823601

MINNOVA Inc.

1991 BUDGET PROPOSAL

BRENDA JOINT VENTURE

BY: DAVE HEBERLEIN

MARCH 1991

MINNOVA INC.

DATE: March 14, 1991

TO: Ross Weeks

COPIES TO: Ian Pirie, Cam Clayton, File

FROM: Dave Heberlein.

SUBJECT: **1991 BRENDA JV BUDGET PROPOSAL**

This is the detailed budget and work proposal for the 1991 Brenda JV properties. As we discussed at our meeting earlier in the month, there have been some significant changes made to the overall program. The addition of the Whipsaw porphyry to our property portfolio has caused some adjustments to the scale and scope of some of the other projects. Revised budget figures and a schedule of work are shown in the appended tables.

Proposed work on the Rainbow Tam O'Shanter property near Greenwood has been reduced by about one third from our preliminary budget proposal. Most of the cuts have been in the amount and detail of the proposed grid work. Our program will evaluate the property as a whole for bulk tonnage Tertiary epithermal gold targets. This will include grid coverage of anomalous areas identified by previous programs. We hope to drill test **all** remaining targets this year.

An early drill program (1000m) is planned on the Athelstan Jackpot property to the east of Greenwood. Three to four holes will be drilled to test for economic gold mineralization in the hangingwall of the Lind Creek Thrust, at the base of the serpentinized ultramafic. If results are negative this property will be dropped.

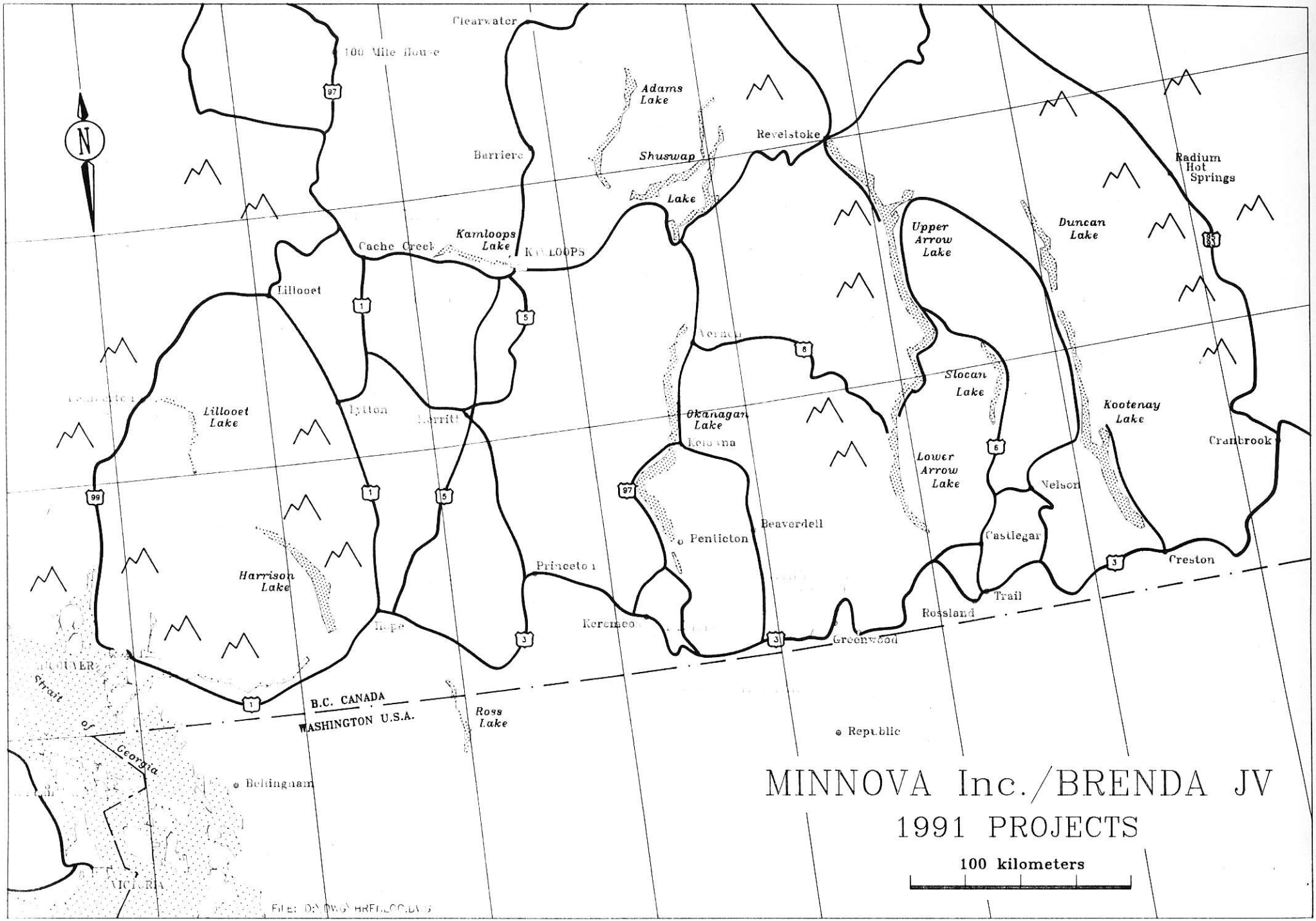
On Richter, a small program (approximately two weeks) will be carried out to look at the Skarn potential around some of the

Mesozoic intrusions in the Reed Lake and Longhorn grid areas. These were shown to be anomalous for gold by last years sampling. If results prove to be unfavourable no further work will be recommended for the property.

A budget has again been proposed for the Last Chance property near Kamloops. Good geological targets remain on both claim blocks, but they are not high priority. This program may be postponed in favour of a new acquisition without jeopardizing the claims.

Throughout the year we will also be evaluating new prospects throughout the JV area. Emphasis will be placed on more advanced targets with large tonnage, open pit potential. Properties at or close to the drilling stage will be given priority.

Dave Heberlein


Clearwater
100 Mile House
97
Adams Lake
Barriere
Shuswap
Lake
Revelstoke
Radium Hot Springs
Cache Creek
Kamloops Lake
KAMLOOPS
Upper Arrow Lake
Duncan Lake
95
Lillooet
1
5
Vernon
8
Slocan Lake
Lillooet Lake
Lytton
Okanagan Lake
Kelowna
Kootenay Lake
Cranbrook
6
Lower Arrow Lake
99
97
Nelson
Penticton
Beaverdell
Castlegar
Harrison Lake
Princeton
3
Creston
Trail
Rossland
Greenwood
B.C. CANADA
WASHINGTON U.S.A.
Ross Lake
Republic
Strait of Georgia
Bellingham
VICTORIA
N
MINNOVA Inc./BRENDA JV
1991 PROJECTS
100 kilometers

1991 BUDGET PROPOSAL
Summary by Work Type

Project	*Geol*	*Geoph*	*Geoch*	*Drill*	*Line*	*Trench*	*Hotels*	**Options*	*Other*	*Total*	*% of Budget*
RICHTER	15.3	0.0	7.5	0.0	0.0	0.0	2.2	0.0	0.0	25	3%
GENERAL	40.0	0.0	7.0	0.0	0.0	0.0	3.0	0.0	0.0	50	6%
RAINBOW	40.0	28.7	28.2	129.0	12.3	10.0	5.0	20.0	1.9	275	33%
ATH-JACKPOT	10.0	0.0	2.5	78.0	0.0	0.0	4.0	15.0	0.5	110	13%
LC/SPROAT	24.1	7.8	7.8	47.3	0.0	10.0	3.0	0.0	0.0	100	12%
WHIPSAW	49.6	49.8	8.5	105.8	16.0	12.0	8.2	25.0	0.0	275	33%
TOTALS	179	86	61	360	28	32	25	60	2	835	
%	21%	10%	7%	43%	3%	4%	3%	7%	0%		

DIRECT EXPENDITURES	=	$834,930
ADMINISTRATION	=	$92,992
TOTAL	=	$927,922

1991 SCHEDULE							
PROJECT	ACTIVITY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST
ATHELSTAN – JACKPOT	Geology Drilling						
RAINBOW TAM O'SHANTER	Linecutting Geology Sampling Geophysics Drilling						
RICHTER	Geology						
LAST CHANCE	Geology Sampling Drilling						
WHIPSAW	Compilation Geology Sampling Geophysics Drilling						
Sproat							

1991 Schedule

BRENDA GENERAL (658, 624)

1991 BUDGET PROPOSAL

BUDGET: $50,000

INTRODUCTION:

The Brenda General budget is designed to allow reconnaissance work and property examinations within the Brenda JV area. In 1991 our project generation efforts will concentrate on prospects that are at or close to the diamond drilling stage. Principal targets are large tonnage, open-pittable deposits. These include: porphyry Cu-Au, disseminated (epithermal) Au and skarn. We anticipate looking at a large number of submittals throughout the year.

PROJECT BUDGET FORECAST
1991

PROJECT NAME: BRENDA GENERAL PROJECT NO. 658

GEOLOGY				
	Salaries	$30,000		
	Travel Expenses	$1,500		
	Contract Payments	$0		
	Field Expenses	$12,000		
	Analyses	$1,000	$44,500	89%
GEOPHYSICS				
	Salaries	$0		
	Travel Expenses	$0		
	Contract Payments	$0		
	Field Expenses	$0	$0	0%
GEOCHEMISTRY				
	Salaries	$1,000		
	Travel Expenses	$0		
	Contract Payments	$0		
	Field Expenses	$500		
	Analyses	$2,000	$3,500	7%
DRILLING				
	Salaries	$0		
	Travel Expenses	$0		
	Contract Payments	$0		
	Field Expenses	$0		
	Analyses	$0	$0	0%
Line Cutting			$0	0%
Trenching			$0	0%
Hotels and Meals			$2,000	4%
Option Payments			$0	0%
Property Maintenance			$0	0%
Other			$0	0%
	TOTAL DIRECT EXPENDITURES		$50,000	

RICHTER (656)

1991 BUDGET PROPOSAL

BUDGET: $25,000 (Brenda 100%)

OBJECTIVES:

1. To evaluate the Reed Lake and Longhorn grid areas for gold skarn potential.

2. Prospect the remaining claim area to follow-up unexplained heavy mineral anomalies.

SUMMARY:

The Richter Property, staked in 1988, covers several anomalous drainages identified by an earlier regional heavy mineral sampling program. Follow-up work in 1989 and 1990 was aimed at identifying the sources of gold in the drainages and evaluating the property as a whole for porphyry, skarn and Tertiary epithermal mineralization.

During the 1989 field program, a gold bearing albitite alteration zone was discovered in the Testalinden Creek area. This feature explains the anomalous gold values in the drainage, but after trenching and drill testing it was determined to be too small to warrant further work.

Anomalous gold values (up to 1020ppb) are also present on the Longhorn Grid. Here, values up to 1020 ppb were obtained from the brecciated margin of an easterly trending feldspar porphyry diorite pluton. Reconnaissance soil sampling over this target outlined an anomalous zone approximately 100 by 150m in size. On the Reed Lake Grid at the north end of the property, a similar intrusion has

returned values of up to 238 ppb gold.

The potential for skarn development at the margins of these diorite porphyry plutons is good, particularly where they cut calcareous country rocks. Exploration in 1991 will evaluate these areas.

PROPOSED WORK:

1. Mapping and prospecting around porphyry intrusions to the north and east of Reed Lake to determine if any sizable areas of skarn are present.

2. Extension of mapping and sampling on the Longhorn Grid to fully cover the periphery of the anomalous porphyry intrusion.

3. Prospecting on the remainder of the property to see if there are any more potentially skarn bearing intrusions and to follow-up unexplained heavy mineral anomalies.

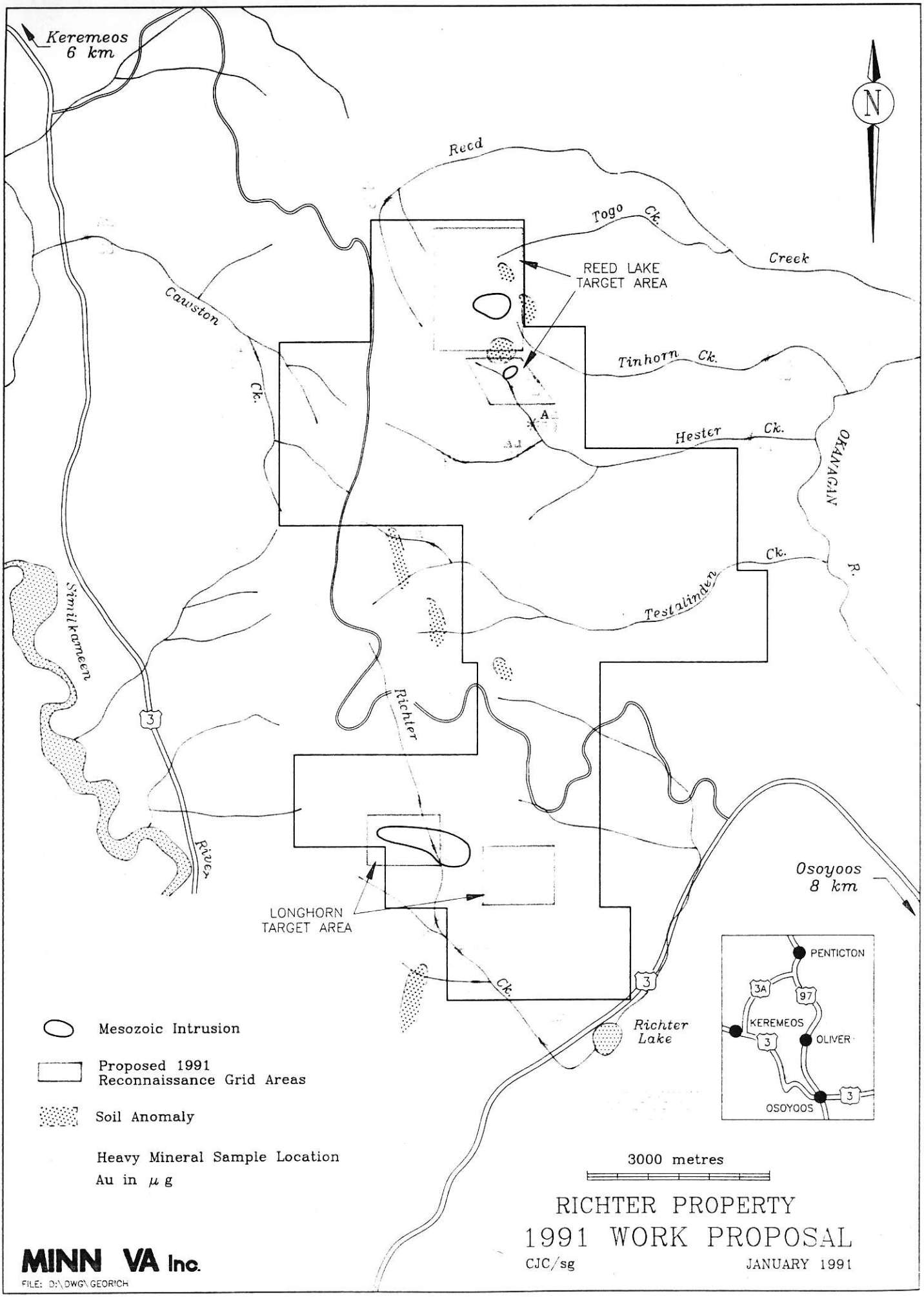
TENTATIVE SCHEDULE:

Mapping and prospecting - late May to early June

PROJECT BUDGET FORECAST
1991

PROJECT NAME: RICHTER PROJECT NO. 656

GEOLOGY				
150 Litho	Salaries	$10,300		
	Travel Expenses	$300		
	Contract Payments	$0		
	Field Expenses	$1,800		
	Analyses	$2,700	$15,100	60%
GEOPHYSICS				
	Salaries	$0		
	Travel Expenses	$0		
	Contract Payments	$0		
	Field Expenses		$0	0%
GEOCHEMISTRY				
500 Soils @ $13	Salaries	$1,200		
	Travel Expenses	$350		
	Contract Payments	$0		
	Field Expenses	$850		
	Analyses	$6,500	$8,900	36%
DRILLING				
600m @ $50	Salaries	$0		
	Travel Expenses	$0		
	Contract Payments	$0		
	Field Expenses	$0		
	Analyses	$0	$0	0%
	Line Cutting		$0	0%
	Trenching		$0	0%
	Hotels and Meals		$1,000	4%
	Option Payments		$0	0%
	Property Maintenance		$0	0%
	Other		$0	0%
	TOTAL DIRECT EXPENDITURES		$25,000	


Keremeos
6 km
N
Reed
Togo Ck.
Creek
REED LAKE
TARGET AREA
Cawston
Ck.
Tinhorn Ck.
A
Hester Ck.
OKANAGAN
R.
Ck.
Testalinden
Similkameen
River
3
Richter
LONGHORN
TARGET AREA
Ck.
3
Richter
Lake
Osoyoos
8 km
PENTICTON
3A
97
KEREMEOS
3
OLIVER
3
OSOYOOS
Mesozoic Intrusion
Proposed 1991
Reconnaissance Grid Areas
Soil Anomaly
Heavy Mineral Sample Location
Au in μ g
3000 metres
RICHTER PROPERTY
1991 WORK PROPOSAL
CJC/sg
JANUARY 1991
MINN VA Inc.
FILE: D:\DWG\GEORICH

ATHELSTAN-JACKPOT (666)
1991 BUDGET PROPOSAL

BUDGET: $110,000 (100% Brenda)

OBJECTIVES:

1. To test the Lind Creek thrust at the base of the serpentinite for economic gold mineralization.

SUMMARY:

The Athelstan-Jackpot property is located 9km east-southeast of Greenwood, B.C. It is underlain mainly by serpentinite of the Permian age Knob Hill Group. These rocks are cut by younger diorite and quartz-feldspar porphyry plutons of Mesozoic and Tertiary age. Gold mineralization at the old Athelstan and Jackpot workings occurs in lenses of massive arsenopyrite and pyrite that lie within broad halos of listwanite alteration. The listwanite zones are centred on several steeply dipping northeast trending faults.

Although the known mineralization is not of economic significance, the potential for economic zones at the basal thrust contact is good. Surface mineralization associated with the northeast trending faults may well be reflecting leakage of hydrothermal fluids from depth. The 1991 program will test this hypothesis with four drillholes into the basal thrust. The holes will be drilled to test the areas where the mineralized, northeast trending faults intersect the Lind Creek Thrust at depths of less than 200m from surface.

PROPOSED WORK:

1. Detailed mapping and rock sampling around the Athelstan and Jackpot workings to confirm the structural controls on the mineralization.

2. Determination of the precise location and orientation of the Lind Creek Thrust to optimize drill hole locations.

3. Drill testing the Lind Creek Thrust where steep northeast faults intersect it.

4. Complete surface mapping and sampling on the remainder of the claims.

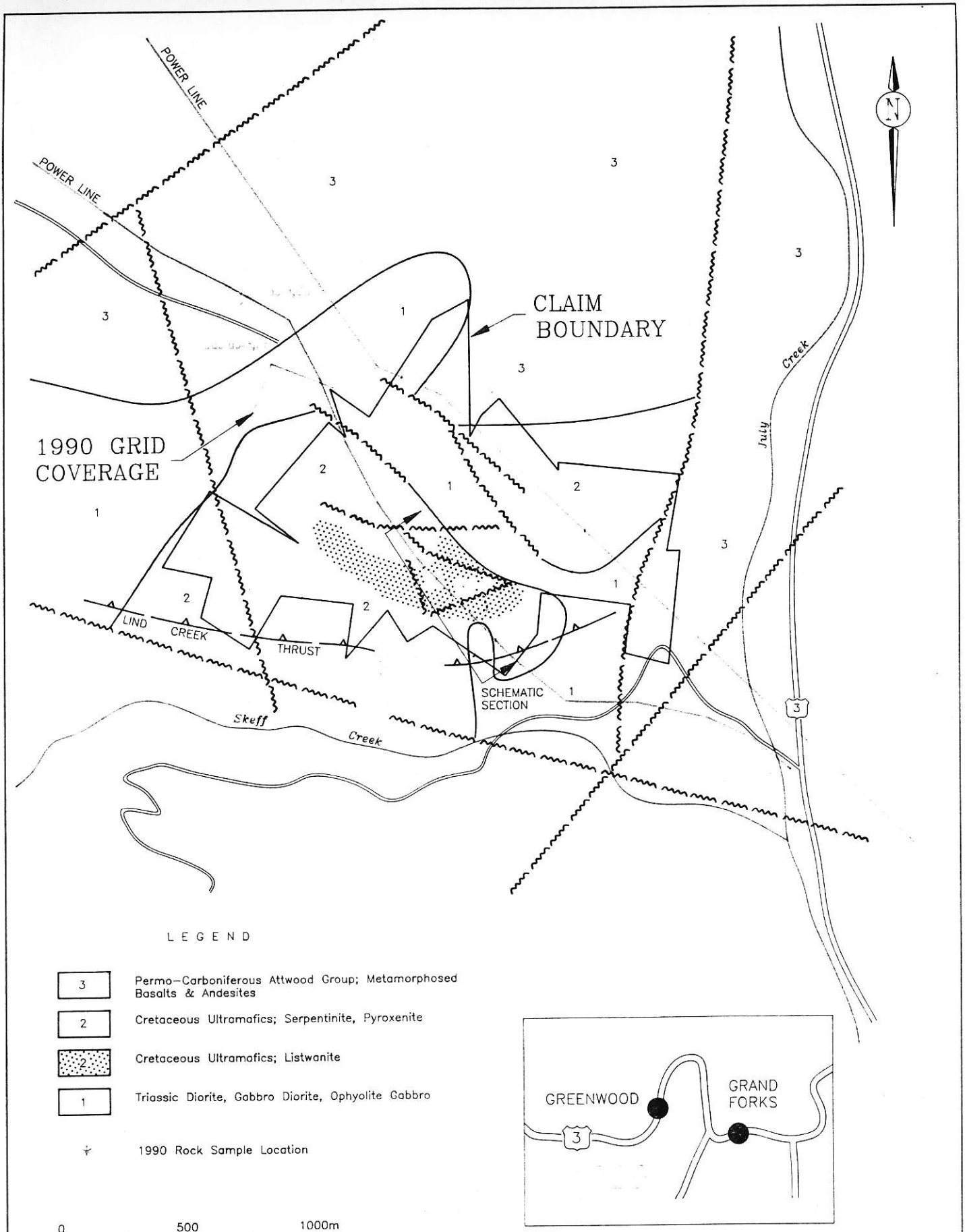
TENTATIVE SCHEDULE:

Geological mapping, drill hole planning	-	late April.
Drill program	-	May.

PROJECT BUDGET FORECAST
1991

PROJECT NAME: ATHELSTAN-JACKPOT PROJECT NO. 666

GEOLOGY				
20 Lithos	Salaries	$7,000		
100 Geochem	Travel Expenses	$500		
	Contract Payments	$0		
	Field Expenses	$500		
	Analyses	$2,000	$10,000	9%
GEOPHYSICS				
	Salaries	$0		
	Travel Expenses	$0		
	Contract Payments	$0		
	Field Expenses	$0	$0	0%
GEOCHEMISTRY				
60 Soils	Salaries	$1,500		
120 Rock Samples	Travel Expenses	$220		
	Contract Payments	$0		
	Field Expenses	$0		
	Analyses	$780	$2,500	2%
DRILLING				
1100m @ $60/m	Salaries	$6,000		
	Travel Expenses	$1,000		
	Contract Payments	$66,000		
	Field Expenses	$1,000		
	Analyses	$4,000	$78,000	71%
Line Cutting			$0	0%
Trenching			$0	0%
Hotels and Meals			$4,000	4%
Option Payments			$15,000	14%
Property Maintenance			$0	0%
Other			$500	0%
	TOTAL DIRECT EXPENDITURES		$110,000	

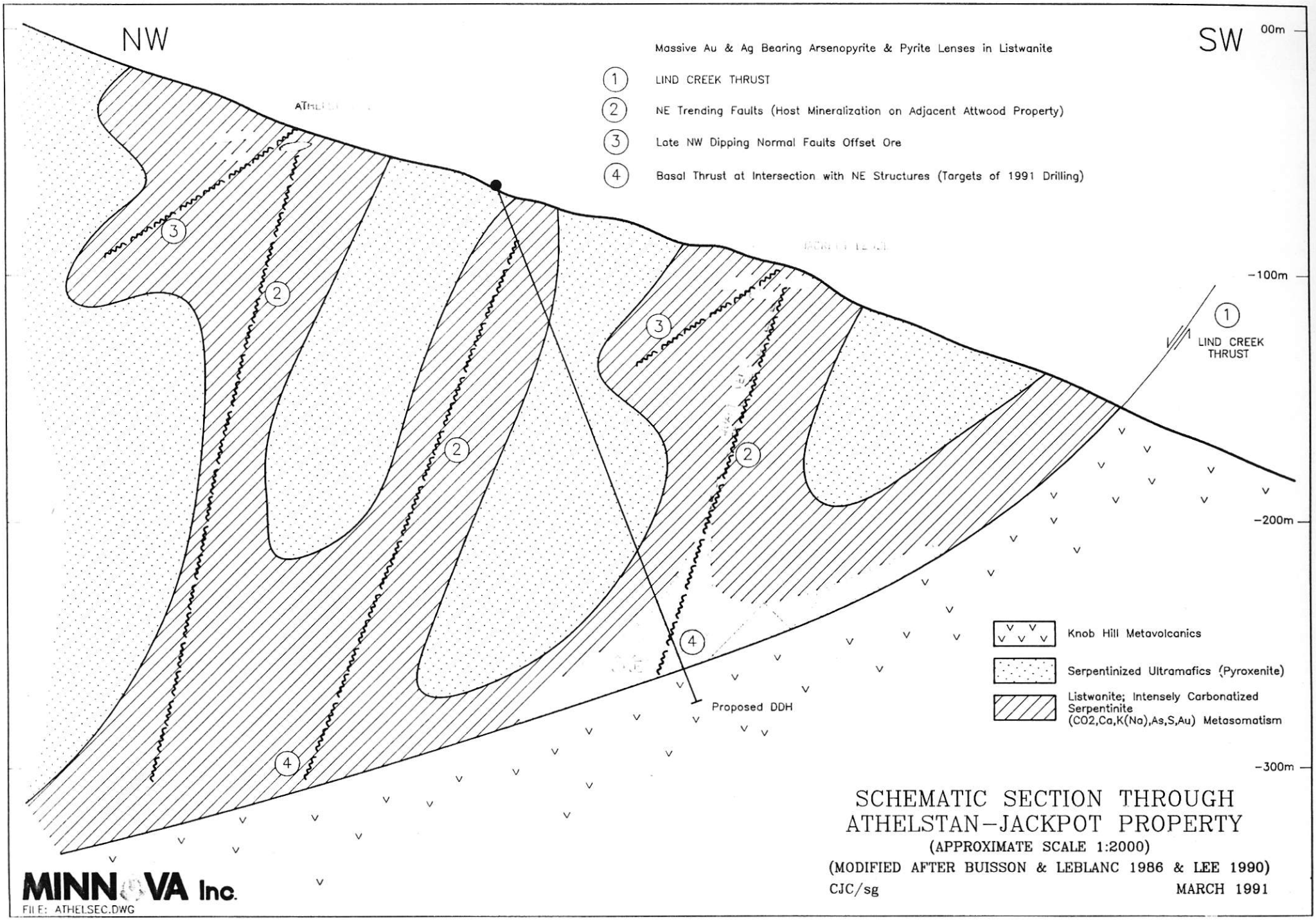


ATHELSTAN–JACKPOT PROPERTY
SUMMARY MAP

CJC/sg JANUARY 1991

MINNOVA Inc.

FILE: ATHEL.DWG



SCHEMATIC SECTION THROUGH ATHELSTAN–JACKPOT PROPERTY

(APPROXIMATE SCALE 1:2000)

(MODIFIED AFTER BUISSON & LEBLANC 1986 & LEE 1990)

CJC/sg MARCH 1991

MINNOVA Inc.

FILE: ATHELSEC.DWG

RAINBOW - TAM O'SHANTER (661)

1991 BUDGET PROPOSAL

BUDGET: $275,000 (100% Brenda)

OBJECTIVES:

1. To evaluate potential epithermal gold targets along the Deadwood Fault.
2. To follow-up anomalous As-Sb geochemistry in soils in the Murray Gulch-Annex Fault area.
3 Diamond drill test targets on the Deadwood fault and Annex Faults.
4 Complete reconnaissance mapping and sampling over the remainder of the property.

SUMMARY:

The Rainbow-Tam O'Shanter property is centred about six kilometres west of Greenwood. The property consists of 345 claim units, under option from Kettle River Resources, Dentonia Resources and prospector D. Moore.

The claims cover a large area of Eocene volcanics, sediments and intrusives in what is known as the Toroda Creek Graben. On the west side of the graben, at the southwest part of the property, a felsic intrusive of Jurassic age cuts Permo-Carboniferous Knobb Hill Gp. sediments and Triassic Brooklyn Fm. sediments. Knob Hill Gp. rocks are also exposed in the northeastern part of the property, east of the graben boundary. Here they are cut by a Cretaceous intrusion.

Heavy mineral samples of the area have outlined several drainages which are anomalous in Au, As, Sb, Ag, Hg and Cu. Some of these anomalies are explained by known showings. Others,

however, remain unexplained.

Two areas of alteration occur on the property. These are: the Midway Mine area and the Tam O'Shanter area.

At the Midway Mine, three separate phases of alteration and mineralization occur. The earliest consists of pervasive listwanitization of serpentinite in the Knobb Hill Fm. along regional thrust faults. Younger quartz-feldspar porphyry dykes and sills overprint the listwanite zones and cause pervasive clay alteration and localized silicification. This event deposited narrow polymetallic veins in shear zonesin high angle shear zones. Steeply dipping Tertiary faults containing epithermal-style chalcedonic veins (e.g. the Picture Rock Quarry) represent the youngest mineralizing event in the Midway area.

In the Tam O'Shanter area, alteration occurs along the Deadwood Fault, which forms the eastern boundary of the Toroda Creek Graben. Large areas of argillic alteration and pervasive silicification occur in the Eocene Kettle River Fm. adjacent to the fault (Bengal and Sinter showings). Alteration and anomalous precious metal values also occur in Knob Hill Gp. chert pebble conglomerate, associated with northwest trending splays.

The 1991 campaign will evaluate the Tertiary structures for bulk tonnage epithermal targets. Work will concentrate on the Deadwood Fault and the Annex Fault in the Murray Gulch area. Both of these structures host known epithermal zones and cut drainages with anomalous stream sediments.

In the Murray Gulch area, a 200 by 50m reconnaissance grid is proposed to cover the inferred source area of anomalous Sb and As values detected by the 1990 contour sampling program. This grid will also cover a part of the Annex Fault where it crosses

drainages with anomalous heavy mineral values. The grid will be soil sampled and mapped. Reconnaissance IP and magnetic surveys will assist in identifying potentially mineralized zones.

A similar program will be carried out over the Deadwood Fault on the Tam O'Shanter grid. Exploration will focus on the areas to the north and southeast of the Bengal and Sinter occurrences.

In addition to this work, the rest of the property will be mapped and prospected to determine if there are any further areas of interest. Targets generated by this work will be drill tested.

PROPOSED WORK:

1. Grid coverage of the Annex Fault and the Murray Gulch areas to identify the source of anomalous soils and heavy minerals.

2. Extension of the Tam grid to the south, east and north over the strike extensions of the Deadwood Fault.

3. Complete geological mapping and rock sampling of the remainder of the property.

4. Backhoe trenching to expose known fault zones, geochemical and geophysical anomalies and to test targets generated by the above program.

5. Diamond drilling testing of the best targets.

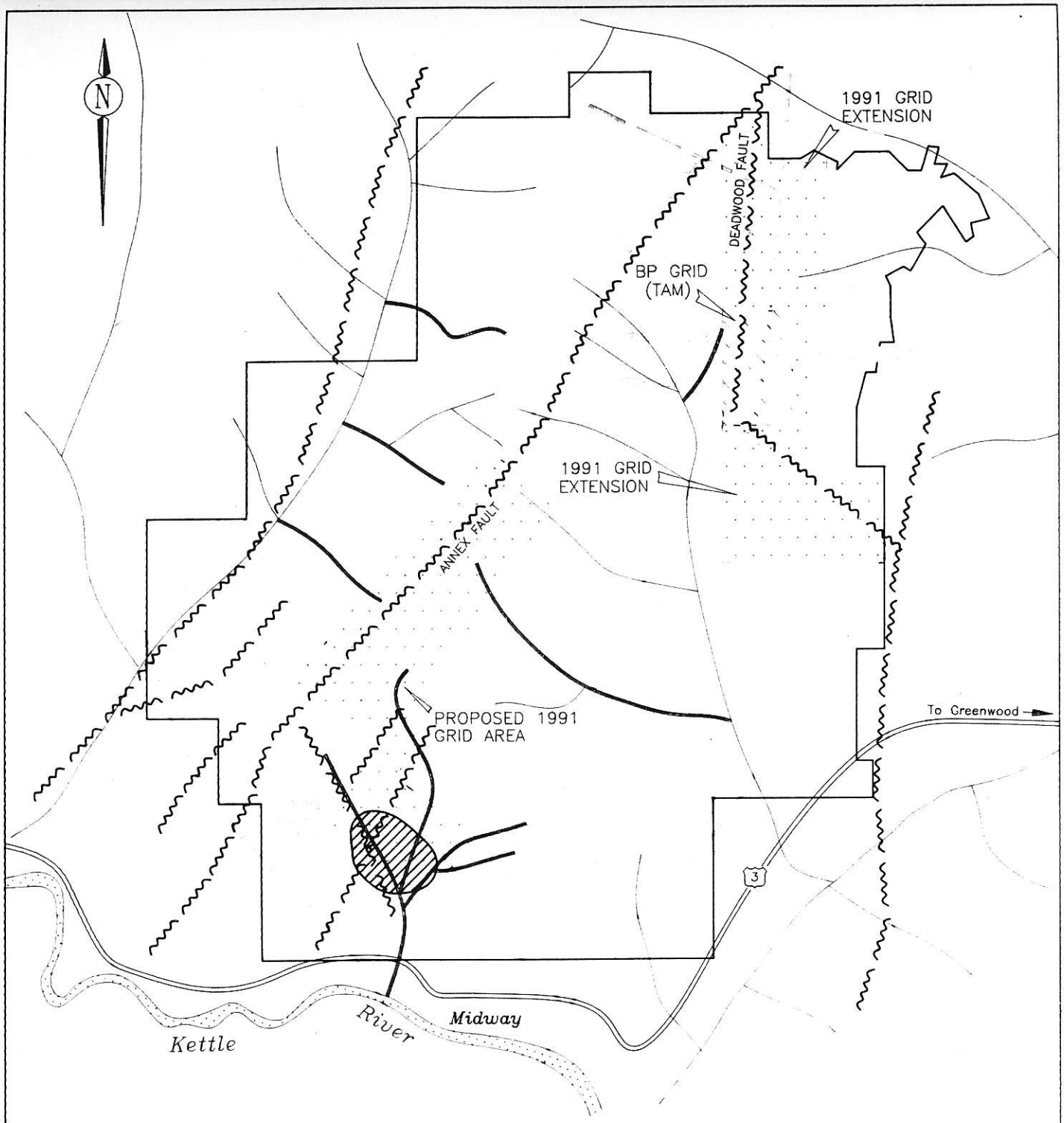
TENTATIVE SCHEDULE:

1.	Line Cutting	-	mid to late April.
2.	Mapping and soil sampling	-	May to early June.
3.	IP and Mag surveys	-	early May.
4.	Trenching and drilling	-	July - September.

PROJECT BUDGET FORECAST
1991

PROJECT NAME: RAINBOW PROJECT NO. 661

GEOLOGY				
100 Litho's @ $25/sample	Salaries	$30,700		
20 Assays @ $40/sample	Travel Expenses	$1,500		
	Contract Payments	$0		
	Field Expenses	$4,450		
	Analyses	$3,300	$39,950	15%
GEOPHYSICS				
35 km Mag/VLF	Salaries	$0		
20km IP	Travel Expenses	$0		
	Contract Payments	$28,200		
	Field Expenses	$500	$28,700	10%
GEOCHEMISTRY				
1200 Soils	Salaries	$3,300		
250 Rock geochem	Travel Expenses	$500		
	Contract Payments	$0		
	Field Expenses	$5,000		
	Analyses	$19,350	$28,150	10%
DRILLING				
1500m @ $60	Salaries	$12,000		
	Travel Expenses	$950		
	Contract Payments	$102,000		
	Field Expenses	$4,000		
	Analyses	$10,000	$128,950	47%
Line Cutting	35 km		$12,250	4%
Trenching			$10,000	4%
Hotels and Meals			$5,000	2%
Option Payments			$20,000	7%
Property Maintenance			$2,000	1%
Other			$0	0%
	TOTAL DIRECT EXPENDITURES		$275,000	



Aeromag linears

Sb–As Anomaly from 1990 contour soils

Anomalous drainage

Epithermal occurrence

0 1 2 3 4 5km

RAINBOW–TAM O'SHANTER

1991 WORK PROPOSAL

MINNOVA Inc.

FILE: D:\DWG\RTCOMP.DWG

DRH/sg

MARCH 1991

WHIPSAW (new)

1991 BUDGET PROPOSAL

BUDGET: $275,000 (100% Brenda)

OBJECTIVES:

1. To evaluate potential of the Whipsaw porphyry for a large tonnage, open-pittable Cu-Au deposit.
2. Follow-up and drill test Au anomalies in soils and rocks near the BZ and Silvertip occurrences.
3. Extend grid coverage to the north and west of the porphyry stock to further delineate the porphyry copper target and to assess the potential for a peripheral Au zone.

SUMMARY:

The Whipsaw porphyry system lies near the headwaters of Whipsaw Creek, approximately 26km southwest of Princeton and 15 km west of the Similkameen Cu-Au Mine. Access to the claims is via 18 km of logging road that leaves the Hope-Princeton Highway 13km south of Princeton.

Meta-volcanic and sedimentary rocks of the Triassic Nicola Gp. underlie the central and eastern parts of the property. These are intruded by granodiorites of the late Jurassic-early Cretaceous Eagle Plutonic Complex (EPC) which underlie the western claim area. The contact between the EPC and the Nicola Gp. is intruded by a younger (Tertiary) quartz monzonite stock known as the Whipsaw Porphyry. This intrusion is responsible for extensive hydrothermal alteration and Cu-Mo mineralization along its northern and western periphery.

Previous exploration efforts have identified an area of low

grade Cu and Mo mineralization approximately 600m long and 200m wide close to the northern intrusive contact. Grades in the order of 0.25% Cu and 0.01% MoS_2 over widths of up to 100m are documented from drill holes into this zone. The known porphyry mineralization lies within a broad chargeability anomaly (defined by the 125ms contour) that extends several hundred metres to the north and east of the drilled area. Much of this anomaly lies in a swampy area that is not amenable to summer drilling.

South of the porphyry, Au-Ag-Zn mineralization occurs in veins, breccias and skarn zones at the contact of the EPC and the Nicola Gp. sediments. These occurrences include the BZ, Silvertip and Metestopher showings. It is unknown if these occurrences represent a distal manifestation of the Whipsaw porphyry system or if they are related to the older EPC which is sporadically mineralized along its entire contact. Highly anomalous gold values from soils and rocks from around these occurrences suggest that there is good potential for a large Au bearing system.

Proposed Work:

Field work in 1991 will concentrate on three areas:

1. Silvertip Grid: Work will consist of geological mapping and sampling around the know showings; prospecting to locate the source of the Au soil anomalies; and IP and magnetic surveys to determine the extent of the mineralized zones. This will be followed by diamond drill testing of the most promising targets.

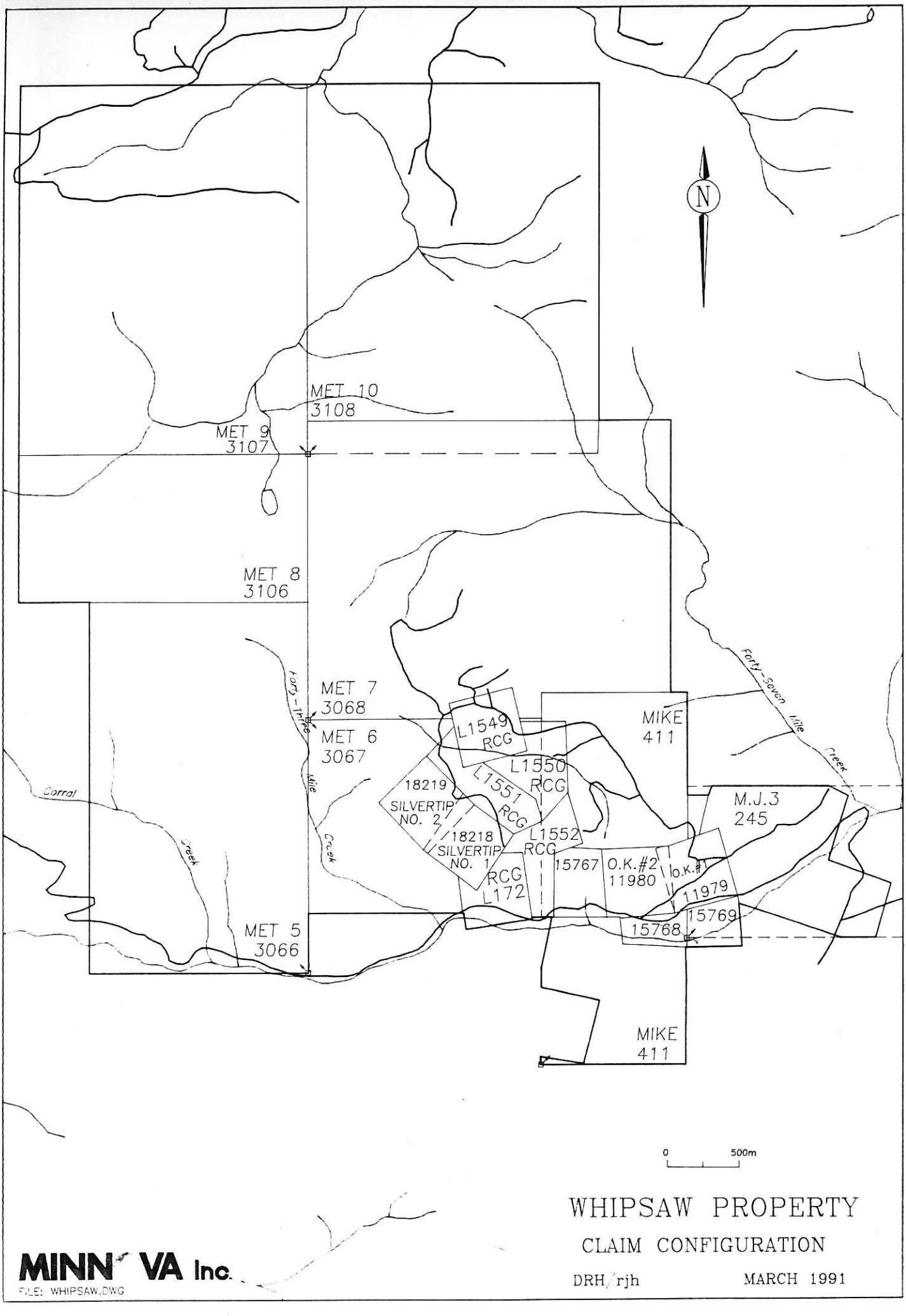
2. Porphyry West Area: Mapping, sampling and geophysical coverage (IP and Mag) will be extended to the west of the porphyry stock to cover an area with two significant drill intersections (holes DDH-1 and 2 - 0.26% Cu/75m and 0.49% Cu/29m). From the old data, this undefined area of mineralization appears to have no soil geochemical signature and no IP response. If it is part of the

porphyry system at the northern contact of the stock, it could substantially increase the size of the porphyry target. It will be drill tested if results of the ground work are positive.

3. **Porphyry North Area:** Mapping, sampling and geophysical coverage (IP and Mag) will be extended to the north of the known porphyry copper zone to test for the presence of a peripheral Au-rich halo. As much of this area is swamp covered, the extent of the ground work may be limited by access and exposure. This part of the program may be carried over to early 1992.

TENTATIVE SCHEDULE:

1.	Mapping, and sampling	-	mid June to late July.
2.	IP and Mag Surveys	-	July.
3.	Drilling	-	August-September.



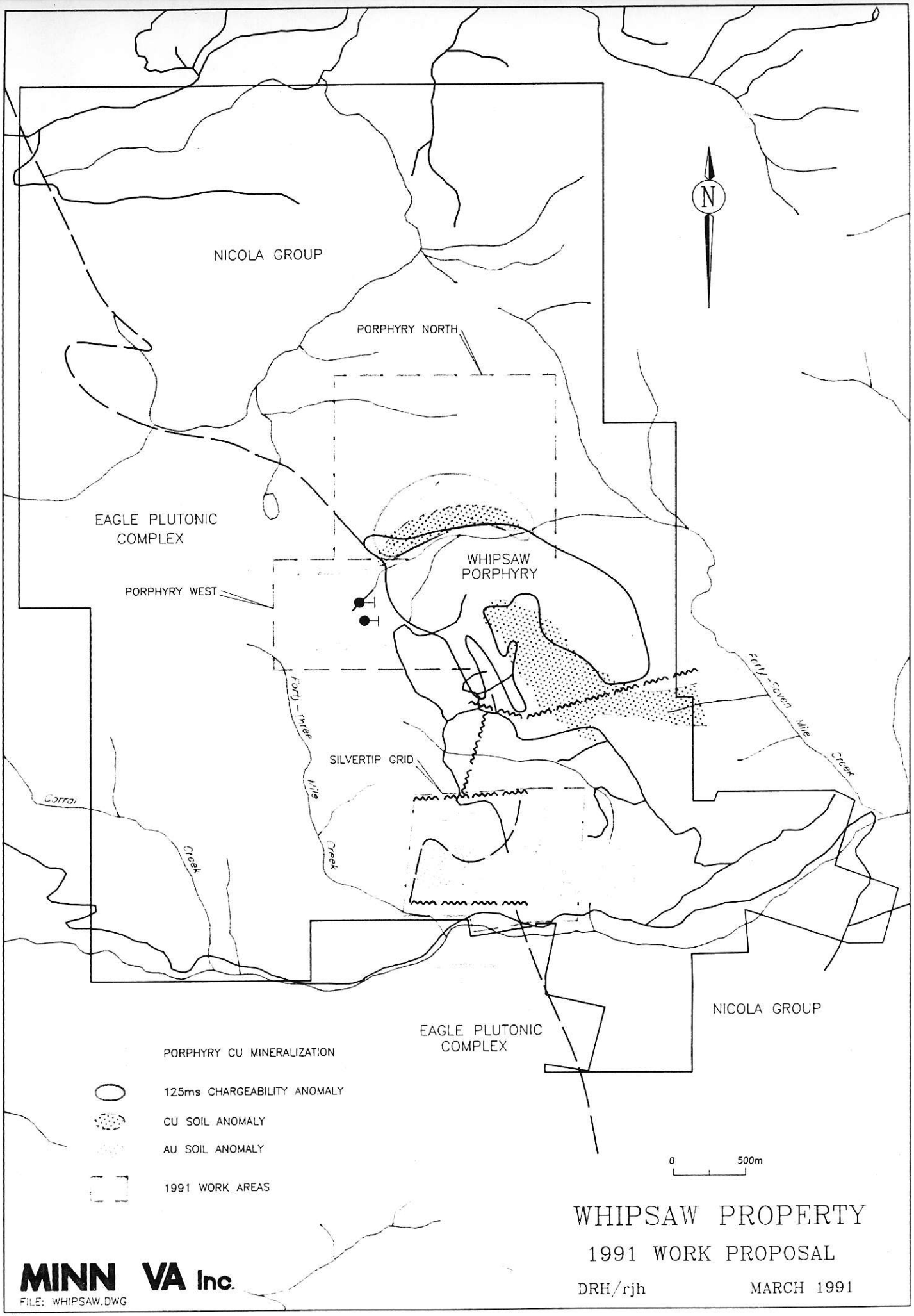
WHIPSAW PROPERTY

CLAIM CONFIGURATION

DRH/rjh MARCH 1991

MINNOVA Inc.

FILE: WHIPSAW.DWG



WHIPSAW PROPERTY

1991 WORK PROPOSAL

DRH/rjh MARCH 1991

MINN VA Inc.

FILE: WHIPSAW.DWG

PRCJECT BUDGET FORECAST
1991

PROJECT NAME: WHIPSAW PROJECT NO.

GEOLOGY				
	Salaries	$39,400		
	Travel Expenses	$0		
	Contract Payments	$0		
	Field Expenses	$3,700		
	Other	$0		
	Analyses	$3,200	$46,300	17%
GEOPHYSICS				
Recce IP, Mag				
- 40km	Salaries	$0		
	Travel Expenses	$0		
	Contract Payments	$49,800		
	Field Expenses	$0	$49,800	18%
GEOCHEMISTRY				
0 Soils				
150 Litho	Salaries	$0		
	Travel Expenses	$500		
	Contract Payments	$0		
	Field Expenses	$0		
	Analyses	$7,550	$8,050	3%
DRILLING				
1500m				
	Salaries	$6,600		
	Travel Expenses	$500		
	Contract Payments	$97,500		
	Field Expenses	$7,500		
	Analyses	$7,500	$119,600	43%
Line Cutting	18 km		$7,200	3%
Trenching			$10,800	4%
Hotels and Meals			$8,250	3%
Option Payments			$25,000	9%
Property Maintenance			$0	0%
Other			$0	0%
	TOTAL DIRECT EXPENDITURES		$275,000	

LAST CHANCE (622)
1991 BUDGET PROPOSAL

BUDGET: $100,000

OBJECTIVE:

1. Complete evaluation of the remaining targets on the claims.
2. Identify and drill test the source structure for Hg mineralization on the LC 1-4 claims.
3. Detail sample and drill test the breccia body on the LC-5 claim.

SUMMARY:

Two targets remain to be tested on the Last Chance property. On the LC 1-4 claims good potential still remains for a blind epithermal Au deposit. Drilling in 1990 tested the contact between Ashcroft Fm. conglomerates and Nicola Gp. volcanics which appears, at least locally, to be the locus for Hg mineralization. Mercury deposits in the LC area indicate a high structural level in the epithermal system. The presence of Hg anomalies at contacts and within permeable lithologies, such as the Ashcroft Fm. conglomerates, also indicates that the Hg may have migrated laterally from the source structure. Gold mineralization, if present, should occur at deeper levels in the system.

A potential source structure is indicated by a strong, northwest trending resistivity low that occurs to the east of the 1990 grid. This feature lies along the interpreted strike of the Sabiston Creek Fault; a regionally mineralized structure.

On the LC-5 property, the Split Rock breccia pipe is also indicative of a Tertiary hydrothermal system. This feature is most likely of Miocene age, since it cuts and alters Eocene Kamloops Gp.

fragmental rocks and is itself cut by basaltic dykes (possibly feeders to the Miocene olivine basalts in the area). Breccia pipes are most often genetically related to volatile rich intrusives; representing explosive discharge of late magmatic and mixed magmatic/deuteric fluids.

Gold deposits associated with breccia pipes are known throughout the world. Good examples occur in the Andean Cordillera (e.g. Guanaco, El Tambo and Minas del Prado, Chile - Camus, 1990) and in Australia (Kidstone - Mustard, 1966). In these systems gold mineralization, typically occurs in a zone of strong argillic and sericitic alteration close to the outer margin of the breccia pipe. The adjacent breccia and wallrock is usually weakly propylitized.

The Split Rock breccia pipe on the LC-5 claim exhibits similar charcteristics. The pipe is round in plan with a diameter of approximately 300m. It consists of a single monomictic phase (basaltic Kamloops Gp. fragments) with rounded fragments that are sometimes rimmed by secondary chalcedonic silica and bleached by moderate to weak argillic/sericite alteration. Fragmental rocks adjacent to the pipe are strongly argillized (e.g at the lahar cliffs). Stringers containing vuggy chalcedony have been noted in the brecoia and propylitic alteration is widespread in the brecciated basalt flows surrounding the pipe. The pipe has a weak Hg-Ag-Au geochemical signature.

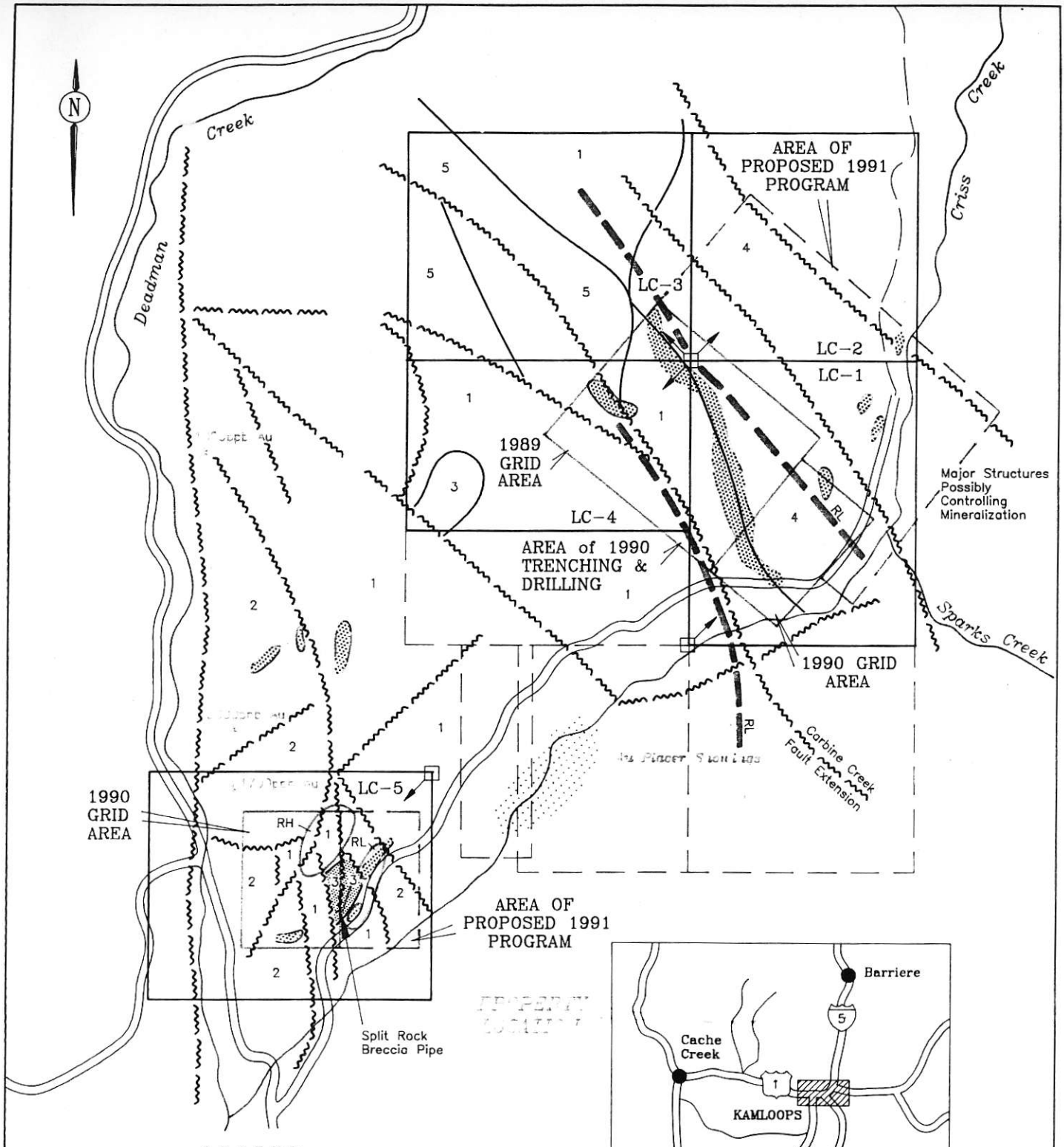
PROPOSED WORK:

Work is proposed for both LC properties. On the LC 1-4 geological mapping and reconnaissance soil sampling is proposed along the trace of the resistivity low. The objective is to locate precisely the fault and identify anomalous areas along it for drill testing.

At the breccia pipe on LC-5 a program of in-fill litho sampling (to at least a 50m density) is proposed. The aim of this work is to identify geochemical (As, Sb, Hg, Tl) and alteration hotspots in the breccia that reflect a mineralized system at depth. If present, anomalies will be drill tested.

TENTATIVE SCHEDULE:

1. Mapping and Sampling - June to July.
2. Drilling (if warranted) - September.



LEGEND

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)
	1989 Heavy Mineral Sample Location
	Soil Anomaly (Hg)
RH,RL	Resistivity (High,Low)

LAST CHANCE PROPERTY

1991 WORK PROPOSAL

MINNOVA Inc.

FILE: D:\DWG\GEOLC

CJC/sg

JANUARY 1991

PROJECT BUDGET FORECAST
1991

PROJECT NAME: LAST CHANCE PROJECT NO. 622

GEOLOGY				
20 Lithos	Salaries	$20,100		
180 Geochem	Travel Expenses	$300		
	Contract Payments	$0		
	Field Expenses	$500		
	Analyses	$3,200	$24,100	24%
GEOPHYSICS				
6 km Rece I.P. @ $1200/km	Salaries	$0		
	Travel Expenses	$300		
	Contract Payments	$7,200		
	Field Expenses	$300	$7,800	8%
GEOCHEMISTRY				
400 Soils @ $13/sample	Salaries	$1,800		
	Travel Expenses	$300		
	Contract Payments	$0		
	Field Expenses	$500		
	Analyses	$5,200	$7,800	8%
DRILLING				
750m @ $50/m	Salaries	$3,000		
	Travel Expenses	$300		
	Contract Payments	$37,500		
	Field Expenses	$500		
	Analyses	$2,000	$43,300	43%
Line Cutting			$0	0%
Trenching			$10,000	10%
Hotels and Meals			$3,000	3%
Option Payments			$0	0%
Property Maintenance			$4,000	4%
Other			$0	0%
	TOTAL DIRECT EXPENDITURES		$100,000	