

825643

MINNOVA Inc.

1989 ANNUAL REPORT

BRENDA-OKANAGAN JOINT VENTURE

SUMMARY AND HIGHLIGHTS

G. Evans

The 1989 exploration program has provided the Minnova - Brenda exploration joint venture with a solid and successful start. It involved a busy manpower intensive season of assessing both the regional mineral potential and individual property potential in the Okanagan area.

Of the eight projects initially brought into the Joint Venture, three projects, namely Last Chance, Wart and Richter, will continue on with more advanced work in 1990. Last Chance has large areas of Miocene epithermal alteration (large Hg, As, Ag anomalies) and with more detailed work, will be drilled in 1990. The Wart property has several gold bearing fault zones and has promising potential for gold bearing structures similar to those of the Elk property directly to the south. The Richter property has been brought to the stage where several gold bearing targets have been identified and values obtained of up to 6.8 g/t Au. Numerous soil anomalies have been identified and will be explored in 1990 including diamond drilling of the best targets.

Of the remaining projects, the Jolly property was drill tested in 1989 and while promising structures were successfully intersected the low gold values indicate further work is not warranted. The Lamb and Gil projects also were found to have very low mineral potential and further work is not justified. Both the Clapper and Ferroux properties have promising potential for Au ± Cu porphyry deposits and further work will be proposed once they have been compared to other porphyry properties presently available.

The Brenda Reconnaissance program was very successful in 1989 in assessing the mineral potential of the region as well as bringing in the Rainbow Tam-O'Shanter project to the Joint Venture. A surprisingly large number of property submissions were sent in and this is expected to continue. This program allows us to focus on various targets including alkaline porphyries (Nicola Group)

and gold bearing skarns (Greenwood area) and to continue the Tertiary gold program. It provides the solid groundwork and area-wide presence that will set the foundation for future discoveries.

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Brenda JV**

PROJECT NO. **all**

GEOLOGY

Salaries	\$103,716		
Travel Expenses	\$3,543		
Contract Payments	\$3,651		
Field Expenses	\$48,239		
Analyses	\$15,904	\$175,053	30%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$98,119		
Field Expenses	\$3	\$98,122	17%

GEOCHEMISTRY

Salaries	\$35,976		
Travel Expenses	\$0		
Contract Payments	\$2,286		
Field Expenses	\$1,961		
Analyses	\$77,342	\$117,565	20%

DRILLING

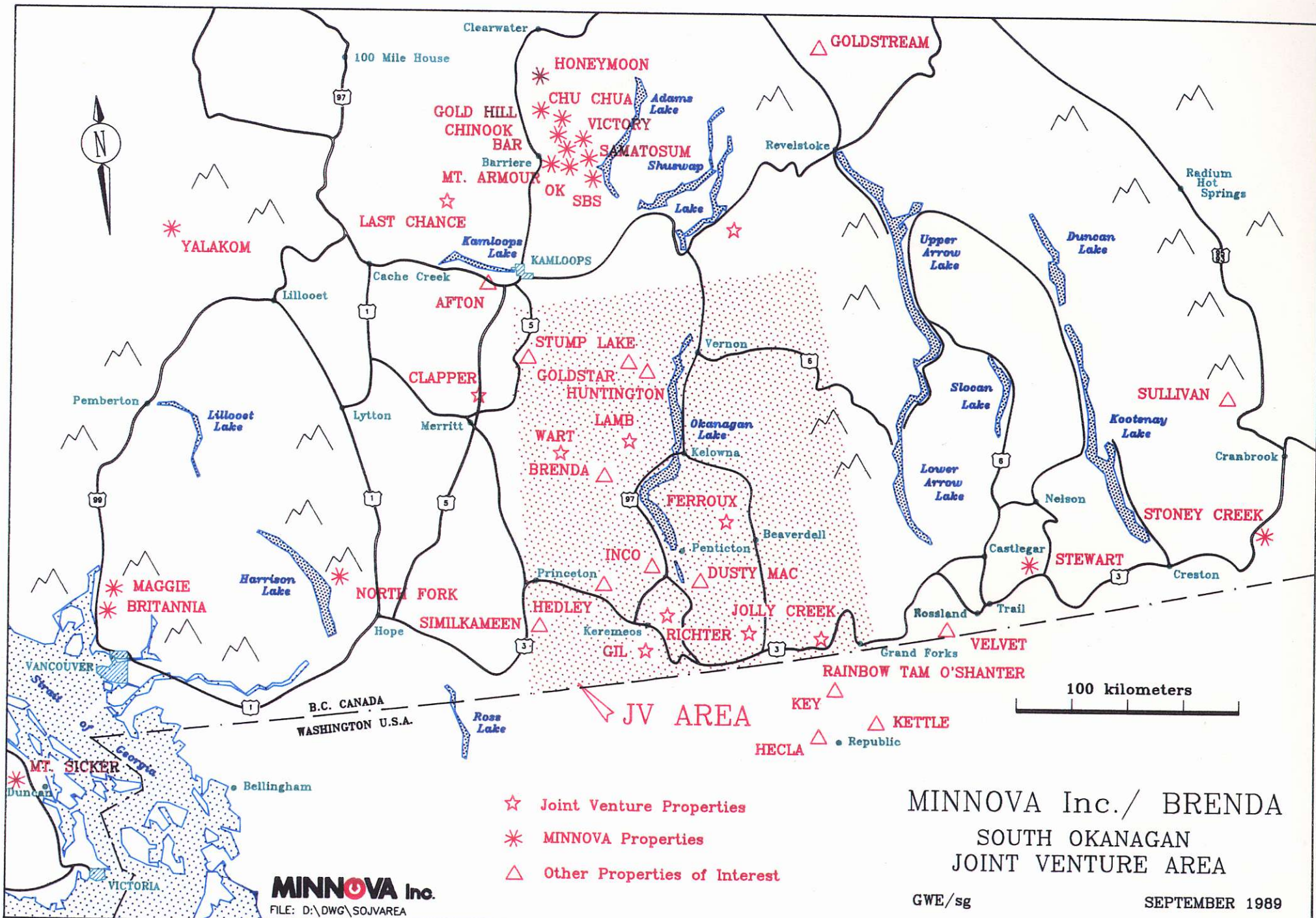
Salaries	\$11,028		
Travel Expenses	\$0		
Contract Payments	\$77,992		
Field Expenses	\$2,173		
Analyses	\$6,511	\$97,704	17%

<i>Line Cutting</i>	\$31,116		5%
<i>Trenching</i>	\$11,599		2%
<i>Hotels and Meals</i>	\$23,451		4%
<i>Option Payments</i>	\$15,000		3%
<i>Property Maintenance</i>	\$12,335		2%
<i>Other</i>	\$0		0%

TOTAL DIRECT EXPENDITURES	\$581,945		
ADMINISTRATION (12%)	\$68,033		
(excluding option payment)		=====	
TOTAL		\$649,978	

FURTHER BREAKDOWN

SALARIES	\$150,720	26%
TRAVEL	\$3,543	1%
CONTRACT	\$182,048	31%
FIELD EXP	\$52,376	9%
ANALYSES	\$99,757	17%



MINNOVA Inc./ BRENDA
 SOUTH OKANAGAN
 JOINT VENTURE AREA

GWE/sg

SEPTEMBER 1989

MINNOVA Inc.
 FILE: D:\DWG\SOJVAREA

LAST CHANCE (PN 622)

G. Evans

Introduction

The Last Chance claims are located approximately 18 km north-northwest of the west end of Kamloops Lake. Of the five claims, L.C. 1-4 (71 units) are contiguous with L.C.#5 (20 units) lying two km to the southwest. High mercury values in rocks and anomalies in A.E.M. surveys prompted 1989 work, looking for a precious metal bearing epithermal system.

1989 Programme

- Geophysics - 19.2 km of ground mag/VLF survey was conducted over the grid area
A. E. M. survey 202 line km flown
- Geology - 22.2 km of grid was geologically mapped at 1:2500 scale
- Geochemistry - 61 rocks samples were taken and analyzed with the lithogeochemical package and Hg
884 soil samples were analyzed for Cu, Pb, Zn, Ag, Au, As, Sb, and Hg
- Line Cutting - 22.2 km of line were cut in grid establishment
- Trenching - 118 m were excavated in 10 trenches

Results

In 1989 the property was flown with an DIGHEM airborne mag/resistivity survey to outline major structures and gain a better understanding of the geology. The airborne magnetometer survey outlined two very distinct magnetic features believed to be

subvolcanic intrusives. These are located along the Deadman River fault and along a NW trend near the LC showings. They are tentatively interpreted to be the heat sources of the epithermal systems. The regional structures previously mapped were also better defined as resistivity lows.

A grid was placed over the LC showing area to better understand the epithermal system and controls for mineralization. A large soil anomaly lies along the contact of a conglomerate unit intruded by a mafic subvolcanic intrusive. Strongly anomalous Hg, As and Ag values occur along the contact with the conglomerate which provides an ideal impermeable cap as an ore control. The L.C. showings are located along this contact and have minor malachite, azurite and tetrahedrite associated with the mercury showings.

In the epithermal model the alteration seen to date would lie above or peripheral to the main precious metal system. With numerous post Eocene structures with high level epithermal alteration zones present the focus of future work will be to test these systems at depth, either using topographic controls or by drilling.

Recommendations

1. Establish grids over the strike extension of the soil anomalies and favourable contact on the LC grid and the altered zone on L.C. #5.
2. Soil Sample grid areas.
3. Geological mapping and trenching of targets.
4. Drill the targets outlined.

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Last Chance**

PROJECT NO. **622**

GEOLOGY

Salaries	\$6,166		
Travel Expenses	\$218		
Contract Payments	\$540		
Field Expenses	\$3,946		
Analyses	\$0	\$10,870	16%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$20,894		
Field Expenses	\$0	\$20,894	31%

GEOCHEMISTRY

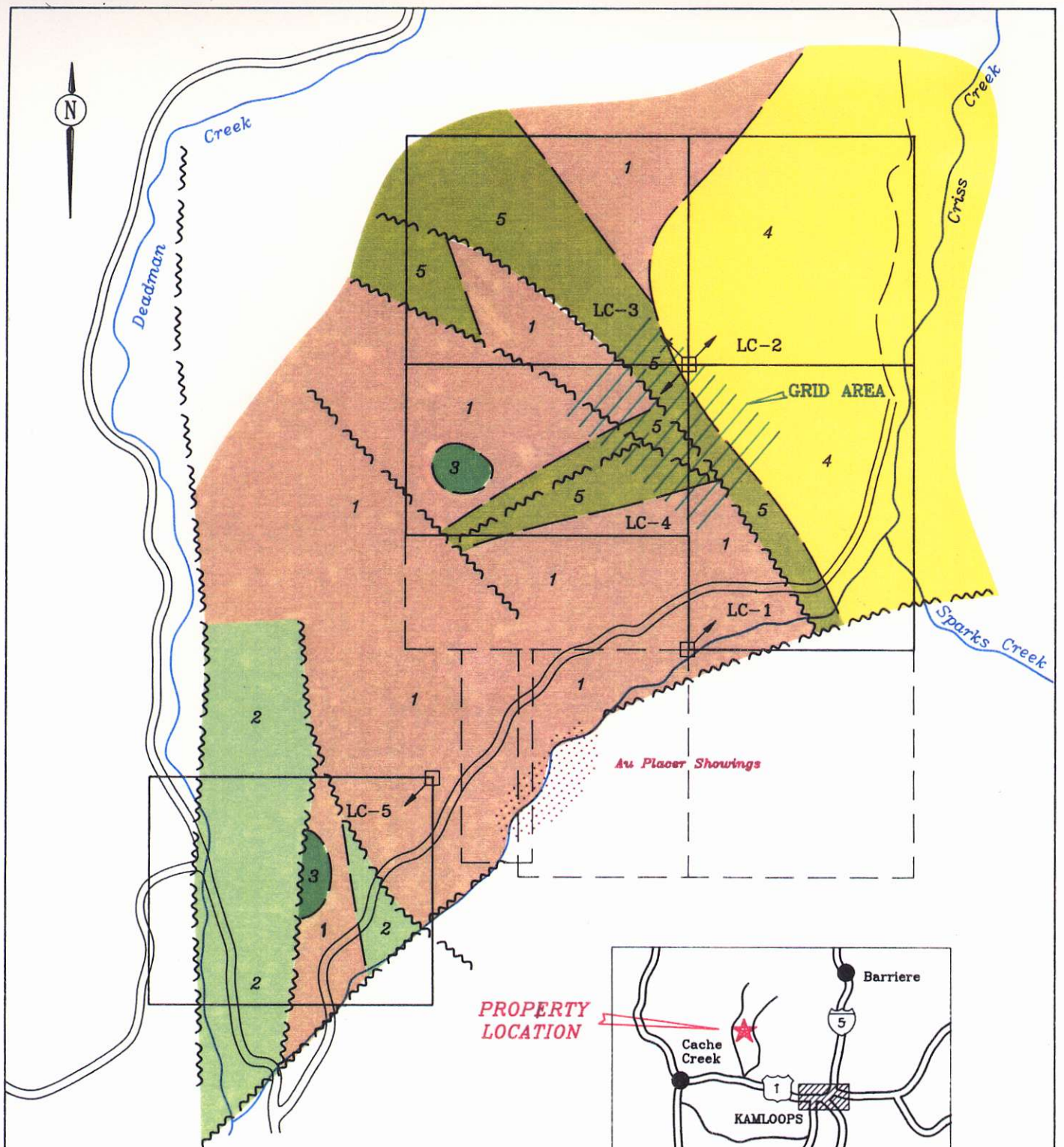
Salaries	\$3,402		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$13,509	\$16,911	25%

DRILLING

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$0	\$0	0%

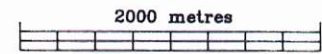
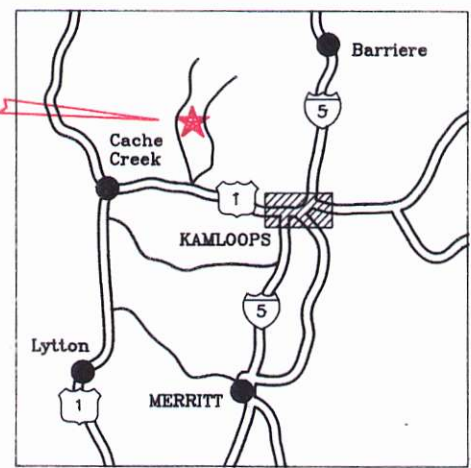
<i>Line Cutting</i>	\$11,152		16%
<i>Trenching</i>	\$4,013		6%
<i>Hotels and Meals</i>	\$1,557		2%
<i>Option Payments</i>	\$0		0%
<i>Property Maintenance</i>	\$2,840		4%
<i>Other</i>	\$0		0%

TOTAL DIRECT EXPENDITURES \$68,238



- 5 Basaltic or Felsic Dykes (MIOCENE)
- 4 Conglomerate and Sandstone (MIOCENE)
- 3 Basalt Breccia and Flows (MIOCENE)
- 2 Kamloops Group (EOCENE)
- 1 Nicola Volcanics and Sediments (TRIASSIC)

PROPERTY LOCATION



LAST CHANCE PROPERTY GEOLOGY

BRENDA GENERAL (PN 624, 658)

G. Evans

Introduction

The Brenda General budget covers the joint venture area and was implemented to examine properties for possible acquisition and explore on a reconnaissance level, areas with favourable geology. In 1989 it funded innumerable property submittals which resulted in the optioning a promising new epithermal project the Rainbow-Tam O'Shanter.

1989 Programme

- | | | |
|--------------|---|--|
| Geology | - | 53 properties were visited as well as numerous geological traverses for regional geology |
| | - | 92 properties submitted and reviewed |
| | - | the Yellow property was mapped 1:2500 |
| Geochemistry | - | 102 heavy mineral samples (Westbank, Rich Creek, Rock Creek and Merritt areas) |
| | - | 204 soil samples taken (Loak and Giant's Head areas) |
| | - | 273 rock samples for geochem and/or assay |
| Geophysics | - | Colour imagery of a government airborne magnetometer survey compilation |

Results

The emphasis of the 1989 program was to find promising Tertiary epithermal systems. Numerous properties were visited in the Okanagan Eocene grabens and a large number of epithermal systems were identified. A majority of these systems were found to be barren of precious metals but several promising targets were defined. One of the more promising targets, the Rainbow-Tam O'Shanter property has since been optioned and will be intensively explored in 1990.

A large number of mesothermal quartz vein systems were also visited in the Okanagan. While several vein systems carry high gold and silver values, the tonnage potential appears limited. As well several gold bearing skarns were examined and the area between Rock Creek and Grand Forks is highlighted for its large number of precious metal skarns. In 1990 a compilation will be carried out in this area and some skarns previously visited will be examined in detail.

Very few copper-gold porphyry systems were visited in 1989 but through property submittals the Triassic Nicola alkaline porphyries show promising potential. Several properties have been reviewed including advanced projects such as Mann and in 1990 this belt will be explored more thoroughly.

Recommendations

1. Continue Tertiary epithermal exploration (property exams and heavy mineral sampling east of Greenwood).
2. Compile and examine gold bearing skarns in the area from Rock Creek east to Grand Forks.
3. Compile and examine copper-gold alkaline porphyries in the Nicola Group.
4. Assess and visit promising properties as they are submitted.

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Brenda General**

PROJECT NO. **624,658**

GEOLOGY

Salaries	\$45,247		
Travel Expenses	\$2,560		
Contract Payments	\$3,111		
Field Expenses	\$12,839		
Analyses	\$8,821	\$72,578	65%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$3,878		
Field Expenses	\$0	\$3,878	3%

GEOCHEMISTRY

Salaries	\$9,529		
Travel Expenses	\$0		
Contract Payments	\$2,286		
Field Expenses	\$893		
Analyses	\$15,799	\$28,507	25%

DRILLING

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$0	\$0	0%

<i>Line Cutting</i>	\$0		0%
<i>Trenching</i>	\$0		0%
<i>Hotels and Meals</i>		\$6,936	6%
<i>Option Payments</i>	\$0		0%
<i>Property Maintenance</i>		\$505	0%
<i>Other</i>		\$0	0%

TOTAL DIRECT EXPENDITURES		\$112,403	
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GIL PROPERTY (PN 626)

G. Evans

Introduction

The Gil property consists of 36 units located seven km southwest of Keremeos. The property was staked in 1987 to cover several heavy mineral samples anomalous in Au over known skarn showings. Previous work concentrated on tungsten potential in the skarns with values as high as 3.85% W over five metres encountered. The Hedley Camp lies only 12 km northwest of the property and over 50 million grams of gold have been extracted from skarn mineralization to date.

1989 Programme

Assessment was filed with the 1988 work to put the claims in good standing until June 9, 1992.

Results

Extensive hornfelsing surrounds a complex Mesozoic intrusive complex. Skarns are located near limestone units within a highly deformed sequence of Permian mafic volcanics and sediments. Anomalous values of Pb, Zn, Cu, WO₃, Bi, Ag and Au are found in the skarns but no economic values to date. The strong heavy mineral anomalies have not been fully explained and Au bearing retrograde alteration has not been identified on the property.

Recommendations

At this time no further work is recommended.

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Gil**

PROJECT NO. **626**

GEOLOGY

Salaries	\$1,530		
Travel Expenses	\$154		
Contract Payments	\$0		
Field Expenses	\$93		
Analyses	\$0	\$1,776	71%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0	\$0	0%

GEOCHEMISTRY

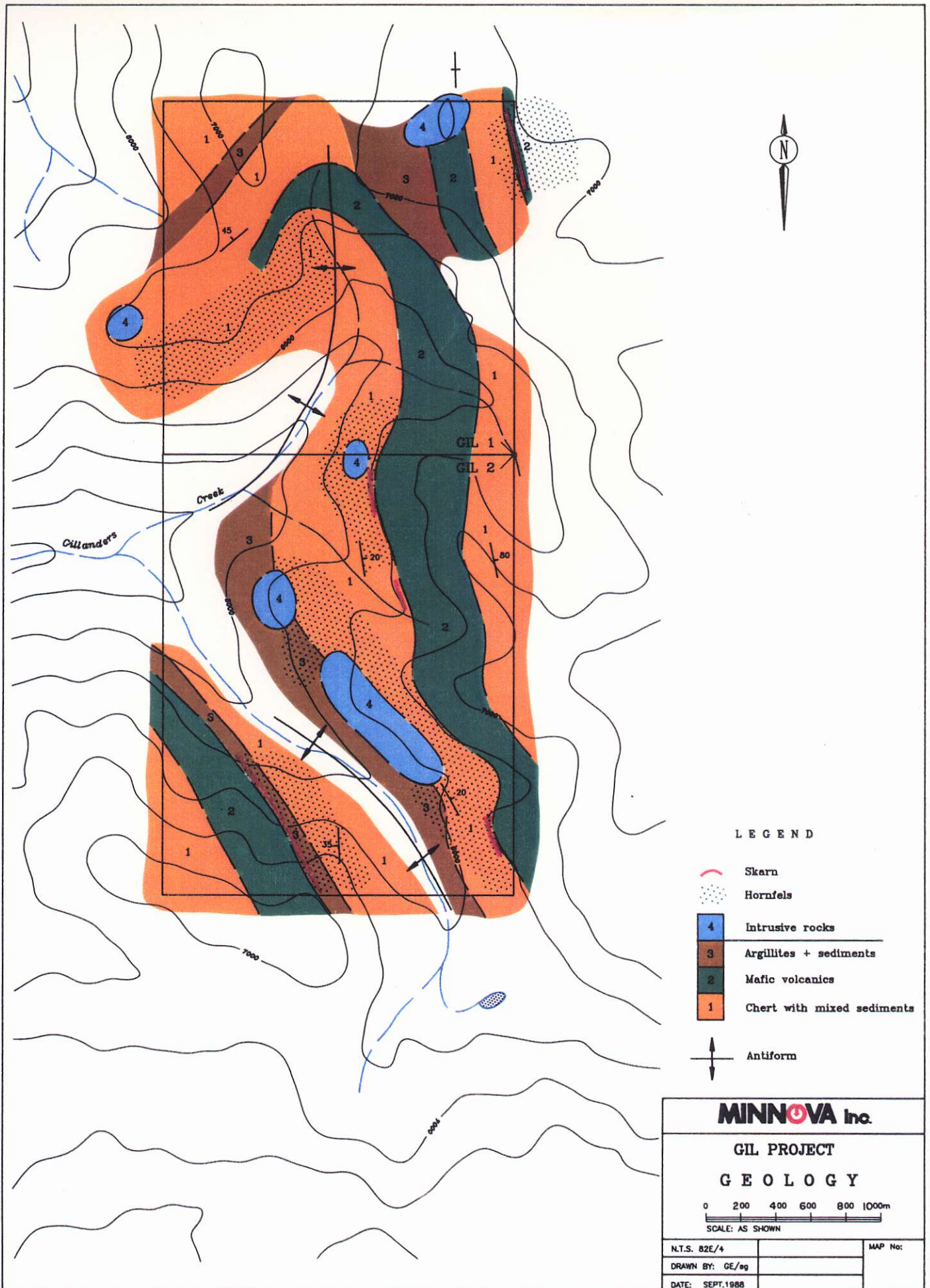
Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$0	\$0	0%

DRILLING








Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$0	\$0	0%

<i>Line Cutting</i>	\$0		0%
<i>Trenching</i>	\$0		0%
<i>Hotels and Meals</i>	\$0		0%
<i>Option Payments</i>	\$0		0%
<i>Property Maintenance</i>	\$720		29%
<i>Other</i>	\$0		0%

TOTAL DIRECT EXPENDITURES \$2,496

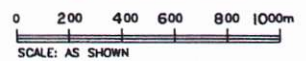


LEGEND

-  Skarn
-  Hornfels
-  4 Intrusive rocks
-  3 Argillites + sediments
-  2 Mafic volcanics
-  1 Chert with mixed sediments
-  Antiform

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GIL PROJECT
GEOLOGY



N.T.S. 82E/4		MAP No:
DRAWN BY: GE/sg		
DATE: SEPT. 1988		

JOLLY PROPERTY (PN 628)

G. Evans

Introduction

The Jolly property consists of four crown grants and six mineral claims (45 units), located about ten kilometres northwest of Rock Creek and three kilometres east of Camp McKinney. The claims are underlain predominantly by Carboniferous or older Anarchist Group metasediments and volcanics. Several old workings on narrow, discontinuous, auriferous quartz veins occur on the property. The 1989 work program involved testing, by diamond drilling, the major north-south and east-west structures on the property. Because of the narrow, discontinuous nature of these veins, further exploration is not justified.

1989 Program

- Geology - 1 km² grid mapping at 1:2000
- Linecutting - 10 line kilometres
- Geophysics - 9 line kilometres mag and VLF/EM
- Diamond Drilling - 1299 metres NQ drilling in 9 holes
- Geochemistry - 415 rock and core samples were collected and analysed for Cu, Pb, Zn, Ag and Au. Select samples were analysed for Cr, Ni and Pt
- 78 rock and core samples were collected and analysed for the lithogeochemical package, as well as for Cu, Pb, Zn, Ag, Au, As, Ba and Sb

Results

Geological mapping confirmed and expanded on previous mapping. Highly anomalous gold values were obtained from narrow, discontinuous quartz veins within sediments, volcanics and intrusives of the Anarchist Group. Previous exploration was directed at these veins, however because of the very narrow targets, further exploration is not justified. The current program was directed at testing major north-south and east-west trending structures, identified both by mapping and geophysics. Three structures were tested by drilling, ranging in width from 20 metres to over 100 metres. Very strong alteration (silicification, graphitic banding, sericite/talc alteration, serpentization) was associated with these structures. No significant gold values occurred in any of the drill intersections of these structures.

Recommendations

Gold bearing quartz veins are known to occur on the property but do not warrant further exploration based on their narrow size and discontinuous nature. Larger structures on the property do not contain significant gold values and again, do not justify additional work. As a result, no further work is recommended on the Jolly property.

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Jolly**

PROJECT NO. **628**

GEOLOGY

Salaries	\$4,873		
Travel Expenses	\$154		
Contract Payments	\$0		
Field Expenses	\$4,677		
Analyses	\$2,022	\$11,726	8%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$2,465		
Field Expenses	\$3	\$2,468	2%

GEOCHEMISTRY

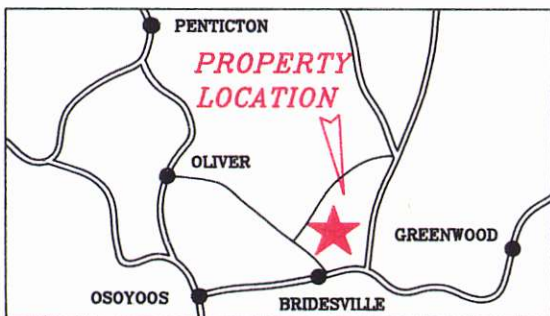
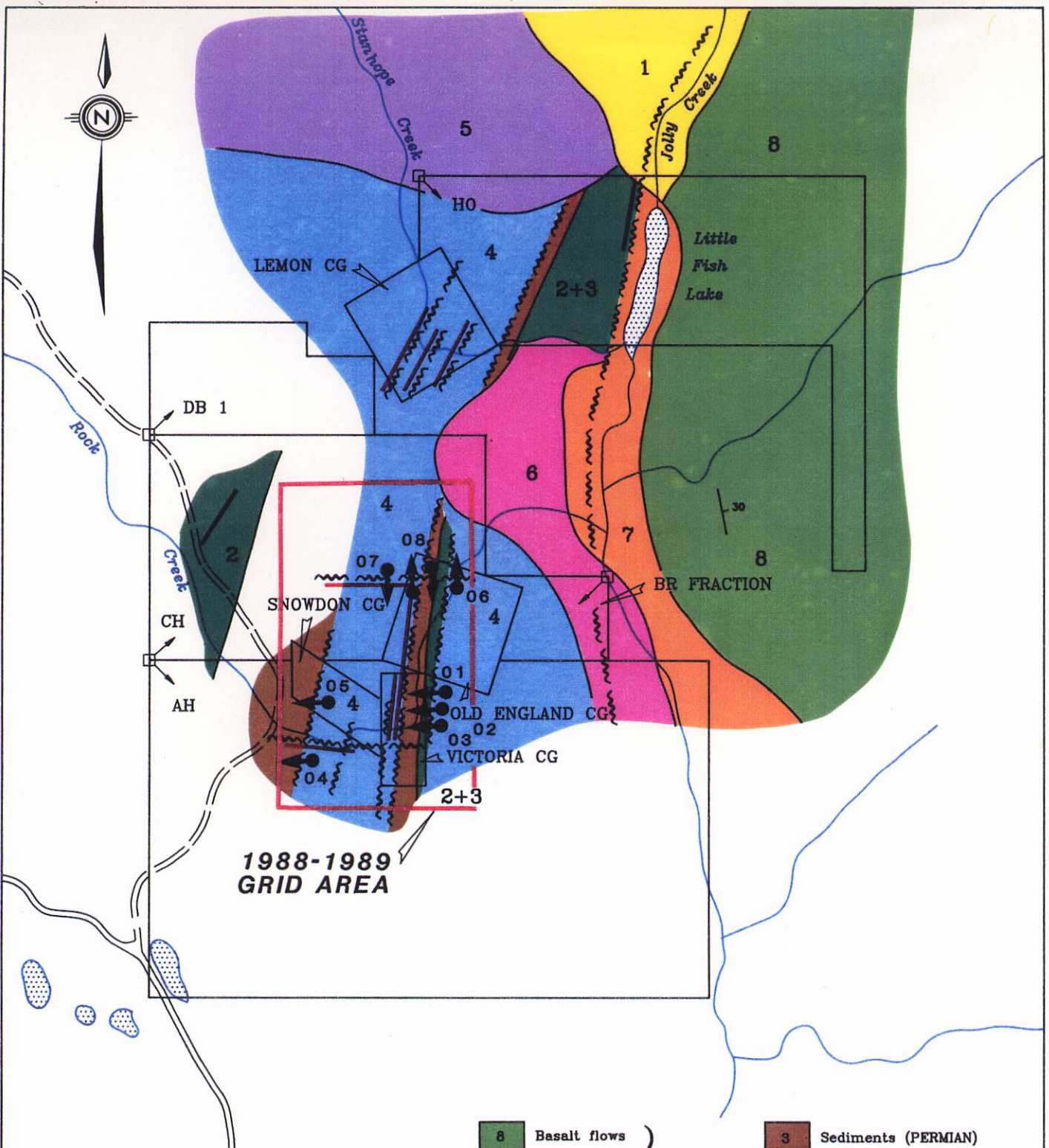
Salaries	\$1,229		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$149		
Analyses	\$971	\$2,349	2%

DRILLING

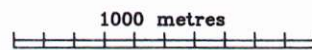
Salaries	\$11,028		
Travel Expenses	\$0		
Contract Payments	\$77,992		
Field Expenses	\$2,173		
Analyses	\$6,511	\$97,703	70%

<i>Line Cutting</i>	\$3,500		3%
<i>Trenching</i>	\$0		0%
<i>Hotels and Meals</i>	\$3,065		2%
<i>Option Payments</i>	\$15,000		11%
<i>Property Maintenance</i>	\$4,000		3%
<i>Other</i>	\$0		0%

TOTAL DIRECT EXPENDITURES \$139,811



- | | | | | |
|---|---------------------------|--------------|-------|----------------------------|
| 8 | Basalt flows | } (TERTIARY) | 3 | Sediments (PERMIAN) |
| 7 | Sediments | | 2 | Mafic volcanics (TRIASSIC) |
| 6 | Syenite flows | | 1 | Gneiss (PALEOZOIC) |
| 5 | Diorite (CRETACEOUS) | | ~~~~~ | Faults |
| 4 | Diorite (ANARCHIST GROUP) | | --- | Veins + Mineralization |
| | ● | | ← | DDH Location |



JOLLY OPTION GEOLOGY

LAMB PROPERTY (PN 640)

G. Evans

Introduction

The Lamb property consists of 150 units, located 22 kilometres northwest of Kelowna. The claims are mainly underlain by Paleozoic Cache Creek Group metasediments and volcanics, intruded by Mesozoic and possible Tertiary intrusions, and in part overlain by Eocene volcanics. Kerr Addison Mines Ltd. staked the property in 1987 to cover a Hedley skarn type environment. Exploration in 1988 by Kerr Addison included geological mapping, geochemistry and geophysics. There was little encouragement from this program. Work by Minnova in 1989 was directed at examining areas of Tertiary intrusives and volcanics which were largely ignored in the previous program.

1989 Program

- Geology
- about 3 km² property scale mapping at 1:10,000 scale was done to fill in areas not covered by previous mapping.
- Geochemistry
- 12 Heavy Mineral samples collected and split into 3 size fractions which were analysed for Au, Ag, As, Cu, Mo, Pb, Sb, Zn and Hg.
 - 14 rock samples were collected and analysed for the lithogeochemical package as well as for Cu, Pb, zn, Ag, Au, As, Ba and Sb.
 - 11 rock samples were collected and analysed for Cu, Pb, Zn, Ag and Au.

Results

Geological mapping confirmed the presence of late Cretaceous - early Tertiary granodiorite intrusives and Eocene Marron volcanics. Minimal alteration occurs on the property and weakly anomalous gold values are restricted to narrow, discontinuous quartz veins in the Cache Creek Group metasediments. Anomalous gold values occurred in heavy mineral samples collected from the southeast slopes of Whiterocks Mountain (a large late Cretaceous - early Tertiary granodiorite intrusion). Follow-up of these anomalies indicated a glacial origin to the anomalies.

Recommendations

The claims have been thoroughly examined by this and the 1988 work program by Kerr Addison, with very little encouragement. No further work is recommended on the Lamb property.

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Lamb**

PROJECT NO. **640**

GEOLOGY

Salaries	\$2,353		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$2,439		
Analyses	\$0	\$4,792	56%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0	\$0	0%

GEOCHEMISTRY

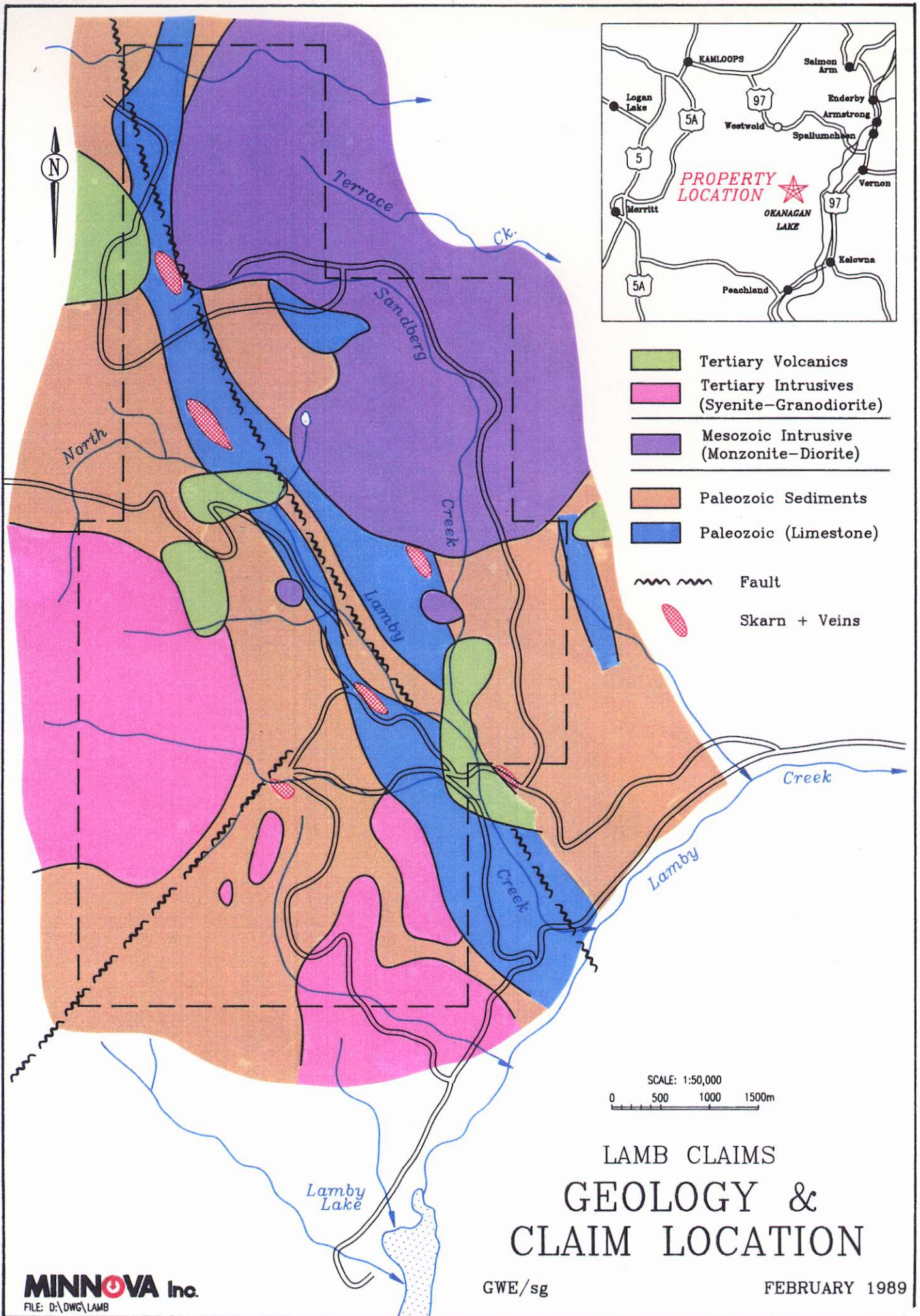
Salaries	\$524		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$2,551	\$3,074	36%

DRILLING

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$0	\$0	0%

<i>Line Cutting</i>	\$0		0%
<i>Trenching</i>	\$0		0%
<i>Hotels and Meals</i>		\$682	8%
<i>Option Payments</i>	\$0		0%
<i>Property Maintenance</i>		\$0	0%
<i>Other</i>		\$0	0%

TOTAL DIRECT EXPENDITURES		\$8,548	
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LAMB CLAIMS GEOLOGY & CLAIM LOCATION

CLAPPER PROPERTY (PN 642)

G. Evans

Introduction

The 68 units of the Clapper property straddle the Coquihalla Highway 29 km north of Merritt. Interest in the property was generated by a north-south trending fault - the Clapperton Fault, which, tapped the same sources of mineralization as the Swakum Mtn. vein/skarn system a few kilometres to the west.

1989 Program

- | | | |
|--------------|---|---|
| Geophysics | - | 228 km of airborne mag and 3-frequency resistivity survey |
| Geology | - | follow up of 1988 Kerr Addison mapping in light of geophysical results; detailed mapping (1:500 and 1:1000 scale) mapping of shears |
| Geochemistry | - | 26 rock samples
16 heavy mineral samples |

Results

The airborne magnetic survey shows two distinct magnetic highs - one in the central and one in the southern portion of the property, separated by a NW trending magnetic low. Geological mapping shows that an intrusive dioritic phase of the Nicola Volcanics causes the central mag high and probably the northern one as well.

Detailed mapping (1:500 and 1:1000 scale) and sampling of the Diet and Cherry Zones, two exposed sections of the Clapperton Fault, showed generally poor gold values, Although one

sample from the Diet Zone yielded 3400 ppb Au over 5 cm, another 2900 ppb Au and a third 280 ppb Au, other rock samples contained only 20 ppb Au or less.

Only one of the 16 heavy mineral samples taken from creeks on the property showed anomalous values. Unfortunately its drainage samples an area outside the property borders.

Recommendations

Gold occurrence on this property is low-grade, sporadic and on a centimetre-scale. However, the large magnetic features (Nicola intrusives) remain untested, therefore, in 1990, the property will be evaluated for Triassic alkaline Cu-Au mineralization.

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Clapper**

PROJECT NO. **642**

GEOLOGY

Salaries	\$3,108		
Travel Expenses	\$116		
Contract Payments	\$0		
Field Expenses	\$1,849		
Analyses	\$0	\$5,074	28%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$10,882		
Field Expenses	\$0	\$10,882	60%

GEOCHEMISTRY

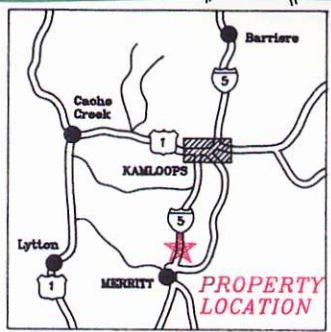
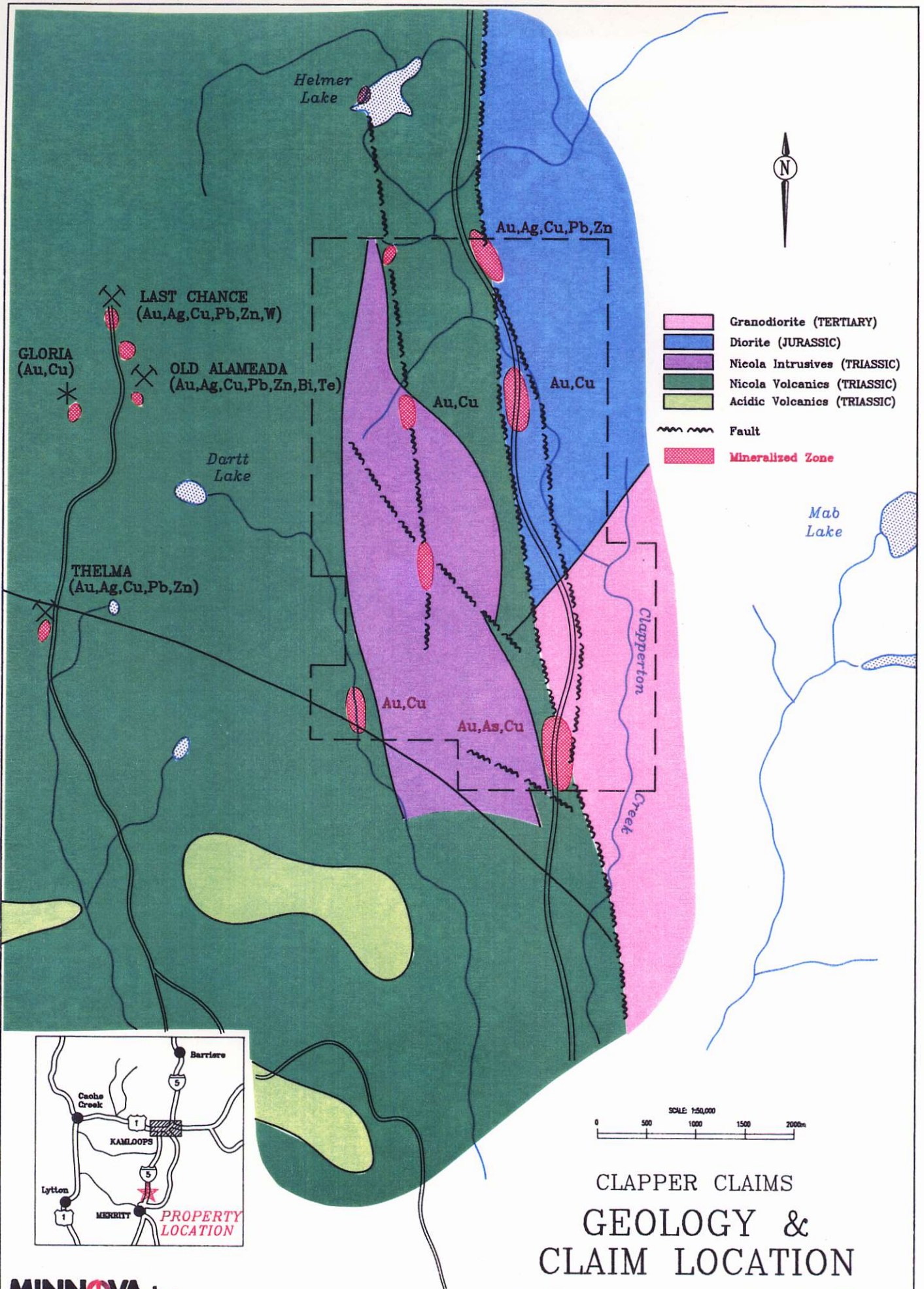
Salaries	\$897		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$61		
Analyses	\$1,078	\$2,035	11%

DRILLING

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$0	\$0	0%

<i>Line Cutting</i>		\$0	0%
<i>Trenching</i>		\$0	0%
<i>Hotels and Meals</i>		\$271	1%
<i>Option Payments</i>		\$0	0%
<i>Property Maintenance</i>		\$0	0%
<i>Other</i>		\$0	0%

TOTAL DIRECT EXPENDITURES \$18,262



CLAPPER CLAIMS
GEOLOGY &
CLAIM LOCATION

WART PROPERTY (PN 643)

G. Evans

Introduction

The Wart Claims straddle the Okanagan Connector Highway 36 kilometres southeast of Merritt. Interest in the property increased in 1989 of gold in clay alteration zones with quartz veins on the Elk claims immediately to the south.

1989 Program

Traverses of the southern part of the property were made in an attempt to identify structures trending onto the property from the Elk claims; new outcrops exposed by highway construction were sampled.

- Geology - 1988 Kerr Addison geological mapping was re-examined and found to be accurate
- Geochemistry - 12 rock samples were taken and analyzed for the Minnova lithogeochemical package
- 7 heavy mineral samples were collected, split into 3 size fractions and analysed for Au, Ag, As, Cu, Mo, Pb, Sb, Zn, Hg

Results

Outcrop in the southern portion of the property is scarce and mapping failed to identify any structures trending onto it from the Elk claims. Rock geochemistry yielded one sample with 400 ppb Au/30 cm on a newly exposed roadcut; other samples contained background values.

Heavy mineral sampling, however, did produce one anomalous drainage in the southwestern part of the property.

Recommendations

The lack of outcrop on the property precludes a geological approach to its initial exploration. It is thus proposed that the geological picture be examined by airborne geophysical methods and that the heavy mineral stream sediment anomaly be followed up by further sediment and soil sampling.

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Wart**

PROJECT NO. **643**

GEOLOGY

Salaries	\$4,337		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$1,735		
Analyses	\$0	\$6,072	61%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0	\$0	0%

GEOCHEMISTRY

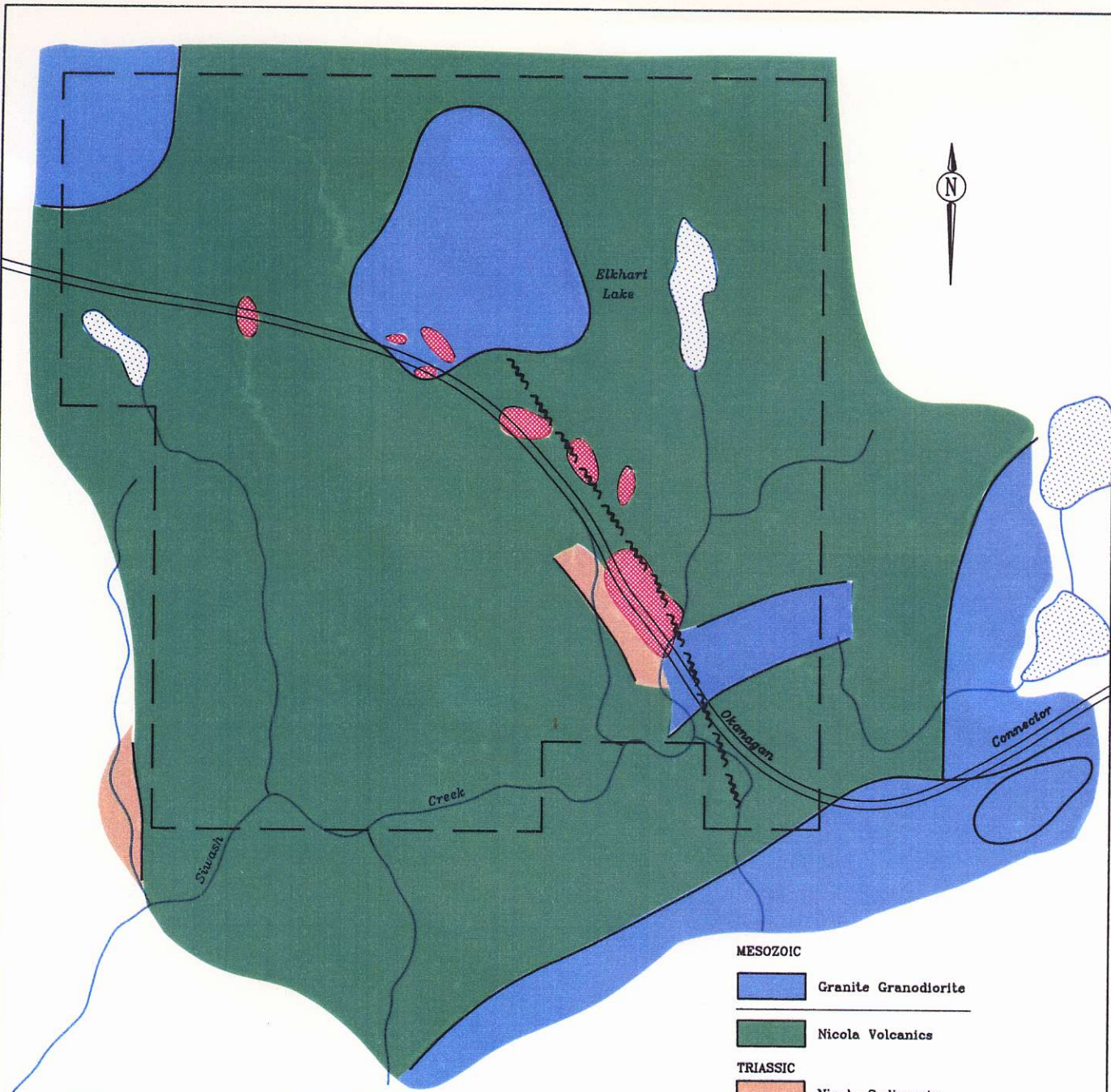
Salaries	\$922		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$169		
Analyses	\$1,767	\$2,857	29%

DRILLING


Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$0	\$0	0%

<i>Line Cutting</i>	\$0		0%
<i>Trenching</i>	\$0		0%
<i>Hotels and Meals</i>		\$968	10%
<i>Option Payments</i>	\$0		0%
<i>Property Maintenance</i>		\$0	0%
<i>Other</i>		\$0	0%

TOTAL DIRECT EXPENDITURES \$9,897



MESOZOIC

 Granite Granodiorite

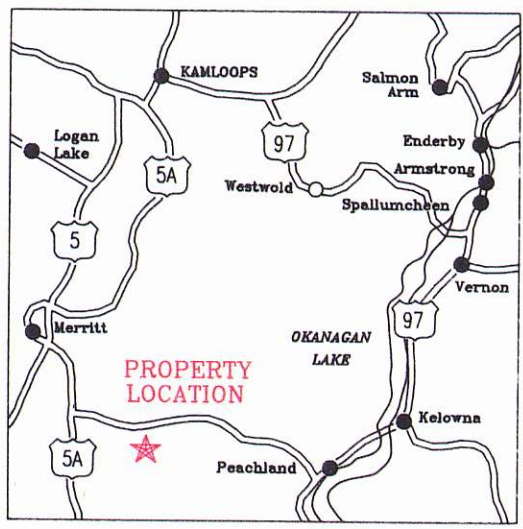
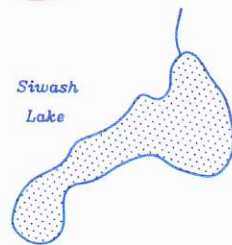
 Nicola Volcanics

TRIASSIC

 Nicola Sediments

 Fault

 Alteration + Mineralization



WART PROPERTY
GEOLOGY &
CLAIM LOCATION

FERROUX PROPERTY (PN 655)

G. Evans

Introduction

The Ferroux property is located four km northwest of Carmi, B.C. The property consists of 75 units staked on anomalous heavy mineral samples underlain by Tertiary volcanics. Work in 1989 outlined a large area in the centre of the property where mineralized monzonite bodies intrude the Tertiary volcanics.

1989 Programme

- | | | |
|--------------|---|--|
| Geology | - | 1:5000 scale mapping of the property |
| Geochemistry | - | 95 contour soil samples
26 lithochemical rock samples
162 geochemical rock samples
10 heavy mineral samples (3 fractions) |
| Trenching | - | 9 trenches for a total of 330 m excavated |

Results

In 1989, the geological mapping and sampling highlighted a monzonite unit intruding the Eocene Marama dacites. The intrusive is consistently mineralized with 5-15% sulphides (po, py, cpy) and is regularly anomalous in Au, Cu, Zn (up to .72 g/t Au) over a wide area. Very limited outcrop has hampered the geological interpretation but this unusual Tertiary intrusive warrants follow up work. The strongest 1989 heavy mineral gold anomaly is downstream from the monzonite but the strongest 1987 heavy mineral anomaly on the east side of the property has not been explained

with follow up heavy mineral sampling or contour soil sampling. At this time there is not evidence of any epithermal systems and the mineralized monzonite is the most promising target.

Recommendations

1. File remaining 1989 work for assessment
2. After comparison with other precious metal bearing porphyries in 1990, additional work may be warranted including an I.P. survey and trenching.

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Ferroux**

PROJECT NO. **655**

GEOLOGY

Salaries	\$7,816		
Travel Expenses	\$102		
Contract Payments	\$0		
Field Expenses	\$2,450		
Analyses	\$0	\$10,368	38%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0	\$0	0%

GEOCHEMISTRY

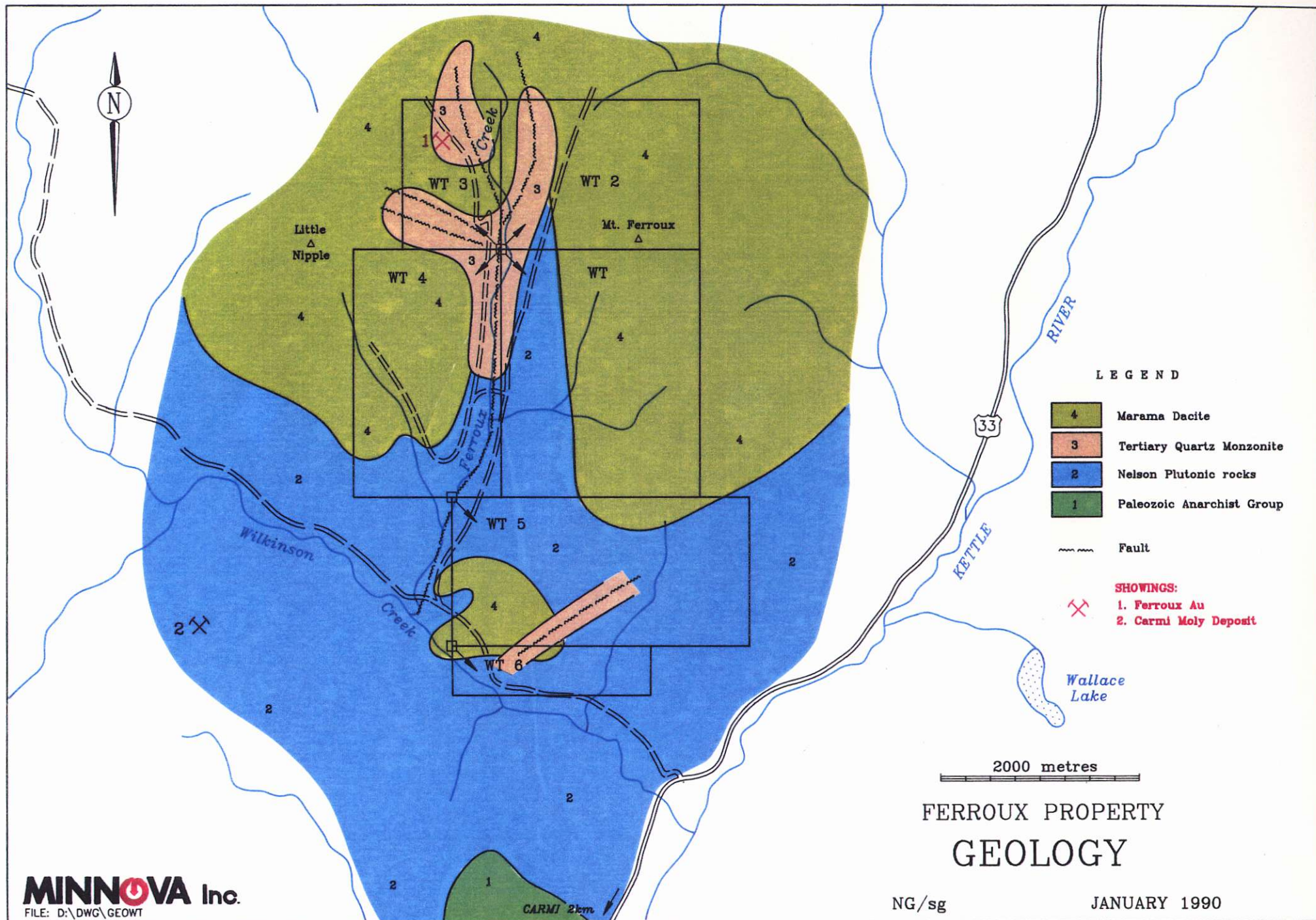
Salaries	\$4,137		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$135		
Analyses	\$5,698	\$9,969	37%

DRILLING

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$0	\$0	0%

<i>Line Cutting</i>	\$0		0%
<i>Trenching</i>	\$3,925		14%
<i>Hotels and Meals</i>	\$2,123		8%
<i>Option Payments</i>	\$0		0%
<i>Property Maintenance</i>	\$730		3%
<i>Other</i>	\$0		0%

TOTAL DIRECT EXPENDITURES		\$27,116	
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RICHTER PROPERTY (PN 656)

G. Evans

Introduction

The Richter property consists of 212 units located between Oliver and Keremeos, B.C. The property covers an extensive area of Paleozoic volcanics and sediments intruded by Mesozoic plutons. In 1988 the property was staked to cover numerous multi-element heavy mineral anomalies. In 1989 the property was intensively examined with numerous alteration zones defined and potential drill targets identified.

1989 Programme

- | | | |
|--------------|---|---|
| Geology | - | geological mapping of property at 1:10000 scale
geological mapping of Testalinden and Ridge grids 26 km at 1:2500 |
| Geophysics | - | 580 km of A.E.M. survey
8 km of EM-17 on Testalinden Grid |
| Geochemistry | - | 310 soil samples on contour lines
1721 soil samples over grids
143 lithogeochemical rock samples
448 geochemical rock samples
(81 panel samples, 49 channel samples)
8 thin sections |
| Linecutting | - | 42.15 km of grid (3 grids) |
| Trenching | - | 98 m of blasting on the albite zone (5 trenches) |

Results

The 1989 work revealed a complex geological package of rocks on the Richter property. The best understood style of mineralization to date is that in contact alteration zones peripheral to the Mesozoic intrusives. These strongly albite-altered zones (90%+) have extensive quartz stockworks with up to 15% sulphides (py, po, cpy) with gold values up to 6.8 g/t. Blasting of these oxidized zones indicates sulphides and gold values increase at depth. With widths up to 50 m and strike lengths in excess of 500 m these zones have good potential for large tonnage gold systems.

Numerous quartz veins over much of the property have impressive size potential and there is good potential for gold bearing Fairview type vein systems. Several soil anomalies are as yet unexplained and require more follow up work to find the bedrock sources. The three grid areas established in 1989 all have promising drill targets which can be tested in the near term.

Recommendations

1. Follow up recce soil anomalies
2. Map the Reed Lake Grid
3. Trench defined anomalous areas
4. Drill gold bearing albite zones and any new targets

PROJECT EXPENDITURE SUMMARY

1989

PROJECT NAME: **Richter**

PROJECT NO. **656**

GEOLOGY

Salaries	\$28,286		
Travel Expenses	\$239		
Contract Payments	\$0		
Field Expenses	\$18,211		
Analyses	\$5,061	\$51,797	27%

GEOPHYSICS

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$60,000		
Field Expenses	\$0	\$60,000	31%

GEOCHEMISTRY

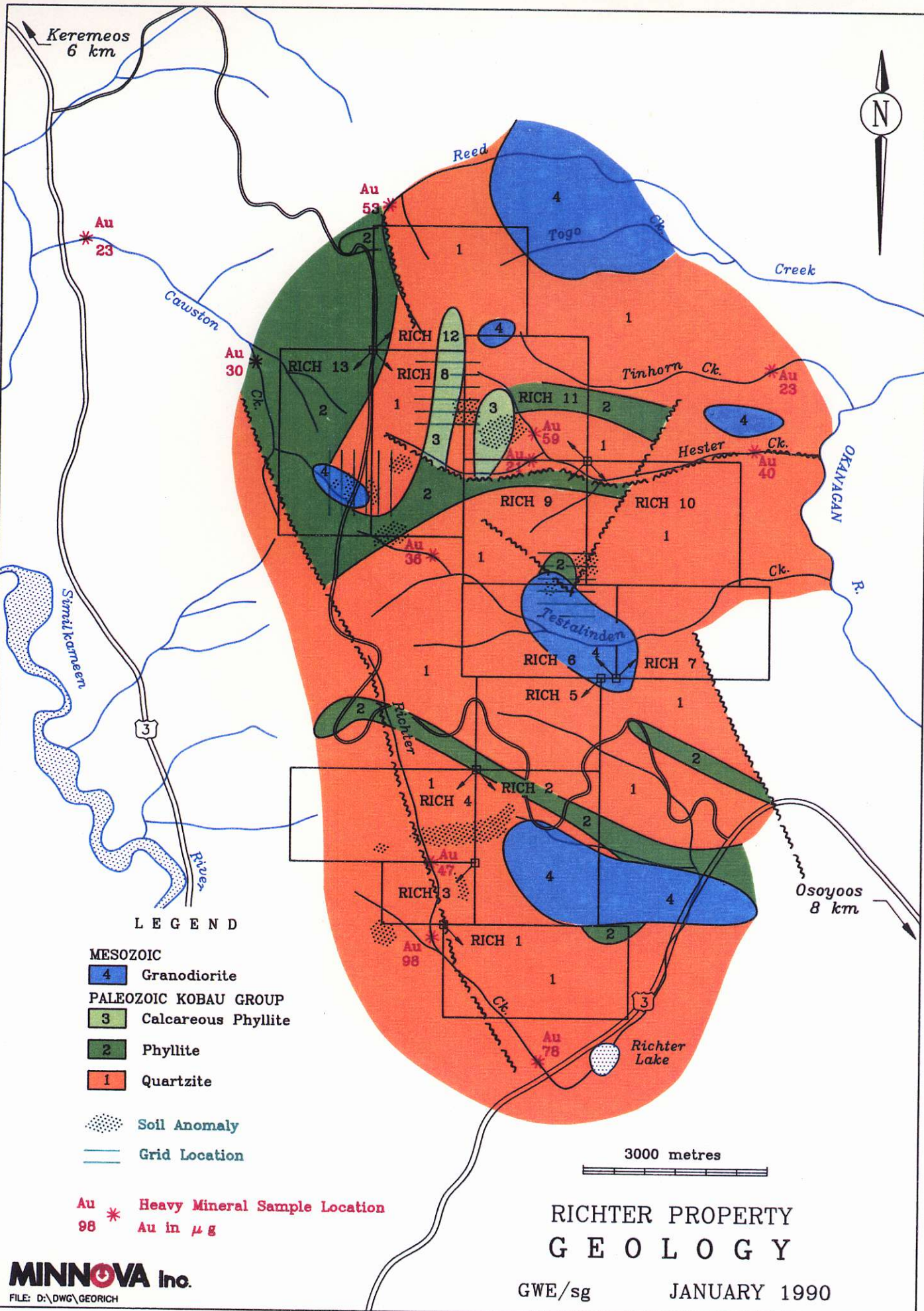
Salaries	\$15,336		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$554		
Analyses	\$35,969	\$51,858	27%

DRILLING

Salaries	\$0		
Travel Expenses	\$0		
Contract Payments	\$0		
Field Expenses	\$0		
Analyses	\$0	\$0	0%

<i>Line Cutting</i>	\$16,464		8%
<i>Trenching</i>	\$2,961		2%
<i>Hotels and Meals</i>	\$7,849		4%
<i>Option Payments</i>	\$0		0%
<i>Property Maintenance</i>	\$4,260		2%
<i>Other</i>	\$0		0%

TOTAL DIRECT EXPENDITURES		\$195,189	
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Keremeos
6 km



Reed

4

Togo

Creek

Au
*
23

Causton
Ck.

Au
*
30

RICH 12

4

RICH 8

RICH 11

Tinhorn Ck.

Au
*
23

RICH 13

3

Au
*
59

RICH 9

RICH 10

Au
*
40

Hester
Ck.

Similkameen
River

3

LEGEND

- 4 Granodiorite
- 3 Calcareous Phyllite
- 2 Phyllite
- 1 Quartzite

- Soil Anomaly
- Grid Location

Au * Heavy Mineral Sample Location
 98 * Au in μ g

3000 metres

Osoyoos
8 km

RICH 6

RICH 7

RICH 5

RICH 4

RICH 2

Au
*
47

RICH 3

RICH 1

Richter
Lake

**RICHTER PROPERTY
GEOLOGY**

GWE/sg JANUARY 1990