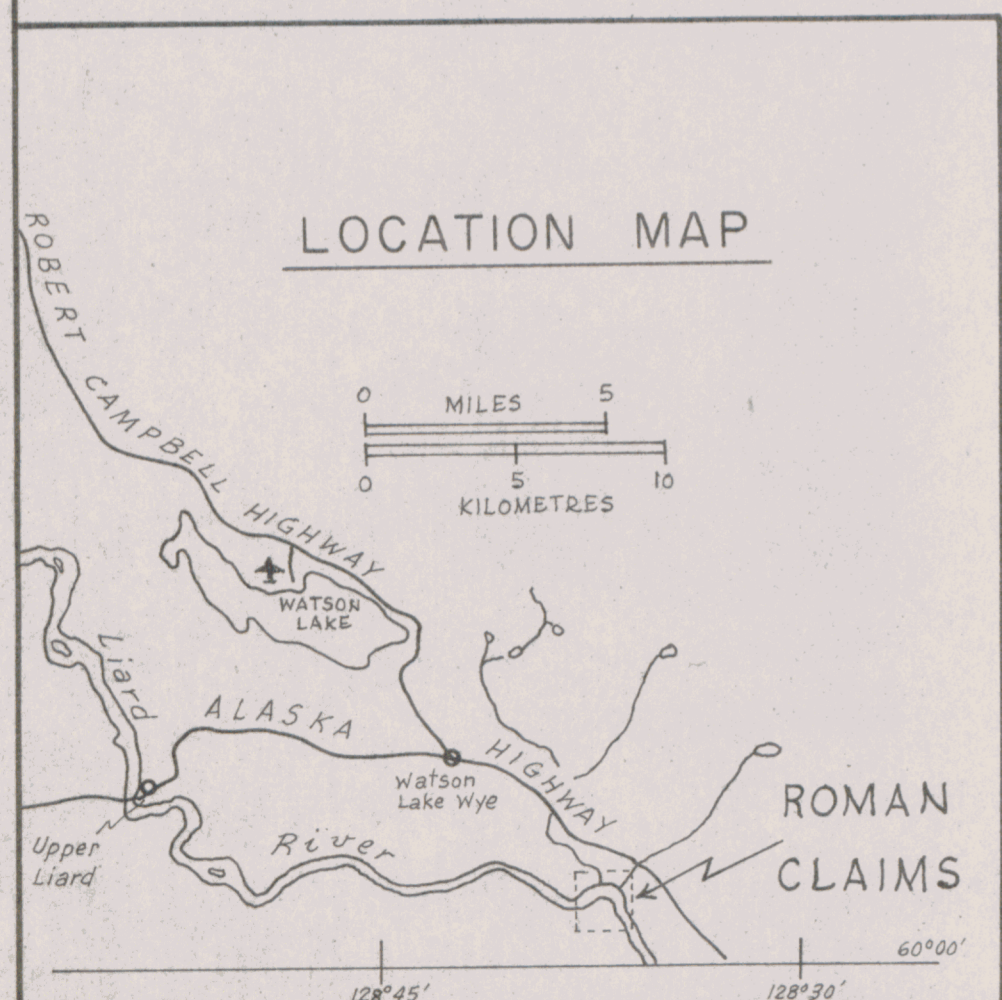
KRAL No.	IDENTIFICATION	ppb Au	ppm Ag	ppm Pb	ppm Zn	ppm Ba						
1	RS - 1	-	-	22	42	95	}	silt				
	RS - 2	-	-	10	42	69						
	RS - 3	-	-	13	36	51						
	RS - 4	-	-	15	62	36	}	soils				
	RS - 5	-	-	16	53	28						
	RS - 6	-	-	16	63	29						
	RS - 7	-	-	14	64	121						
	RS - 8	-	-	16	51	20						
	RS - 9	-	-	19	71	11	}	silt				
	RS - 10	-	-	21	295	344						
	RS - 11	-	-	19	44	24	}					
	RS - 11 BK	-	-	15	38	66						
	RS - 12	-	-	19	50	331						
	RS - 13	-	-	18	42	54						
	RS - 14	-	-	15	37	49						
	RS - 15	-	-	23	52	467						
	RS - 16	-	-	22	46	58						
	RS - 17	-	-	20	46	326						
	RS - 18	-	-	25	61	401			}	Soils		
	RS - 19	-	-	21	46	481						
	RS - 20	-	-	17	43	74						





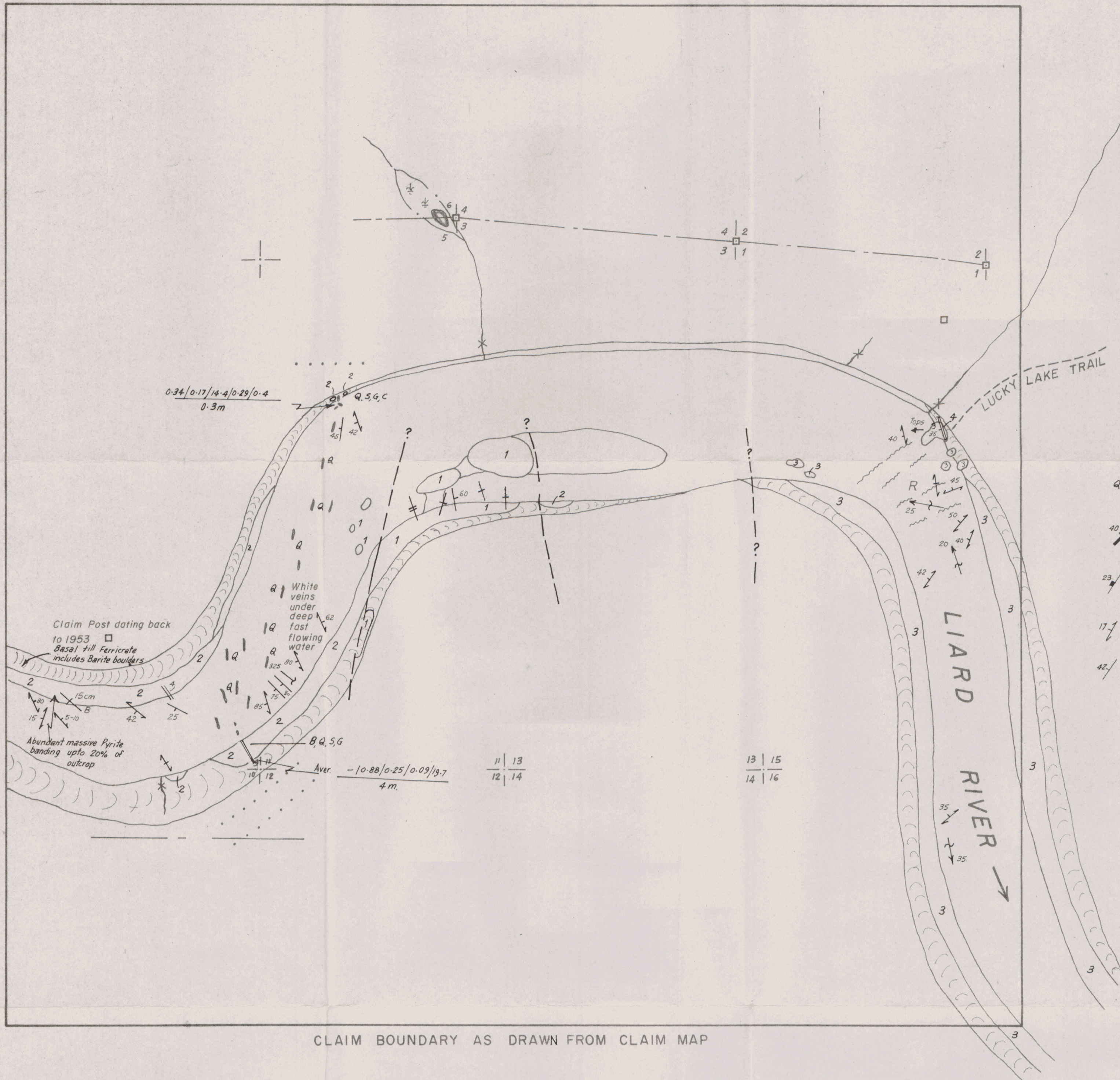
CLAIM BOUNDARY AS DRAWN FROM CLAIM MAP

- # 11 Claim number
- YA-36890 Grant number
- R-25 Soil sample
- R-4 Silt sample
- Rock sample
- Claim post (claim line), located
- Claim post drawn from claim map
- Vein
- Outcrop
- Till cliffs
- Outcrop cliffs
- Swamp (pond)
- River (creek)
- Rapids



To accompany report by D. A. R. Hendry, *David Hendry*  
dated December 1979

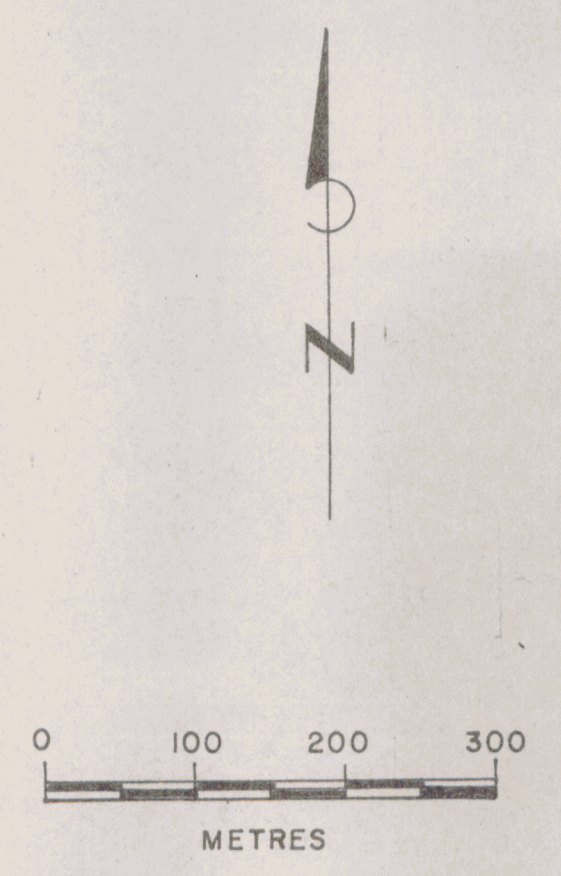
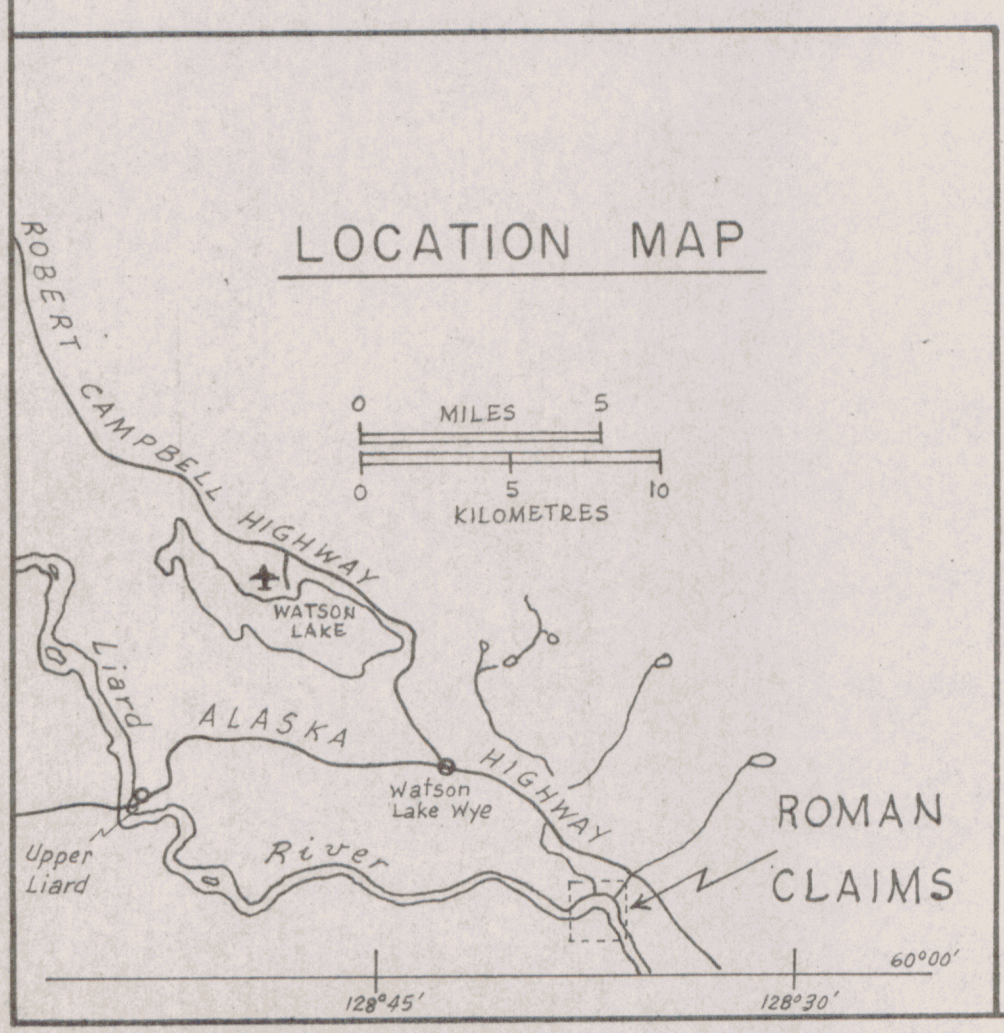
ST. JOSEPH EXPLORATIONS LIMITED		
TORONTO, CANADA		
ROMAN CLAIMS		
WATSON LAKE, Y.T.		
SAMPLE & CLAIM LOCATION		
SCALE: 1:5000		
APPROX. LAT. & LONG. OF LOWER RT. COR. OF DWG.	PROJECT NO. 6270	MAP 1
60° 00' 00" LATITUDE	REPORT NO. 1	105-A-2
128° 36' 00" LONGITUDE		N.T.S.



**LEGEND**

- Till - Boulder till cliffs
  - Porphyry dykes - Plagioclase porphyry, rusty weathering, none-calcareous, possibly diorite
  - Phyllite - grey, calcareous to non-calcareous, crenulated. Includes minor silty limestone with rare current indications.
  - Black shale - Banded, black, carbonaceous, non-calcareous, rusty with pyrite/marcasite bands and nodules common
  - Chert and quartz siltstone, shattered with rusty partings
  - Unassayed vein/dyke, Quartz, Barite, Pyrite, sphalerite, Galena, Chalcopyrite
  - Vein, dyke, (40° dip, vertical, horizontal)
  - Jointing (23° dip, vertical, horizontal)
  - Foliation (17° dip, vertical, horizontal)
  - Bedding (42° dip, vertical, horizontal)
  - Bedding, tops observed
  - Minor Fold (hinge line orientation)
- %Cu %Pb %Zn  $\frac{Ag}{Au}$  %Ba  
 0.17 / 0.27 / 0.93 / 0.20 / 19.3  
 2 metres

CLAIM BOUNDARY AS DRAWN FROM CLAIM MAP

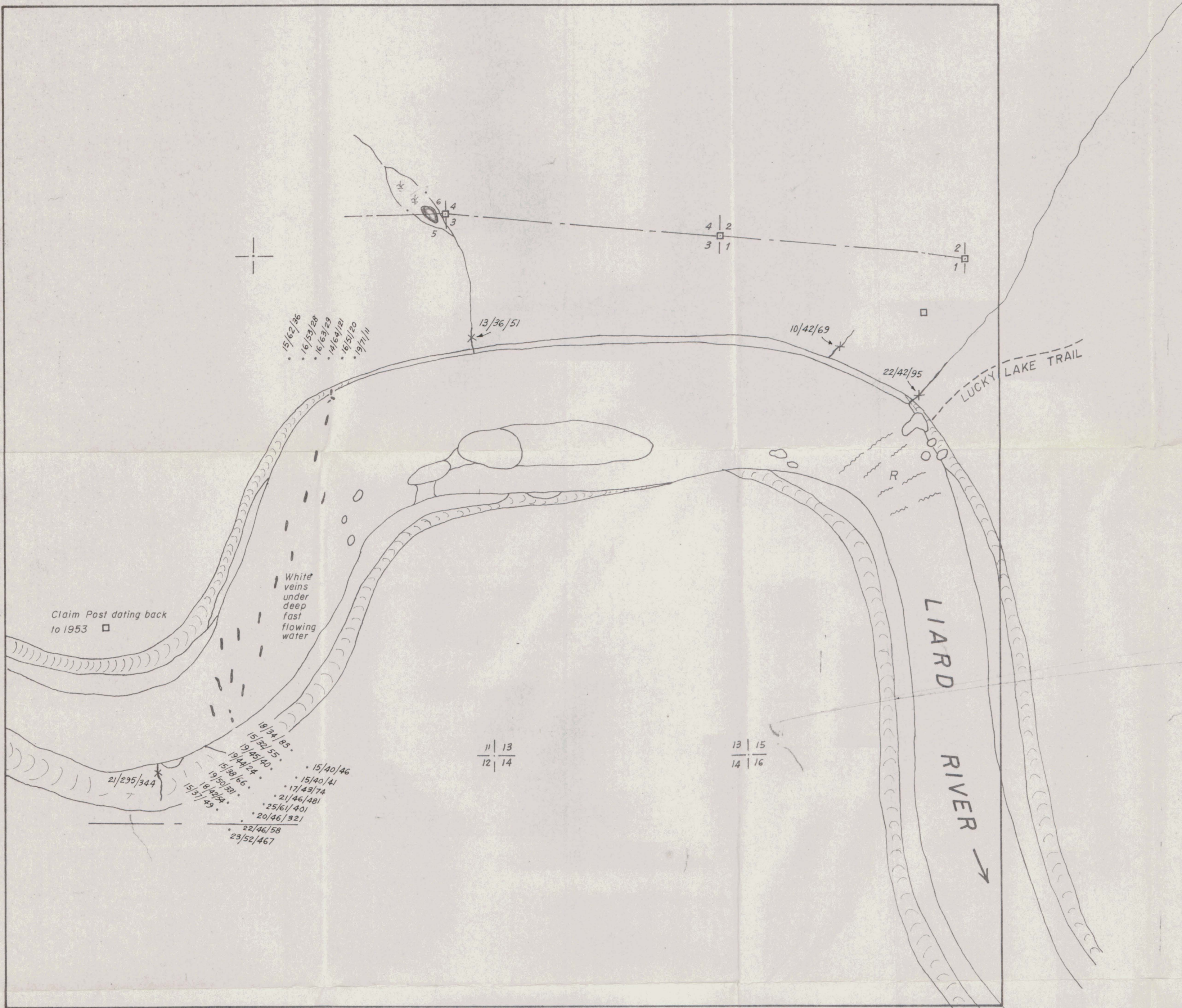


- Soil sample
- Silt sample
- Claim post (claim line), located
- Claim post drawn from claim map
- Vein
- Outcrop
- Till cliffs
- Outcrop cliffs
- Swamp (pond)
- River (creek)
- Rapids

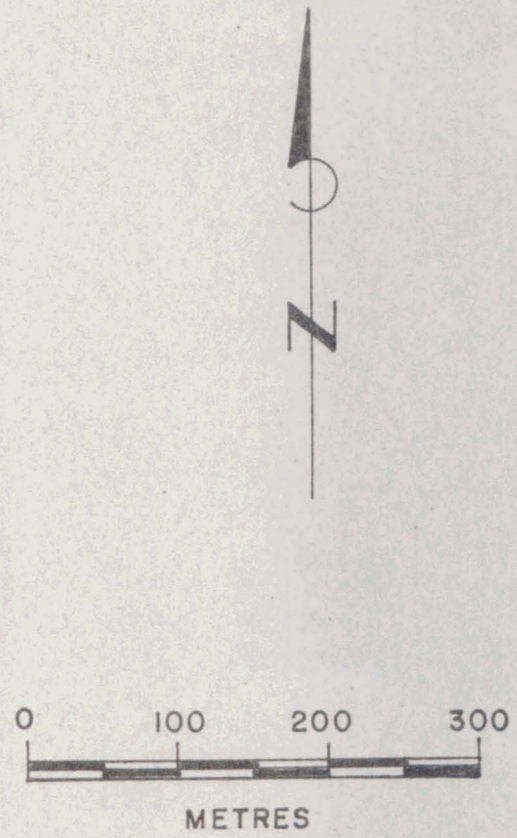
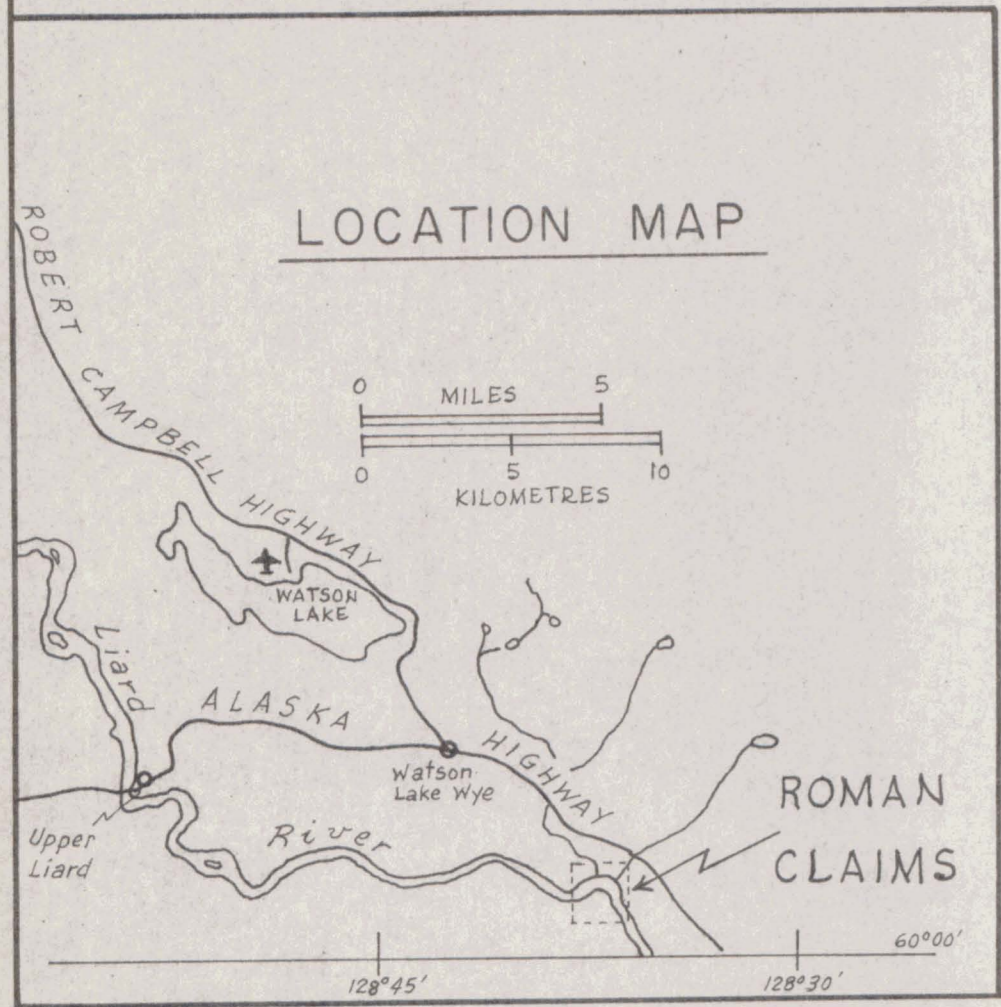


To accompany report by D. A. R. Hendry, dated December 1979

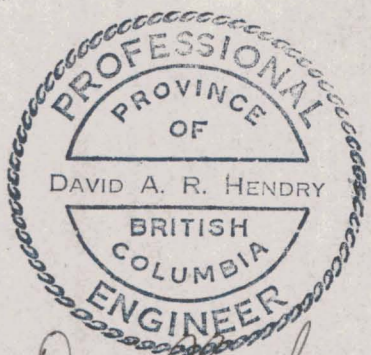
<b>ST. JOSEPH EXPLORATIONS LIMITED</b> TORONTO, CANADA		
<b>ROMAN CLAIMS</b> WATSON LAKE, Y.T. <b>GEOLOGY &amp; ASSAYS</b>		
SCALE: 1:5000		
APPROX LAT & LONG OF LOWER RT. COR. OF DWG	PROJECT NO. 6270	MAP 2
60° 00' 00" LATITUDE	REPORT NO. 1	105-A-2
128° 36' 00" LONGITUDE		N.T.S.



CLAIM BOUNDARY AS DRAWN FROM CLAIM MAP



- 15/40/38 Pb ppm / Zn ppm / Ba ppm
- Soil sample
- \* Silt sample
- Claim post (claim line), located
- + Claim post drawn from claim map
- ~ Vein
- Outcrop
- ~ Till cliffs
- ~ Outcrop cliffs
- ~ Swamp (pond)
- ~ River (creek)
- ~ Rapids



To accompany report by D.A.R. Hendry,  
dated December 1979

ST. JOSEPH EXPLORATIONS LIMITED		
TORONTO, CANADA		
ROMAN CLAIMS		
WATSON LAKE, Y.T.		
SOIL & SILT GEOCHEMISTRY		
Pb / Zn / Ba		
SCALE: 1:5000		
APPROX. LAT. & LONG. OF LOWER RT. COR. OF DWG.	PROJECT NO. 6270	MAP 3
60° 00' 00" LATITUDE	REPORT NO. 1	105-A-2
128° 36' 00" LONGITUDE		NTS