## MAR 19990006: SPIRIT RIVER

Received date: Mar 02, 1999

Public release date: Mar 03, 2000

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MAR 02 1999

### **695491 ALBERTA LTD.**

**226,21 10405 Jasper Avenue Edmonton, Alberta T5J 3S2 Telephone: (780) 973-5368 Fax: (780) 973-5238** 

February 12, 1999

WANHAM

### ASSESSMENT WORK REPORT 1997 and 1998

The Assessment Work is to be Applied to the Following Lands Only

Sections 15 - 22, 27 - 30, Township 77, Range 3, West of the 6<sup>th</sup> Meridian Contained in Permit Number 9396110011

Sections 1 - 4, 5N, 6 - 13, 14S and NW, 15 - 36 Township 77, Range 6, West of the 6<sup>th</sup> Meridian Contained in Permit Number 9396110014

Sections 13 - 17, 20 - 29, 32 - 36, Township 78, Range 8, West of the 6<sup>th</sup> Meridian Contained in Permit Number 9396110024

Sections 1 - 4, 9 - 17, Township 79, Range 8, West of the 6<sup>th</sup> Meridian Contained in Permit Number 9396110028

Prepared by

Kenneth Richardson President 695491 ALBERTA LTD.

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### **SUMMARY**

Alberta, particularly the northern part of the province, has been subject to intense diamond exploration activity since discovery of the Monopros Mountain Lake Kimberlite north east of Grande Prairie several years ago. The level of activity increased significantly with an announcement by Ashton Mining of Canada Inc. in 1997 that it had located a kimberlite province in the Buffalo Head Hills area. Exploration for diamonds had been undertaken in Alberta for some twenty years prior to that, but at a much lower level of activity.

695491 Alberta Ltd. has twenty Metallic and Industrial permits on 181,272 hectares in the Spirit River area of the Peace River District on which it has undertaken a program of searching for potential diamond bearing formations. This Assessment Work Report in being filed for certain portion of some of the permits containing 20,544 hectares, as outlined in this document.

Activities undertaken include obtaining and analyzing satellite radar imagery, aero magnetics and airborne infrared photographs, undertaking a ground magnetometer survey and gathering of various samples for analysis.

Insufficient work has been undertaken to date to ascertain if the permit area has potential for locating diamond bearing formations. Significant additional analysis of available data and samples gathered is required to determine the future course of exploration activity.

### 1.0

### INTRODUCTION

The primary objective of work undertaken on the property covered by the Metallic and Industrial Mineral Permits owned by 695491 Alberta Ltd. (695) was to locate diamond indicators with a view to identifying potential kimberlite targets for future drilling. A major portion of northern Alberta, including the Peace River area where the subject property is located, has been the subject of intense diamond exploration activity since discovery of the Monopros Mountain Kimberlite north east of Grande Prairie and the subsequent discovery of numerous kimberlites by Ashton Mining of Canada Inc. at their Buffalo Hills Project.

A 1996 Alberta Geological Survey report on diamonds and diamond indicator minerals; summed up in "The Diamond Potential of Alberta" by Dufresne, Eccles, McKinstry, Schmitt, Fenton, Pawlowicz and Edwards, identifies two diamond indicator trends in northern Alberta. These are the Peace River Trend and the Wabasca River Trend. The property which is the subject of this report is located in the Peace River Trend.

Field Trips #1, #2 and #4 were for the purpose of driving the permit areas to view the terrain, detailed examination of specific areas to collect grab and stream samples and generally assess the overall area to identify sites for further work. Field Trip #3 was to take air borne infrared photographs of specific area sites to further identify possible locations for additional work.

On Field trip #5 a ground magnetometer survey was undertaken to identify potential drilling sites and shallow soil, stream and grab samples were also gathered. Further aerial reconnaissance was undertaken during Field Trip #6.

The various samples were analyzed by the company and a limited number of assays were conducted by an independent laboratory.

### 1.1 Location

The location of Metallic & Industrial Permits owned by 695 is identified on the Ownership/Permitee Map, Figure #2, as Permitee Number 36 - 695491 Alberta Ltd. Figures #3a to 3d shows the location of the shallow soil sample areas.

The general area is between Range 3 and 11, West of the 6<sup>th</sup> Meridian and from the 20<sup>th</sup> Base Line to an irregular line east and west of Spirit River. There is also an irregular portion to the north and west of the main permit area.

Figures 2a to 2d inclusive show the areas on which this Assessment Work Report is being filed.

### 1.2 Access

There is good access to the general area via paved Highway #2 north from Grande Prairie and paved Highway #49 both east and west from Spirit River. Most of the region is also covered by a good network of local roads. Majority of the roads in the western portion of the permit area were constructed by the oil and gas industry and some are virtually impassable during spring breakup. Generally the area can be worked for most of the year, except for load restrictions during the spring. A road map of the Peace River District, showing the highways, is included as Figure #1.

All permit areas are developable from a mining point of view, with industrial services and infrastructure well developed due to the high level of oil, gas and forest activity in the vicinity. The main service centres are Dawson Creek, Grande Prairie and Spirit River.

### 1.3 Topography and Vegetation

The terrain is generally flat to sloping with some portions moderately hilly and a few steeper ridges. Much of the eastern half of the permit area is cultivated, with some poplar and spruce coverage. The western part contains less cultivated area, has large muskegs and a significant portion is covered by thick overgrowth and mature poplar and spruce. There is little, if any, of the topography that would create difficulties for mining development.

## 2.0

## PERMIT TABULATION

All permits are in the name of 695491 Alberta Ltd.

Permit No.	Date	Permit Location (W6M)	Permit Hectares	Assessment Work Report Location (W6M)	Assessment Hectares
9396110011	05/11/96	Twp 77, R3, S1-36	9,216	Twp 77, R3, S15-22, 27-30	3,072
9396110014	05/11/96	Twp 77, R6, S1-4, 5N, 6-13, 14S & NW, 15-36	9,024	Twp77. R6, S1-4, 5N, 6-13, 14S & NW, 15-36	9,024
9396110024	05/11/96	Twp 78, R8, S1-36	9,216	Twp 78, R8, S13-17, 20-29, 32-36	5,120
9396110028	05/11/96	Twp 79, R7, S1-18, Twp 79, R8, S1-18	9,216	Twp 79, R8, S1-4, 9-17	3,328
Total Hectares			36,672		20,544

### 3.1 Satellite Remote Sensing

The satellite chosen was Radarsat and a standard beam image covering 100 km x 100 km with a resolution of 30m, an incidence angle of 46.95°, a descending orbit and an acquisition date of 08/19/1997 at 14:02:35 zulu time. The relative satellite image is included as Figure #6 and portions of the image window showing most of the potential target locations are included as Figures 6a and 7. A total of twenty-three target areas were identified as warranting further exploration. A report on the project is attached as Appendix III.

### 3.2 Prospecting

695 has investigated numerous stream beds, gravel pits, seismic lines and other locations where the ground has been cut or disturbed. The eastern portion of the permit area contained more volcanic material and majority of the activity was concentrated in that area. Analysis by 695 revealed olivine clay and some kimberlite indicator minerals on Sec. 11, Twp 79, R 8. The assay encountered a deep red garnet in the +80 mesh portion of the sample from the property and very small pieces of garnet in all of the samples.

Majority of the samples gathered have not yet been fully analyzed and a report is not available.

### 3.3 Aero Magnetic Survey

Aeromagnetic data was obtained and a preliminary interpretation helped identify areas that are to be analyzed more closely. The relative maps are attached as Figures #9a to c. Significant additional interpretation and a full report is required for fine tuning of target sites.

### 3.4 Air reconnaissance

The permit area was flown extensively on two separate occasions, Field Trips #3 and #6, to visually identify terrain that would be of interest for further prospecting/exploration and to undertake an infrared photographic survey. Approximately 375 photographs were taken, of which four are included as Figures #10a and b to show a sample of the target area.

An initial review of the photo images has been undertaken internally by 695 personnel. A full analysis and report is required to assist with determining potential sites for additional work.

### 3.5 Magnetometer Survey

A ground magnetometer survey was undertaken on Field Trip #5 to further define potential sites for additional work. Shallow soil, stream and grab samples were collected from some potential sites at the time of the survey. A report on the findings of the survey has not been completed.

### 3.6 Shallow Soil Sampling

As mentioned in Section 3.2 Prospecting, shallow soil samples were also taken from eight of the most promising locations during Field Trip #5. The locations are shown on Figures #3a to d inclusive. The samples gathered have not yet been full analyzed although some preliminary work was done by company personnel and, as mentioned below, a small number of assays were commissioned.

### 3.7 Assays

Assays were undertaken on five samples from the following locations:

- Assay # 1 SE Sec. 21, Twp. 77, R 3, W 6<sup>th</sup>
- Assay # 2 NW Sec. 20, Twp. 77, R 3, W 6<sup>th</sup>
- Assay # 3 & 4 NW Sec. 29, Twp. 77, R 6, W 6<sup>th</sup> (2 samples)
- Assay # 5 SW Sec. 11, Twp. 79, R 8, W 6<sup>th</sup>

One deep red garnet was found in the +80 mesh portion of one of the samples from SW Sec. 11, Twp. 79, R 8 and very small garnets were found in all samples. No other kimberlite indicator minerals or diamonds were identified.

All assays, except # 1, revealed the presence of gold.

Certificates of Analysis for the relative assays are included as Appendix II.

### 3.8 Field Trips

Dates and purposes of the various field trips were:

Trip No.	<u>Date</u>	Purpose
1	October 20, 1977	Drive area, detailed examination of certain sites, collect grab and stream samples and generally assess the overall area to identify sites for future work.
2	October 27, 1977	Continue the work commenced during the previous week.
3	November 8, 1977	Undertake air borne infrared photography of the permit area and a visual aerial reconnaissance of the permit area and some of the surrounding region.

4	January 6, 1998	Continue and expand on the work commenced on October 20, 1977
5	January 26, 1998	Undertake a ground magnetometer survey, collect shallow soil, stream and grab samples.
6	March 3, 1998	Undertake additional aerial reconnaissance on the total permit area and some of the surrounding region.

### 4.0

### REGIONAL GEOLOGY

The huge Western Canadian Sedimentary Basin includes the Peace River region where the permits covered by this assessment report are located. The Peace River Arch, a granitic crystalline crust, is a significant anticlinal Precambrian Age structure located approximately 2,000 meters below the Peace River Lowlands that forms the "basement." The basement is the presently stable "platform" underpinning North America and makes up part of the North American Craton.

Part of the Precambrian basement that makes up the structural anticline has an active tectonic history. The Phanerozoic sediments overlying the basement reflect some of that motion as the carbonates filled local collapse features in shallow sea environments following deposition and lithification. Fractures often occurred in response to further cycles of collapse and down warping. Continental and marine carbonate and clastic deposition following the Permian appear to exhibit more subtle responses to basement tectonics, possibly due to a drape effect and their distance from the basement. The Precambrian structure is seen to be brittle and resistant to deformation, weathering and thus, cyclical fracturing.

The North American Craton is sub-divided into its original micro-continent units, based on core analysis ind interpretation of aero magnetic data, which is well documented (Ross, G.M. et al., 1990).

Choosing good targets to consider for potential detailed exploration requires detailed analysis of all available information. There are several published sources for data on the Peace River faulting, such as the Geological Survey of Canada, Alberta Geological Survey and Lithoprobe Reports. Aero magnetic surveys have been used to differentiate the sub-cratons that make up the basement fabric, Figure #4a, and to identify faults, Figure #9b, that may create conditions or conduits suitable for kimberlite intrusive placements. However, aero magnetics should be considered as one tool to be substantiated by, or to substantiate, other data to confirm kimberlite intrusives. This is evidenced in that early aero magnetics did not reveal the Monopros Mountain Lake Kimberlite but aero magnetics did identify the Ashton kimberlite discoveries in the highly faulted Buffalo Head Hills area.

The strategy of 695 is to utilize publically available data, coupled with internally generated information to identify potential areas of mineralization, many of which are not known or mapped.

### 5.0

### **CONCLUSIONS**

Information gathered and work undertaken to date by 695 leads us to conclude:

- There is potential for locating good drill targets within the permit area.
- Significant additional analysis of data and samples obtained is required.
- Based on favorable results from the above, a major exploration program will be required be locate potential diamond bearing formations.
- There is presently insufficient information to ascertain if there is any potential for commercial diamond production from the area.
- There is some potential for gold exploration, although there is insufficient information available to determine if there is any potential for finding commercially economic quantities.

## 6.0 STATEMENT OF EXPENDITURES

1	Prospecting: Transportation, meals, accommodation, air reconnaissance and contract employment	\$44,979.19
2	Geophysical: Satellite remote sensing, aero magnetic survey and ground magnetometer survey	26,457.51
3	Geochemical: grab, stream and shallow soil samples and, analysis	24,237.68
4	Geological: maps and air photography	9,296.33
	Total	<b>\$104,97</b> 0.71

### 6.0 AUTHOR'S EXPERIENCE AND CERTIFICATE

- I, Kenneth Richardson, of Edmonton, Alberta, am qualified to prepare and submit this Assessment Work Report on the 695491 Alberta Ltd. Operated Metallic and Industrial Minerals Exploration Permits tabulated herein by virtue of the following and hereby declare that I have:
- 1. spent sixteen years prospecting minerals in the Peace River, Fort McMurray/FortMcKay, and many areas of Alberta, and the Clearwater region of Saskatchewan, plus many other areas in British Columbia and the Western United States.
- 2. have filed for numerous permits in Alberta and Saskatchewan and have sold many of these to companies such as Birch Mountain Resources Ltd., Tintina Mines Ltd., NSR Resources Ltd. and Focal Resources Limited.
- 3. have prepared Assessment Work Reports for Alberta Energy on properties for H.M.S Properties Ltd. and on my own behalf.
- 4. undertaken research on extraction of metallic minerals from "prairie-type" mineralization found in the Western Canadian Sedimentary Basin during the past sixteen years.

This statement is true and correct and is being made as part of the credentials of this Assessment Work Report dated at Edmonton, Alberta this /2 th day of February, 1999.

Kenneth Richardson, President 695491 Alberta Ltd.

## APPENDIX I BIBLIOGRAPHY

Dufresne, M.B., Eccles, D.R., McKinstry, B., Schmitt, D.R., Fenton, M.M., Pawlowicz, J.G. and Edwards, W.A.D. 1996, The Diamond Potential of Alberta,; Alberta Geographical Survey Bulletin No. 63, 158 p.

Ross, G.M. et al., the Peace River Arch, Western Canada. Bulletin of Canadian Petroleum Geology, Volume 38A, 1990

Stapleton, M.J., TUL Petroleums Ltd., Peace Diamond Project, Lamprophyres of the Peace River District, 1997

# Appendix II ASSAYS

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2 Tel: (416) 239-3527 FAX: (416) 239-4012

### CERTIFICATE OF ANALYSIS

CERTIFICATE NO.:

WITH NaOH.

MI-3872-01

DATE:

APRIL 20, 1998

SUBMITTED BY:

AGAU RESOURCES INC.

ATTENTION:

MR. KENNETH RICHARDSON

DATE RECEIVED: MARCH 19, 1998

SAMPLE OF: ORE

SAMPLES RECEIVED: 1) 01 DIAMOND 2) T3 (85 G)3) #7 BOTTOM GREEN (50 G) 4) T #7 (25 G)

> 5) T 11 (70 G)

PROCEDURE: FROM SAMPLES (AS RECEIVED), A PORTION WAS TAKEN AND WASHED WITH WATER UNTIL ALL THE CLAY WAS REMOVED. WASHWATER WAS SAVED AND DRIED (FINES). AND THE REMAINING "GRAVEL" WAS DRIED. WEIGHED AND SCREENED THROUGH 80 MESH (.177 mm). THE +80 MESH FRACTION WAS WEIGHED, MICROSCOPICALLY EXAMINED AND THEN FUSED

> FUSION WAS LEACHED WITH WATER AND HCL. ANY PARTICLES REMAINING IN THE CRUICIBLE AFTER FUSION WERE CHECKED UNDER THE MICROSCOPE.

### WEIGHTS (IN GRAMS)

	1	2	3	4	5
SAMPLE PORTION TAKEN	15.26	20.69	12.32	9.24	18.68
FINES	8.30	7.88	7.22	4.15	14.99
TOTAL "GRAVEL"	4.53	11.17	2.62	4.73	2.50
+80 MESH	.49	2.63	.39	1.86	1.48 *
AFTER FUSION	NIL	3 Au PIECES	2 Au PIECES	NO Au (2-3 MAYBE)	1 Au SMALL

\* ONE DEEP RED GARNET WAS FOUND IN THE +80 MESH PORTION OF

J. yan Engelen Mgr.

MAR 01 '99 01:43PM CHAUNCEY ASSAY LABSBORATURIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

### CERTIFICATE OF ANALYSIS

CERTIFICATE NO.:

MI-3872-02

DATE:

APRIL 20, 1998

SUBMITTED BY:

AGAU RESOURCES INC.

ATTENTION:

MR. KENNETH RICHARDSON

DATE RECEIVED: MARCH 19, 1998

SAMPLE OF: ORE

NOTE:

THE 3 Au PIECES FOUND IN #2 WERE "DELICATE GOLD". THAT MEANS THEY WERE NOT FLATTENED AND HAD NOT BEEN MOVED FAR WITH THE SAND. COULD BE LESS THAN 10 METERS. OTHER PIECES WERE CHUNKY. THE AU WAS ONLY VISIBLE AFTER FUSION. COULD HAVE BEEN HIDDEN BY

THE GRAY MATERIAL IN THE +80 MESH FRACTION.

#### WEIGHT FRACTIONS

		1	2	3	4	5
	FINES	54.4 %	38.1 %	58.6 %	44.9 %	80.2 %
TOTAL	"GRAVEL"	29.7 %	54.0 %	21.3 %	51.2 %	13.4 %
	+80 MESH	3.21 %	12.71 %	3.17 %	20.13 %	7.92 %
	WATER	15.9 %	7.9 %	20.1 %	3.9 %	6.4 %

REMARKS: MATERIAL IS VERY FINE

IF ANY INDICATORS OR DIAMONDS ARE PRESENT, THEY ARE VERY SMALL AND HARD TO IDENTIFY.

VERY LITTLE MAGNETICS

IN GENERAL NO GARNETS, EXCEPT 1 IN #5

IN SAMPLE #4 SOME PIECES DID NOT FUSE.

SUGGESTIONS: BECAUSE FREE AU IS VISIBLE EVEN IN THE VERY SMALL SAMPLES,

IT IS JUSTIFIED TO ASSAY FOR Au.

DO WHOLE ROCK ANALYSIS ON FINES AND ALSO ON THE -80 MESH

FRACTION.

J. van Engelen Mgr.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2 Tel: (416) 239-3527 FAX: (416) 239-4012

### CERTIFICATE OF ANALYSIS

CERTIFICATE NO.:

MI-3872-03

DATE:

APRIL 22, 1998

SUBMITTED BY:

AGAU RESOURCES INC.

ATTENTION:

MR. KENNETH RICHARDSON

DATE RECEIVED: MARCH 19, 1998

SAMPLE OF: ORE

WHOLE ROCK ANALYSIS ON FRACTIONS OF DIAMOND ORE SAMPLES.

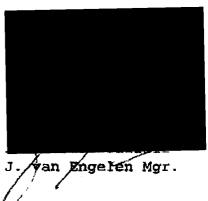
"FINES" IS THE CLAY PART WHICH FLOATS WITH THE WATER.

### WEIGHT FRACTIONS

SAMPLE NO	#1	#2	#3	#4	#5
fines -80 mesh				44.9 8 31.1 %	

### SAMPLE #1) 01 DIAMOND

	FINES	-80 MESH
Si02	69.82 %	83.59 %
A1203	14.83 €	9.48 %
Fe203	4.01 %	.88 %
CaO	.66 %	.46 %
MgO	1.38 %	.32 %
Na20	2.41 %	2.35 %
K20	1.91 %	1.86 %
MnO	.02 %	.01 %
TiO2	.66 %	. 25 %
P205	.05 ֆ	.22 %
LOI	3.96 %	1.01 %
Cr PPM	473	52



MAR 01 '99 01:43PM CHAUNCEY ASSAY LABSABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

### CERTIFICATE OF ANALYSIS

CERTIFICATE NO.: MI-3872-04

DATE:

APRIL 22, 1998

SUBMITTED BY:

AGAU RESOURCES INC.

ATTENTION:

MR. KENNETH RICHARDSON

DATE RECEIVED: MARCH 19, 1998

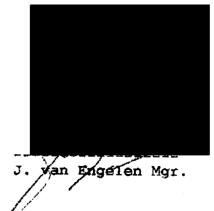
SAMPLE OF: ORE

### SAMPLE #2) T3

	FINES	-80 MESH
SiO2	62.36 %	82.53 %
A1203	16.53 %	9.08 %
Fe203	4.55 %	.71 %
CaO	1.53 %	.58 %
MgO	1.76 %	.27 ક
Na20	2.44 %	2.41 %
KZQ	1.95 €	1.68 %
MnO	.03 %	.01 %
T102	.77 %	.28 %
P205	.23 %	.21 %
roi	7.68 %	1.95 %
Cr PPM	168	67

### SAMPLE #3) #7 BOTTOM GREEN

	FINES	-80 MESH
Si02	69.54 %	90.07 %
A1203	12.44 %	4.13 %
Fe203	4.86 %	1.06 %
CaO	.16 %	.05 %
MgO	1.33 %	.26 %
Na20	1.12 %	.97 %
K20	2.08 %	1.07 %
MnO	.03 %	.01 %
TiO2	.71 %	.22 %
P205	.09 %	.22 €
LOI	7.53 %	1.88 %
Cr PPM	280	57



33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2 Tel: (416) 239-3527 FAX: (416) 239-4012

## CERTIFICATE OF ANALYSIS

CERTIFICATE NO .:

MI-3872-05

DATE:

APRIL 22, 1998

SUBMITTED BY: ATTENTION:

AGAU RESOURCES INC.

MR. KENNETH RICHARDSON

DATE RECEIVED: MARCH 19, 1998

SAMPLE OF: ORE

## SAMPLE #4) T #7

	FINES	-80 MESH
SiO2 Al2O3 Fe2O3 CaO MgO Na2O K2O MnO TiO2 P2O5	66.37 % 14.05 % 5.93 % .87 % 1.54 % 1.17 % 2.19 % .04 % .76 % .14 %	86.97 % 5.89 % 1.39 % .34 % .37 % 1.58 % 1.27 % .02 % .25 % .15 %
<b>FOI</b>	6.84 %	1.71 %
Cr PPM	117	69

### **SAMPLE #5) T 11**

	FINES	-80 MESH
SiO2	63.99 %	84.80 %
A1203	14.68 %	4.52 %
Fe203	5.52 %	.95 %
CaO	1.40 号	4.22 %
MgO	1.72 %	.44 %
Na20	.79 %	1.14 %
K20	2.52 %	1.28 %
MnO	.04 €	.01 %
TiOZ	. 79 %	.20 %
P205	.30 €	.27 €
roi	8.20 €	2.05 %
Cr PPM	134	91

RE: METHYLENE IODIDE

OUR BOTTLE IS LABELLED: GEOLIQUIDS INC, CHICAGO

SPECIFIC GRAVITY = 3.32



P.6

### CERTIFICATE OF ANALYSIS

CERTIFICATE NO.:

MI - 3872 - 06

DATE:

APRIL 23, 1998

SUBMITTED BY:

AGAU RESOURCES INC.

ATTENTION:

MR. KENNETH RICHARDSON

DATE RECEIVED: MARCH 19, 1998

SAMPLE OF: ORE

FOR THIS TEST THE CLAY WAS REMOVED WITH WATER, SAVED AND DRIED (FINES). THE REMAINDER WAS DRIED, WEIGHED AND THEN TREATED WITH METHYLENE IODIDE (S.G=3.32) TO GIVE MI HEAVIES AND MI LIGHTS. THESE WERE THEN WASHED WITH ACETONE AND WEIGHED.

THE MI HEAVIES WERE EXAMINED BY MICROSCOPE AND THEN FUSED WITH NAOH. THE CAUSTIC WAS DISSOLVED IN WATER WITH A LITTLE HCL. THE CRUCIBLE WAS THEN EXAMINED.



J. van Eagelen Mgr.

### CERTIFICATE OF ANALYSIS

CERTIFICATE NO.: MI-3872-07

DATE: APRIL 23, 1998

SUBMITTED BY: AGAU RESOURCES INC.

ATTENTION:

MR. KENNETH RICHARDSON

DATE RECEIVED: MARCH 19, 1998

SAMPLE OF: ORE

LEACH 17/4: MODIFIED H202 LEACH IN OPEN BEAKER ON MI-3872

DIAMOND ORE SAMPLES (FINES).

- SAMPLE NO: 1) 01 DIAMOND

  - 2) T3 3) #7 BOTTOM GREEN
  - 4) T #7
  - 5) T 11

PRECIPITATE DISSOLVED IN AQUA REGIA (A.R), AND RESIDUE WAS FIRE ASSAYED

### MEASUREMENTS ON A.R SOLUTION

SAMPLE NO:	1	2	3	4	5
Au OZ/TON Ag OZ/TON Pt OZ/TON Pd OZ/TON Rh OZ/TON Ru OZ/TON	2.16	3.44	2.11	2.07	2.44
	.60	1.17	.60	2.04	.63
	<.01	<.01	<.01	<.01	1.74
	1.20	.53	.43	1.00	1.31
	.10	<.01	.86	.40	.35
	6.00	4.55	3.44	4.80	7.83

### FIRE ASSAY ON RESIDUE

Au OZ/TON	. 27	3.09	.12	.14	.37
TOTAL Au OZ/TON	2.43	6.53	2.23	2.21	2.81

J. van Engelen Mgr.

# Appendix III SATELLITE REMOTE SENSING REPORT

Report prepared for:

## AGAU Resources Inc.

#21, 10405 Jasper Avenue Edmonton, Alberta T5J 3S2

Mason Research & Development Ltd
Satellite & Earth Science Consultants
9039 - 150 Street
Edmonton, Alberta
T5R 1E8
Phone: (403) 444-2483

### **MISSION:**

We were commissioned by AGAU Resources Inc. of Edmonton, Alberta, to use remote sensing to identify possible Kimberlite occurrences in a 10,000 sq. kilometer area of Northern Alberta.

## REMOTE SENSING METHOD:

The method we used was firstly to choose the right satellite for the project. We chose Radarsat for the Following reasons; for its capability to penetrate cloud, fog, rain, dust, haze and darkness. Radarsat can acquire detailed imagery of the earth day or night.

Radarsat has beam width control from 500 km x 500 km with a resolution of 100 m to a fine beam of 50 km x 50 km and a resolution of 10 m. Radarsat can also operate on a ascending or descending orbit, with a beam incidence angle control of 20° to 60°.

We chose the standard beam width image covering 100 km x 100 km with a resolution of 30 m, an incidence angle of 46.95°, a descending orbit and a acquisition date of 08/19/1997 at 14:02:35 zulu time.

## **METHODOLOGY:**

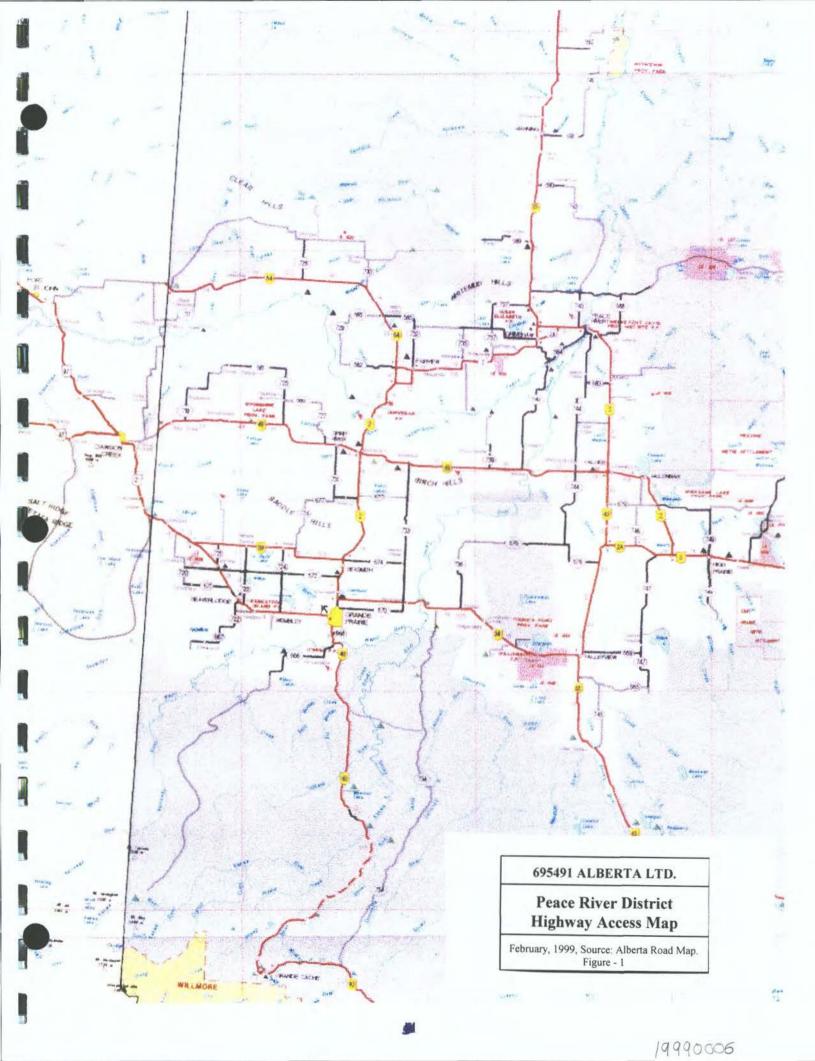
We acquired all known data and maps of the project area:

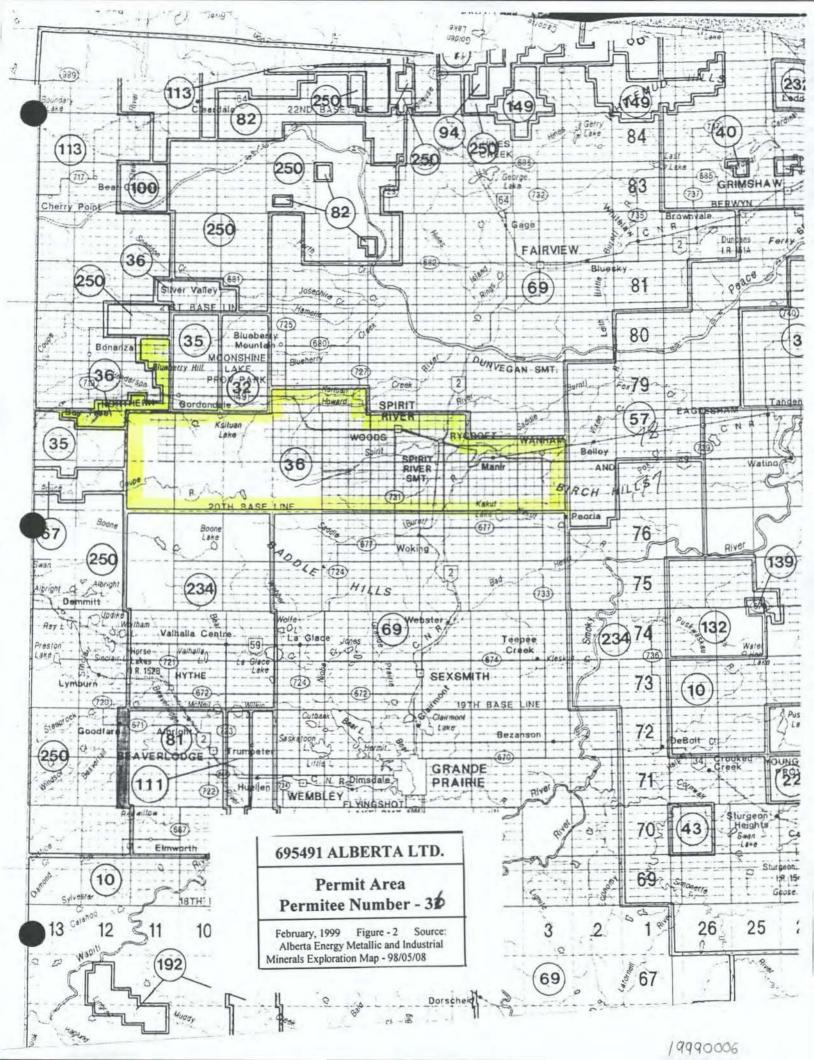
- Topography
- Geo Botany
- Bedrock Geology
- Drift Thickness
- Magnetometer Data
- Groundwater Movements
- Glacial History
- Plate Tetonics
- Kimberlite Occurrences
- Kimberlite Indicators
- Radar Satellite Data

Our findings after considering all of the above information were compared with our findings of density changes, faults and cirques. We then compiled our interpreted conclusions to a satellite map showing all recognized faults and 23 target areas that we believe warrant future field exploration and research.

Mason Research & Development Ltd.

George Mason





TWP 77 Rang 3

## 695491 ALBERTA LTD.

Permit No. 9396110011 Assessment Work Report Area Sec. 15-22, 27-30 Twp. 77, R. 3, W. 6<sup>th</sup> M.

February, 1999 Figure 2a



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	19	20	21	22	
	18	17	16	15	
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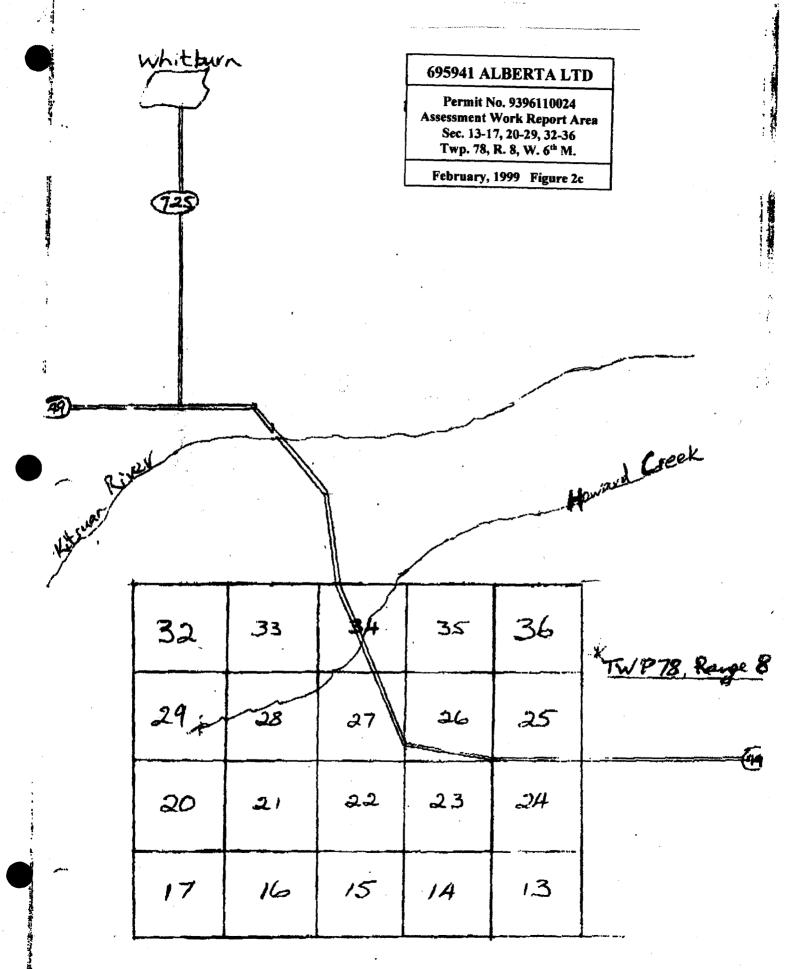
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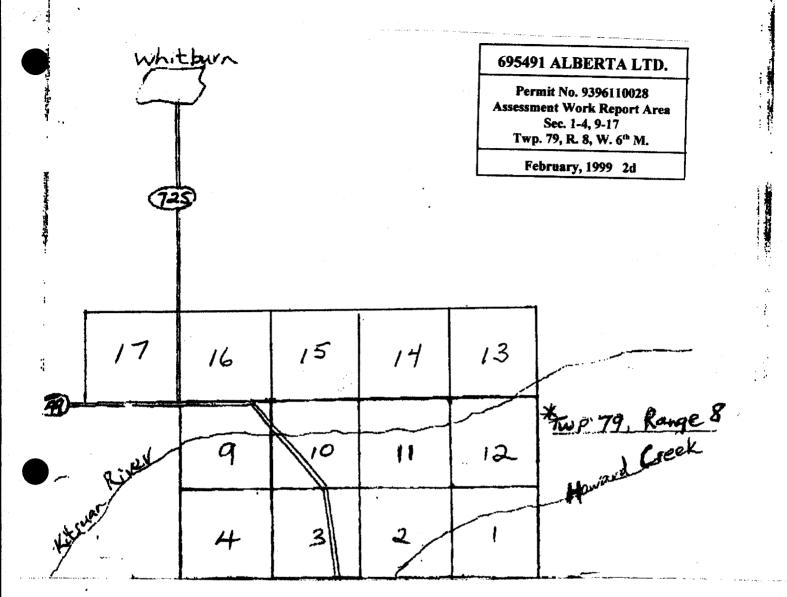
### **695491 ALBERTA LTD.**

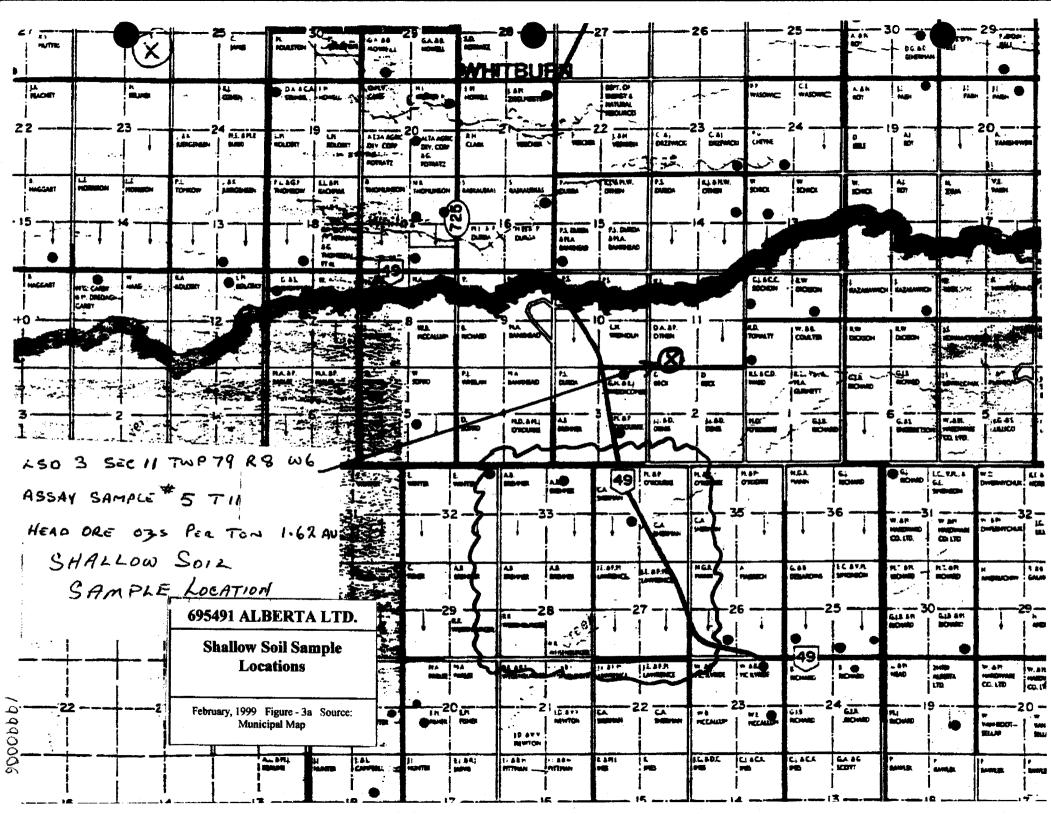
Permit No. 9396110014 Assessment Work Report Area Sec. 1-4, 5N, 6-13, 14S and NW, 15-36, Twp. 77, R. 6, W. 6th M.

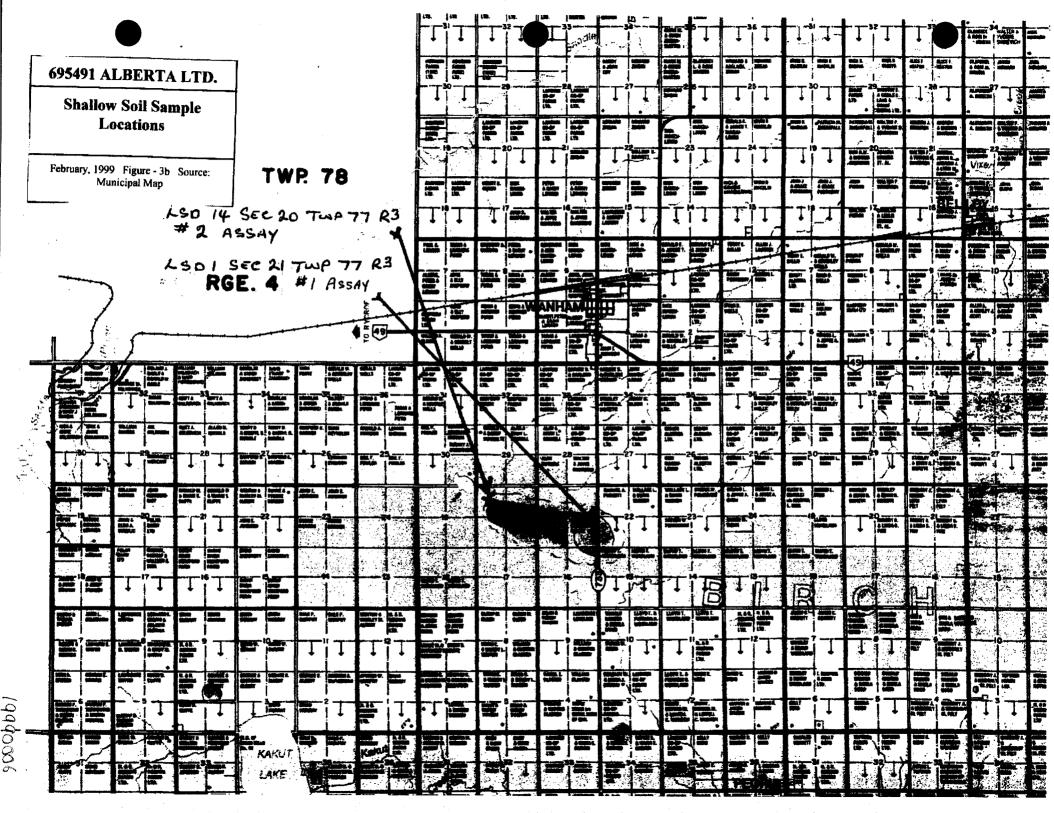
February, 1999 Figure 2b

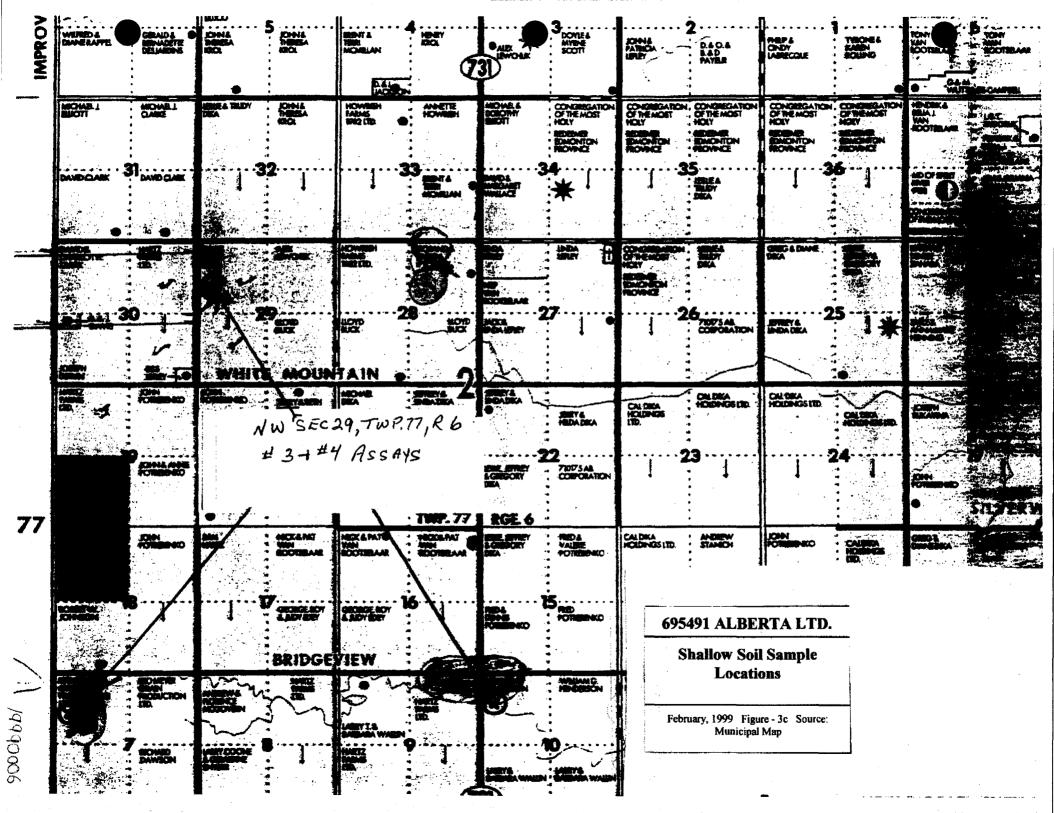
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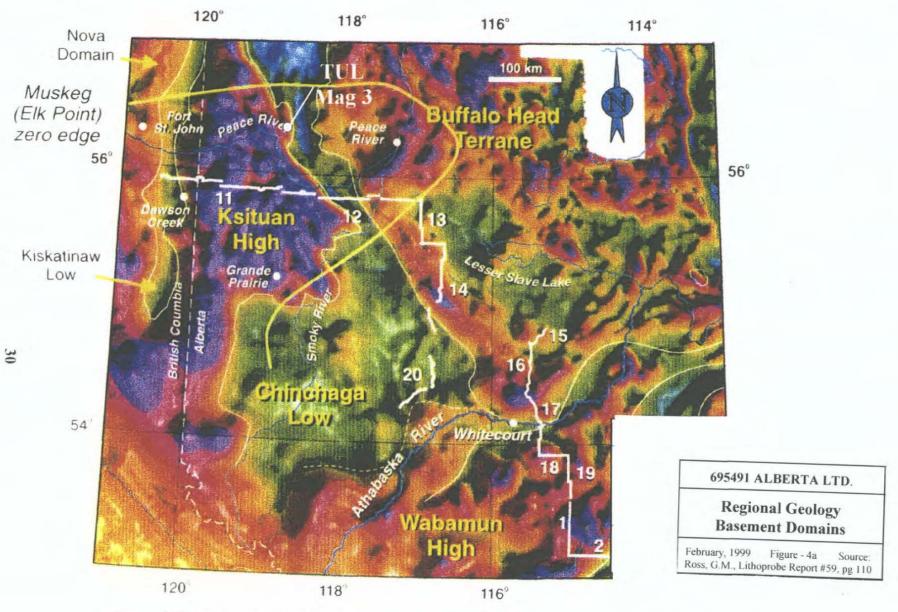
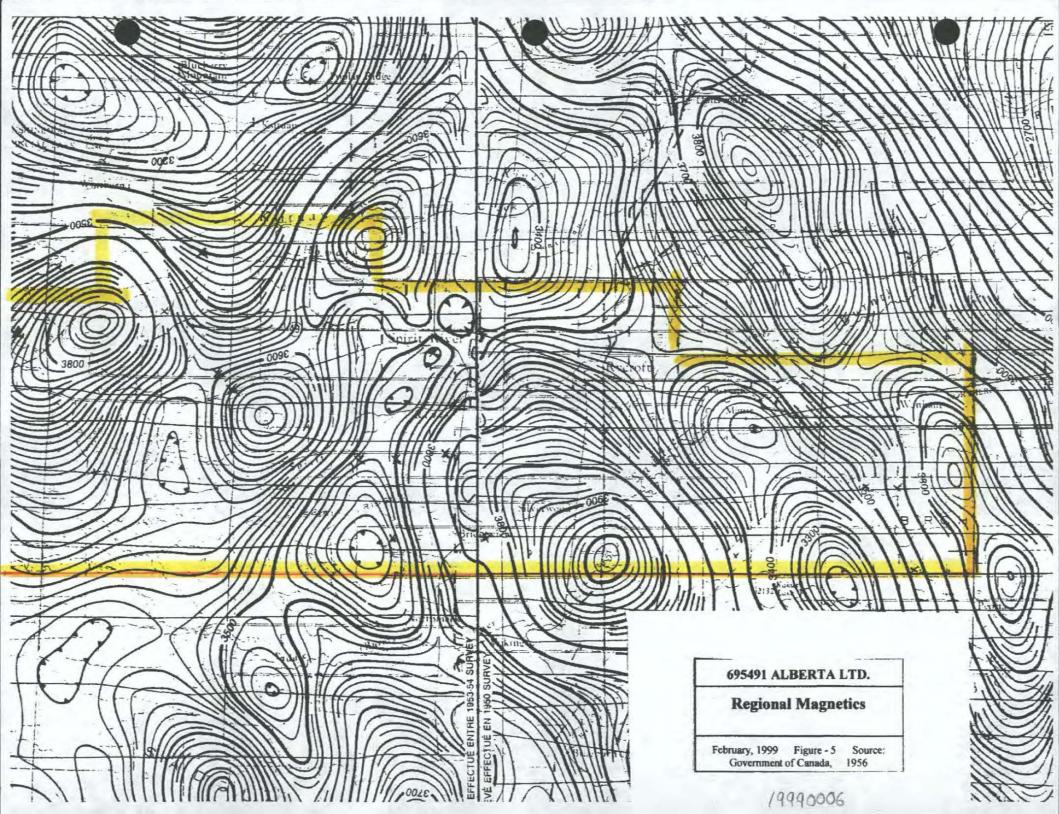


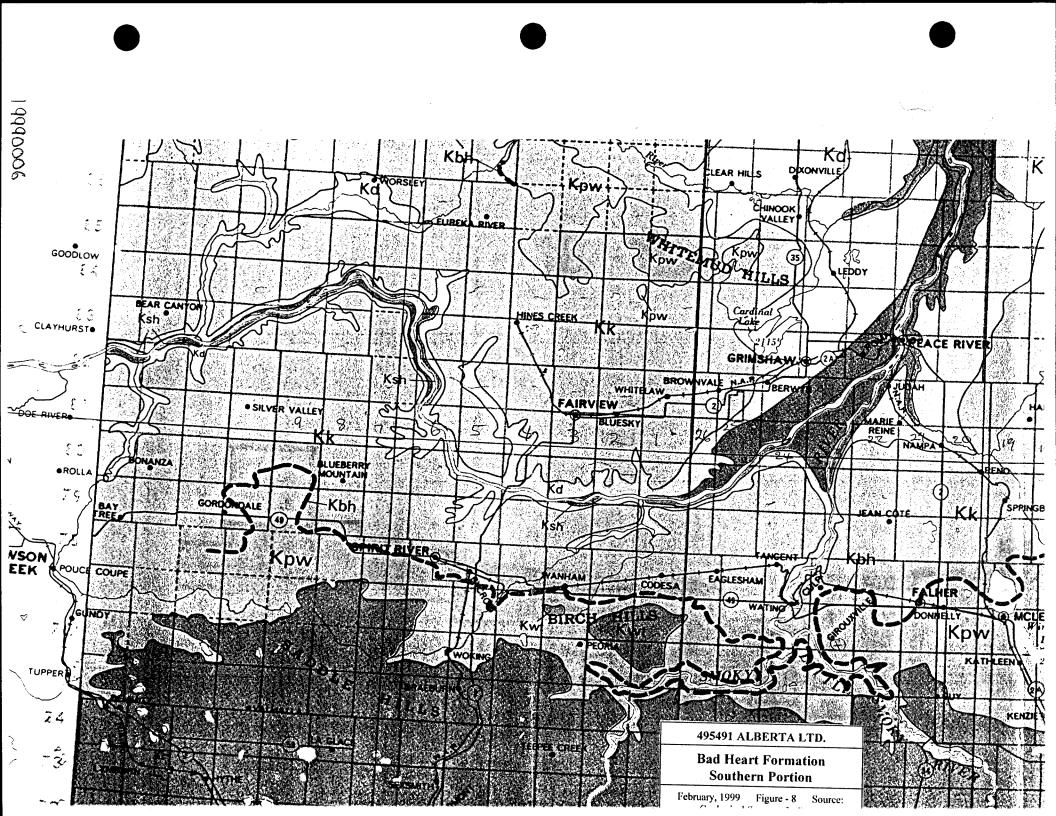
Figure 2: Regional aeromagnetic anomaly map for the Peace River Arch region showing the major basement domains and the locations of the PRAISE line segments (lines 11 through 20).

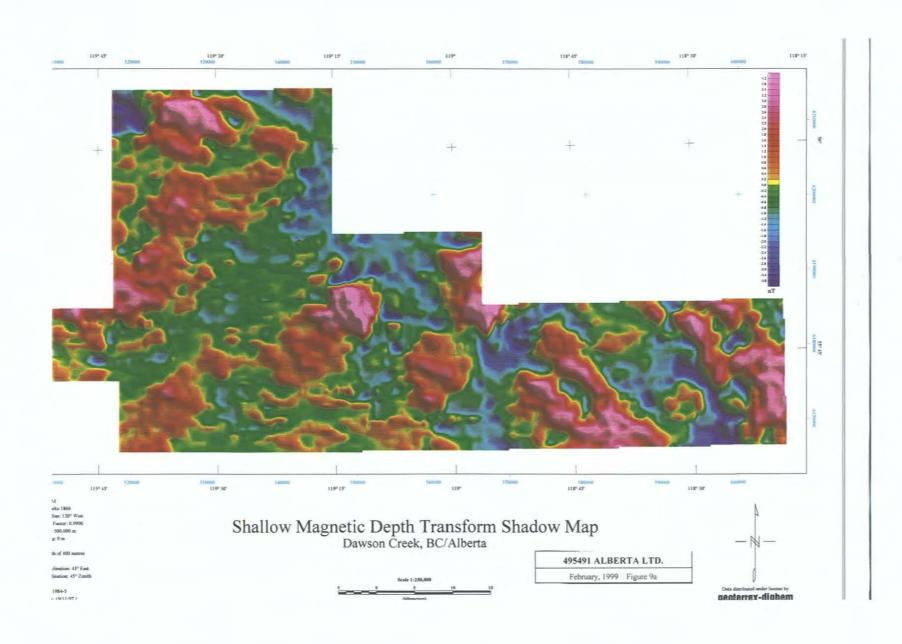
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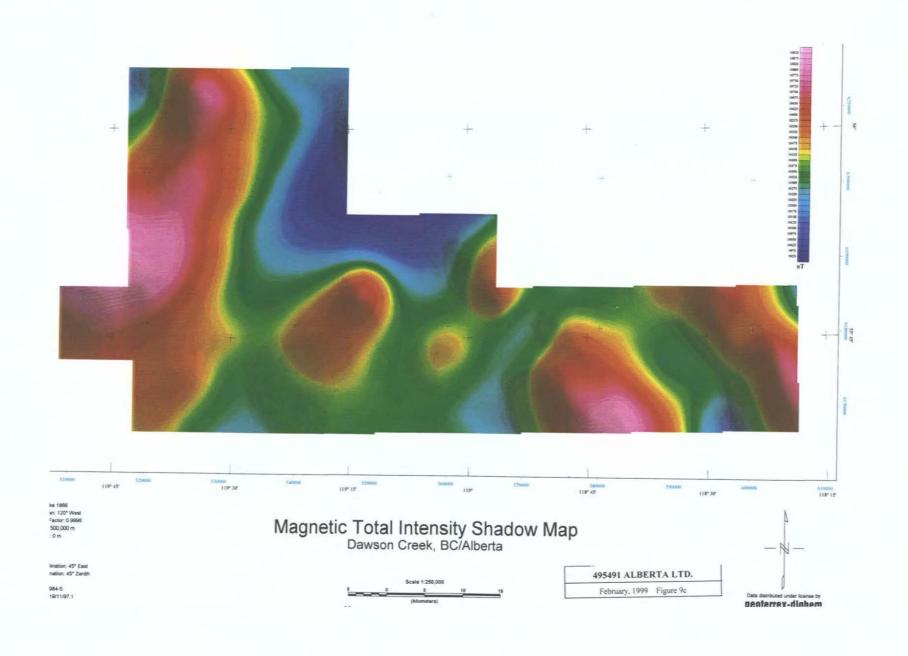


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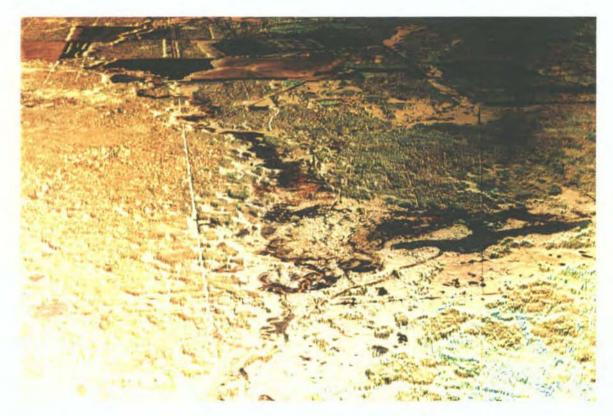
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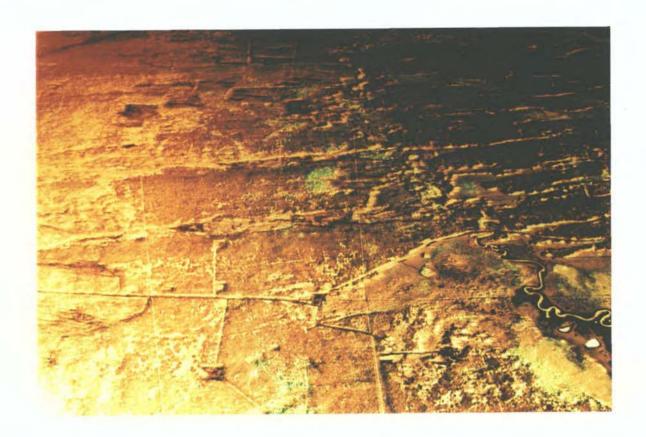




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Sample of Airborne Infrared Pictures

February, 1999 Figure - 10a





## 695491 ALBERTA LTD.

Sample of Airborne Infrared Pictures

February, 1999 Figure - 10b