

MAR 19980010: CALLING LAKE

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1998 ASSESSMENT REPORT

PREPARED FOR

656405 ALBERTA LTD.

Holder of
Metallic and Industrail Mineral Permit
Nos: 9394030001

ACKNOWLEDGEMENTS

Consultant and Scientific Authority

Dr. Norman Haimila, President of Aurora Projects International Inc., British Virgin Islands

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and Dr. T. Yoshida, Calgary, AB.

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Ashton Mining of Canada Inc., Jeff Ward, Project Geologist

Marcel R. Labonte, Geomathematician, Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada, Calgary, AB.

Dr. David Boerner, Research Scientist, Siesmology and Electromagnetism Section, Continental Geoscience Division, Geological Survey of Canada, Ottawa, Ont.

Dr. J. Cox and Mike Clark, Department of Geology, Mount Royal College, Calgary, AB.

Beth Haverslew, Petrologist, Calgary, AB.

Loring Laboratories, Calgary, AB.

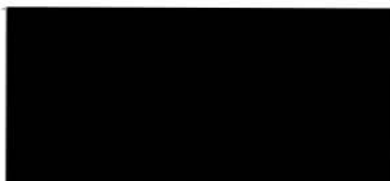
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C.F. Minerals, Kelowna, BC., C. Fipke

Born:

Citizenship:

Social Insurance:



EDUCATION

Primary through High School, Canmore Alberta.
B.A. Sc (1960) University of British Columbia
Ph.D. (1974 Michigan State University

AREAS OF EXPERTISE

PROSPECT GENERATION, INTERNATIONAL AND FRONTIER PROSPECT EVALUATIONS, REGIONAL STUDIES, RESOURCE ASSESSMENT, STRUCTURAL GEOLOGY, REMOTE SENSING, GEOPHYSICAL INTERPRETATIONS, BASINAL STRATIGRAPHY.

PROFESSIONAL EXPERIENCE

1994 to Present

President of AURORA PROJECTS INTERNATIONAL INC.

Generated drillable prospects in Argentina and the Middle East. Of three prospects generated, one is producing oil, one was a dry hole with shows and one remains to be drilled in the winter of 1995-1996.

1980 - 1994

President of ZI CONSULTING LIMITED, Cochrane, Alberta

Consulted for the oil and mineral industries and government agencies.

From 1991 to 1994 consulted for an independent oil company in Canada. On my recommendation this company acquired two exploration blocks and two exploitation blocks in Argentina. Prospects have been generated on these and other subsequently acquired blocks. To date, four wells with various levels of hydrocarbon recoveries and four dry wells have been drilled. Outside Argentina blocks have been evaluated for their hydrocarbon potential in Venezuela, Colombia, Ecuador, Peru, Bolivia, Europe and Asia.

From 1987 to 1991 was the Senior Geologist on the Sub-Andean Cooperative Hydrocarbon Studies Project managed by Meneley Enterprises, Ltd. and directed by Petro Canada International Assistance Corporation, the World Bank and Assistance Reciproca Petrolera Estatal Latin America. This project consisted of basin analyses and hydrocarbon endowment studies in Colombia, Ecuador, Peru, Bolivia, Paraguay, Argentina and adjacent areas utilizing all the pertinent data held by the national oil companies.

From 1980 to 1987 consulted for independent and major oil companies in Canada in addition to governmental agencies and research institutes. Evaluated the hydrocarbon potential for areas throughout Canada and other international areas.

1978 - 1980

CDC Oil and Gas Ltd. (renamed Canterra and now part of Husky Oil and Nova Corp.) Calgary, Alberta.

Held the positions of Geological Specialist and Consultant responsible for prospect generation, structural analyses and regional studies in the Canadian Foothills Belt from latitudes 49°N to 60°N.

1974 - 1978

Energy Subdivision (Petroleum Resource Appraisal Secretariat) of the Institute of Sedimentary and Petroleum Geology (GSC). Calgary Alberta.

Responsible for evaluating hydrocarbon endowment in Canada, especially in the Arctic, the Western Canada Basin and the Foothills Belt.

- 1974 Atlantic Richfield Company. Dallas, Texas
Held the position of Senior Research Geologist in the Geosciences Section. Worked in applied research in remote sensing, structural analysis, regional and basinal studies, in addition to engineering and petrological problems related to the oil and mineral industries.
- 1967 Consulted for small independent oil and mining companies in Michigan and Indiana.
- 1967 Michigan State University. East Lansing, Michigan.
Graduate Assistant and Assistance Instructor.
Taught Introductory Geology and Mineralogy at the undergraduate level.
- 1966 British Columbia Department of Mines and Petroleum Resources. Victoria, British Columbia.
Worked on special mineral projects. Mapped geology and mineral occurrences in Central Vancouver Island and in the Stewart Area of British Columbia.
- 1963 External Aid Office (CIDA). Ottawa, Ontario
Technical Advisor to the Ministry of Industries in Ghana under the Special Commonwealth Africa Assistance Program. Part of a two man team mapping and evaluating mineral projects throughout Ghana including gold mining, placer diamond exploitation, manganese occurrences, and aluminum and limestone prospects.
- 1961 Geological Survey of Canada. Ottawa, Ontario
Technical Officer - assisted in field mapping in Northern Manitoba and Ellesmere Island Northwest Territories. Conducted laboratory work on material from the ultrabasic Muskox Intrusive Complex of the Northwest Territories.
- 1959 Summer employment with government agencies, mining and oil industries in Canada.

PROFESSIONAL ASSOCIATIONS - Canadian Society of Petroleum Geology

- American Association of Petroleum Geologists #0132516
- Association of Professional Engineers, Geologist and Geophysicists of Alberta #28333
- American Institute of Professional Geologists #4293.

ARCHIVES AND REPORTS

Gold Distribution, Structure and Sedimentology of the Banket Deposit in the Vicinity of the Fenu Gold Mine.

Demonstration Equipment and Procedures for Exploiting Small Scale Alluvial Diamond Workings.

The Asuboni Limestone.

Structure and Oil Potential of the Trenton Limestone, Wabash County, Indiana.

Structure and Oil Potential of the Trenton Limestone, Eaton County, Michigan.

Secondary Recovery from the Trenton Limestone of the Lima-Indiana Trend.

Structure and Oil Prospects of the Canadian Maritime Provinces and Offshore Areas.

- 1974 Atlantic Richfield Company. Dallas, Texas
Held the position of Senior Research Geologist in the Geosciences Section. Worked in applied research in remote sensing, structural analysis, regional and basinal studies, in addition to engineering and petrological problems related to the oil and mineral industries.
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- American Association of Petroleum Geologists #0132516
- Association of Professional Engineers, Geologists and Geophysicists of Alberta #28333
- American Institute of Professional Geologists #4293.

RESEARCH AND REPORTS

Gold Distribution, Structure and Sedimentology of the Banket Deposit in the Vicinity of the Fantu Gold Mine.

Demonstration Equipment and Procedures for Exploiting Small Scale Alluvial Diamond Workings.

The Asuboni Limestone.

Structure and Oil Potential of the Trenton Limestone, Wabash County, Indiana.

Structure and Oil Potential of the Trenton Limestone, Eaton County, Michigan.

Secondary Recovery from the Trenton Limestone of the Lima-Indiana Trend.

Structure and Oil Prospects of the Canadian Maritime Provinces and Offshore Areas.

Gravity Interpretation of a Salt Dome, Offshore Texas.

Gravity and Magnetic Interpretation of a Concession in Libya.

Structural and Seismic Interpretation of a Hydrocarbon Prospect in Nevada.

Gravity, Magnetic, Seismic and Structural Analysis of West Texas and the Permian Basin including Hydrocarbon Prospects.

Review and Training Manual for Gravity and Magnetic Interpretation.

Structural Interpretation of the Laguna Madre Field, South Texas.

Structural Analysis and Hydrocarbon Prospects in the Montana Thrust Belt.

Structural Analysis of the Eastern Brooks Range of Alaska.

Permafrost in the Subsurface of the Northslope of Alaska.

Permafrost and Pleistocene Stratigraphy of Copper River Basin, Alaska for Routing of the Trans Alaska Pipeline.

Fracture Analysis Utilizing Fourier Transforms.

Structural Analysis of the Eastern Arctic Islands, Canada.

Borehole Fracture Analysis for Secondary Recovery Projects.

Fracture Analysis for Massive Hydraulic Fracturing in Low Productivity Gas Sands.

Side Looking Radar Study of East Kalimantan, Indonesia.

Remote Sensing Applicability to Exploration in Alaska, Eastern Canada, Arizona, Peru and Indonesia.

Miscellaneous Petrographic and Mineralogical Investigations.

Hydrocarbon Potential of the Mackenzie Valley and the Great Bear Basin in the Vicinity of Norman Wells, Northwest Territories.

Hydrocarbon Potential of the Sverdrup Basin of the Arctic Islands.

Hydrocarbon Potential of the Arctic Islands Fold Belt.

Hydrocarbon Potential of the Stable Platform of the Arctic Islands.

Hydrocarbon Potential of the Lower Mannville Interval in Alberta.

Hydrocarbon Potential Reviews of East Coast Offshore Areas.

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Hydrocarbon Potential of the British Columbia Offshore Areas.

Hydrocarbon Potential of Third World Countries.

Structural Style and Hydrocarbon Potential of the Alberta and British Columbia Foothills.

Review and Training Manual of Structural Styles in Canadian Petroleum Provinces.

Geology and Hydrocarbon Potential of the Canadian Beaufort Sea and Environs.

Hydrocarbon Potential of Arctic North America and Greenland.

Hydrocarbon Potential, Geology and Exploration History of Selected Third World Countries.

Hydrocarbon Potential and Undiscovered Prospects of Several Hydrocarbon Exploration Plays in Alberta and Northeastern British Columbia.

Deltas of the World and Their Potential for Containing Giant Hydrocarbon Accumulations.

Characteristics of Hydrocarbon Accumulations in Four North Sea Sub-basins.

Characteristics of Hydrocarbon Accumulations for Typical Exploration Plays in West Texas and Offshore Louisiana.

Hydrogen Sulphide and Sulphur Occurrences in Petroleum Accumulations of Western Canada.

Sedimentary Basins and Petroleum Resource Potential of the Arctic Ocean Region.

Geology and Hydrocarbon Potential of the Sub-Andean Basins of Colombia, Ecuador, Peru, Bolivia, Paraguay and Argentina.

Geology and Hydrocarbon Potential of the Neuquen Basin of Argentina.

General review of the Golfo San Jorge Basin.

Geology and Hydrocarbon Potential of the Chaco-Parana and Loma Del Omeda regions of Argentina.

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INTRODUCTION

Exploration of this claim permit and of this area over the last several years has confirmed the following:

- An abundance of high quality diamond indicator minerals have been found in the Calling Lake area. These include diamond inclusion picroilmenites and clinopyroxenes, significant chromites, sapphire, and G1,G5,G7,G9,G10 and G11 pyrope garnets (Haimila,R. 1996; Haimila,R. 1998).
- Geotectonic research indicates the existence of a deep mantle root proximal to these claims (Diamonds-Theory and Exploration-A "Hands-On" Short Course,1995).
- Lithoprobe Report #47, 1995-indicates the existence of a deep transcontinental shear zone of late Archean Age. (Snowbird Tectonic Zone) near the south east boundary of these claims.

An Aeromagnetic survey of this area contracted in January of 1998 shows numerous near surface magnetic anomalies (This report as well as Haimila,R. 1998).

This report confirms that beach concentrations of garnets and volcanic breccia on the north east corner of Calling Lake Park shoreline coincide with near surface magnetic anomalies (Spectra Geophysics Magnetic survey).

This report concludes that an aggressive diamond exploration program be planned on the Calling Lake Mineral Permits.

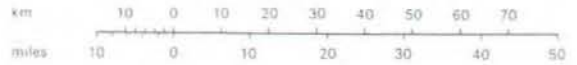
LOCATION

MAPS

Alberta

CANADA

1986 OFFICIAL ROAD MAP



HIGHWAY MARKERS

- Primary Highway
- Yellowhead Highway
- Crowsnest Highway
- Trans-Canada Highway
- Secondary Road

ROAD CLASSIFICATION

- Divided Highway
- 4 Lanes Undivided
- Paved Roads
- Improved Roads
- Unimproved Road

SPECIAL FEATURES

- Provincial Parks
- Fed & Prov Campg
- Rest Area
- Scheduled Airline St
- Ports of Entry
- Open 24 Hours
- Inquire Locally
- Hospital
- Travel Information C
- 1988 Olympic Venue

DISTANCES IN KILOMETRES

- Between Towns and Junctions
- Between Dots

POPULATION SYMBOLS

(Provincial Capital: Edmonton)

- Under 250
- 250 to 1 000
- 1 000 to 2 500
- 2 500 to 5 000
- 5 000 to 10 000
- 10 000 to 25 000
- 25 000 to 50 000
- 50 000 to 100 000
- 100 000 and over

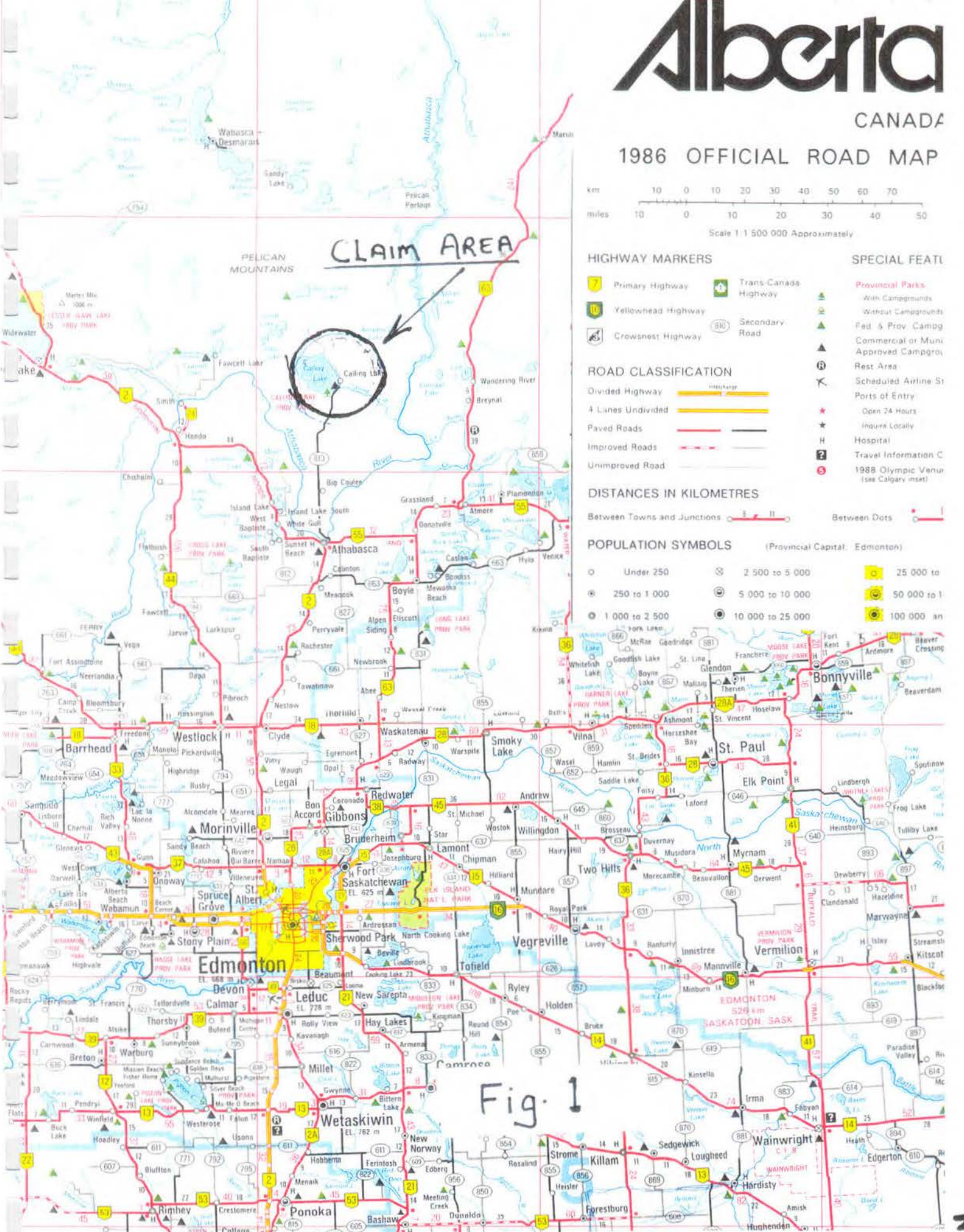
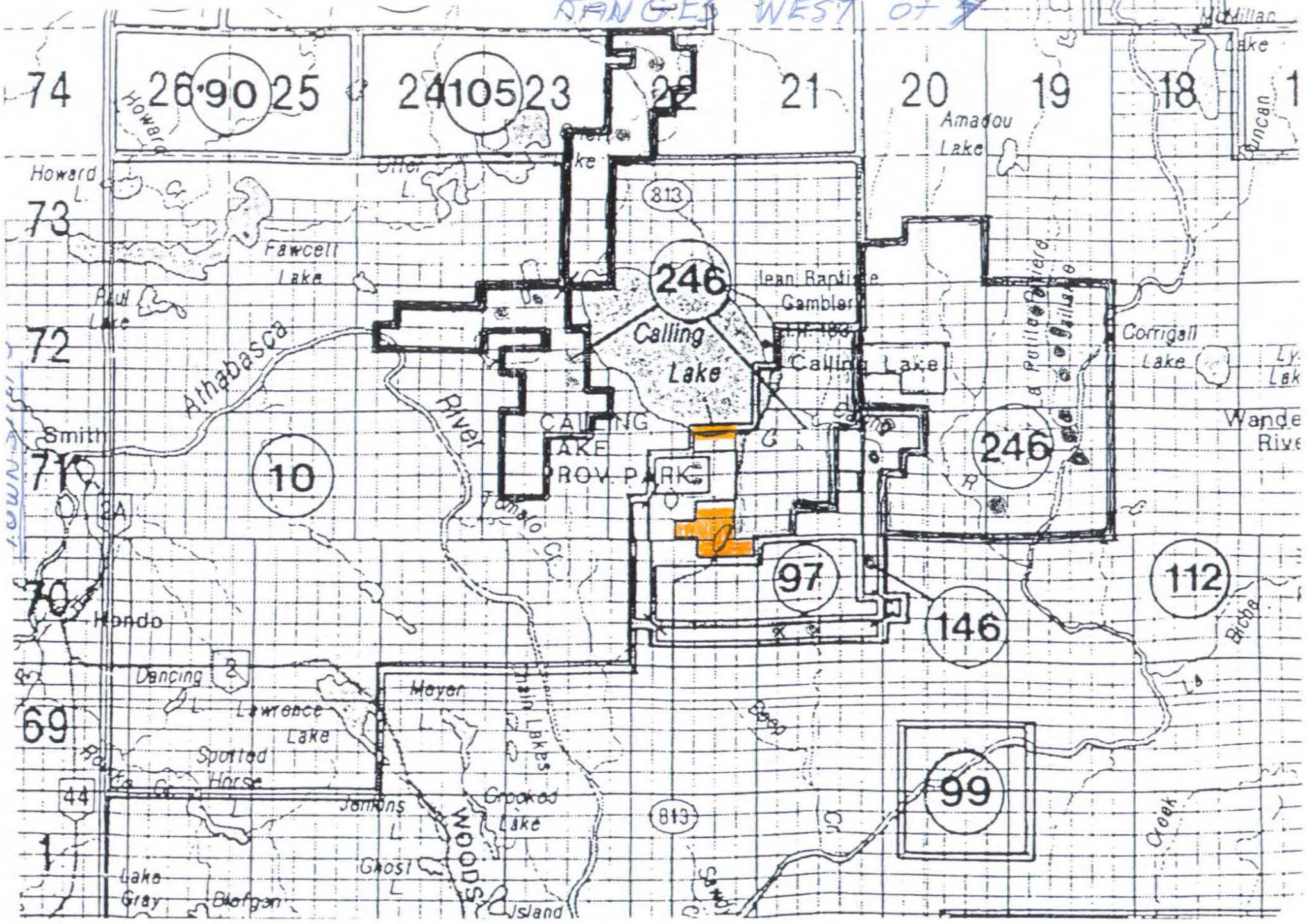


Fig. 1

RANGES WEST OF #



— Permit # 9394030001

Fig 2

PROSPECTING

In August of 1997, a 4 day reconnaissance of the shoreline along and near Calling Lake Provincial Park found several concentrations of garnets . The greatest concentrations of garnets appeared to be near the north east corner of Calling Lake Provincial Park shoreline.

Coincidental to beach garnets were many samples of volcanic breccia (see photos page 16). The concentrations of beach garnets extends for quite a distance past the north east boundary of Calling Lake Provincial Park. The garnets were found up to 100 metres inland from the shore of Calling Lake.

The aeromagnetic survey completed in January, 1998-shows several near surface magnetic anomalies inland and along the shoreline of Calling lake (Fig.3). These anomalies have a magnetic signature similar to kimberlites (G.S.C. open file 3228, 1996).

ASSAYING

Approximately one kilogram of beach concentrated sand was sent to CF Minerals for magnetic separation and picking. 21 grains were sent for microprobe analysis (see inclosed analysis). The corundum grain was a light blue crystal (sapphire). among the G9's and G11's was a G11-1. This according to CF Minerals implies a diamond grade estimate that is attributed to garnet harzburgite source. (see CF Mineral Research code discriptions for G11-1 page 12).

The magnetic separations from this sample were ultimately passed on to the Alberta Geological Survey for further analysing. (Feb/98)-no results from AGS yet.

A further 2 bags of garnet concentrate were sent to Kennecott Canada for assaying. This was after meeting with Kennecott representatives in Vancouver in January of 1998. These samples were sent to their lab in Thunderbay Ont. Because of the high concentrations of garnet and indicator minerals-the samples were sent on to Kennecott's lab in Australia. Those results were not ready for this report-as of March 22, 1998.

SEISMIC

A review of seismic data at Kary Data Service in Calgary by Dr. N. Haimila and R. Haimila in January and February of 1998 (in the area of this permit) showed some diffraction in the basement rock but nothing conclusive. The data was not purchased.

AEROMAGNETIC SURVEY

An aeromagnetic survey was flown at Calling Lake in January of 1998 for 656405 Alberta Ltd. (Haimila, R. 1998). Spectra Geophysics was contracted to supply a near surface anomaly map based on the data acquired in the aeromagnetic survey.

Figure 3 shows Shallow Target Enhancement of Total Magnetic Intensity of the area adjacent to and including the eastern portion of Calling Lake Park. Figure 3 clearly shows near surface magnetic anomalies with magnetic signatures similar to those of kimberlites. These anomalies appear along the eastern shoreline of Calling Lake as well as inland from the lake. The beach concentrations of garnets are proximal to these near surface magnetic anomalies. (see site locations on Fig.3 and see photos on page 16).

CONCLUSION AND RECOMMENDATIONS

This mineral permit covers a small portion of the total permitted lands held in this area by 656405 Alberta Ltd. This assessment report in combination with previous exploration of this area over the last several years has confirmed:

- the presence of high quality diamond indicator minerals.
- the presence of high priority near surface magnetic anomalies
- the existence of a deep mantle root proximal to the claims
- the existence of a deep transcontinental shear zone of late Archean Age (Snowbird Tectonic Zone) near the south east boundary of these claims. **The above information implies a high probability of intrusive bodies in the Calling Lake area.**

An aggressive exploration program on the Calling Lake permits was implemented this spring. A \$200,000 helicopter survey (EM and MAG) started in May on these permits. This survey is to be followed by a surface sampling of magnetic and EM anomalies, the anomalies with diamond indicator minerals will become high priority drill targets.

A drill program is planned for the fall of 1998.

ANALYSIS

REPORTS

RAY HAIMILA
PROJECT: ALBERTA-BEACH SAND

C.F.M. 97-998

19-SEPT-1997

SAMPLE NUMBER	ORIGINAL WEIGHT (KG)	FRACTION	WEIGHT (GMS)
HAIMILA	0.00		
HAIMILA		-20L	268.99
		-20I	7.00
HAIMILA		-20+80HM	8.80
HAIMILA		=20+80H - IL.	597.01
HAIMILA		-20+80H - PY.CRD	18.98
HAIMILA		-20+80H - D.	13.58
HAIMILA		-80H	70.95

Att. Marilyn - File File.

Customer:Ray Haimila(656405 Alberta Ltd.)
 File:haimila Inv#:97-991

ELECTRON MICROPROBE ANALYSIS FROM C.F. MINERAL RESEARCH LTD.
 Batch File "97-998"

16-Oct-1997,10:57 am

Sample #	Mount	Cell	Grain	Classifications		SiO2	TiO2	Al2O3	V2O3	Cr2O3	Fe2O3	FeO	MgO	CaO	MnO	NiO	ZnO	Nb2O5	Na2O	K2O	Totals	
				SA DI	CFM																	
HAIMILA	2362	6	19		SPNL	.02	.03	70.93		.00		3.44	24.18	.00	.04	.01			.000		.00	98.66
HAIMILA	2362	6	17	P	G 9	41.88	.02	21.02		4.08		8.24	18.74	5.88	.46	.01			.020		.00	100.35
HAIMILA	2362	6	18	P	G11	41.43	.06	19.69		5.83		7.29	18.73	6.34	.49	.02			.024		.00	99.89

TABLE 1

Customer: RAY HAIMILA
 File: haimila Inv#: 97-1015

ELECTRON MICROPROBE ANALYSIS FROM C.F. MINERAL RESEARCH LTD.
 Batch File "97-1030"

4-Nov-1997, 2:30 pm

Sample #	Mount	Cell	Grain	Classifications		SiO2	TiO2	Al2O3	V2O3	Cr2O3	Fe2O3	FeO	MgO	CaO	MnO	NiO	ZnO	Nb2O5	Na2O	Max Trace		Totals	
				SA	DI															CFM	Na2O		K2O
HAIMILA	2384	4	18		CORU	.02	.08	101.44		.07		.25	.01	.00	.01	.02				.003	.00	101.91	#
HAIMILA	2384	4	11		RUTL	.00	97.55	.10		.04		1.18	.00	.01	.02	.00				.011	.00	98.92	
HAIMILA	2362	6	19		SPNL	.02	.03	70.93		.00		3.44	24.18	.00	.04	.01				.000	.00	98.66	
HAIMILA	2384	4	10		SPNL	.01	.08	69.83		.08		5.58	23.00	.00	.04	.01				.004	.00	98.63	
HAIMILA	2384	4	16	CE	CPX	53.08	.02	1.04		.24		5.68	15.15	22.73	.15	.08				.383	.00	98.55	
HAIMILA	2384	4	17	CP	CP2	52.31	.14	2.65		.85		3.83	16.78	21.46	.15	.04				.308	.01	98.52	
HAIMILA	2384	4	13	CP	CPX	53.11	.06	1.65		.70		5.14	15.12	22.17	.17	.12				.720	.01	98.97	
HAIMILA	2384	4	14	CP	CPX	53.39	.09	1.00		.65		2.66	17.01	23.99	.05	.01				.168	.01	99.04	
HAIMILA	2384	4	15	CP	CPX	53.25	.17	1.43		.70		3.09	17.00	23.43	.08	.00				.157	.00	99.30	
HAIMILA	2384	4	12	CV	CPX	52.51	.15	3.73		.58		5.16	14.08	22.00	.13	.07				1.070	.00	99.48	
HAIMILA	2362	6	17	P	G 9	41.88	.02	21.02		4.08		8.24	18.74	5.88	.46	.01				.020	.00	100.35	
HAIMILA	2362	6	18	P	G11	41.43	.06	19.69		5.83		7.29	18.73	6.34	.49	.02				.024	.00	99.89	
HAIMILA	2384	4	9	P	G11	40.38	.08	18.57		6.57		8.40	17.58	7.01	.48	.00				.002	.00	99.07	
HAIMILA	2384	4	8	P	G11-1	41.40	.33	19.76		5.19		7.76	19.53	5.31	.37	.03				.057	.00	99.74	
HAIMILA	2384	4	19	R	ALM	39.01	.07	22.49		.04		27.99	9.50	1.05	.51	.03				.012	.00	100.69	
HAIMILA	2384	4	20	R	ALM	36.31	.02	20.14		.02		34.26	.95	7.53	.48	.00				.002	.00	99.71	
HAIMILA	2384	4	21	R	ALM	37.11	.04	20.91		.00		30.85	2.10	7.39	1.77	.00				.008	.00	100.18	
HAIMILA	2384	4	22	R	ALM	36.40	.03	20.87		.00		35.76	2.30	4.15	.28	.00				.003	.00	99.78	

TABLE 2

Mineral	Description	Mineral	Description
1	ACTN Actinolite	59	CP DI* Favorable high pressure CPX with diamond inclusion composition
2	AEG-AUGT Aeg-Augite	60	CP DIO* High pressure CPX with diamond inclusion composition that overlap with fields of CPX's that classify from non diamond inclusion sources
3	AEGR Aegirine	61	CR Chromite
4	AKER Akermanite	62	CR-DI Chromites with major element diamond inclusion composition
5	AL-SI Al-Silicate	63	CR-DI* Diamond inclusion chromite from favorable harzburgite sources
6	ALBT Albite	64	CR-TI High Ti-Cr Chromite (magmatic)
7	ALM Almandine	65	CRIC Crichtonite
8	AMPH Amphibole	66	CUMN Cummingtonite
9	AMPH-AL Al-Amphibole	67	CUMN-NA Na-Cummingtonite
10	AMPH-AL2 Al-Amphibole 2	68	CV Volcanic Clinopyroxene
11	ANAL Analcime	69	DIOP Diopside
12	ANDR Andradite	70	DOLM Dolomite
13	ANDR-TI Ti-Andradite	71	E Eclogitic Garnet
14	ANKR Ankerite	72	ECKR Eckermannite
15	APAT Apatite	73	ENST Enstatite
16	APAT-WILK Apatite, Wilkeite Series	74	ENST-L Lamproitic Enstatite
17	APOP Apophyllite	75	EPID Epidote - Clinozoisite
18	ARFV Arfvedsonite	76	FLSP Feldspar
19	ARFV-K Potassium Arfvedsonite	77	FLSP-BA Ba-Feldspar
20	ARMA Armalcolite	78	FORS Forsterite
21	ASTR Astrophyllite Senes	79	G 1 CFM modification after Dawson's Gr. 1
22	AUGT Augite	80	G 2 CFM modification after Dawson's Gr. 2
23	AUGT-TI Ti-Augite	81	G 3 CFM modification after Dawson's Gr. 3
24	BADL Baddeleyite	82	G 4 CFM modification after Dawson's Gr. 4
25	BARK Barkevikite	83	G 5 CFM modification after Dawson's Gr. 5
26	BART Barite	84	G 6 CFM modification after Dawson's Gr. 6
27	BART-SI Silica-Barite	85	G 7 CFM modification after Dawson's Gr. 7
28	BART-SR Sr Barite	86	G 8 CFM modification after Dawson's Gr. 8
29	BARY Barytocalcite	87	G 9 CFM modification after Dawson's Gr. 9
30	BIOT Biotite	88	G 11 CFM modification after Dawson's Gr. 11
31	BIOT-TI Ti-Biotite	89	G 12 CFM modification after Dawson's Gr. 12
32	BUST Bustamite	90	G 10 Gurney Group 10 Pyrope
33	CALC Calcite	91	G 10-10* Gurney (Best) 10 score category of G10 garnet
34	CANC Cancrinite	92	G 10-9 Gurney 9 score category of G10 garnet
35	CD Chrome Diopside	93	G 10-8 Gurney 8 score category of G10 garnet
36	CDRT Cordierite	94	G 10-7 Gurney 7 score category of G10 garnet
37	CE Eclogitic Clinopyroxene	95	G 10-6 Gurney 6 score category of G10 garnet
38	CE* High Pressure Clinopyroxene of Eclogitic Paragenesis	96	G 10-5 Gurney 5 score category of G10 garnet
39	CELS Celestite	97	G 10-4 Gurney 4 score category of G10 garnet
40	CHLORT Chlonte	98	G 10-3 Gurney 3 score category of G10 garnet
41	CHLRD Chloritoid	99	G 10-2 Gurney (Least) 2 score category of G10 garnet
42	CORO Coronadite	100	G 11-1 Gurney 1 score category of G11 garnet
43	CORU Corundum	101	G 9-1 Gurney 1 score category of G 9 garnet
44	CP Peridotitic Clinopyroxene		
45	CP* High Pressure Clinopyroxene of Peridotitic Paragenesis		
46	CP 1 Clinopyroxene - Dawson's (modified by CFM) Gr. 1		
47	CP 2 Clinopyroxene - Dawson's (modified by CFM) Gr. 2		
48	CP 3 Clinopyroxene - Dawson's (modified by CFM) Gr. 3		
49	CP 4 Clinopyroxene - Dawson's (modified by CFM) Gr. 4		
50	CP 5 Clinopyroxene - Dawson's (modified by CFM) Gr. 5		
51	CP 6 Clinopyroxene - Dawson's (modified by CFM) Gr. 6		
52	CP 7 Clinopyroxene - Dawson's (modified by CFM) Gr. 7		
53	CP 8 Clinopyroxene - Dawson's (modified by CFM) Gr. 8		
54	CP 9 Clinopyroxene - Dawson's (modified by CFM) Gr. 9		
55	CP 10 Clinopyroxene - Dawson's (modified by CFM) Gr. 10		
56	CPX Clinopyroxene		
57	CP DI Clinopyroxene with diamond inclusion composition		
58	CP DIO CPX with diamond inclusion composition that overlaps with fields of CPX's that classify from non diamond inclusion sources		
		NOTE	To calculate the pyrope score of a kimberlite, add up the total point score, then divide by the number of garnets that scored and multiply by a factor of 1.3. An average pyrope score of 5, for example, implies a grade estimate of about 75 carats/100 tonnes attributable to garnet harzburgite.
		102	G 1* Eclogitic Garnet - Best diamond inclusion composition
		103	G 1 Eclogitic Garnet Group 1 - 2nd Best diamond inclusion composition
		104	G 2 Eclogitic Garnet Group 2 - non diamond bearing
		105	GLAS Glass
		106	GROS Grossular
		107	GT General Garnet
		108	GT-ZR-TI Zr-Ti Garnet

Mineral	Description	Mineral	Description		
109	HEDN	Hedenbergite	168	RHOD	Rhodonite
110	HOLN	Hollandite	169	RICT	Richterite
111	HORN	Hornblende	170	RICT-K	K-Richtertite
112	HUMI	Humite Group	171	RIEB	Riebeckite
113	IL	Ilmenite - Regional	172	RIEB-K	K-Riebeckite
114	IL-CA	Ca-Ilmenite	173	RUTL	Rutile
115	IL-MN	Mn-Ilmenite	174	RUTL-NB	Nb-Rutile
116	KAER	Kaersutite	175	RUTL-SI	Si-Rutile
117	KALS	Kalsilite	176	SALT	Saite
118	KAOL	Kaolinite	177	SAND	Sanidine
119	KNEB	Knebelite	178	SAND-L	Lamproitic Sanidine
120	KU FN	Kutnohorite	179	SAND2	Sanidine 2
121	KYAN	Kyanite/Andalusite/Sillimanite	180	SAPH	Sapphirine
122	LEUC	Leucite	181	SERP	Serpentine
123	LEUC-L	Lamproitic Leucite	182	SHCH	Shcherbakovite
124	LM	Megacryst Low Pressure	183	SI-ZR	Silica-Zircon
125	M	Megacryst High Pressure (magmatic)	184	SODL	Sodalite
126	MAGN	Magnetite	185	SPES	Spessartine
127	MAGN-TI	Ti-Magnetite	186	SPES*	Spessartine of Broken Hill Mine composition
128	MARG	Margantite	187	SPHENE	Sphene
129	MELAN	Meianite	188	SPNL	Sphenel
130	MELI	Melilite	189	SPNL-SI-AL	Si-Al Spinel
131	MG1	E Garnet Megacryst with G1 overlap	190	STAU	Staurolite
132	MONT	Monticellite	191	STRN	Strontianite
133	NEPH	Nepheleine	192	TALC	Talc
134	NEPT	Nepotunite	193	TEPH	Tephroite
135	NOSN	Nosean-Hauyne	194	TOPZ	Topaz
136	OLV	Olivine	195	Tour-D	Tourmaline with composition equivalent to diatrene tourmaline
137	OLV-DI	Diamond inclusion composition Olivine	196	Tour-R	Tourmaline with composition equivalent to regional tourmaline
138	OP1	Orthopyroxene - Dawson's Gr. 1	197	Tourmalin	Tourmaline with no Bcr analysis
139	OP2	Orthopyroxene - Dawson's Gr. 2	198	TREM	Tremolite
140	OP3	Orthopyroxene - Dawson's Gr. 3	199	UN01	Ca-Ti Silicate
141	OP4	Orthopyroxene - Dawson's Gr. 4	200	UN02	K-Ti-Si Shcherbakovite like
142	OP5	Orthopyroxene - Dawson's Gr. 5	201	UN03	Mn-Ti-Si
143	OPX	Orthopyroxene	202	UN04	Ti Silicate Altered Sphene
144	OPX-DI	Diamond inclusion composition Orthopyroxene	203	UN05	Cr-Fe-Si-Mg-Al Si Altered Cr. spinel
145	OPX-ENS	Enstatite	204	UN06	Siliceous Titanites
146	OPX-HY	Hypersthene	205	UN07	Ca-Mg-Fe-Si Si Carbonate
147	ORTH	Orthopyroxene 2	206	UN08	Na-Fe-Si
148	P	Peridotitic Garnet	207	UN09	Si Corundum
149	PERC	Periclase	208	UN10	Ca-Ti-Fe Silicate Altered Sphene
150	PERV	Perovskite	209	UN11	Fe-Ti-Zr Silicate
151	PHLG	Phlogopite	210	UN12	W-Nb-Ti-Fe Oxide
152	PHLG-TI	Titanium Phlogopite	211	UN13	Nb-Ti-Fe-Si
153	PIEM	Piemontite	212	UN14	Fe-Mg-Al-Si
154	PIL	Picroilmenite	213	UN16	Na-Al-Si
155	PLAG	Plagioclase	214	UN21	Mg-Ca-Ti Oxide
156	PLEU	Pseudoleucite	215	UN24	Ca-Al-Si
157	PREH	Prehnite	216	UVAR	Uvarovite
158	PRID	Priderite	217	WAD	Wad
159	PSBK	Pseudobrookite	218	WADT	Wadeite
160	PSBK-FE	Iron-Pseudobrookite	219	WILK	Wilkeite
161	PYRL	Pyrolusite	220	WILM	Willemite
162	PYROPH	Pyrophanite	221	WOLA	Wollastonite
163	PYROX	Pyroxmangite	222	ZOIS	Zoisite
164	PYRP	Pyrope	223	ZR-TI-GT	Zr-Ti Garnet
165	QRTZ	Quartz			
166	QRTZ-IMP	Impure Quartz			
167	R	Regional Garnet			

Shallow Target Enhancement

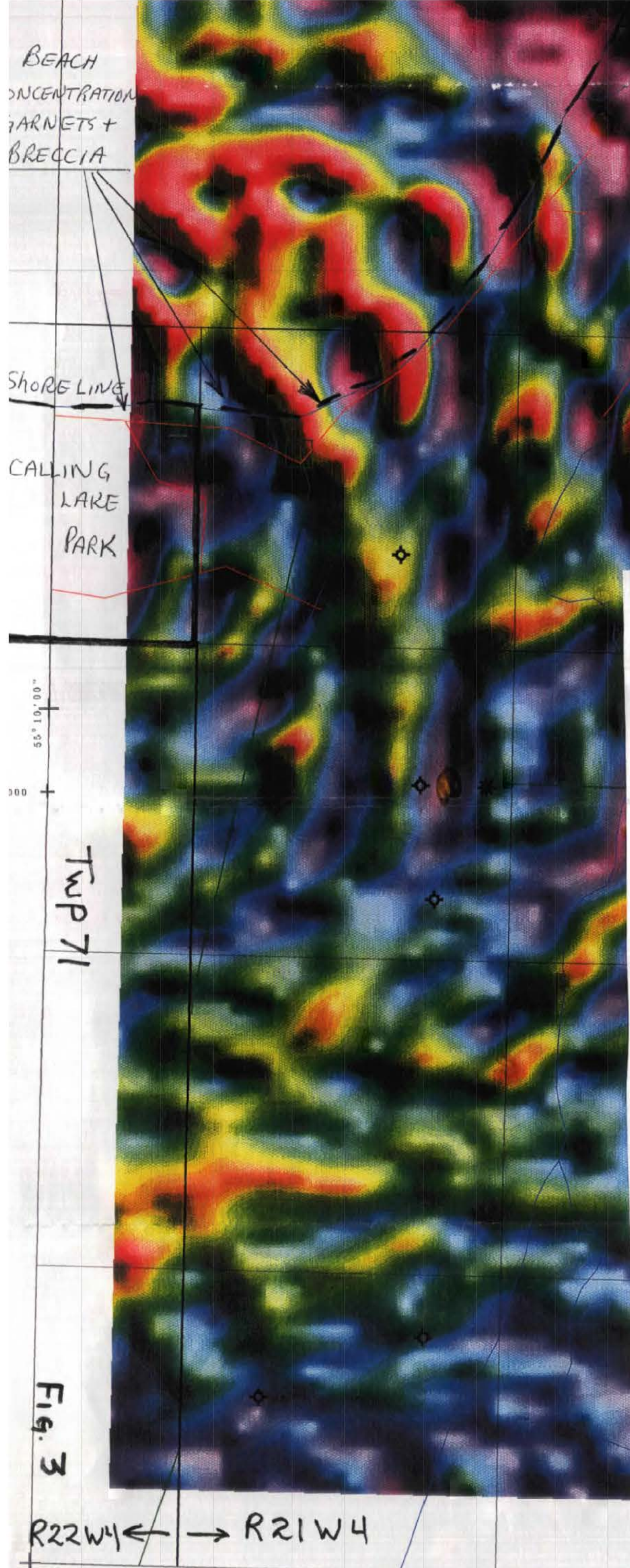
of

Total Magnetic Intensity

(aeromagnetic survey map)

and

Sample Location Map

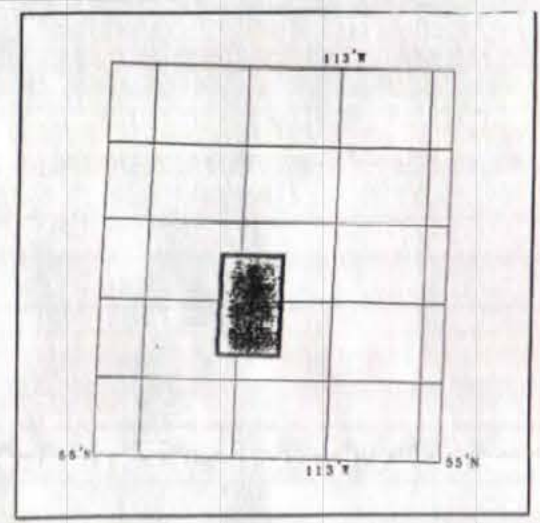


SURVEY PARAMETERS

FLOWN BY: SPECTRA AVIATION SERVICES
 TRAVERSE LINE SPACING: 200 METERS E/W
 CONTROL LINE SPACING: 1000 METERS N/S
 FLYING HEIGHT: 100 METERS DRAPE
 DATUM: NAD-27

PROJECTION PARAMETERS

PROJECTION: UTM
 ELLIPSOID: CLARKE 1866
 UNITS: METERS
 CENTRAL MERIDIAN: -111 DEGREES WEST
 LATITUDE ORIGIN: 0.0 DEGREES
 SCALE FACTOR: 0.9996
 FALSE EASTING: 500000.0 METERS
 FALSE NORTHING: 0.0 METERS



656405 ALBERTA LTD.

CALLING LAKE HRAM SURVEY



SHALLOW TARGET ENHANCEMENT
 of TOTAL MAGNETIC INTENSITY

FIG. 3

Volcanic breccia and beach concentrates of garnets- found on the northeast shore of Calling Lake Park



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STATEMENT OF COSTS

Prospecting- 2 men , equipment, and 4x4 vehicle
(4 days @ 10 hrs/day @ \$50.00/hr/man).....\$4,000.00
(mobilization and demobilization).....\$150.00

Assay and electron probe
(processsing , picking, and microbe of 21 grains).....\$680.60
(transportation costs of sample to CF Minerals).....\$70.00

Seismic Data Review
(0.5 day @ \$650.00/day).....\$325.00

Meeting with Kennecott Representatives in Vancouver
(trip for 2 to Vancouver for 2 nights).....\$1200.00
(time and sample preparation to Kennecott from Calgary).....\$150.00

Report Costs
(digital color printing, preparation time and binding costs).....\$800.00

Management (15%).....\$956.25

Total to be applied to Mineral Permit No. 9394030001.....\$7531.25

Also to be applied to Mineral Permit No. 9394030001

Credit from 1996 Assessment Report for PermitNos. 9394020021 to 9394020023
and 9394030001.....\$2000.00

Credit from the 1998 Assessment Report for Permit Nos.9394020021 to
9394020023.....\$4000.00

Total to be applied to Mineral Permit No. 9394030001.....\$13,531.25

Value of Assessment due on permit No. 9394030001

(7.5 sections @\$2560.00=\$19,200.00)

Monies in lieu of work\$19,200.00 - \$13,531.25= \$5,668.75