



TYPE OF REPORT/SURVEY(S) <b>GEOCHEMICAL</b>	TOTAL COST <b>\$ 6324.75</b>
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AUTHOR(S) **G. Benmore** SIGNATURE(S) *George Benmore*

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED **OCTOBER 4, 1991** YEAR OF WORK **90-91**

PROPERTY NAME(S) **W. Albert River Group - Albert River W. Property**

COMMODITIES PRESENT **Cu - Au - Rare Earths <sup>and</sup> Y**

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN

MINING DIVISION **Golden B.C. Mining Division** NTS **82 J / 12**

LATITUDE **50° 38' N** LONGITUDE **115° 35' W**

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (42 units), PHOENIX (Lot 1706), Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (terms involved)]:

**Barbi 721 (18 units), Ash 720 (20 units), Rachel 1757 (4 units).**

OWNER(S)  
(1) **Dia Met Minerals Ltd.** (2)

MAILING ADDRESS  
**1675 Powick Road  
Kelowna, B.C. V1X - 4L1**

OPERATOR(S) (that is, Company paying for the work)  
(1) (2)

MAILING ADDRESS  
**as above**

**21474**

SUMMARY GEOLOGY (Geology, age, structure, alteration, mineralization, size, and attitude):

A  $\pm$  3km long zone of quartz veining and dyking infills the axial plane cleavage zone of a folded sequence of Ordovician to Cambrian argillaceous limestones and shales. The zone accompanied by localized qtz-sericite-pyrite and propylitic alteration is associated with scheelite-copper-gold-rare earth mineralization reflected by heavy mineral geochemistry. A ground magnetic survey indicates the presence of a buried cupola flanked by skarn zones.

REFERENCES TO PREVIOUS WORK

E. Northcote 1983, Fipke 1985, Fipke & Suggitt 1987, D.K. Norris 1987 etc., Blusson 1982, Fipke 1990

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LOG NO: DEC 04 1991	RD.
ACTION: <i>back from</i>	
FILE NO:	

LOG NO: OCT 07 1991	RD.
ACTION:	
FILE NO:	

INTRODUCTION

The W. Albert River group consists of 3 contiguous claims totalling 42 claims. The three claims known as the Ash, Barbi, and Rachel occur in the Golden Mining Division and are 100% owned by Dia Met Minerals Ltd. Dia Met Minerals Ltd. took channel samples of bedrock above the vicinity of previous high (to 50,000 ppb) Au and high rare earth (Ce-La-Th) heavy mineral anomalies.

It is possible that an alkaline intrusion containing high (Ce-La-Th) rare earths intruding the Palaeozoic marine carbonate host rocks outcropping on the claims may be producing an auriferous skarn zone. As a consequence channel sampling was done to define the source of the gold detected in previous anomalous heavy mineral samples collected in the north part of the claim block.

Location, Access, Topography

The BARBI, ASH, and RACHEL claims are all located Latitude 50° 38' N, Longitude 115° 35' W; NTS 82J/12E in the Golden Mining Division, approximately 75 kilometres east of Radium, BC. The claims lie near the west headwaters of Albert River between Tangle Peak and Albert River (Figures 1 & 2).

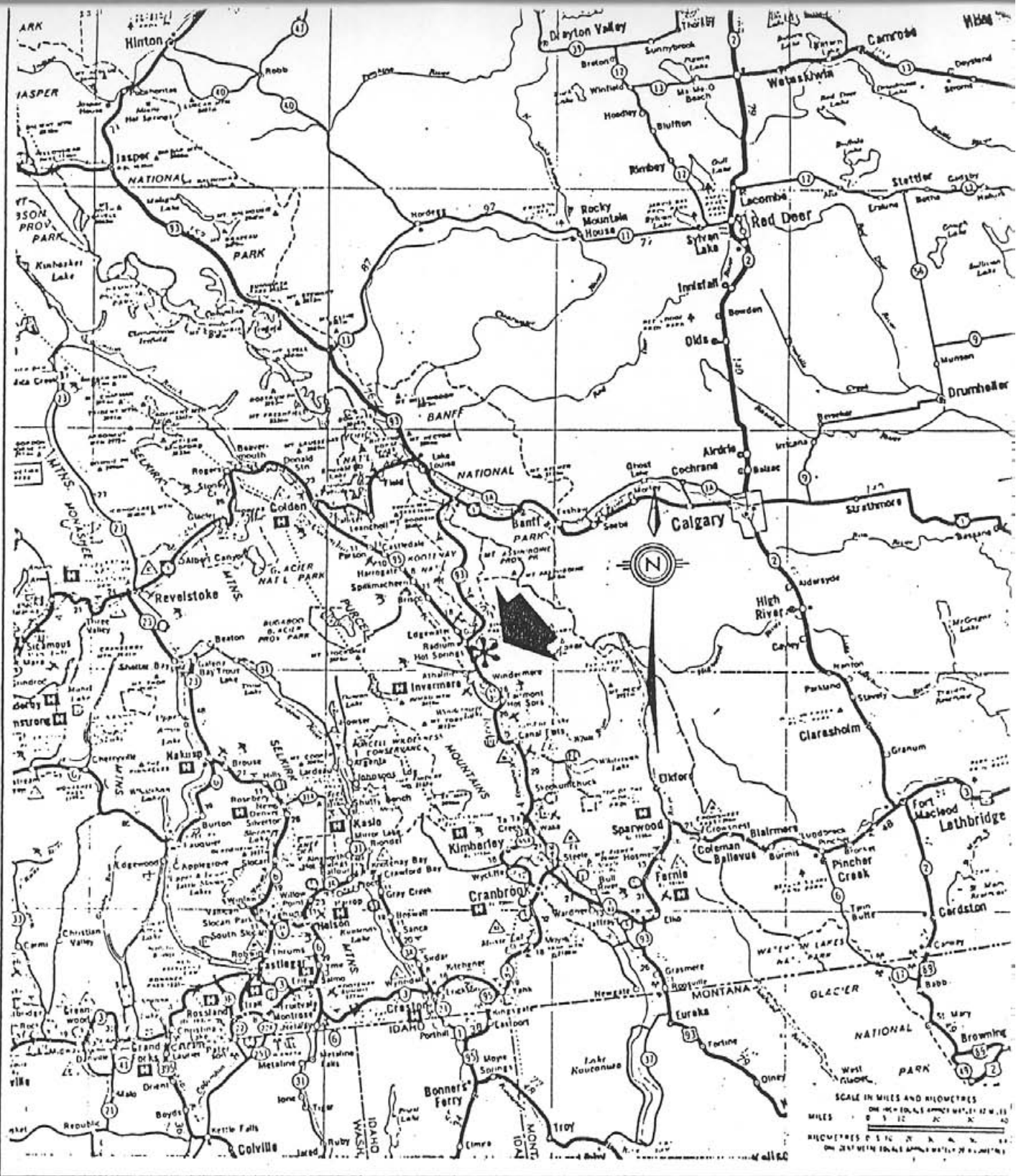
The claims are accessible by car on 40 kilometres of good logging access road leaving the east side of Sinclair Canyon Highway #93 at a point 4 kilometres north of Swede Creek. The logging system leads southeasterly, crossing the Kootenay River at Yearling Creek, to Palliser River, a distance of about 20 kilometers. The road leads easterly about 8 kilometers to the Albert River and then northerly along the river 12 kilometers to the W. Albert River Group property.

There is also a poorly maintained logging road that branches up Cochran Creek about 4 kilometers south of where the main logging road crosses the Kootenay River. Difficult four wheel access is possible for 11 kilometers up Cochran Creek to a point about 2 kilometers west of the now-lapsed Zirkon claim. The said point is about 29 kilometers from Highway #93 and about 15 kilometers from hydro power lines.

The northern claims was accessed by driving from the Kootenay River junction 12 kilometers northwesterly up the good gravel Cross River road. One then proceeds southwesterly for 10 kilometers over a poorly maintained logging road. Once over Miller Pass one proceeds southerly for an additional two kilometers over another poorly maintained logging road to the central part of the Barbi claim.

The east side of the claim block is on the west side of Albert River at an elevation of 1300 metres and rises steeply to the west to over 2600 meters. The central portion of the property is difficult to traverse because of steep topography and dense bush.

GEOLOGICAL BRANCH  
 ASSESSMENT REPORT  
 21474

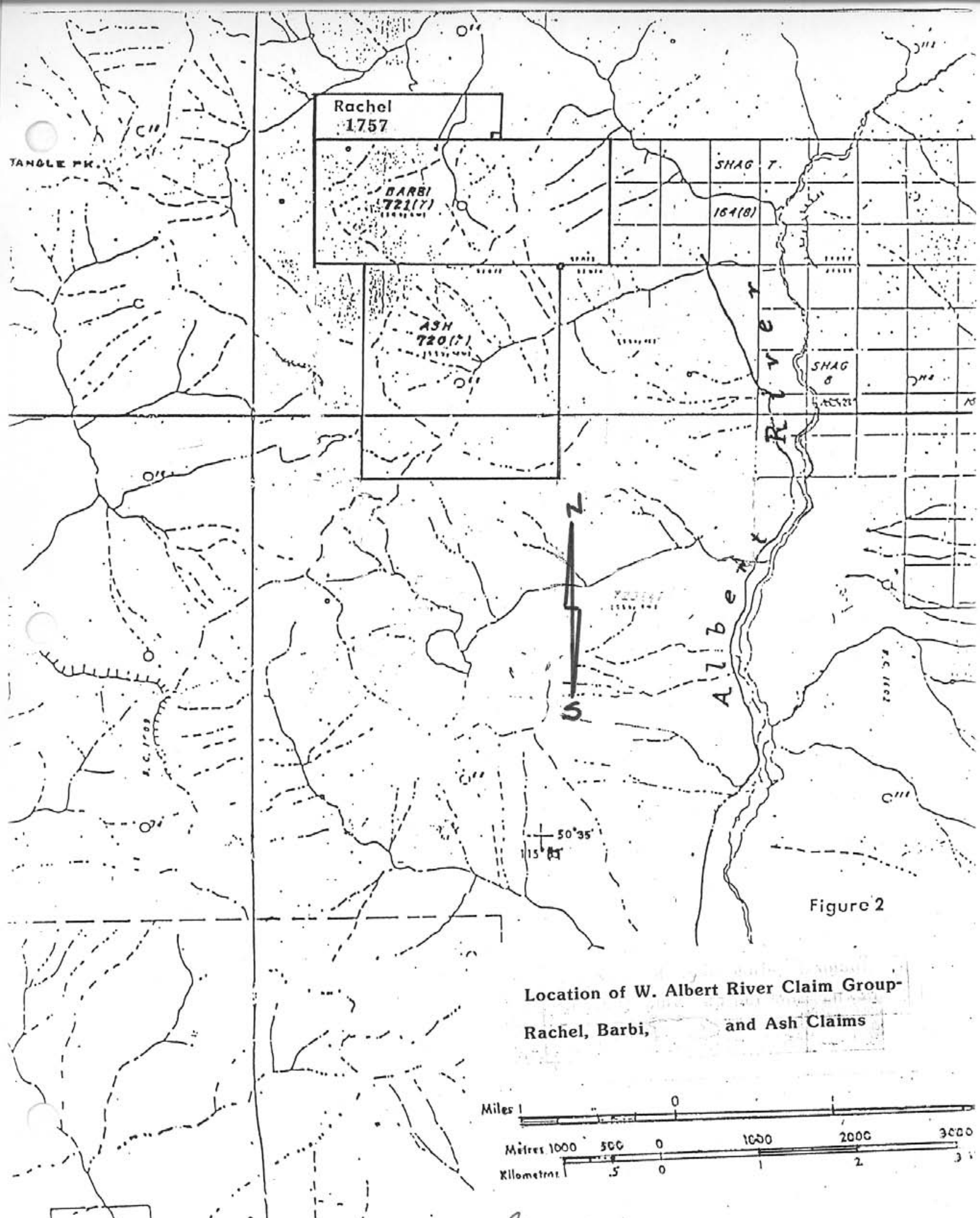


**DIA MET MINERALS LTD  
INDEX MAP  
W. ALBERT RIVER CLAIM GROUP**

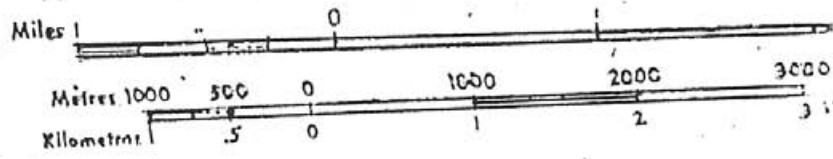
82J/12E  
GOWER, THOMPSON & ASSOCIATES  
Drawn J. F. B.

50° 37' N 115° 35' W  
K. E. NORTHCOTE AND ASSOCIATES LTD  
April 30 1983

Figure 1



Location of W. Albert River Claim Group  
 Rachel, Barbi,  
 and Ash Claims



## SUMMARY OF PREVIOUS ECONOMIC GEOLOGY AND RESULTS

The Albert River claims contain a  $\pm$  3 km zone of intense quartz veining and dyking mostly along N N W trending axial plane cleavages crosscutting a sequence of folded Cambrian to Ordovician marine limestones and shales. The zone is geographically located at the eastern edge of Cordilleran intrusive activity within a belt of gold bearing alkalic monzonite intrusives that trend S S E into Montana. Geologic mapping within the claims area has been completed by S. Blusson (1982), C.Fipke (1984), and D.K. Norris (1987).

The 3 km zone of silicification is associated with a central area of intensely anomalous scheelite and moderately anomalous Cu +/-Au & Pb heavy mineral geochemistry surrounded by strongly anomalous Cu & Pb, moderately anomalous Au-As & Zn and weakly anomalous Mo. The area of intensely anomalous scheelite is coincident with two base station corrected magnetic highs postulated by geophysist P. Nielsen to represent possible skarn deposits near the contact of +/- 550 m diameter buried intrusive cupola. This area contains localized quartz - sericite +/- andalusite alteration. A large block of intensely scheelite mineralized marble was located by prospecting directly downslope from one of the ground magnetic highs.

Diamond drilling of the central magnetic anomalies was postponed by Dia Met when even more intense scheelite heavy mineral geochemical values from 6 to 12 % W accompanied by some strong gold values were identified within and downslope from the northern portions of the +/- 3 km zone of intense silicification.

The north anomalous area has been covered by two base station corrected ground magnetic surveys plus some localised stream and talus heavy mineral sampling but no strong magnetic drill target areas have been identified. The heavy mineral sampling has indicated that the northernmost part of the northern anomaly is strongly anomalous in Ce - La rare earths accompanied by weak to moderate Au, Y and Th with weak or unanomalous W. Progressing southward gold values increase to 50,000 ppb and then abruptly decrease with increasing W (scheelite) mineralization.

A grid was placed over this northern anomalous zone. Sampling with a scintilometer for the presence of Th produced only background values. Ten samples of rock taken from talus were at best weakly anomalous in Au. By contrast three of five -20 mesh talus samples ranged from 3,000 to 7,700 ppb Au and the other two samples contained >10,000 ppb Au. The source of these samples was a creek draining a narrow basin where outcrops a NNW-trending syncline in sedimentary rocks.



## PRESENT WORK.

### 1. Introduction

There is a strong possibility that the high >10,000 ppb gold values originate from stratigraphy in the upper portion of the drainage. In view of the previous indefinite geophysical surveys and talus rock sampling a channel sample of bedrock which is well-exposed in the upper part of the basin was made.

## METHODOLOGY.

### 2. Channel Sampling of Bedrock.

Twenty-two rock chip samples were collected in two contiguous lines. One line of seventeen samples was collected down the ridge above the drainage basin in question (Figures 3+4). This channel was started at the core of the syncline, and terminated down the ridge at the start of talus covering the bedrock. The second line was started in the same stratigraphic position as the end of the first but offset into the creek, where outcrop was again available. Five more samples were collected going downstream. The last samples in this line were taken near where the anomalous heavy mineral samples were taken in 1990.

The foregoing twenty-two samples were sent to Norm's Manufacturing and Geoservices Ltd. in Kelowna, B.C. where they were crushed, pulverized and split. In all cases the samples that were prepared for sending constituted 20% or less of the original sample size (see page 8). Prepared fractions were sent to Activation Laboratories in Ancaster, Ontario. There they underwent encapsulation and geochemical analysis for Au +33 using delayed neutron activation (INAA) techniques.

## RESULTS

The geochemical results on pages 9+10 indicate that none of the samples analysed in the above fashion yielded anomalous results in Au or other elements.

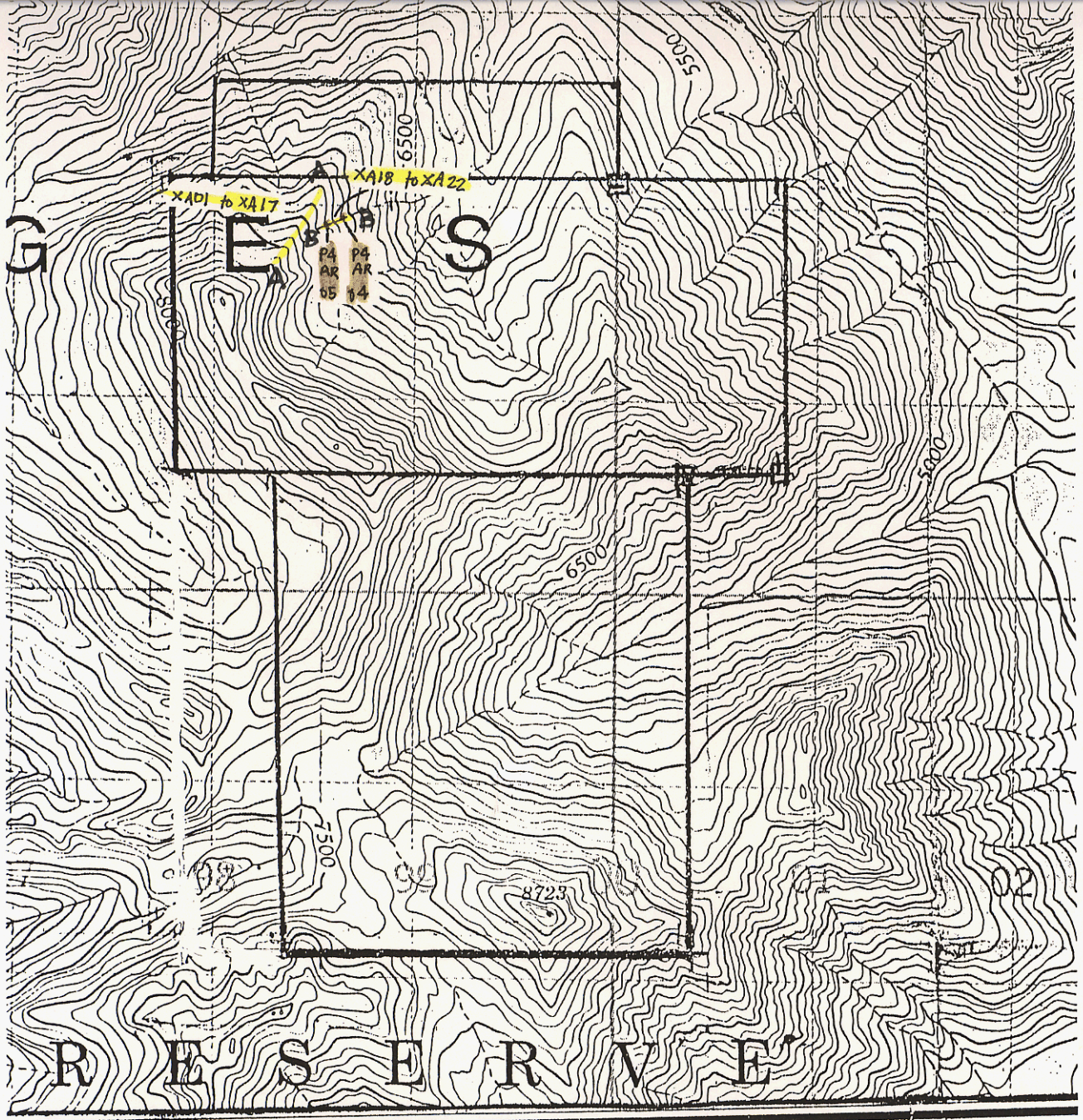
## CONCLUSIONS

It is possible that gold is contained in these outcropping sediments in the upper part of the drainage of the highly anomalous northern zone. If so, the sampling and/or processing techniques failed to find it. The 80% or more of each sample which remains might be more advantageously treated to reveal the source of the gold found downstream.

## RECOMMENDATIONS.

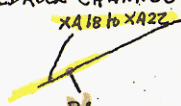
The remaining 80% of each sample should be acidized and a heavy mineral sample taken of the concentrate. This sample should then be tested geochemically.





LEGEND

1991 BEDROCK CHANNEL SAMPLE LOCATION  
 label indicates run of sample numbers.

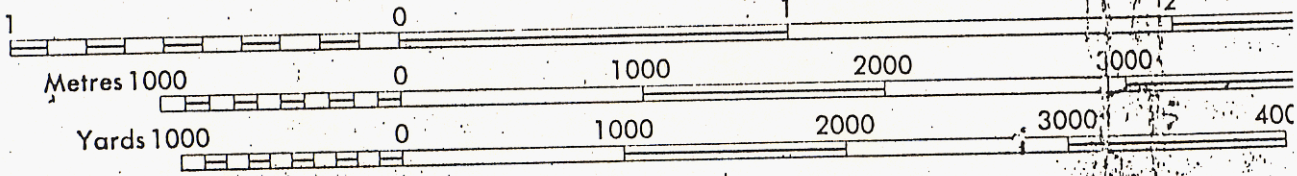


P4 1996 ANOMALOUS  
 AR -20 mesh  
 05 TALUS SAMPLE LOCATION

# TANGLE PEAK

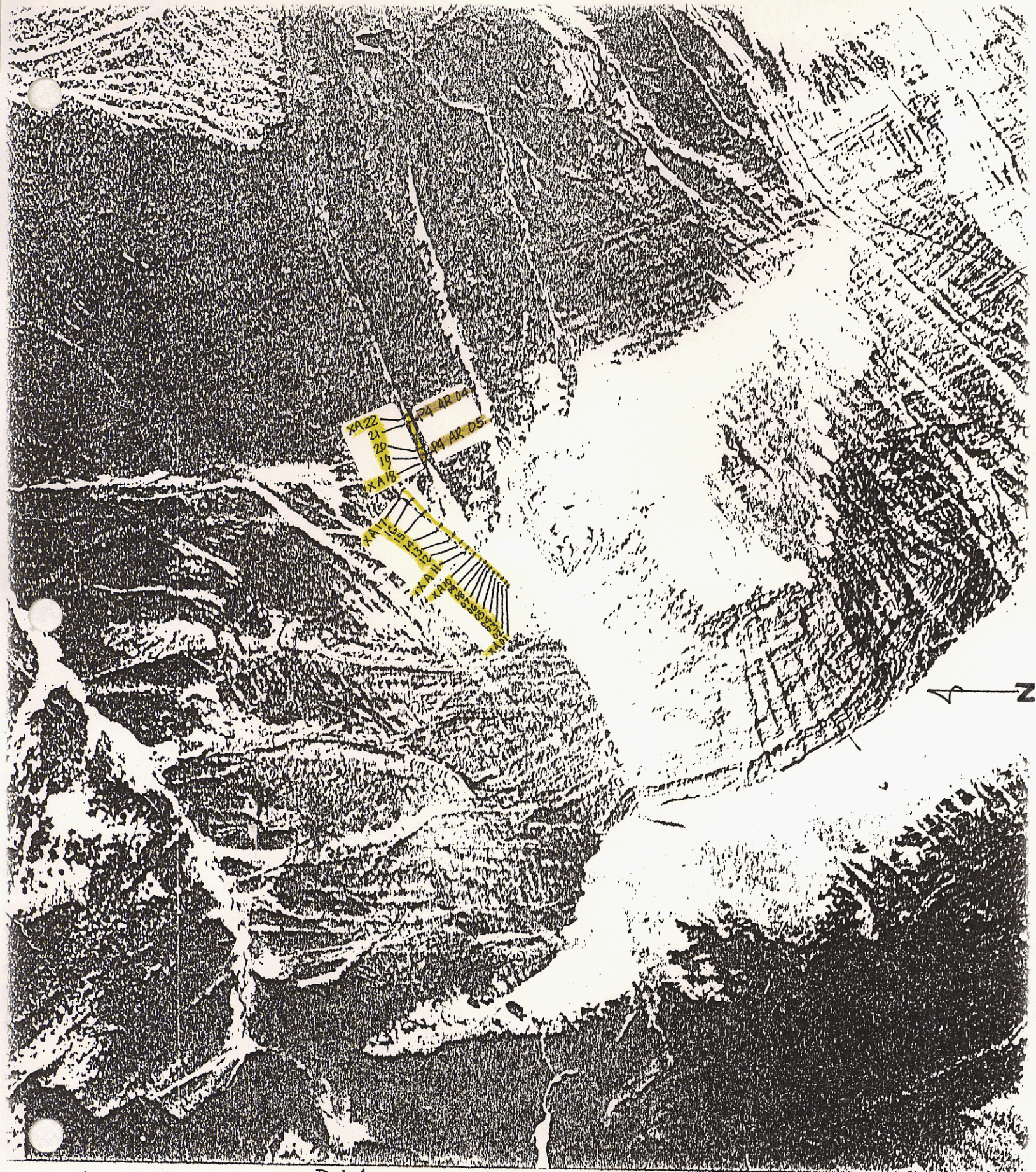
KOOTENAY LAND DISTRICT  
 BRITISH COLUMBIA

Scale 1:50,000 Échelle



DIAMET MINERALS  
 ALBERT RIVER PROJECT  
 FIGURE 3





DIA MET MINERALS  
 ALBERT RIVER PROJECT  
 1991 CHANNEL SAMPLE LOCATIONS  
 FIGURE 4

~~1990~~ 1991

BEDROCK

LEGEND

1991 CHANNEL SAMPLE LOCATION

XA 21

PA AR 04

1990 ANOMALOUS -20 MESH SAMPLE LOCATION

SCALE  
 0 50 100 150 200 m  
 APPROXIMATE



DIA MET MINERALS  
ALBERT RIVER PROJECT

FLEX POSITION-	DATE: AUG. 6, 1991
SAMPLE SPLITTING SIZES	SHIFT:
After Crushing -	

#	SAMPLE #	Original WEIGHT IN KG. Sample Size	COLLECT AFTER Pulverizing SW/W (Kg)	Sample taken from pulverized portion FRACTION quantity shipped to Activation Laboratories (grams)	INT.
1	XA 01	8.5	1.4	10.218	
2	XA 02	6.0	0.7	10.146	
3	XA 03	7.8	1.2	9.818	
4	XA 04	2.0	0.4	9.126	
5	XA 05	7.5	1.5	10.237	
6	XA 06	7.2	1.1	8.404	
7	XA 07	7.7	1.1	9.018	
8	XA 08	6.6	0.5	8.153	
9	XA 09	7.6	0.6	8.923	
10	XA 10	6.9	1.0	10.062	
11	XA 11	2.1	0.3	7.606	
12	XA 12	2.7	0.4	8.398	
	XA 13	3.5	0.6	7.983	
14	XA 14	3.6	0.6	8.255	
15	XA 15	2.6	0.4	9.000	
16	XA 16	2.1	0.3	9.344	
17	XA 17	2.2	0.3	7.700	
18	XA 18	2.7	0.4	7.070	
19	XA 19	2.6	0.4	6.953	
20	XA 20	3.2	0.6	8.912	
21	XA 21	2.7	0.4	9.435	
22	XA 22	2.6	0.4	10.006	
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

Activation Laboratories Ltd.

Work Order: 3093

Report: 3098

Sample description	AU PPB	AG PPH	AS PPH	BA PPH	BR PPH	CA %	CO PPH	CR PPH	CS PPH	FE %	HF PPH	HS PPH	IR PPB	MO PPH	NA PPH	NI PPH	RB PPH	SE PPH	SC PPH	SI PPH	SN %
XA01	<5	<5	2	160	3	8	<5	57	<2	2.79	<1	<1	<5	<5	1100	66	<30	1.0	1.4	<5	<0.01
XA02	<5	<5	4	920	5	15	7	40	2	2.03	4	<1	<5	<5	3500	<50	61	0.7	5.4	<5	<0.01
XA03	<5	<5	3	290	4	32	<5	19	<2	1.52	1	<1	<5	<5	1400	<50	<30	0.7	2.0	<5	<0.01
XA04	<5	<5	<2	250	6	35	<5	16	<2	0.74	1	<1	<5	<5	2240	<50	<30	0.3	1.8	<5	<0.01
XA05	<5	<5	2	200	3	34	<5	18	<2	0.89	<1	<1	<5	<5	2030	<50	<30	0.3	2.2	<5	<0.01
XA06	<5	<5	3	320	6	25	5	30	<2	1.64	2	<1	<5	<5	3080	<50	35	0.9	3.5	<5	<0.01
XA07	<5	<5	3	290	4	31	<5	18	<2	0.91	<1	<1	<5	<5	1330	<50	<30	0.5	2.3	<5	<0.01
XA08	<5	<5	3	480	5	26	7	35	<2	1.64	3	<1	<5	<5	2450	<50	43	0.9	4.6	<5	<0.01
XA09	<5	<5	4	240	6	27	<5	31	<2	1.41	2	<1	<5	<5	4100	<50	33	0.5	3.8	<5	<0.01
XA10	<5	<5	3	150	4	18	5	42	<2	1.58	<1	<1	<5	6	1440	<50	<30	1.0	2.3	<5	<0.01
XA11	<5	<5	3	280	5	18	8	56	<2	2.11	4	<1	<5	7	3970	<50	78	1.2	5.2	<5	<0.01
XA12	<5	<5	4	420	4	20	7	45	<2	1.96	3	<1	<5	<5	3360	130	55	0.9	5.9	<5	<0.01
XA13	<5	<5	<2	210	5	22	<5	29	<2	1.32	2	<1	<5	<5	6670	<50	36	0.5	4.5	<5	<0.01
XA14	<5	<5	2	230	4	25	<5	35	<2	1.65	2	<1	<5	<5	4260	<50	72	0.3	5.7	<5	<0.01
XA15	<5	<5	3	220	4	14	8	52	<2	2.22	1	<1	<5	<5	1970	<50	48	0.7	5.4	<5	<0.01
XA16	<5	<5	3	150	4	21	7	38	<2	1.72	1	<1	<5	<5	2230	<50	40	0.6	5.2	<5	<0.01
XA17	<5	<5	4	230	4	15	9	57	<2	2.53	2	<1	<5	<5	3090	<50	78	1.3	7.1	<5	<0.01
XA18	<5	<5	2	330	4	18	10	53	2	2.56	3	<1	<5	<5	2620	<50	69	0.3	8.1	<5	<0.01
XA19	<5	<5	3	410	4	19	8	53	3	2.64	2	<1	<5	<5	2340	<50	69	0.7	8.1	<5	<0.01
XA20	<5	<5	2	<100	3	31	<5	17	<2	1.14	<1	<1	<5	<5	7480	<50	<30	0.7	2.6	<5	<0.01
XA21	<5	<5	2	210	4	28	<5	21	<2	1.02	<1	<1	<5	<5	3370	<50	<30	0.5	2.2	<5	<0.01
XA22	<5	<5	2	170	5	25	<5	30	<2	1.09	<1	<1	<5	5	2130	<50	<30	0.7	1.9	<5	<0.01



Activation Laboratories Ltd.

Work Order: 3093 Report: 3088

Sample description	SR	TA	TH	U	V	ZN	LA	CE	ND	SM	EU	TR	YB	LU	Mass
	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	g
XA01	<0.05	<1	2.0	<0.5	<4	<50	7	14	8	1.0	1.4	<0.5	0.52	0.05	10.22
XA02	0.07	<1	6.7	1.3	<4	78	24	51	20	2.4	0.7	0.6	1.68	0.25	10.15
XA03	0.07	<1	2.8	2.0	<4	<50	14	31	12	1.5	0.7	<0.5	1.01	0.15	9.818
XA04	0.10	<1	2.1	1.1	<4	<50	10	17	10	0.9	0.3	<0.5	0.47	0.08	9.125
XA05	0.10	<1	1.4	1.0	<4	<50	10	18	<5	0.9	0.3	<0.5	0.56	0.08	10.24
XA06	0.05	<1	4.4	1.2	<4	59	17	32	17	1.7	0.6	<0.5	1.36	0.18	8.404
XA07	0.06	<1	1.3	1.7	<4	<50	14	31	8	1.5	0.6	<0.5	0.96	0.12	9.016
XA08	0.06	<1	5.0	1.7	<4	60	17	34	14	1.8	0.6	<0.5	1.23	0.13	8.153
XA09	0.06	<1	4.1	2.1	<4	88	19	32	8	1.9	0.7	<0.5	1.45	0.18	8.923
XA10	<0.05	<1	2.3	<0.5	<4	<50	14	29	13	2.0	2.3	<0.5	0.90	0.10	10.06
XA11	<0.05	<1	8.0	1.4	<4	50	28	56	22	2.7	1.0	<0.5	1.55	0.24	7.606
XA12	<0.05	<1	8.4	1.9	<4	67	28	58	22	2.8	1.1	<0.5	1.82	0.30	8.398
XA13	<0.05	<1	4.9	0.6	<4	<50	27	60	24	3.3	1.5	0.6	1.57	0.22	7.983
XA14	<0.05	<1	6.8	1.1	<4	77	24	49	15	2.4	0.9	<0.5	1.71	0.23	8.255
XA15	<0.05	<1	4.9	<0.5	<4	<50	19	39	15	1.9	1.0	<0.5	0.92	0.12	9.000
A16	<0.05	<1	3.5	1.3	<4	69	18	41	13	1.8	0.8	<0.5	0.97	0.15	9.344
A17	<0.05	<1	7.7	<0.5	<4	99	25	50	21	2.5	0.7	<0.5	1.63	0.21	7.700
A18	<0.05	<1	7.8	2.0	<4	<50	30	60	22	2.5	0.9	0.6	1.64	0.23	7.070
A19	<0.05	<1	8.3	<0.5	<4	<50	29	52	28	2.6	0.7	<0.5	1.69	0.23	6.953
A20	0.09	<1	3.1	1.1	<4	60	17	39	14	2.1	0.7	<0.5	1.49	0.18	8.912
A21	0.08	<1	2.0	<0.5	<4	<50	11	21	7	1.2	0.8	<0.5	0.48	0.08	9.435
A22	0.06	<1	2.2	1.3	<4	<50	13	26	8	1.2	1.1	<0.5	0.69	0.09	10.01



SEP 11 '91 14:14 ACTIVATION LABS

**DIA  MET  
MINERALS**

STATEMENT OF EXPLORATION EXPENDITURES

ALBERT RIVER CLAIMS

1. Direct Exploration Expenses

15 MAN DAYS ( Mark Fipke, Wayne Fipke, Asaph Fipke )  
purchasing supplies, travelling to property, repairing  
access road, mob/demob camp, complete continuous rock chip  
sampling survey.

W. Fipke 5.5 days @ \$200., M. Fipke 4.5 days @ \$150.,

A. Fipke 5 days @ \$100.

\$2275.00

Expenses of above personnel including meals,  
accommodations, rental of camp gear, chain saws,  
communication radio phone, 4 wheel drive truck and gas

\$1400.87

3 MAN Days @ \$200.00 per day for geologist  
services planning & organizing survey, compiling results,  
completing assessment report.

\$ 600.00

drafting and copying supplies

\$ 75.25

2. Other Direct Dia Met expenditures

telephone long distance, plastic sample bags, topofil,  
aluminum tags, freight of samples to labs, miscellaneous

\$ 130.00

secretarial typing, proof reading, maps for drafting,  
copying report, accounting, office supplies

\$ 300.00

3. August 31, 1991 invoice from Norm's Manufacturing & Geoservices

Processing of 22 rock chip samples including crushing,  
pulverizing, splitting and preparing for submission to Activation  
Laboratories 22 @ \$60

\$1320.00

4. Activation Labs Au +33 analysis invoices

\$ 223.63

TOTAL EXPENDITURES

\$6324.75

GEORGE BENMORE

4388 HOBSON ROAD

KELOWNA, B.C.

VIW 1Y3

TELEPHONE: (604) 764-4134

EDUCATION:

1980

UNIVERSITY OF BRITISH COLUMBIA  
Bachelor of Applied Science in Geological Engineering, Exploration  
Option.

LANGUAGES:

English and French written and spoken.

WORK EXPERIENCE:

1987 - 1989

Small consulting jobs in gold exploration including the following:

GEOLOGICAL SURVEY OF CANADA (January - March 1989)  
Winter Works Programme

NORLUND GEOLOGICAL CONSULTANTS LTD. (August - December  
1988)

Core logging. Gold-bearing sulfides in a quartz vein in the  
Kootenays.

KERR-ADDISON MINES LTD. (May - July 1988)

Reconnaissance exploration on Whitesail Lake map area.

GEOLOGICAL SURVEY OF CANADA (November 1987 - April 1988)  
Winter Works Programme.

TWV ENGINEERING (June - August 1987)

Core logging. Banded sulfides in a quartz vein on Banks Island.

July 1981 -

TECK EXPLORATION AUSTRALIA, Sydney, N.S.W.

April 1982

Exploration for Kuroko-type deposits in Ordovician rocks.

November 1980 -

PACIFIC EXPLORATION CONSULTANTS, Perth, West Australia

June 1981

Exploration for Kimberlite pipes and alluvial diamonds near Smoke  
Creek, W.A.

May 1979 -

PINE POINT MINES, N.W.T., Canada

November 1979

Exploration for Devonian carbonate-hosted lead and zinc. Duties  
were core logging and evaluation of a drilling method.

May 1978 -

TRIGG - WOOLLETT CONSULTANTS, Edmonton, Alberta

November 1978

Exploration for uranium in a roll-front deposit near Great Bear Lake.  
The job was exclusively core logging.

May 1977 -

PINE POINT MINES, N.W.T., Canada

August 1977

Grade Control at the lead-zinc mine plus two weeks as Field  
Foreman.

ADDITIONAL EXPERIENCE:

I worked as a field assistant for the following organizations between  
university years:

1975

UTAH MINES, Houston, B.C.  
Porphyry copper exploration.

1974

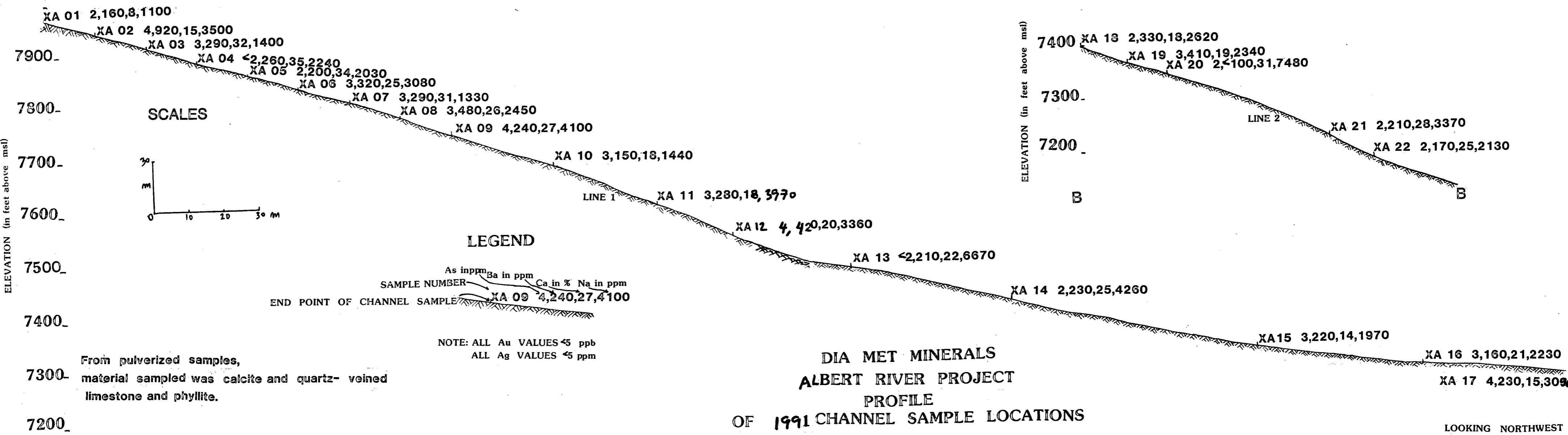
DYNASTY EXPLORATION, Howards Pass, Y.T.  
Lead-zinc exploration in Ordovician sediments.

1973

ENVIRONMENT CANADA, Garibaldi Park, B.C.  
Surveying and meteorological readings.



A.R. 21474



A (SEE FIGURE 3)

FIGURE 5

A