

REVERSE CIRCULATION
PERCUSSION DRILLING
ASSESSMENT REPORT

LOG NO: 0607	RD.
ACTION:	
FILE NO:	

ON THE

MODEL CLAIM GROUP

TUNKWA LAKE AREA
KAMLOOPS MINING DIVISION

by

MURRAY MORRISON, B.Sc.

Claims: Model 1-3, Anne 1-6 (65 units)
Location: The Model property is situated 2 km east
of Tunkwa Lake, or 13 km due north of
Logan Lake, B.C.
Latitude: 50°37'; Longitude: 120°49'
N.T.S. Map 92-1-10 W
Owner: Mad River Resources Inc.
Operator: Mad River Resources Inc.
Date Started: December 9, 1989
Date Completed: December 21, 1989

Kelowna, B.C.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

May 18, 1990

20,034

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SUMMARY

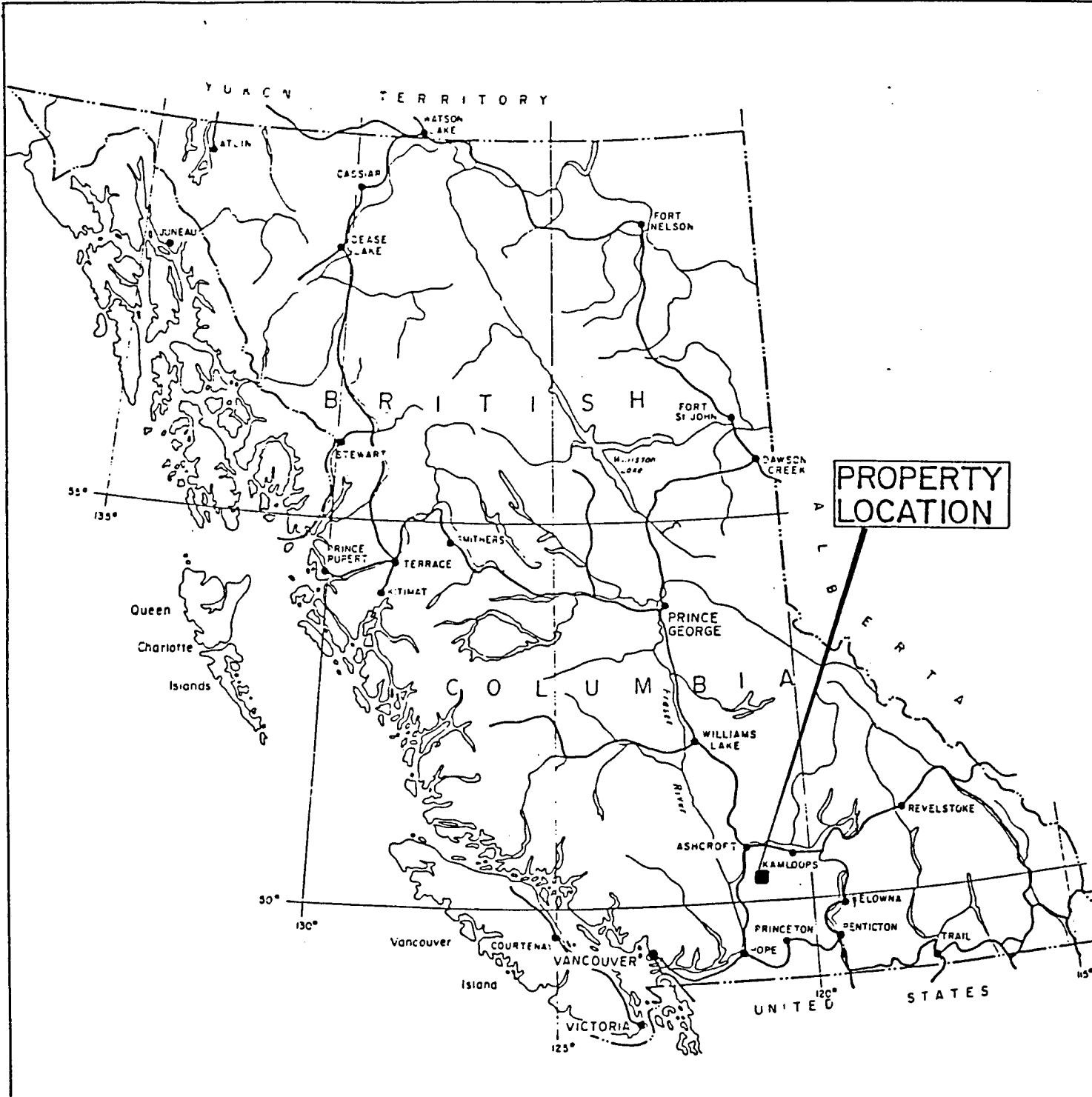
A Reverse Circulation Drill Program was conducted December 9-11, 1989 on the Model Group of mineral claims located near Tunkwa Lake, 13 km due north of Logan Lake, B.C.. The program, financed by Mad River Resources Inc. of Calgary (owner/operator), consisted of 7 drill holes totalling 733 metres, all drilled on the Model 1 mineral claim. The drill holes, ranging in depth from 54.9 to 144.8 metres, were all drilled into highly fractured, carbonate and/or silica replaced, metasediments or metavolcanics of the Upper Triassic Nicola Group transected by the Model Fault Zone.

The Model Fault Zone is a large structure occurring at the old Tunkwa Lake Mercury Prospect on the Model 1 mineral claim, that during 1988 geochemical, geophysical and geological surveys was determined to cross the property at 050 degrees/vertical.

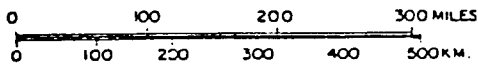
The 1989 Reverse Circulation Drill Program confirmed the size and attitude of the Model Fault Zone, and proved that the typical epithermal indicator elements, mercury, antimony, and arsenic, accompany low temperature silica and carbonate replacement to depths of at least 125 metres within the fault zone.

No significant precious metal values were discovered during the 1989 drill program, but the magnitude of the Model Fault Zone was clearly demonstrated.

The potential for finding a large quartz stockwork(or skarnified limestone)bearing precious metal values at a depth in excess of 250 metres east of drill hole M89-4 is suggested. The drill testing for such a target must be considered a high risk venture in light of the fact that no precious metal values of significance have yet been found on the Model Claim Group.



MAD RIVER RESOURCES INC.		
H. M. JONES & ASSOCIATES INC.		VANCOUVER, B.C.
MODEL PROPERTY LOCATION MAP KAMLOOPS LAKE AREA		
N.T.S. 92 I-10W		KAMLOOPS M.D., B.C.
SCALE AS SHOWN		NOV. 1988
DRAWN BY: M.M.		Map 1



M. Morrison

INTRODUCTION

During December, 1989 a seven hole Reverse Circulation Percussion Drill program, totalling 733 metres, was conducted on the 65-unit Model-Anne "gold" prospect located 2 kilometres east of Tunkwa Lake, or 13 kilometres due north of the village of Logan Lake, B.C.. The drilling was carried out by Northspan Exploration of Kelowna, B.C. and financed by owner/operator Mad River Resources of Calgary, Alberta.

The original Model 1-3 mineral claims of the Model Claim Group were staked by the writer in March, 1981 to cover the old "Tunkwa Lake Mercury Prospect" which was considered to have potential as an epithermal gold prospect. The property was subsequently optioned to Placer Development Ltd. (1981-1984), to Lacana Mining Corporation (1984-1985), and finally, to Mad River Resources Inc. of Calgary (1988 to present). The ANNE 1-6 mineral claims were added to the property in 1988.

Work by Placer Development Ltd. in 1981 consisted of a widely spaced soil geochemical survey yielding inconclusive results. In 1984, Lacana Mining Corp. conducted geological and geophysical surveys over the immediate Tunkwa Mercury Prospect area, and in September of that year, drilled five diamond drill holes totalling 405 metres. Gold mineralization was not found and the option was terminated.

During 1988 and early 1989 expanded geochemical, geophysical and geological surveys were conducted over the Model 1-3 and ANNE 2 mineral claims by Mad River Resources Inc. These surveys resulted in the selection of the December, 1989 drill targets at the old Tunkwa Lake Mercury Propect on the Model 1 mineral claim.

The writer supervised the 1989 drill program and logged the drill holes. Drill logs were then provided to Engineer Harold M. Jones

Continued . . .

120°49'

To Savona
17 Km

Road

ANNE 5

Tunkwa Cr.

MODEL 2

Leighton Lake

Tunkwa Lake

ANNE 4

MODEL 1

ANNE 2

Old Tunkwa
Mercury Prospect

MODEL 3

ANNE 6

ANNE 1

ANNE 3

MINERAL
RESERVE

50°35'

To Logan Lake
11 Km.

0 1 2 KM.

- - - Access roads
- Legal corner posts



J.M. Morrison

MAD RIVER RESOURCES INC.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

MODEL PROPERTY

CLAIM MAP

KAMLOOPS LAKE AREA

N.T.S.92I-10W

KAMLOOPS M.D., B.C.

SCALE 1: 50,000

NOV. 1988

Map 2

INTRODUCTION - Continued

of Vancouver who reviewed the data and appraised the results in a concise report written for Mad River Resources Inc. of Calgary. The writer has now taken the liberty of reproducing portions of the H.M. Jones report for this assessment report on the 1989 Reverse Circulation Drill program. In particular, the material under the title " Results " has been reproduced for this report along with supporting Figures 1-7. The first four paragraphs of H.M. Jones' "Discussion" have also been reproduced for this report. This writer, however, takes responsibility for the material written under the "Conclusion" title for this report.

Complete drill logs and certificates of geochemical analysis are appended to this report.

LOCATION AND ACCESS

The Model property lies 1 to 3 km east of Tunkwa Lake, or 13 km due north of Logan Lake, B.C. The Logan Lake - Savona all-season gravel road transects the property from southwest to northeast at a point 18 km from Logan Lake or 21 km from the TransCanada Highway at Savona. The property can be reached in one hour's driving time from Kamloops via either the TransCanada Highway - Savona route or the Coquihalla Highway - Logan Lake route. Several dirt or gravel roads extend to most parts of the Model property from the Logan Lake - Savona Road (please see Map # 2).

PHYSICAL FEATURES AND CLIMATE

The Model property lies on the Thompson Plateau midway between the Uplands of Highland Valley, 20 km to the southwest, and Kamloops Lake, 20 km to the northeast. Kamloops Lake occupies a portion of the arid Thompson Valley which falls within the rain shadow of the British Columbia Coast Mountains.

The property at an average elevation of 1,150 metres features very gentle relief with glacial moraines and drumlins forming long ridges 10 to 40 metres above the surrounding countryside. Drainage from the property follows a course to the north via Tunkwa and Durand Creeks to the Thompson River (Kamloops Lake) at 340 metres.

Glacial deposits are extensive, greatly limiting the bedrock exposures on the property.

The climate on the Thompson Plateau is moderate with winter minimums seldom lower than -30°C , and summer maximums rarely exceeding $+30^{\circ}\text{C}$. The spring and summer temperatures on the Model property are often five degrees cooler than those at Kamloops.

Annual precipitation on the property amounts to approximately 30 cms - half of it in the form of winter snow. The snow begins to accumulate in November and can equal up to 1 metre some years. Most of the snow melts from the property in early April.

Large open grassland areas, interrupted by shallow ponds or marshes, make up 30% of the region covered by the Model property. Lodgepole pine cover level portions of the property, while Douglas fir are dominant on the rolling hills. Some of the forest has been recently stripped by logging and replanted. Cattle graze on the open grasslands from May until October.

CLAIM STATUS

The property is made up of the Model 1-3 and ANNE 1-5 metric grid mineral claims, totalling 64 units and the ANNE #6, 2-post mineral claim.

The Model 1-3 mineral claims were staked by the writer, M. Morrison, of Kelowna, B.C., in March 1981. The ANNE #6 mineral claim was staked by the writer in August 1988.

The Model 1-3 mineral claims have been optioned to Mad River Resources Inc. of Calgary which can earn a 100% interest in the property subject to payments and conditions outlined in an agreement dated May 3, 1988. The ANNE #6 mineral claim is included within the terms of the same option agreement. The ANNE 1-5 mineral claims, staked during April, 1988, have been purchased by Mad River Resources Inc.

Particulars on the Model property mineral claims are listed below:

<u>Claim Name</u>	<u>Units</u>	<u>Date of Recording</u>	<u>Record No.</u>	<u>Mining Division</u>	<u>Expiry Date*</u>
Model 1	4	Mar 16/81	3325	Kamloops	Mar 16/93
Model 2	4	Mar 16/81	3326	"	Mar 16/93
Model 3	4	Mar 16/81	3327	"	Mar 16/93
ANNE 1	2	Apr 13/88	7589	"	Apr 13/93
ANNE 2	12	Apr 13/88	7590	"	Apr 13/93
ANNE 3	8	Apr 13/88	7591	"	Apr 13/93
ANNE 4	12	Apr 13/88	7592	"	Apr 13/93
ANNE 5	18	Apr 13/88	7593	"	Apr 13/93
ANNE 6	<u>1</u>	Aug 9/88	7951	"	Aug 9/93
	65				

* The Expiry Date is based on the acceptance of this report for Assessment Work Credits.

It should be noted that the southeast corner of mineral claim ANNE #3 overlaps a Mineral Reserve, and that the area covered by this claim is thus reduced by approximately one-half unit (12.5 hectares). (please see Map #2).

HISTORY

The mercury occurrence located on the Model 1 mineral claim is first referred to in the Geological Survey of Canada Summary Report for 1918 (part B, p. 20) under the name of the "Summit Group". The occurrence has been restaked over the years as the Mercury, OK, Cinnabar Ridge, Bull Horn, RR, and the Tunkwa mineral claims.

The original workings consisted of a 5 metre vertical shaft and a 6 metre inclined shaft located at the north end of a knoll next to the Logan Lake - Savona Road. The remains of a small concrete retort are also located at this site, 550 metres north and 650 metres east of the Legal Corner Post of the Model 1 mineral claim. The knoll has been explored by several small cuts and the production of mercury (amounting to less than 50 kg) apparently came from these shallow cuts and the shafts. There are also several shallow cuts into low rusty ridges fringing a pond east and southeast of the old retort. The work was designed to find mercury within the carbonate altered rocks and no mention of gold is made in any of the literature referring to the old mercury prospect.

The Model 1-3 mineral claims were staked over the old Tunkwa mercury prospect by the writer in March 1981 and Placer Development optioned the property in April 1981 as a gold prospect.

During 1981, Placer Development conducted a widely spaced (25 by 250 metre) soil geochemical program over the Model 1-3 mineral claims, and had 471 samples analyzed for mercury, gold, silver, arsenic, antimony, molybdenum, copper and zinc. Large mercury, arsenic and antimony soil anomalies were outlined, but gold and silver values were low and Placer Development Ltd. elected to return the property to the vendor in 1984.

Lacana Mining Corporation optioned the property in March 1984 as a potential epithermal gold occurrence, and had the Model 4-8 mineral claims staked around the perimeter of the Model 1-3 mineral claims. Lacana conducted VLF-EM and

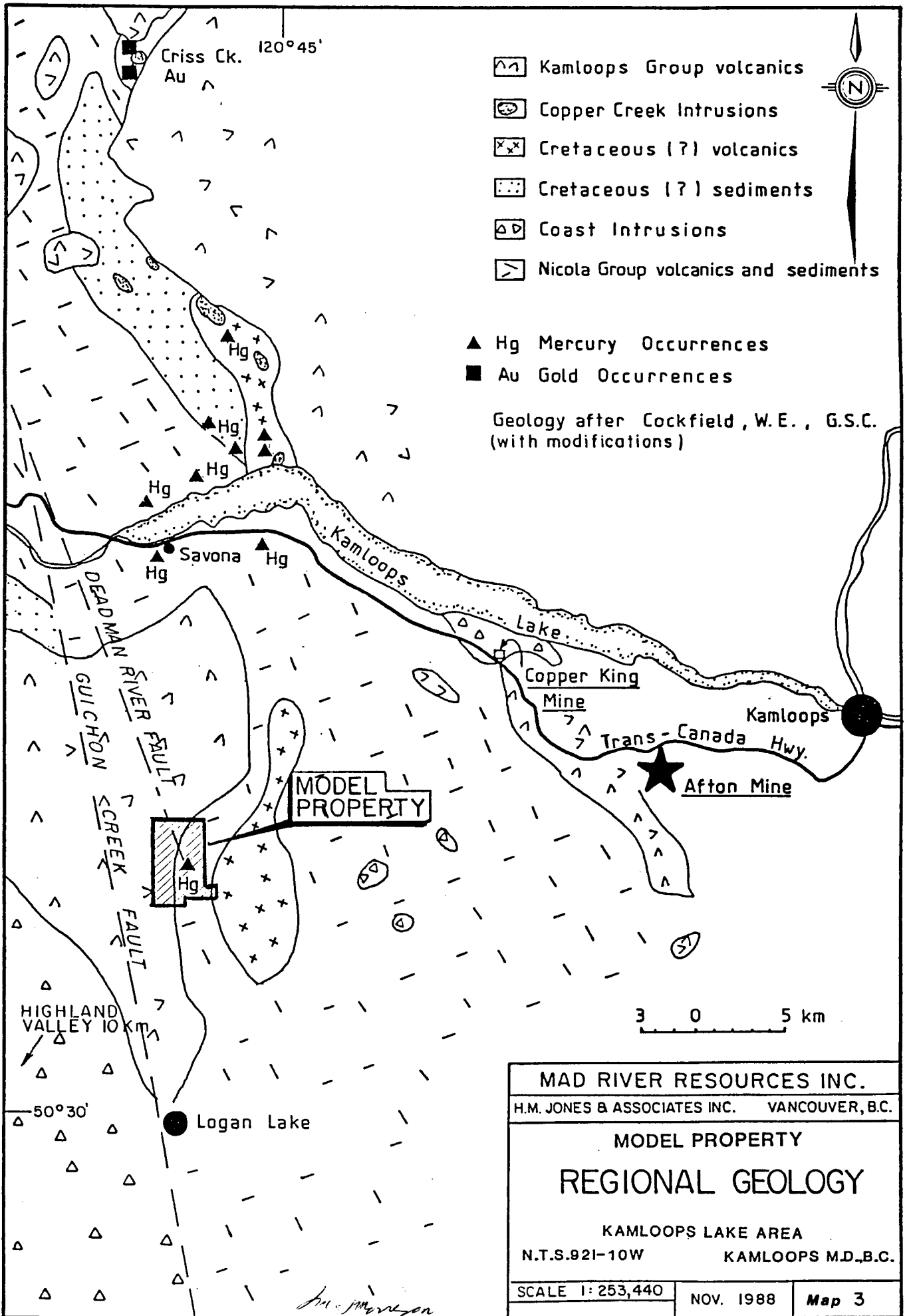
magnetometer surveys over the immediate area of the old Tunkwa mercury prospect, and followed-up on the preliminary surveys with a diamond drilling programme. Five inclined drill holes, totalling 405 metres, were drilled from four sites. The longest drill hole was drilled to 124 metres at an inclination of minus 45 degrees, or to a depth of 95 metres below surface. The sludge of each 10 foot (3.28 m) intercept, as well as selected core intervals, were analyzed for 31 elements including gold, silver, mercury, antimony and arsenic. Although some carbonate/silica replaced drill intercepts yielded high mercury, antimony and arsenic values the precious metal values were negligible, and Lacana dropped their option on the property.

The property received no further attention until May of 1988 when Mad River Resources Inc. of Calgary, optioned the Model 1-3 mineral claims. The old Model 4-8 mineral claims were restaked as the ANNE 1-5 mineral claims in April, 1988, and were purchased by Mad River Resources Inc. The ANNE 6, 2-post mineral claim was added to the property in August, 1988.

In 1988 and early 1989 detailed geochemical (soil), geophysical (ground VLF-EM and magnetometer) and geological surveys were conducted over the Model 1-3 mineral claims and the northern portion of the ANNE 2 mineral claim. The surveys, financed by Mad River Resources Inc. resulted in the selection of the 1989 Reverse Circulation drill targets.

REGIONAL GEOLOGY

Map # 3 illustrates the regional geology of the Kamloops Lake area. The geology has been traced with some modifications from Map 886A, entitled "Nicola" by W.E. Cockfield of the Geological Survey of Canada. The oldest rocks in the region are the metasediments and metavolcanics of the Upper Triassic Nicola Group which form a broad belt, widening to the south, and extending from 30 km northwest of Savona to 40 km southeast of Savona on Map# 3. The Nicola Rocks are intruded by the Guichon Batholith to the southwest and the Iron Mask Stock to the northeast - both Intrusives are related to the Jurassic-Cretaceous(?) Coast Intrusions. Jurassic sediments and volcanics overlie the Nicola rocks over narrow bands up to 25 km north and south of Savona, and these rocks, along with the Nicola Group rocks, have been intruded by small Tertiary(?) plugs of the Copper Creek Intrusions. Large areas to the southwest and to the northeast of Savona are covered by Kamloops Group Tertiary volcanic flows and intercalated sediments.



Finally, deep deposits of Pleistocene glacial drift are widespread throughout the map area and cover much of the Model property.

In the Savona district, the geology has a distinct northwesterly trend, with probable major faults aligning with Deadman River, Sabiston Creek, Carabine Creek, and Durand Creek. Open File Map 980 of the Ashcroft area by J.W.H. Monger et. al. of the Geological Survey of Canada indicates that the Deadman River Fault extends south at least as far as the Tunkwa mercury prospect. A splay from the Deadman River Fault continues south as the Guichon Creek Fault.

Several northwest and northeast lineaments of lesser order of magnitude, not shown on Map 980, also dissect the Nicola Group Rocks. Early Tertiary(?) intrusives with related carbonate and siliceous alteration zones appear to align with some of these lesser order lineaments.

REGIONAL MINERALIZATION

The Model property lies between two highly productive mining camps in south-central British Columbia. The world-renowned Highland Valley copper-molybdenum mines lie 20 km to the southwest of the property, while the rich Afton copper-gold mine lies 25 km to the northeast. The large copper mines are associated with plutonic rocks of Jurassic-Cretaceous(?) age, and apparently predate the mercury occurrences of the Savona Mercury Belt.

Mercury prospects of the Savona Mercury Belt occur associated with faulted, ankeritic and/or siliceous alteration zones within Triassic or Jurassic metasediments or metavolcanics. North of Kamloops Lake there is a clear spatial relationship between Tertiary(?) Copper Creek Intrusions and mercury occurrences. South of Kamloops Lake the Copper Creek Intrusions are believed to underlie many of the faulted alteration zones associated with the mercury prospects, although at most, the Tertiary intrusives have not yet been exposed by erosion. The alteration

zone at the old Tunkwa mercury prospect (now covered by the Model 1 mineral claim) is believed to cap one such Tertiary intrusion.

It is suspected that the mercury prospects associated with high-level intrusive plugs of Tertiary age may represent the upper horizons of potential epithermal gold-bearing systems. Gold has been found associated with a Copper Creek intrusion at Criss Creek 30 km north of Savona. Also, gold, silver, antimony, lead, zinc and copper mineralization have all been found associated with ankeritic carbonate alteration zones south of Kamloops Lake on other properties examined by the writer. The Brussels property, 17 km to the northeast of the Model property, has yielded samples with 1750 parts per billion (ppb) gold, and the Sprout property, 15 km to the northeast of the Model property, has yielded samples with 1650 ppb gold, 316 ppm silver, up to 10% antimony, 1.5% lead and 1.5% zinc.

It appears that in addition to mercury, the alteration zones associated with Copper Creek Intrusions also have the potential to carry both precious and base metal values.

PROPERTY GEOLOGY

The property geology was mapped by the writer in 1988 (M. Morrison, 1988), and Map M-88-9 at a scale of 1:10,000 accompanies this report. A brief summary of the geology is given below based on the 1988 mapping and 1989 drilling results.

Upper Triassic Nicola Group metavolcanics and metasediments underlie the eastern half of the Model Claim Group as illustrated on Map M-88-9. The Nicola Group rocks are believed to strike north and dip moderately east (where not affected by local drag-folding).

The Nicola Group is made up of volcanic rocks predominantly of andesitic composition. Sedimentary rocks of clastic and chemical deposition are intercalated within the thick sequence of volcanic rocks and possibly account for 5% of the total rock volume.

The Nicola Group rocks are locally cut by diorite dykes of possible Late Cretaceous age and by late rhyodacite dykes of possible Tertiary Age.

Tertiary Kamloops Group volcanics and sediments unconformably overlie the Nicola Group rocks on the western side of the property. The Kamloops Group is made up of andesitic and basaltic flows with intercalated conglomerates and breccias. The Tertiary volcanics are nearly flat-lying on the western side of the property (ANNE 4 mineral claim), but dip steeply to the northwest, north of Tunkwa Creek (on the ANNE 5 mineral claim).

Deep Pleistocene till and gravel cover much of the property.

Several strong faults are believed to pass through the Model property. The Deadman River Fault is thought to cut southeasterly through the centre of the claim group, while three northeast striking faults (the Model Fault, and the M1 and M2 Faults) were inferred from data collected during 1988 property mapping.

Continued . . .

PROPERTY GEOLOGY - Continued

Wide zones of brecciated rock or gouge, pervasively carbonate, and/or silica-replaced, mark the trace of the larger faults on surface. The Model Fault Zone, mapped in 1988 as passing northeasterly through the Tunkwa Lake Mercury Prospect, is one such fault.

The Model Fault Zone, confirmed by the 1989 drilling, cuts through metavolcanics and metasediments of the Nicola Group. The fault zone has been invaded by a late Tertiary (?) rhyodacite dyke that in turn has been brecciated and altered to clay minerals. Elevated mercury, antimony and arsenic values accompany late ank-erite, dolomite and quartz veinlets and pervasive low temperature silica replacement to depths of at least 125 metres within the fault zone, but precious metal values are uniformly low.

DRILL PROGRAM

The Drill

A track-mounted Reverse Circulation Percussion Drill was hired from Northspan Exploration Ltd. of Kelowna for the Model drill program. The drill, with a capacity to drill a 10.8 cm bore hole to a depth of at least 150 metres, was considered suitable for the job. The self-contained drill, built by Northspan in conjunction with Kelowna Steel Fabricators, features components from several Trade Name companies. It has been given the name "Explorer" by the builders.

The drill is equipped with a dozer blade for site levelling and carries 140 metres of drill rod in a side rack. A service pick-up truck and a one-ton water truck with 1300 litre tank accompanies the drill to each site.

The drill was trucked directly to the property from Kelowna via Kamloops, Logan Lake, and the Logan Lake-Savona road.

Continued . . .

DRILL PROGRAM - Continued

Site Preparation

All drill sites were near the margins of a shallow alkaline pond and the frozen dry bed of the pond allowed for easy access without road building during the month of December.

Sumps for drill tailings were dug at some drill sites with the dozer blade mounted on the drill.

Reclamation

Reclamation, which will include the filling-in of sumps, the planting of grass seed, and spreading of fertilizer, has had to await spring breakup and it has not been completed at the time of writing this report.

The Program

The drilling program was conducted December 9-21, 1989, during a relatively mild winter. The drilling was conducted dry to approximately 30 metres in most of the drill holes. Below 30 metres downhole water was suffice for continued wet drilling without the necessity of trucking water to the drill sites.

The seven Reverse Circulation drill holes were drilled from five sites illustrated on Figure 1. All of the drill holes were drilled near the centre of the Model 1 mineral claim at the old Tunkwa Mercury Prospect. The area covered by the drill program measures 100 by 200 metres within the Model Fault Zone.

The specifics of the 7 drill holes are listed in the table on the following page:

Continued . . .

DRILL PROGRAM - Continued

The Program - Continued

The drill program consisted of seven holes totalling 733 metres. They were (for locations see Fig. 1):

<u>Hole No.</u>	<u>Coordinates</u>		<u>Bearing</u>	<u>Dip</u>	<u>Length (m)</u>
	<u>North</u>	<u>West</u>			
89-1	21+32N	11+01W	N40W	-60	89.9
89-2	21+32N	11+01W	--	-90	96.0
89-3	21+78N	10+83W	N40W	-80	120.4
89-4	22+33N	10+68W	S40E	-70	144.8
89-5	21+05N	11+32W	N40W	-72	123.4
89-6	20+67N	11+53W	N40W	-60	59.4
89-7	21+30N	10+98W	S40E	-70	99.1
				Total	733 m

Sampling

Approximately 40 kg of rock powder and chips were produced by each 3 metre drill intercept. A 3-way splitter situated under the cyclone yielded a one-eighth split of the large samples for analysis. In many cases the sample was split once again into a manageable 2½ kg size for shipment to the lab. A reject sample was also collected from each 3 metre drill intercept, and a rock chip sample was screened and washed from spare sample material for geological studies.

The wet (frozen) samples were delivered to Eco-Tech Laboratories Ltd. in Kamloops in plastic bags. Each 3 metre intercept of each drill hole was submitted to the lab for analysis. In all, 229 samples were analyzed for 30 element ICP plus mercury by flameless AA, and 156 of these samples were additionally analyzed for gold by Fire Assay and Atomic Absorption finish.

Continued . . .

DRILL PROGRAM - Continued

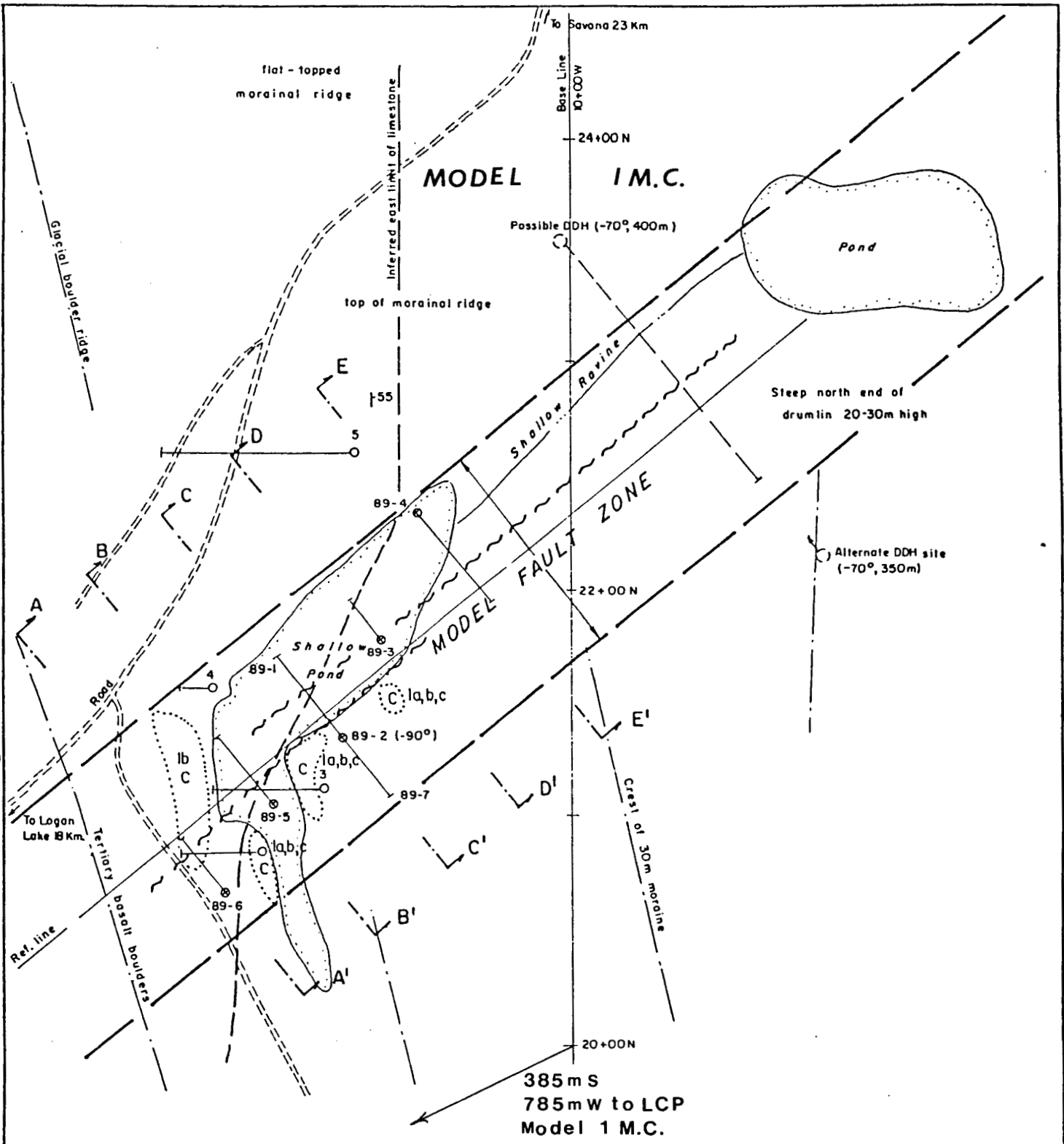
Sampling - Continued

For each sample the rock chips and powder submitted were crushed to -10 mesh and a subsample of 250 g of each was ring pulverized to approximately -140 mesh. Aqua Regia digestion was used for the ICP 30 element analyses.

The results of all of the analyses are listed in Appendix D.

RESULTS

- * A broad structural zone, the Model Fault zone, is inferred to cross the property cutting all geologic units (Morrison, 1988, 1989). It is inferred to trend N50E and is approximately 100 metres wide. Drilling in 1984 by Lacana indicated this zone consisted of many faults, mostly trending parallel to the zone but others at cross-cutting trends. The epithermal system referred to earlier occurs within this structural zone.
- * All 1989 drill holes tested this broad zone on sections mostly at 40 metre separations (see Fig. 1). They were planned to test a central fault zone - Model Fault (F₁) - as well as the rocks adjacent to it. The geology in each hole was plotted on the appropriate section, shown as Figs. 2 to 6, which are accompanied by overlay sections. These latter sections graphically illustrate the parts of each hole which have elevated values in arsenic, antimony and mercury, as well as those sections with appreciable silica and carbonate alteration.
- * Arsenic, antimony and mercury were selected because they appear to show a reasonable correlation with geology, silica and/or carbonate alteration. These are the better indicator minerals and alteration products associated with epithermal gold deposits.
- * It should be noted that reverse circulation drilling only returns cuttings. For this reason, geological contacts, fault and bedding attitudes, etc., cannot be measured or precisely located. The geologic logs are essentially an averaging of the geology over each 3 metre drill interval.



LEGEND

- TERTIARY
 - 2 Kamloops Group
 - Rhyodacite dyke
- TRIASSIC
 - 1 Nicola Group
 - 1a limestone
 - 1b siltstone
 - 1c andesite
- C Carbonate alteration
- Outcrop
- ~ Inferred fault
- 3 1984 Lacana drill hole
- 89-1 1989 Mad River " "
- Possible diamond drill hole



After Morrison, 1989

MAD RIVER RESOURCES INC.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

**MODEL PROPERTY
GEOLOGY and
DRILL HOLE LOCATIONS**

N.T.S. 92 I -10W KAMLOOPS M.D., B.C.

0 50 100 150 METRES

SCALE 1:2500

H.M. JONES

MARCH 1990

FIG. 1

H. Morrison

REF. LINE

89-6
-60°

E. 1160m

59.4m



As 50-100 ppm, Sb 20-30 ppm,
Hg >5000 ppb, Si >30%, Ca >40%



As >100 ppm, Sb >30 ppm

J.M. Morrison

MAD RIVER RESOURCES INC.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

**MODEL PROPERTY
DRILL SECTION : A - A'
ASSAY & ALTERATION**

KAMLOOPS LAKE AREA

N.T.S. 921-10W

KAMLOOPS M.D., B.C.

0 5 10 20 30 METRES

SCALE 1:600

H.M. JONES

MARCH 1990

FIG. 2 a

REF. LINE

89-6
-60°




El. 1160m.

ld

ld

59.4 m.

LEGEND

- TERTIARY
 - Kamloops Group
 - 2 Rhyodacite dyke
- TRIASSIC
 - 1 Nicola Group
 - 1a Limestone
 - 1b Siltstone
 - 1c Argillite
 - 1d Andesite
-  Fault - strong clay alteration
 -  - weak alteration
 -  Breccia
 - lb,lc Second unit much less than first

H.M. Jones

After Morison, 1989

MAD RIVER RESOURCES INC.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

**MODEL PROPERTY
DRILL SECTION : A - A'
GEOLOGY**

KAMLOOPS LAKE AREA

N.I.S. 921-10W

KAMLOOPS M.D., B.C.

0 5 10 20 30 METRES

SCALE 1 : 600

H.M. JONES

MARCH 1990

FIG. 2b



REF. LINE

89-5
-72°

El. 1160m.

123.4m

As
Sb
Hg
Si
Ca

-  As 50-100 ppm, Sb 20-30 ppm, Hg >5000 ppb, Si >30%, Ca >40%
-  As >100 ppm, Sb >30 ppm

Jm. Morrison

MAD RIVER RESOURCES INC.

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**MODEL PROPERTY
DRILL SECTION -- B - B'
ASSAY & ALTERATION**

KAMLOOPS LAKE AREA

N.T.S. 92 I -10W

KAMLOOPS M.D., B.C.

0 5 10 20 30 METRES

SCALE 1:600

MARCH 1990

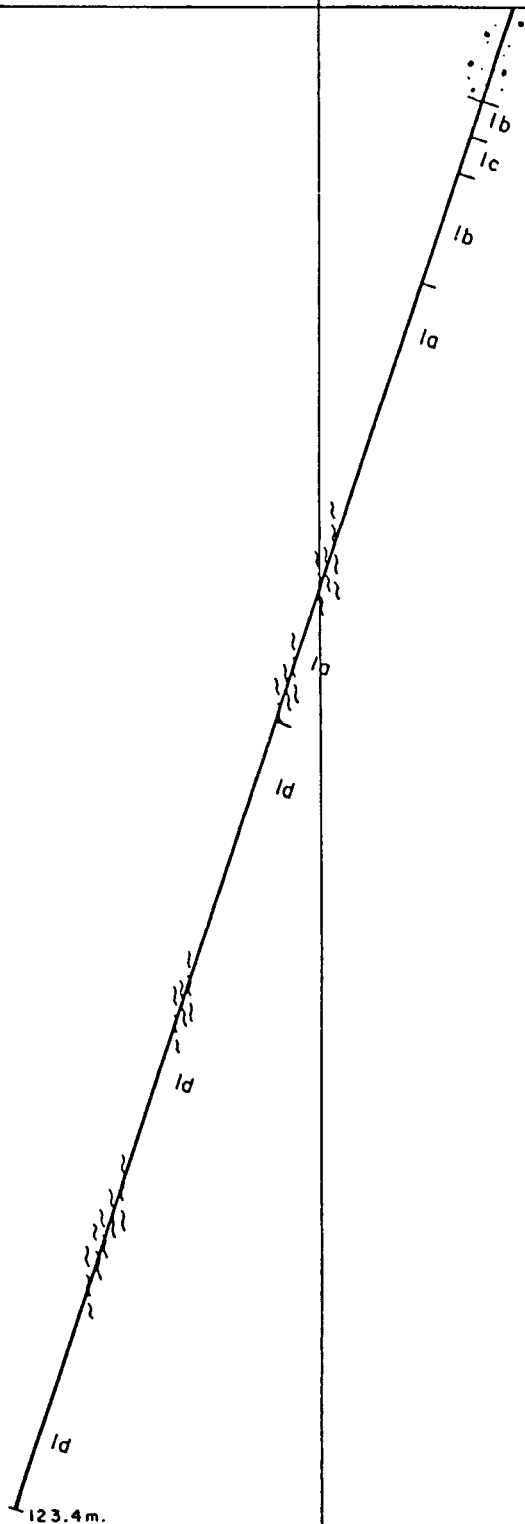
FIG. 3 a

H.M. JONES

REF. LINE

89-5
-72°

El. 1160m.



LEGEND

- TERTIARY**
 Kamloops Group
 2 Rhyodacite dyke
- TRIASSIC**
 1 Nicola Group
 1a Limestone
 1b Siltstone
 1c Argillite
 1d Andesite
- ~~~~~ Fault - strong clay alteration
 - - - - - weak alteration
 e ∇ Δ Breccia
 1b, 1c Second unit much less than first

John Morrison

After Morrison, 1989

MAD RIVER RESOURCES INC.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

**MODEL PROPERTY
DRILL SECTION : B - B'
GEOLOGY**

KAMLOOPS LAKE AREA

N.T.S. 92 I -10W

KAMLOOPS M.D., B.C.

0 5 10 20 30 METRES

SCALE 1 : 600

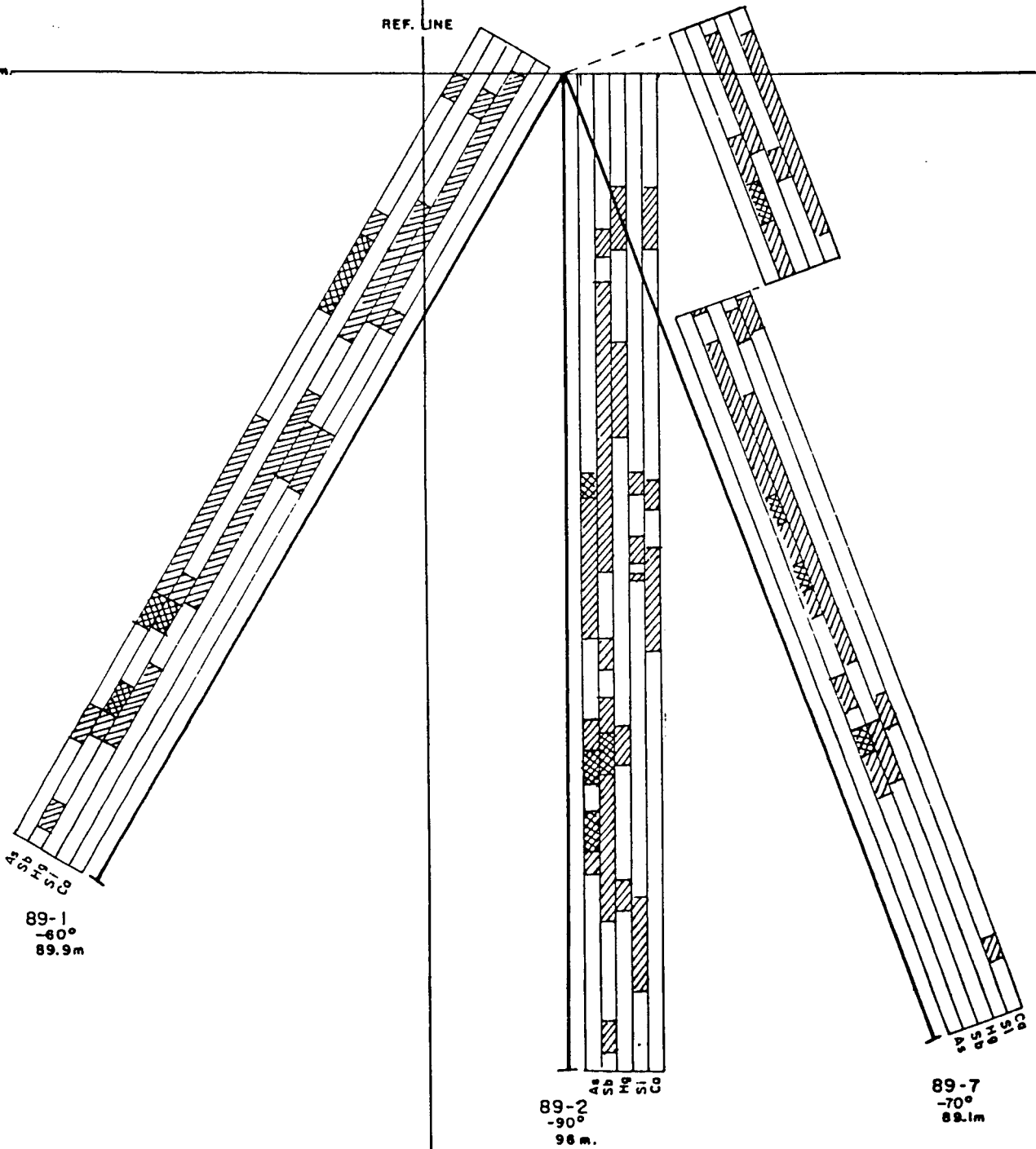
H.M. JONES

MARCH 1990

FIG. 3 b

REF. LINE



El. 1160m



89-1
-45°
89.9m

89-2
-90°
96m

89-7
-70°
88.1m

 As 50-100 ppm, Sb 20-30 ppm,
 Hg >5000 ppb, Si >30%, Ca >40%
 As >100 ppm, Sb >30 ppm

J. Morrison

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**MODEL PROPERTY
DRILL SECTION : C - C'
ASSAY & ALTERATION**

KAMLOOPS LAKE AREA

N.T.S. 921-10W

KAMLOOPS M.D., B.C.

0 5 10 20 30 METRES

SCALE 1 : 600

MARCH 1990

FIG. 4 a

H.M. JONES

REF. LINE

El. 1160m.

89-1
-60°
89.9m

89-2
-90°
96 m.

89-7
-70°
89.1m

LEGEND

- | | | | |
|-----------------|-----------------|--|----------------------------------|
| TERTIARY | | | |
| 1 | Kamloops Group | | Fault - strong clay alteration |
| 2 | Rhyodacite dyke | | -weak alteration |
| TRIASSIC | | | Breccia |
| 1 | Nicola Group | | Second unit much less than first |
| 1a | Limestone | | |
| 1b | Siltstone | | |
| 1c | Argillite | | |
| 1d | Andesite | | |

After Morison, 1989

MAD RIVER RESOURCES INC.

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**MODEL PROPERTY
DRILL SECTION : C - C'
GEOLOGY**

KAMLOOPS LAKE AREA

N.T.S. 92 I - IOW' KAMLOOPS M.D., B.C.

0 5 10 20 30 METRES

SCALE 1 : 600

H.M. JONES

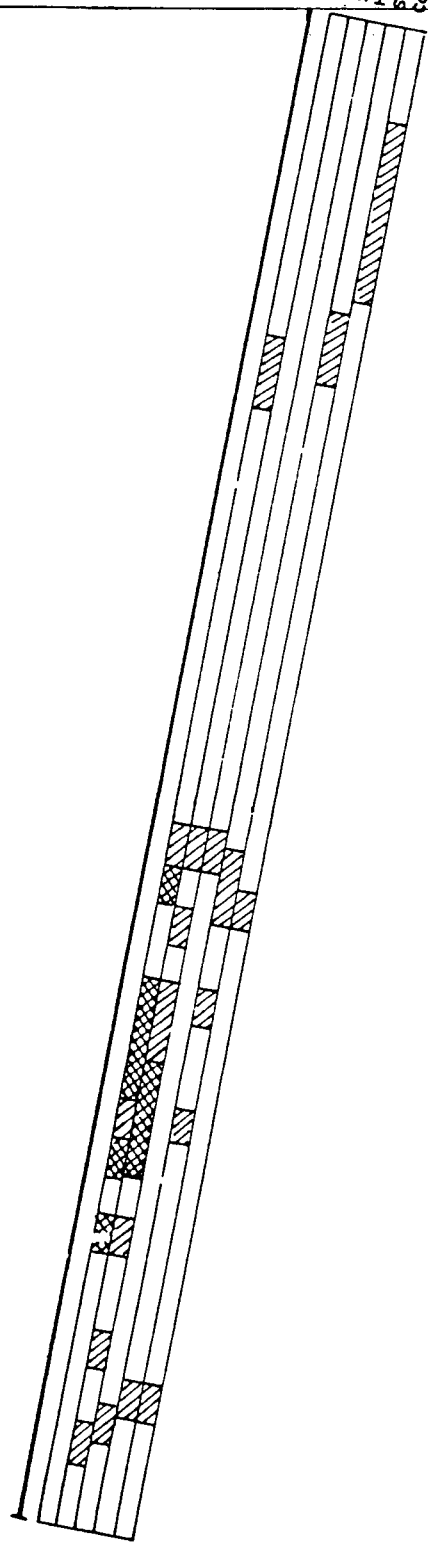
MARCH 1990

FIG. 4b

J.M. Morrison

89-3 REF. LINE
-80°

El. 1160m.



120.4 m.

////// As 50-100ppm, Sb 20-30ppm,
Hg >5000ppb, SI >30%, Ca >40%

▨ As >100 ppm, Sb >30 ppm

H.M. Jones

MAD RIVER RESOURCES INC.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

**MODEL PROPERTY
DRILL SECTION : D - D'
ASSAY & ALTERATION
KAMLOOPS LAKE AREA**

N.T.S. 921-10W

KAMLOOPS M.D., B.C.

0 5 10 20 30 METRES

SCALE 1 : 600

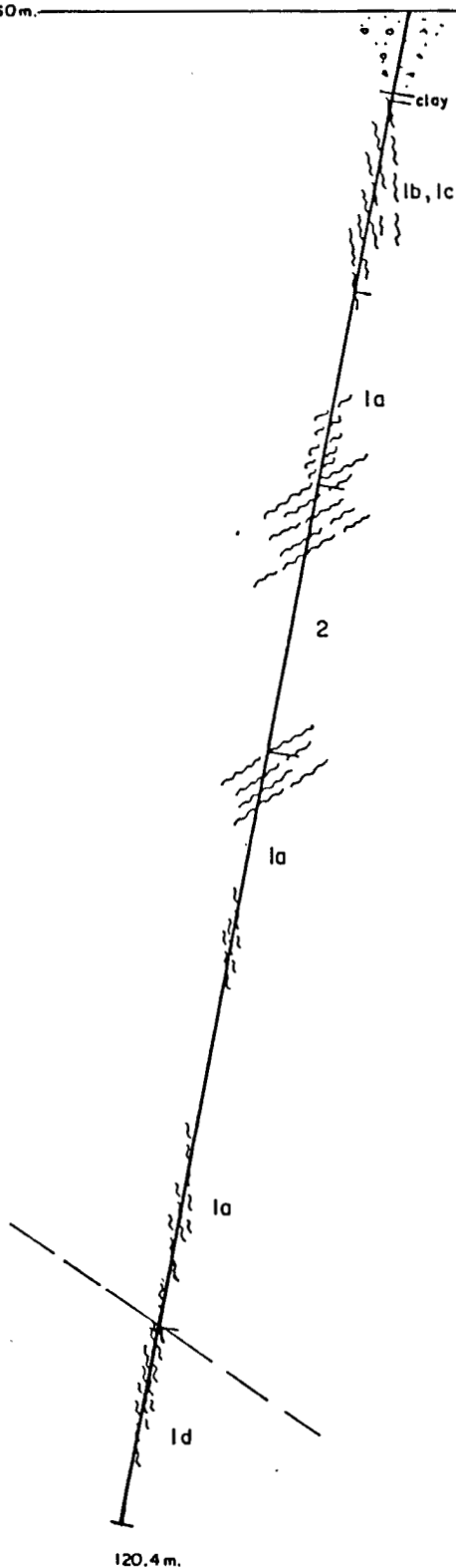
H.M. JONES

MARCH 1990

FIG. 5a

89-3 REF. LINE
-80°

El. 1160m.



LEGEND

- | | | |
|-----------------|-----------------|--|
| TERTIARY | | |
| 1 | Kamloops Group | Fault - strong clay alteration |
| 2 | Rhyodacite dyke | - weak alteration |
| TRIASSIC | | |
| 1 | Nicola Group | Breccia |
| 1a | Limestone | lb,lc Second unit much less than first |
| 1b | Siltstone | |
| 1c | Argillite | |
| 1d | Andesite | |

After Morison, 1989

John Morrison

MAD RIVER RESOURCES INC.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

**MODEL PROPERTY
DRILL SECTION : D - D'
GEOLOGY**

KAMLOOPS LAKE AREA

N.T.S. 92I-10W KAMLOOPS M.D., B.C.



SCALE 1:600

H.M. JONES

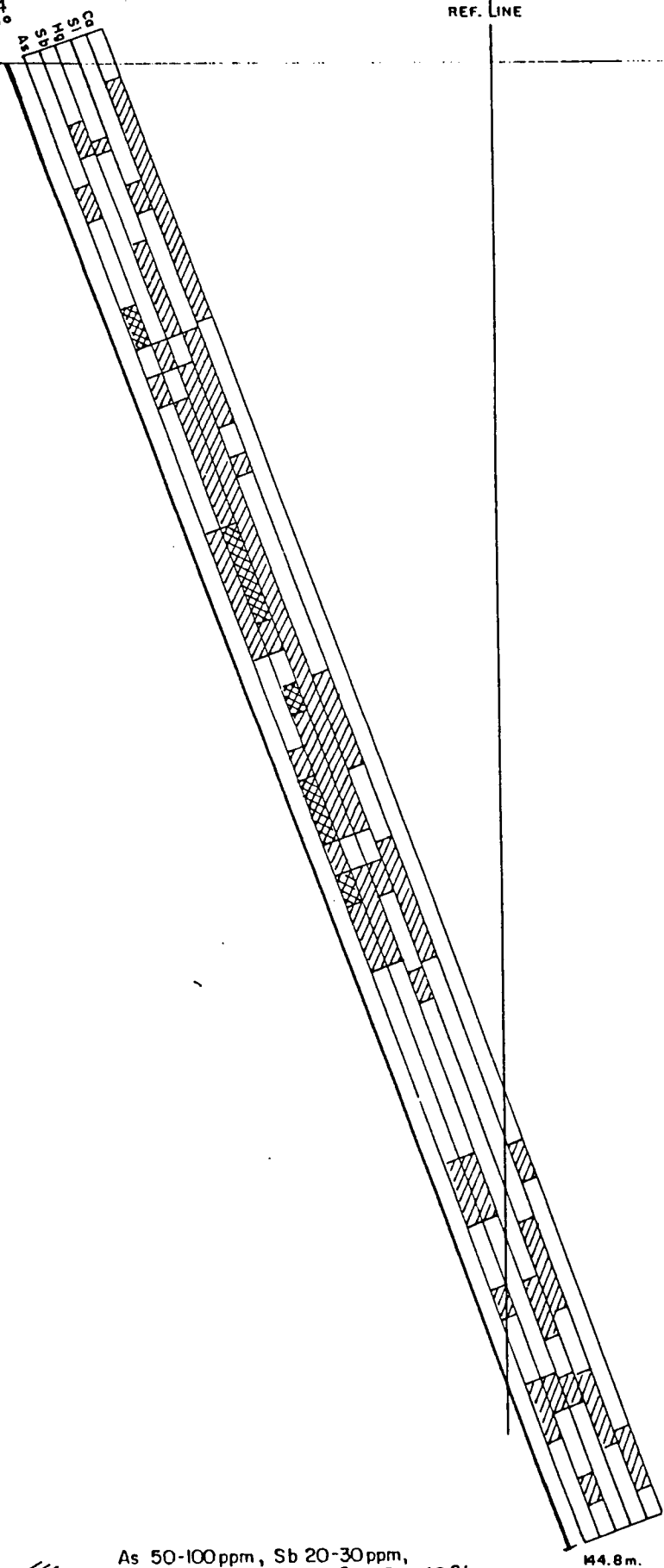
MARCH 1990



FIG. 5b

89-4
-70°

REF. LINE

E1.1160m.



 As 50-100 ppm, Sb 20-30 ppm, Hg >5000 ppb, Si >30%, Ca >40%
 As >100 ppm, Sb >30 ppm

J.M. Morrison

MAD RIVER RESOURCES INC.
 H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

MODEL PROPERTY
DRILL SECTION : E - E'
ASSAY & ALTERATION
 KAMLOOPS LAKE AREA

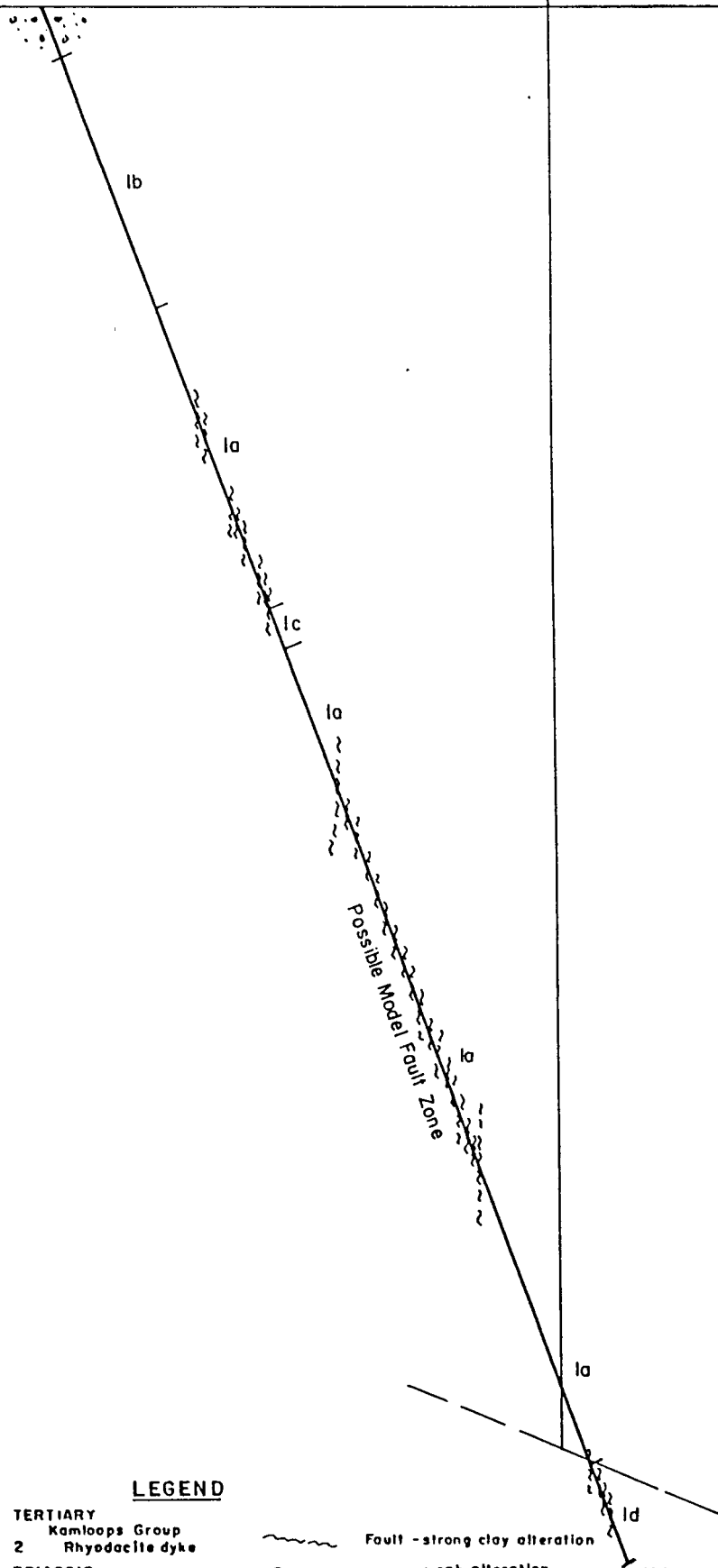
N.T.S. 92 I -10W KAMLOOPS M.D., B.C.
 0 5 10 20 30 METRES

SCALE 1:600	MARCH 1990	FIG. 6a
H.M. JONES		

89-4
-70°

REF. LINE

El. 1160m



LEGEND

- TERTIARY
 - 1 Kamloops Group
 - 2 Rhyodacite dyke
- TRIASSIC
 - 1 Nicola Group
 - 1a Limestone
 - 1b Siltstone
 - 1c Argillite
 - 1d Andesite
- ~~~~~ Fault - strong clay alteration
 - ~~~~~ - weak alteration
 - ▼ ▲ Breccia
 - lb,lc Second unit much less than first

Jim Morrison

After Morison, 1989

MAD RIVER RESOURCES INC.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

**MODEL PROPERTY
DRILL SECTION : E - E'
GEOLOGY**

KAMLOOPS LAKE AREA

N.T.S. 92 I -10W

KAMLOOPS M.D., B.C.

0 5 10 20 30 METRES

SCALE 1 : 600

H.M. JONES

MARCH 1990

FIG. 6b

1. Geology of Drill Holes

- * All holes tested the same geology over a limited area. The following is a summary of the geology intersected, describing it from the top of the geological section downward.

(a) Siltstone- Unit 1b on map and sections

- * Siltstone, with minor interbeds of argillite and occasionally limestone, occurred at the top of all holes except 89-6. This unit was oxidized (rusty), often contained 20% to 30% carbonate replacement, and was cut by a number of late, narrow (1 to 20 mm) ankerite and quartz veins, and lesser 1 to 5 mm chalcedony veinlets. Adjacent to fault zones the siltstones were often strongly silicified. Minor cinnabar was present in ankerite and quartz veinlets.

(b) Limestone - Unit 1a on map and sections

- * Limestone underlies the siltstone unit, based on the geology striking north and dipping east at 55°. Limestone was intersected in all holes except 89-6. It was grey to pink, finely recrystallized, and contained minor fine interbeds of argillite. Narrow late veinlets (1 to 10 mm) of ankerite and quartz were widespread. Local areas were largely replaced by silica. In fault zones the limestone often showed a green coloration, had manganese on fractures, and was cut by chalcedony, ankerite or quartz veinlets, some of which contained minor cinnabar and pyrite. Some faults were also largely replaced by quartz and ankerite.
- * Elevated values in arsenic, antimony and mercury were common in or near fault zones.

(c) Argillite - Unit 1C on map and sections

- * Very little argillite was intersected. It occurred as thin interbeds in siltstone and to a lesser extent in limestone. It was typically black and fine grained.

(d) Amygdaloidal andesite - Unit 1d on map and sections

- * Andesite occurred in all holes. Hole 89-6 was entirely within this unit, while the other holes only intersected it near their bottoms. It was fine grained, purple, with chlorite, quartz and epidote amygdules and was cut by fine quartz and ankerite veinlets. Hematite slickensides were common on fault zones in this unit.
- * Arsenic, antimony and mercury values dropped off dramatically a short distance into the andesite. An exception to this was in Hole 89-3 which had a short section at the bottom elevated in antimony and mercury. This was associated with a silicified fault zone.

(e) Rhyodacite dyke - Unit 2 on map and sections

- * The porphyritic rhyodacite had a purple, glassy matrix with 20% to 40% white feldspar phenocrysts. It was intersected in Holes 89-1, 2 and 7, on Section C-C', where it occurred within a low angle strongly clay-altered fault zone (F₂). In these holes two branches of the dyke were intersected, but in Hole 89-3 only one was intersected, suggesting that it branches near surface.
- * The dyke was very strongly clay-altered, suggesting considerable hydrothermal activity along the fault which it occupies. Samples taken from its vicinity in Hole 89-1 returned elevated to anomalous values in As, Sb and Hg, while in Holes 89-2 and 7 only Hg values were elevated. In Hole 89-3 elevated As, Sb and Hg values were recorded below the dyke and fault in an area of numerous faults (F₁ fault).

2. Assays

- * The following assays were considered to be of interest. They were:

	<u>Elevated Values</u>	<u>Anomalous Values</u>
arsenic	50 - 100 ppm	>100 ppm
antimony	20 - 30 ppm	>30 ppm
mercury	1 - 5 ppm	>5.0 ppm

- * As a general statement, arsenic and antimony values tended to be low in siltstones, often elevated in limestone and low in andesite. However, in areas of faulting, especially when accompanied by strong silicification and carbonization, they were often elevated, especially arsenic.
- * Mercury, which is much more volatile than the other elements, was often anomalous over considerable lengths and was not as localized as arsenic and antimony. It was more elevated in limestone. In some instances, where cinnabar was identified in the hole, assays from those sections returned low values in mercury. This indicated that there may be problems with the mercury assays.
- * Gold assays were very low, most of which were below the detection limit of the assay procedure.
- * Exceptions to the above occurred in Holes 89-5 and 89-3. In the former As, Sb and Hg were elevated in the upper part of the hole in siltstones containing minor argillite. While no significant faulting was observed in this part of the hole, there was a significant increase in carbonate and locally in quartz. The assay values and alteration suggest faulting in proximity to this area.
- * Near the bottom of Hole 89-3 elevated Sb and Hg values were obtained from a section of andesite. This coincided with a silicified fault zone. Anomalous Hg values often tended to "overlap" into the upper contact area of the andesite. This may be reflecting faulting or fracturing along bedding planes on or near the contact and are not considered to be significant.

DISCUSSION

- * Major fault structures accompanied by intense hydrothermal alteration are the normal hosts for epithermal gold deposits. The Model Fault Zone is definitely a major structure within which are a number of faults. Two strong faults were identified in the drilling, the most significant of which was named the Model fault (F₁ fault). It is thought to strike N50E and dip vertically. It is cross-cut by a low angle fault (F₂ fault) which was later filled with a Tertiary rhyodacite dyke (Fig. 7).

REF. LINE

El. 1160 m.

CROSS FAULT (F2)

SILTSTONE
LIMESTONE

RHODACITE DYKE

LIMESTONE
ANDESITE

89-1

Weak faults

89-7

89-2




MODEL FAULT (F1)

89-3
40m behind section

89-4
90m. behind section

LIMESTONE
ANDESITE

LEGEND

-  Elevated antimony
-  Elevated arsenic
-  Fault zone

J.M. Morrison

Section looking N50°E

MAD RIVER RESOURCES INC.

H.M. JONES & ASSOCIATES INC. VANCOUVER, B.C.

MODEL PROPERTY
SKETCH SHOWING RELATIONSHIP
BETWEEN As-Sb VALUES & FAULTING
KAMLOOPS LAKE AREA

N.T.S. 92 I -10W KAMLOOPS M.D., B.C.



SCALE 1:600
H.M. JONES

MARCH 1990

FIG. 7

- * Drilling and assay data suggest that many of the elevated to anomalous arsenic and antimony values obtained in Holes 89-1, 3 and 4 are related to the F₁ fault. This is illustrated on Fig. 7, which is a sketch of a number of holes projected to Section C-C' showing the inferred location of the F₁ fault and the area of significant As and Sb. The F₂ fault, where intersected, also returns significant values in As, Sb and Hg. This mineralization is probably related to the F₁ fault.
- * The most significant As, Sb and Hg assays were obtained in the vicinity of faulting in limestone. These areas were often accompanied by moderate to intense low temperature silica and/or carbonate alteration. Minor cinnabar was also present. This geological and mineralogical setting is typical of the upper section (low temperature) of an epithermal system. Gold, if present, would occur at a lower level.
- * Unfortunately, there is no easy way to determine if gold is present in the system at a greater depth. Only deeper drilling would give the answer.

The limestone unit of the Nicola Group is more receptive to silica replacement than the underlying amygdaloidal andesite and deeper drilling should be directed to the eastern down-dip projections of the limestone unit within the Model Fault Zone.

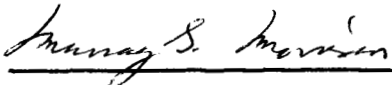
CONCLUSIONS AND RECOMMENDATIONS

The results of the 1989 drilling program demonstrate that the Model Fault Zone is a strong fault zone with a history of repeated movement and associated hydrothermal activity. The drilling further indicates that anomalous values of the typical low temperature epithermal elements, mercury, antimony and arsenic, extend to a depth of at least 125 metres along with low temperature silica replacement.

The drill program did not rule out the possibility that the Model Fault Zone could host a quartz stockwork system with precious metal values or a skarnified limestone with precious metal values at a depth in excess of 250 metres to the northeast of the 1989 drill area. Two diamond drill holes are therefore recommended for sites 100 and 200 metres northeast of drill hole M89-4 along the Model Fault Zone. These drill holes should be drilled to depths of 300 metres to test for precious metal values.

Precious metal values have not yet been found within the Model Fault Zone and therefore the drilling of the two holes recommended must be considered a high risk venture.

May 18, 1990
Kelowna, B.C.



Murray S. Morrison, B.Sc.

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* Filed as an Assessment Report with the B.C. Ministry of Energy, Mines, and Petroleum Resources.

** Company Report for Mad River Resources Inc. of Calgary, Alberta.

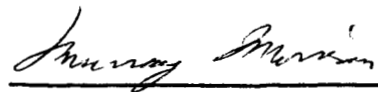
APPENDIX A

STATEMENT OF QUALIFICATIONS

I, Murray Morrison, of the City of Kelowna, in the Province of British Columbia, do hereby state that:

1. I graduated from the University of British Columbia in 1969 with a B.Sc. Degree in Geology.
2. I have been working in all phases of mining exploration in Canada for the past twenty years.
3. During the past twenty years, I have intermittently held responsible positions as a geologist with various mineral exploration companies in Canada.
4. I have examined many mineral properties in Southern British Columbia during the past twenty years.
5. I supervised the Reverse Circulation Drilling Program outlined in this report.
6. I am the vendor of the property and I retain an interest in the property.

May 18, 1990
Kelowna, B.C.



Murray Morrison, B.Sc.

APPENDIX B

STATEMENT OF EXPENDITURES - ON THE MODEL GROUP OF MINERAL CLAIMS.

Statement of Expenditures in connection with the Reverse Circulation Drill Program carried out on the Model Group of mineral claims located 13 km north of Logan Lake, British Columbia (N.T.S. Map 92-I-10W) for the year 1989.

DRILL ROAD AND DRILL SITE PREPARATION

Not necessary - no charge -

DRILLING

Mobilization and Demobilization (from Kelowna)	\$ 1,300.
Reverse Circulation Percussion Drilling (10.8 cm bore) 733 metres @ \$36.091/metre	26,455.
Geologist, M. Morrison, 13 days @ \$225.00/day	2,925.
Truck 4x4 (incl. gasoline and insurance) 13 days @ \$ 70.00/day	910.
Meals 13 days @ \$ 27.00/day	351.
Lodging 13 days @ \$ 39.96/day	519.
	<hr/>
sub-total:	\$ 32,460.

ASSAYING DRILL INTERCEPTS

ICP analysis for 30 elements, plus mercury 229 samples @ \$15.50 each	\$ 3,550.
Gold geochem analysis:	
97 samples @ \$6.75	655.
59 samples @ \$6.00	354.
229 rock sample bags @ \$0.37 each	85.
	<hr/>
sub-total:	\$ 4,644.

Continued . . .


APPENDIX B - Continued

REPORT PREPARATION

Geologist, M. Morrison	3 days @ \$225.00/day	\$ 675.
Drafting		50.
Typing		50.
Copying		<u>20.</u>
	sub-total:	\$ 795.
	<u>GRAND TOTAL:</u>	<u>\$37,899.</u>

I hereby certify that the preceding statement is a true statement of monies expended in connection with the Reverse Circulation Drill Program carried out December 9-21, 1989.

May 18, 1990



Murray Morrison - Geologist

APPENDIX C

DRILL LOGS

Reverse Circulation
Percussion Drill Record

Location: 520mN, 690mE of L.C.P. Model #1 M.C.

Mad River

Resources Inc.

Property Grid: 21+32N, 11+01W

Azimuth: 320 degrees

Property: Model-Anne

Hole No. RCDH 89-1

page 1 of 3

Dip: -60° Length: 89.9m Elevation: 1160.3m

Mineral Claim: Model #1

Date Started: Dec. 9/89 Drill Diameter: 10.8cm

Date Logged: Dec. 9&10/89 Section:

Logged by: M. S. Morrison *M. S. Morrison*

Date Completed: Dec. 10/89 Dip Tests: -

Drilling Contractor: Northspan Exploration of Kelowna, B. C.

Purpose: to test the Model Fault Zone for precious metal potential.

Metres		Description	Sample No.		metres		wid' in m	% replacem't					% veinlets		ore minerals	rock geochemistry				
from	to		from	to	clay	carb		sil	ep	ank	qtz	cal	ep	Au ppb		Ag ppm	Hg ppm	Sb ppm	As ppm	Fe %
0	1.0	Collar																		
1.0	1.8	Overburden: soil, some broken rock.																		
1.8	29.9	Upper Triassic Nicola Group Sediments: siltstone.	1.8	4.6	2.8	5	30		5											
		Siltstone with minor argillite interbeds:	01	4.6	7.6	3.0	5	30	5	3										
		• • • well fractured, rusty (oxidized); replaced	02	7.6	10.7	3.1	5	30	5	1										
		with 20 to 30% carbonate (pervasive) and up to 20% silica locally; 3 to 5% late ankerite veinlets	03	10.7	13.7	3.0	20	20	5				tr cinn.							
		1-20 mm, 1 to 3% (later) quartz veinlets, 1-10 mm	04	13.7	16.8	3.1	40	5	5	3										
		with trace of pyrite in quartz.	05	16.8	19.8	3.0	5	30	5	1										
		7.6 - 13.7 m 5% zones of strong silica replacement (70%).	06	19.8	22.9	3.1	5	30	5	4			tr cinn.							
		10.7 - 16.8 m Fault zone: 30 to 80% of siltstone decomposed to light green soft rock and clay.	07	22.9	25.9	3.0	5	30	7	3			tr py	15	.2	7.0	10	185	6.1	4.0
		10.7 - 13.7 m trace of very fine-grained cinnabar in ankerite veinlet.	08	25.9	27.4	1.5	5	30	5	3			tr vfg py	5	.2	6.3	15	260	5.8	2.6
		13.7 - 16.8 m 5% of rock is Tertiary rhyodacite (see description below).																		
		19.8 - 22.9 m trace of cinnabar in quartz veinlet.																		
		25.9 - 27.4 m zone of strong silica replacement (100%).																		
29.9	41.1	Tertiary Dyke: Rhyodacite dyke with 20 to 40% white feldspar microphenocrysts set in a glassy																		

Continued . . .

Reverse Circulation
Percussion Drill Record

Location:
Property Grid:
Azimuth:

Mad River Resources Inc.

Property:
Hole No. RCDH 89-2 page 2 of 3

Dip: Length: Elevation:

Mineral Claim:

Date Started: Drill Diameter:

Date Logged: Section:

Logged by: M. S. Morrison *M. S. Morrison*

Date Completed: Dip Tests:

Drilling Contractor: Northspan Exploration of Kelowna, B. C.

Purpose:

Metres		Description	Sample No.	metres		wid' in m	% replacem't				% veinlets				ore minerals	rock geochemistry						
from	to			from	to		clay	carb	sil	ep	ank	qtz	cal	ep		Au ppb	Ag ppm	Hg ppm	Sb ppm	As ppm	Fe %	Ca %
22.9	90.8			Limestone with minor argillite interbeds: well fractured, grey to brown; finely recrystallized; local low temperature silica replacement equalling 10 to 50%; 5% late ankerite veinlets, 1-10 mm, 1-3% quartz veinlets, 1-4 mm, and trace of very fine grained disseminated pyrite.	37	22.9	25.9	3.0	5	10		2	1			tr diss py		No Sample				
			38	25.9	29.0	3.1	5	10		2	1				L 5	.4	5.9	25	45	4.8	4.5	
			39	29.0	32.0	3.0		20		5	2			tr py	L 5	.4	6.4	25	45	5.8	5.4	
			40	32.0	35.1	3.1		20		5	2				L 5	.2	8.7	20	25	5.3	5.6	
			41	35.1	38.1	3.0		3		5	1				L 5	.4	2.8	20	40	5.7	4.3	
			42	38.1	41.1	3.0		30	30	5	2			tr diss py	L 5	.2	3.0	25	100	5.8	4.3	
			43	41.1	44.2	3.1		10		10	2				L 5	.2	3.7	25	85	5.6	4.7	
			44	44.2	47.2	3.0		20	50	5	3			1% py diss	L 5	.2	3.4	25	85	5.4	3.2	
			45	47.2	50.3	3.1		30	20	5	3				L 5	.2	1.0	15	70	4.7	6.7	
			46	50.3	53.3	3.0		20	20	5	3			tr diss py	L 5	.2	1.5	15	50	5.0	6.5	
			47	53.3	56.4	3.1		10	20	3	3			tr diss py	L 5	.2	2.2	20	35	4.7	6.6	
			48	56.4	59.4	3.0		10	20	3	1			1/2% py diss	L 5	.4	0.9	15	35	5.3	7.0	
			49	59.4	62.5	3.1		10	20	3	1				L 5	.4	1.7	20	25	5.0	6.6	
			50	62.5	65.5	3.0		10	20	3	1				L 5	.4	5.4	40	90	5.1	6.2	
			51	65.5	68.6	3.1		10	6	2	1			tr diss py	L 5	.4	2.8	35	110	5.6	6.5	
			52	68.6	71.6	3.0				3	1			tr py	L 5	.4	2.0	20	45	5.3	6.6	
			53	71.6	74.7	3.1		10		5	2			tr cinn	L 5	.2	3.9	25	190	4.5	4.8	
			54	74.7	77.7	3.0				4	3				L 5	.2	3.0	25	65	4.6	4.4	
			55	77.7	80.8	3.1		30		5	3			tr cinn	L 5	.2	8.3	20	35	3.8	4.5	
				66.4	69.2																	
				66.4	69.2																	
				73.2	79.9																	

Continued . . .

Reverse Circulation
Percussion Drill Record

Location:	Mad River	Resources Inc.	Property:
Property Grid:			Hole No. RCDH 89-3
Azimuth:			page 2 of 3
Dip:	Length:	Elevation:	Mineral Claim:
Date Started:	Drill Diameter:	Date Logged:	Section:
Date Completed:	Dip Tests:	Logged by: M. S. Morrison <i>M. S. Morrison</i>	
Drilling Contractor: Northspan Exploration of Kelowna, B. C.			

Purpose:		metres		wid'	% replacem't			% veinlets			ore	rock		geochemistry								
Metres from	to	Description	Sample No.	from	to	in m	clay	carb	sil	ep	ank	qtz	cal	ep	minerals	Au ppb	Ag ppm	Hg ppm	Sb ppm	As ppm	Fe %	Ca %
		groundmass. The dyke coincides with a <u>fault zone</u>	71	38.1	41.1	3.0	70				2					L 5	.2	0.2	5	10	4.3	4.6
		and the rhyodacite is 30 to 70% decomposed to a	72	41.1	44.2	3.1	80				1		1			L 5	.2	0.2	5	15	4.7	5.2
		soft, light green clayey rock; 1-2% ankerite and	73	44.2	47.2	3.0	40				1		2		tr diss py	L 5	.2	0.3	5	15	4.1	5.5
		calcite veinlets.	74	47.2	50.3	3.1	50				2		4		" " "	L 5	.2	0.6	5	15	4.0	5.2
		38.4 - 44.2 m 70 to 80% grey and green clay(gouge)	75	50.3	53.3	3.0	60						3		" " "	L 5	.2	0.5	5	10	4.1	4.2
		59.4 - 64.3 m 90% grey clay (gouge).	76	53.3	56.4	3.1	40				3		2		" " "	L 5	.2	0.3	15	15	4.5	5.0
64.3	105.0	Upper Triassic Nicola Group Sediments: limestone	77	56.4	59.4	3.0	70				2		2			L 5	.2	0.6	10	10	4.1	4.3
		Limestone: well fractured or faulted, grey to	78	59.4	62.5	3.1	90				2		2			L 5	.2	0.2	5	20	4.4	4.8
		green, finely recrystallized; discoloured and par-	79	62.5	65.5	3.0	65		5		2		2			L 5	.2	1.4	10	30	5.5	4.9
		tially decomposed by faulting locally; 10 to 30%	80	65.5	68.6	3.1	25		35		5					L 5	.2	5.6	20	90	5.1	8.8
		low temperature silica replacement; 1 to 5% anker-	81	68.6	71.6	3.0		25	35		3	1			tr diss py	L 5	.2	1.0	15	105	4.0	9.0
		ite veinlets, 1-10 mm, and up to 5% quartz veinlets,	82	71.6	74.7	3.1			15		3	1				L 5	.2	0.9	20	50	5.0	6.7
		0.1 to 5 mm; trace of disseminated pyrite.	83	74.7	77.7	3.0			3		1	1				L 5	.2	0.4	15	25	4.6	6.6
		64.3 - 71.6 m 35% silica replacement.	84	77.7	80.8	3.1			30		5	5				L 5	.2	0.8	20	115	5.7	6.4
		73.2 - 77.7 m Fault zone: limestone is discolored	85	80.8	83.8	3.0			20		5	2			tr diss py	L 5	.2	0.8	25	150	5.0	5.0
		(green) and partially decomposed, manganese on	86	83.8	86.9	3.1			10		5	1			" " "	L 5	.2	0.7	35	135	4.7	5.8
		fractures.	87	86.9	89.9	3.0			30		3	2			" " "	L 5	.2	0.9	30	70	5.7	6.3
		77.7 - 86.9 m well fractured zone: chalky, slight-																				
		ly discolored and partially decomposed lime-																				
		stone, manganese on fractures.																				
		86.9 - 89.9 m 30% silica replacement.																				
Continued . . .																						

Reverse Circulation
Percussion Drill Record

Location:
Property Grid:
Azimuth:

Mad River Resources Inc.

Property:
Hole No. RCDH 89-4 page 3 of 3

Dip: Length: Elevation:
Date Started: Drill Diameter: Date Logged: Section:
Logged by: M. S. Morrison
Date Completed: Dip Tests:
Drilling Contractor: Northspan Exploration of Kelowna, B. C.

Purpose:		metres		wid'	% replacem't				% veinlets				ore	rock geochemistry								
Metres from	to	Description	Sample No.	from	to	in m	clay	carb	sil	ep	ank	qtz	cal	ep	minerals	Au ppb	Ag ppm	Hg ppm	Sb ppm	As ppm	Fe %	Ca %
		102.1 - 105.2 m 1 cm wide banded ankerite-quartz vein.	130	102.1	105.2	3.1	80		25		5	2				L 5	.2	0.9	15	20	5.4	5.5
			131	105.2	108.2	3.0			5		5					L 5	.2	0.2	10	15	5.2	5.1
		108.2 - 111.3 m 70% silica and 30% carbonate replacement.	132	108.2	111.3	3.1	70	30	65		5	1			diss py.	L 5	.2	3.2	25	70	5.0	6.2
			133	111.3	114.3	3.0		30	25		5	1	2		diss py.	L 5	.2	7.1	20	75	4.2	8.4
		114.3 - 118.0 m 60% silica replacement, 15% stock-work of composite ankerite-quartz veinlets, 1-10 mm.	134	114.3	117.3	3.0			60		10	5			" "	L 5	.1	4.0	5	30	3.2	7.7
			135	117.3	120.4	3.1			35		5	3				L 5	.2	3.7	5	45	4.4	5.2
			136	120.4	123.4	3.0			40		8	2				L 5	.4	5.9	10	55	5.5	6.9
		118.0 - 133.5 m 30 to 40% silica replacement, 5-8% composite ankerite-quartz veinlets, 1-10 mm.	137	123.4	126.5	3.1			40		5	1	1		tr. py	L 5	.2	6.0	15	45	4.9	6.6
			138	126.5	129.5	3.0			40		4	1			tr. py	L 5	.6	3.0	10	35	3.4	3.5
		128.9 - 129.7 m black argillite interbed.	139	129.5	132.6	3.1			35		3	1			" "	L 5	.4	5.2	25	50	4.6	5.2
		133.5 - 135.6 m 60% silica replacement, well fractured and manganese stained.	140	132.6	135.6	3.0			50		5	2			" "	L 5	.6	3.2	15	75	3.8	4.4
			141	135.6	138.7	3.1		50	-		5	2				L 5	.2	2.0	15	25	4.7	4.8
		135.6 - 136.8 m Fault zone: light green, very soft, decomposed limestone, 10% hematite stained schistose rock.	142	138.7	141.7	3.0		20	-		5	2				L 5	.2	3.4	20	15	5.3	4.8
			143	141.7	144.8	3.1					3	3	1	1		L 5	.2	3.2	10	15	5.0	4.8
136.8	144.8	Upper Triassic Nicola Group Volcanics: Amygdaloidal Andesite: well fractured, fine-grained, purple (hematite stained), green (chlorite altered), and light green (carbonate replaced): 3% ankerite and 1% quartz veinlets.																				
		136.8 - 140.8 m Fault zone: 30 to 50% carbonate replacement.																				
		140.8 - 144.8 m hematitic slickenside surfaces.																				

END OF DRILL HOLE at 144.8 metres.

Reverse Circulation
Percussion Drill Record

Location: 490mN, 658mE of L.C.P. Model #1 M.C.
Property Grid: 11+32W, 21+07N
Azimuth: 320 degrees

Mad River Resources Inc.

Property: Model-Anne
Hole No. RCDH 89-5 page 1 of 2

Dip: -72° Length: 123.4m Elevation: 1160.2m

Mineral Claim: Model #1

Date Started: Dec. 17/89 Drill Diameter: 10.8cm Date Logged: Section:

Logged by: M. S. Morrison *M. S. Morrison*

Date Completed: Dec. 19/89 Dip Tests: -

Drilling Contractor: Northspan Exploration of Kelowna, B. C.

Purpose: to test the Model Fault Zone for precious metal potential.

Metres		Description	Sample No.	metres		wid' in m	% replacem't			% veinlets			ore minerals	rock geochemistry							
from	to			from	to		clay	carb	sil	ep	ank	qtz		cal	ep	Au ppb	Ag ppm	Hg ppm	Sb ppm	As ppm	Fe %
0	1.0	Collar.	144	7.6	10.7	3.1	5	20	10												
1.0	6.1	Overburden: soil and clay.	145	10.7	13.7	3.0	10	20													
6.1	7.6	Broken rock. No sample collected.	146	13.7	16.8	3.1	5	30	30												
7.6	59.1	Upper Triassic Nicola Group Sediments: siltstone, limestone and minor argillite.	147	16.8	19.8	3.0		40	50				tr py.		.2	9.9	25	85	4.9	6.8	
			148	19.8	22.9	3.1	10	25	30						.2	4.4	15	85	4.0	6.7	
7.6	22.9	Siltstone with interbedded black argillite: well fractured, rusty (oxidized); replaced with 20 to 40% carbonate and 10 to 50% silica; 3-5% late ankerite veinlets, 1-5 mm.	149	22.9	25.9	3.0			10							.2	5.5	10	50	4.4	5.9
			150	25.9	29.0	3.1			10						.2	4.7	15	40	4.5	7.0	
			151	29.0	32.0	3.0			10						.2	4.9	15	40	4.4	6.8	
			152	32.0	35.1	3.1			10						.2	2.7	10	25	3.4	5.4	
			153	35.1	38.1	3.0			10						.2	2.8	10	25	3.2	4.5	
			154	38.1	41.1	3.0			10						.2	7.6	20	40	4.0	5.4	
			155	41.1	44.2	3.1			20						.2	5.8	15	165	3.7	5.1	
22.9	59.1	Limestone with minor black argillite interbeds: well fractured; grey to green; finely recrystallized; low temperature silica replacement 10% (locally to 70%); 1 to 5% late ankerite veinlets, 1 - 10 mm.	156	44.2	47.2	3.0			20						.2	1.0	10	25	4.4	4.2	
			157	47.2	50.3	3.1			20						.2	6.2	20	160	4.2	4.1	
			158	50.3	53.3	3.0			40				tr py.		.2	1.9	10	105	3.2	3.2	
			159	53.3	56.4	3.1			8						.2	0.5	5	25	3.9	5.9	
			160	56.4	59.4	3.0			3						.2	5.4	20	25	5.0	4.9	
		25.9 - 29.0 m 70% silica replacement of 10% of limestone.																			
		44.2 - 47.2 m Fault zone: limestone slightly dissolved and discoloured green, 90% silica replacement of 20% of limestone.																			

Continued . . .

Reverse Circulation
Percussion Drill Record

Location: 490mN, 658mE of L.C.P. Model #1 M.C.
Property Grid: 21+07N, 11+32W
Azimuth: 320 degrees
Dip: -72° Length: 123.4m Elevation: 1160.2m

Mad River Resources Inc.

Property:
Hole No. RCDH 89-5 page 2 of 2

Mineral Claim:
Date Started: Dec. 17/89 Drill Diameter: 10.8cm Date Logged: Section:
Logged by: M. S. Morrison *M. S. Morrison*
Date Completed: Dec. 19/89 Dip Tests: -
Drilling Contractor: Northspan Exploration of Kelowna, B. C.

Purpose: to test the Model Fault Zone for precious metal potential.

Metres from	to	Description	Sample No.	metres		wid' in m	% replacem't				% veinlets				ore minerals	rock			geochemistry			
				from	to		clay	carb	sil	ep	ank	qtz	cal	ep		Au ppb	Ag ppm	Hg ppm	Sb ppm	As ppm	Fe %	Ca %
		53.9 - 59.1 m Fault zone: limestone slightly dissolved and discoloured.	161	59.4	62.5	3.1		20		5	3					5	.2	0.7	5	15	4.7	5.2
			162	62.5	65.5	3.0		50	10		3	2				10	.2	4.8	15	20	5.3	5.2
59.1	123.4	Upper Triassic Nicola Group Volcanics: Amygdaloidal Andesite: well fractured, fine-grained variably purple (hematite stained), green (chlorite altered), or tan to buff (carbonate replaced); 1-5% ankerite, up to 2% quartz, and up to 5% calcite veinlets; amygdules of calcite, epidote and quartz 1-3 mm.	163	65.5	68.6	3.1		5		3	3	1				5	.2	2.4	10	20	4.6	6.1
			164	68.6	71.6	3.0		3			3	3		tr cinn.	5	.2	3.3	10	15	4.9	5.2	
			165	71.6	74.7	3.1		2		2	2				10	.2	0.7	5	10	4.5	5.3	
			166	74.7	77.7	3.0		2		-	3				5	.2	3.9	15	15	4.8	4.3	
			167	77.7	80.8	3.1		2		5	2				5	.4	0.5	10	10	5.0	3.9	
			168	80.8	83.8	3.0		2		3	3				10	.2	0.7	5	15	4.7	4.3	
		59.4 - 65.5 m 20 to 50% carbonate replacement.	169	83.8	86.9	3.1		5			4				10	.4	1.3	5	10	4.4	4.8	
		68.6 - 71.6 m 15% carbonate replacement, 1 mm cinnabar crystals in ankerite veinlet.	170	86.9	89.9	3.0		5			4				5	.2	0.5	5	10	4.4	5.4	
			171	89.9	93.0	3.1		5		1	10				5	.2	0.4	5	10	4.5	6.2	
		80.8 - 83.8 m Fault Zone: weak, some slicken-side surfaces.	172	93.0	96.0	3.0		2		1	5		1		5	.2	0.5	5	10	4.8	5.2	
			173	96.0	99.1	3.1		5			5		1		10	.4	0.7	5	10	5.0	4.8	
		89.9 - 93.0 m well fractured, 10% ankerite veinlets, 1-10 mm.	174	99.1	102.1	3.0		5			5		1		5	.4	0.5	10	10	4.9	4.4	
			175	102.1	105.2	3.1		95			2			tr lim	10	.4	0.7	10	10	5.5	4.7	
		96.0 - 105.2 m Fault Zone: hematite on slicken-side surfaces.	176	105.2	108.2	3.0		30			5		1	tr py.	5	.4	2.2	15	15	4.7	5.3	
			177	108.2	111.3	3.1		30			10		1	tr py.	10	.2	1.2	10	10	3.9	5.8	
		102.1 - 106.1 m 100% carbonate replacement.	178	111.3	114.3	3.0		10			4			" "	5	.2	0.5	5	5	3.9	5.3	
		110.6 - 111.4 m 90% carbonate replacement.	179	114.3	117.3	3.0		10		2	3	1			10	.2	0.6	5	15	4.9	6.3	
			180	117.3	120.4	3.1		5		5	2		2		5	.2	0.5	5	20	6.5	5.8	
		END OF DRILL HOLE at 123.4 metres.	181	120.4	123.4	3.0		5		5	2		2		15	.2	0.7	10	10	5.7	5.1	

Reverse Circulation
Percussion Drill Record

Location:
Property Grid:
Azimuth:

Mad River Resources Inc.

Property:
Hole No. RCDH 89-7 page 2 of 3

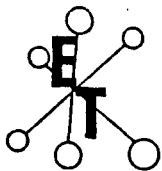
Dip: Length: Elevation:
Date Started: Drill Diameter: Date Logged: Section:
Logged by: M. S. Morrison *M. S. Morrison*
Date Completed: Dip Tests:
Drilling Contractor: Northspan Exploration of Kelowna, B. C.

Metres		Description	Sample No.	metres		wid' in m	% replacem't			% veinlets			ore minerals	rock		geochemistry				
from	to			from	to		clay	carb	sil	ep	ank	gtz		cal	ep	Au ppb	Ag ppm	Hg ppm	Sb ppm	As ppm
		25.9 - 29.0 m siliceous microbreccia zone equals 40% of the rock.	210	32.0	35.1	3.1	2	5		2				5	.4	3.6	20	25	4.8	5.3
			211	35.1	38.1	3.0	2	10		5				10	.4	6.0	20	30	5.8	5.1
		29.0 - 32.0 m 70% black argillite, siliceous microbreccia zone equals 10% of the rock.	212	38.1	41.1	3.0	5	5	20	2				10	.2	5.1	20	30	5.5	6.1
			213	41.1	44.2	3.1	2	20		2	1	2		5	.2	4.8	20	45	4.4	4.9
32.0	84.1	Limestone with black argillite interbeds: silty, dark grey, finely recrystallized, and well fractured; 10 - 40% black manganese stained zones of late recrystallized very fine grained carbonate and silica with pyrite; up to 40% microbrecciated siliceous zones; 3 - 5% ankerite, and 1 - 3% calcite veinlets.	214	44.2	47.2	3.0	2	20		5	1	2		5	.2	10.	30	35	5.5	3.4
			215	47.2	50.3	3.1		20		2				10	.4	10.	25	20	5.9	5.6
			216	50.3	53.3	3.0		10		2		1		10	.4	10.	35	25	5.4	3.6
			217	53.3	56.4	3.1		10		3		2	tr py.	10	.4	4.1	20	20	5.7	5.8
			218	56.4	59.4	3.0		10		3		2	tr py.	5	.2	7.5	25	15	5.6	6.2
			219	59.4	62.5	3.1		10		5		2	tr py.	5	.2	5.5	15	15	4.9	5.9
			220	62.5	65.5	3.0		10		5		2	tr py.	5	.2	1.2	20	30	5.2	7.1
		32.0 - 35.1 m 40% argillite interbeds.	221	65.5	68.6	3.1		40		3	1		tr py	5	.4	1.2	15	45	5.3	8.5
		38.1 - 41.1 m siliceous microbreccia equals 20% of the rock.	222	68.6	71.6	3.0		10		3				10	.2	6.8	30	40	5.0	7.4
			223	71.6	74.7	3.1		10		3				5	.2	7.1	25	45	6.2	7.3
		44.2 - 62.5 m Fault zone: weak.	224	74.7	77.7	3.0		5		3	tr			10	.2	3.4	L5	15	5.2	7.6
		65.5 - 69.2 m siliceous microbreccia equals 40% of the rock.	225	77.7	80.8	3.1		5		5	tr			10	.4	0.6	L5	15	5.3	8.1
			226	80.8	83.8	3.0				3		3		5	.2	0.3	L5	10	5.0	7.5
		71.6 - 84.1 m Fault zone: chalky, light green, slightly dissolved, soft limestone, 5% clay.																		
84.1	99.1	Upper Triassic Nicola Group Volcanics. Amygdaloidal Andesite: well fractured, fine-grained, green (chlorite altered) or white (carbon-																		

Continued . . .

APPENDIX D

GEOCHEMICAL ANALYSIS CERTIFICATES



ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

DECEMBER 14, 1989

CERTIFICATE OF ANALYSIS ETE 89-976

MAD RIVER RESOURCES INC.
1600 BOW VALLEY SQUARE 11
205 5th AVE. S.W.
CALGARY, ALBERTA
T2P 2V7

ATTENTION: MR. J. HAMILTON

SAMPLE IDENTIFICATION: 30 ROD CHIP samples received December 11, 1989

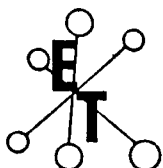
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976 - 2	30002	7.6 - 10.7		4030
976 - 3	30003	10.7 - 13.7		1975
976 - 4	30004	13.7 - 16.8		4790
976 - 5	30005	16.8 - 19.8		13528
976 - 6	30006	19.8 - 22.9		8060
976 - 7	30007	22.9 - 25.9	15	7000
976 - 8	30008	25.9 - 27.4	5	6310
976 - 9	30009	27.4 - 29.0	5	5320
976 - 10	30010	29.0 - 30.5	5	5400
976 - 11	30011	30.5 - 32.0	5	13225
976 - 12	30012	32.0 - 35.1	5	1670
976 - 13	30013	35.1 - 38.1	5	1750
976 - 14	30014	38.1 - 41.1	5	1825
976 - 15	30015	41.1 - 44.2	5	7145
976 - 16	30016	44.2 - 47.2	5	6005
976 - 17	30017	47.2 - 50.3	5	3800
976 - 18	30018	50.3 - 53.3	5	6385
976 - 19	30019	53.3 - 56.4	5	9120
976 - 20	30020	56.4 - 59.4	5	3270
976 - 21	30021	59.4 - 62.5	5	7750
976 - 22	30022	62.5 - 65.5	5	2130
976 - 23	30023	65.5 - 68.6	5	2735
976 - 24	30024	68.6 - 71.6	5	3270
976 - 25	30025	71.6 - 74.7	5	8055
976 - 26	30026	74.7 - 77.7	5	8740
976 - 27	30027	77.7 - 80.8	5	1215
976 - 28	30028	80.8 - 83.8	5	2890
976 - 29	30029	83.8 - 86.9	5	2280
976 - 30	30030	86.9 - 89.9	5	2810

Jutta Jealouse
ECO-TECH LABORATORIES LTD.
JUTTA JEALOUSE
B.Sc. Certified Assayer

cc:

Mr. N. Morrison
684 Balsam road
Kelowna, B.C.
V1Y 1P7

ECO-TECH LTD.



ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (804) 573-5700 Fax 573-4557

DECEMBER 27, 1989

CERTIFICATE OF ANALYSIS ETK 89-983

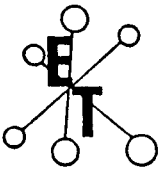
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MAD RIVER RESOURCES INC.
1600 BOW VALLEY SQUARE II
205 5th AVE. S.W.
CALGARY, ALBERTA
T2P 2V7

ATTENTION: MR. J. HAMILTON

SAMPLE IDENTIFICATION: 113 ROCK CHIP samples received December 18, 1989

ET#	Description	D.H. 89-2		Au (ppb)	Hg (ppb)
		metres from	to		
983 - 1	30031	4.6	7.6		380
983 - 2	30032	7.6	10.7		212
983 - 3	30033	10.7	13.7		7240
983 - 4	30034	13.7	16.8		>10000
983 - 5	30035	16.8	19.8		3680
983 - 6	30036	19.8	22.9	NO SAMPLE	
983 - 7	30037	22.9	25.9	NO SAMPLE	
983 - 8	30038	25.9	29.0	<5	5918
983 - 9	30039	29.0	32.0	<5	6430
983 - 10	30040	32.0	35.1	<5	8670
983 - 11	30041	35.1	38.1	<5	2750
983 - 12	30042	38.1	41.1	<5	2960
983 - 13	30043	41.1	44.2	<5	3670
983 - 14	30044	44.2	47.2	<5	3370
983 - 15	30045	47.2	50.3	<5	1020
983 - 16	30046	50.3	53.3	<5	1530
983 - 17	30047	53.3	56.4	<5	2240
983 - 18	30048	56.4	59.4	<5	935
983 - 19	30049	59.4	62.5	<5	1734
983 - 20	30050	62.5	65.5	<5	5408
983 - 21	30051	65.5	68.6	<5	2760
983 - 22	30052	68.6	71.6	<5	2040
983 - 23	30053	71.6	74.7	<5	3880
983 - 24	30054	74.7	77.7	<5	2960
983 - 25	30055	77.7	80.8	<5	8270
983 - 26	30056	80.8	83.8	<5	905
983 - 27	30057	83.8	86.9	<5	790
983 - 28	30058	86.9	89.9	<5	500
983 - 29	30059	89.9	93.0	<5	215
983 - 30	30060	93.0	96.0	<5	2458



ECO-TECH LABORATORIES LTD.

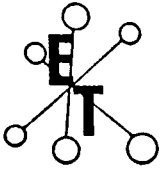
ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

MAD RIVER RESOURCES INC.

DECEMBER 27, 1989

ET#	Description	metres from to	Au (ppb)	Hg (ppb)
983 - 31	30061	D.H. 89-3 7.6 - 10.7		475
983 - 32	30062	10.7 - 13.7		1045
983 - 33	30063	13.7 - 16.8		1105
983 - 34	30064	16.8 - 19.8		715
983 - 35	30065	19.8 - 22.9		650
983 - 36	30066	22.9 - 25.9		1030
983 - 37	30067	25.9 - 29.0		1030
983 - 38	30068	29.0 - 32.0		260
983 - 39	30069	32.0 - 35.1	<5	450
983 - 40	30070	35.1 - 38.1	<5	190
983 - 41	30071	38.1 - 41.1	<5	160
983 - 42	30072	41.1 - 44.2	<5	190
983 - 43	30073	44.2 - 47.2	<5	285
983 - 44	30074	47.2 - 50.3	<5	605
983 - 45	30075	50.3 - 53.3	<5	530
983 - 46	30076	53.3 - 56.4	<5	310
983 - 47	30077	56.4 - 59.4	<5	590
983 - 48	30078	59.4 - 62.5	<5	200
983 - 49	30079	62.5 - 65.5	<5	1420
983 - 50	30080	65.5 - 68.6	<5	5615
983 - 51	30081	68.6 - 71.6	<5	1025
983 - 52	30082	71.6 - 74.7	<5	855
983 - 53	30083	74.7 - 77.7	<5	380
983 - 54	30084	77.7 - 80.8	<5	835
983 - 55	30085	80.8 - 83.8	<5	815
983 - 56	30086	83.8 - 86.9	<5	670
983 - 57	30087	86.9 - 89.9	<5	850
983 - 58	30088	89.9 - 93.0	<5	725
983 - 59	30089	93.0 - 96.0	<5	675
983 - 60	30090	96.0 - 99.1	<5	780
983 - 61	30091	99.1 - 102.1	<5	690
983 - 62	30092	102.1 - 105.2	<5	730
983 - 63	30093	105.2 - 108.2	<5	> 10000
983 - 64	30094	108.2 - 111.3	<5	440
983 - 65	30095	111.3 - 114.3	NO SAMPLE	
983 - 66	30096	114.3 - 117.3	<5	3163
983 - 67	30097	117.3 - 120.4	<5	350
983 - 68	30098	D.H. 89-4 4.6 - 7.6		2450
983 - 69	30099	7.6 - 10.7		9900
983 - 70	30100	10.7 - 13.7		3680
983 - 71	30101	13.7 - 16.8		3265
983 - 72	30102	16.8 - 19.8		3280
983 - 73	30103	19.8 - 22.9		4690
983 - 74	30104	22.9 - 25.9		4990
983 - 75	30105	25.9 - 29.0		7040



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ASSAYING - ENVIRONMENTAL TESTING
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MAD RIVER RESOURCES INC.

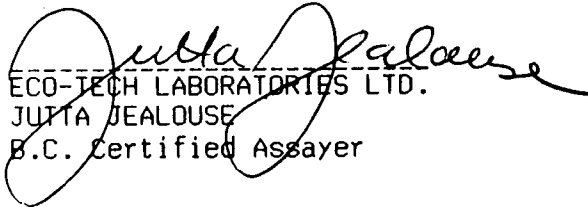
DECEMBER 27, 1989

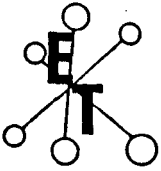
ET#	Description	D. H. 89-4 metres from to	Au (ppb)	Hg (ppb)
983 - 76	30106	29.0 - 32.0		2960
983 - 77	30107	32.0 - 35.1		5460
983 - 78	30108	35.1 - 38.1		7700
983 - 79	30109	38.1 - 41.1	NO SAMPLE	
983 - 80	30110	41.1 - 44.2		> 10000
983 - 81	30111	44.2 - 47.2		> 10000
983 - 82	30112	47.2 - 50.3	NO SAMPLE	
983 - 83	30113	50.3 - 53.3	NO SAMPLE	
983 - 84	30114	53.3 - 56.4	NO SAMPLE	
983 - 85	30115	56.4 - 59.4	NO SAMPLE	
983 - 86	30116	59.4 - 62.5	< 5	5510
983 - 87	30117	62.5 - 65.5	NO SAMPLE	
983 - 88	30118	65.5 - 68.6	< 5	> 10000
983 - 89	30119	68.6 - 71.6	< 5	4790
983 - 90	30120	71.6 - 74.7	NO SAMPLE	
983 - 91	30121	74.7 - 77.7	NO SAMPLE	
983 - 92	30122	77.7 - 80.8	< 5	1000
983 - 93	30123	80.8 - 83.8	NO SAMPLE	
983 - 94	30124	83.8 - 86.9	< 5	880
983 - 95	30125	86.9 - 89.9	< 5	850
983 - 96	30126	89.9 - 93.0	< 5	860
983 - 97	30127	93.0 - 96.0	< 5	1020
983 - 98	30128	96.0 - 99.1	< 5	1630
983 - 99	30129	99.1 - 102.1	NO SAMPLE	
983 - 100	30130	102.1 - 105.2	< 5	945
983 - 101	30131	105.2 - 108.2	< 5	220
983 - 102	30132	108.2 - 111.3	< 5	3160
983 - 103	30133	111.3 - 114.3	< 5	7140
983 - 104	30134	114.3 - 117.3	< 5	3980
983 - 105	30135	117.3 - 120.4	< 5	3670
983 - 106	30136	120.4 - 123.4	< 5	5910
983 - 107	30137	123.4 - 126.5	< 5	6020
983 - 108	30138	126.5 - 129.5	< 5	2960
983 - 109	30139	129.5 - 132.6	< 5	5200
983 - 110	30140	132.6 - 135.6	< 5	3160
983 - 111	30141	135.6 - 138.7	< 5	1980
983 - 112	30142	138.7 - 141.7	< 5	3360
983 - 113	30143	141.7 - 144.8	< 5	3200

CC:

Mr. M. Morrison
684 Balsam road
Kelowna, B.C.
V1W 1B9

SC89/KAM9


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ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

JANUARY 5, 1990

CERTIFICATE OF ANALYSIS ETC 89-990

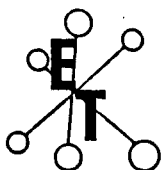
HAD RIVER RESOURCES INC.
1600 BOW VALLEY SQUARE 11
205 5th AVE. S.W.
CALGARY, ALBERTA
T2P 2V7

ATTENTION: MR. J. HAMILTON

SAMPLE IDENTIFICATION: 08 ROCK CHIP samples received December 22, 1989

ET#	Description	D.H. 89-5 metres from to	Au (ppb)	Hg (ppb)
990 - 1	144	7.6-10.7		5868
990 - 2	145	10.7-13.7		5635
990 - 3	146	13.7-16.8		2431
990 - 4	147	16.8-19.8		9861
990 - 5	148	19.8-22.9		4356
990 - 6	149	22.9-25.9		5505
990 - 7	150	25.9-29.0		4658
990 - 8	151	29.0-32.0		4862
990 - 9	152	32.0-35.1		
990 - 10	153	35.1-38.1	5	2737
990 - 11	154	38.1-41.1	5	2801
990 - 12	155	41.1-44.2	10	7623
990 - 13	156	44.2-47.2	5	5796
990 - 14	157	47.2-50.3	5	998
990 - 15	158	50.3-53.3	5	6231
990 - 16	159	53.3-56.4	5	1883
990 - 17	160	56.4-59.4	5	499
990 - 18	161	59.4-62.5	5	5341
990 - 19	162	62.5-65.5	5	724
990 - 20	163	65.5-68.6	10	4765
990 - 21	164	68.6-71.6	5	2431
990 - 22	165	71.6-74.7	5	3335
990 - 23	166	74.7-77.7	10	706
990 - 24	167	77.7-80.8		3856
990 - 25	168	80.8-83.8		511
990 - 26	169	83.8-86.9	10	654
990 - 27	170	86.9-89.9	10	1332
990 - 28	171	89.9-93.0	5	476
990 - 29	172	93.0-96.0	5	428
990 - 30	173	96.0-99.1	5	487
			10	125

Jutta Joubert, Certified Assayer



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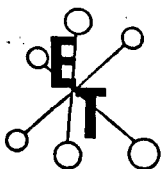
ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

MAD RIVER RESOURCES INC.

JANUARY 3, 1990

ET#	Description	metres from to	Au (ppb)	Hg (ppb)
990 - 31	174	D.H. 89-5 99.1-102.1	5	476
990 - 32	175	102.1-105.2	10	666
990 - 33	176	105.2-108.2	5	2154
990 - 34	177	108.2-111.3	10	1201
990 - 35	178	111.3-114.3	5	476
990 - 36	179	114.3-117.3	10	595
990 - 37	180	117.3-120.4	5	487
990 - 38	181	120.4-123.2	15	688
990 - 39	182	D.H. 89-6 4.6-7.6		2193
990 - 40	183	7.6-10.7		185
990 - 41	184	10.7-13.7		91
990 - 42	185	13.7-16.8		95
990 - 43	186	16.8-19.8		50
990 - 44	187	19.8-22.9		77
990 - 45	188	22.9-25.9		101
990 - 46	189	25.9-29.0		920
990 - 47	190	29.0-32.0		578
990 - 48	191	32.0-35.1		882
990 - 49	192	35.1-38.1		225
990 - 50	193	38.1-41.1		84
990 - 51	194	41.1-44.2		91
990 - 52	195	44.2-47.2		91
990 - 53	196	47.2-50.3		50
990 - 54	197	50.3-53.3	10	80
990 - 55	198	53.3-56.4	5	69
990 - 56	199	56.4-59.4	5	68
990 - 57	200	D.H. 89-7 1.5-4.6		5761
990 - 58	201	4.6-7.6		4960
990 - 59	202	7.6-10.7		3448
990 - 60	203	10.7-13.7		5931
990 - 61	204	13.7-16.8		3312
990 - 62	205	16.8-19.8		3772
990 - 63	206	19.8-22.9	10	4128
990 - 64	207	22.9-25.9	10	4163
990 - 65	208	25.9-29.0	5	3139
990 - 66	209	29.0-32.0	5	2120
990 - 67	210	32.0-35.1	5	3599
990 - 68	211	35.1-38.1	10	5968
990 - 69	214	38.1-41.1	10	5119
990 - 70	213	41.1-44.2	5	4776
990 - 71	212	44.2-47.2	5	>10000
990 - 72	215	47.2-50.3	10	>10000
990 - 73	216	50.3-53.3	10	>10000
990 - 74	217	53.3-56.4	10	4061
990 - 75	218	56.4-59.4	5	7502

Jutta Jalouse
Jutta Jalouse, Certified Assayer



ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

MAD RIVER RESOURCES INC.

JANUARY 3, 1990

ET#	Description	D. H. 89-7 metres from to		Au (ppb)	Hg (ppb)
990 -	76	219	59.4-62.5	5	5476
990 -	77	220	62.5-65.5	5	1178
990 -	78	221	65.5-68.6	5	1244
990 -	79	222	68.6-71.6	10	6820
990 -	80	223	71.6-74.7	5	7080
990 -	81	224	74.7-77.7	10	3416
990 -	82	225	77.7-80.8	10	561
990 -	83	226	80.8-83.8	5	280
990 -	84	227	83.8-86.9	15	312
990 -	85	228	86.9-89.9	5	354
990 -	86	229	89.9-93.0	5	499
990 -	87	230	93.0-96.0	5	191
990 -	88	231	96.0-99.1	5	425

Julia Jealous
ECO-TECH LABORATORIES LTD.
JULIA JEALOUS
B.C. Certified Assayer

cc:

Mr. M. Morrison
684 Balsam road
Kelowna, B.C.

V1W 1B9

SC89/KAM9

ECO-TECH LABORATORIES LTD.

MAD RIVER RESOURCES INC. - ETK 89-976A

10041 EAST TRANS CANADA HWY.
 KAMLOUPS, B.C. V2C 2J3
 PHONE - 604-573-5700
 FAX - 604-573-4557

1600 BOW VALLEY SQUARE II
 205 - 5 AVE. S.W.
 CALGARY, ALBERTA
 T2P 2V7
 ATTENTION: J. HAMILTON

DECEMBER 15, 1989

VALUES IN PPM UNLESS OTHERWISE REPORTED

PAGE 1

30 ROCK CHIPS & POWDER SAMPLES RECEIVED DECEMBER 11, 1989

D.H. 89-1	DESCRIPTIONS	AG	AL(Z)	AS	B	BA	BI	CA(Z)	CD	CO	CR	CU	FE(Z)	K(Z)	LA	MG(Z)	MN	MO	NA(Z)	NI	P	PB	SB	SN	SR	TI(Z)	U	V	W	Y	ZN
<i>metres</i>																															
4.6-7.6	01	.2	.66	70	2	5	<5	4.59	<1	19	32	29	4.53	.02	<10	1.51	937	2	.03	9	450	10	10	<20	55	<.01	<10	132	<10	10	53
7.6-10.7	02	.2	.89	25	2	210	<5	3.84	1	23	21	24	4.47	.10	<10	1.67	1095	2	.04	6	770	10	15	<20	71	<.01	<10	126	<10	17	54
10.7-13.7	03	.2	1.10	10	4	120	<5	4.23	1	23	25	27	5.06	.11	<10	2.19	1284	1	.05	6	720	10	15	<20	72	<.01	<10	137	<10	18	52
13.7-16.8	04	.2	1.10	5	2	680	<5	3.90	<1	21	21	26	4.80	.13	<10	1.91	1303	1	.05	7	750	12	15	<20	87	<.01	<10	127	<10	17	51
16.8-19.8	05	.2	.72	30	2	30	<5	5.54	<1	22	57	39	5.52	.02	<10	2.08	1298	3	.02	10	510	12	15	<20	69	<.01	<10	175	<10	14	61
19.8-22.9	06	.2	.71	55	4	10	<5	5.02	2	22	59	33	5.21	.02	<10	2.05	1221	2	.04	11	440	10	10	<20	63	<.01	<10	164	<10	11	60
22.9-25.9	07	.2	.79	185	4	5	<5	3.96	<1	26	29	40	6.05	.01	<10	1.71	1050	3	.02	14	310	12	10	<20	56	<.01	<10	172	<10	11	52
25.9-27.4	08	.2	.67	260	2	5	<5	2.61	<1	30	42	44	5.81	.01	<10	1.39	1150	2	.02	19	200	8	15	<20	52	<.01	<10	182	<10	8	52
27.4-29.0	09	.2	.81	215	2	5	<5	2.66	<1	32	36	37	5.14	.05	<10	1.57	1009	1	.03	21	300	6	15	<20	61	<.01	<10	143	<10	9	51
29.0-30.5	10	.2	1.00	110	2	50	<5	3.62	<1	22	32	35	5.75	.07	<10	1.88	1147	<1	.05	13	590	12	10	<20	101	<.01	<10	151	<10	15	53
30.5-32.0	11	.2	1.15	30	6	190	<5	3.71	<1	22	32	31	5.36	.09	<10	2.26	1209	<1	.07	9	730	8	<5	<20	108	<.01	<10	122	<10	17	55
32.0-35.1	12	.2	.90	20	2	125	<5	3.92	1	18	54	23	4.77	.06	<10	2.28	1061	1	.06	7	600	8	<5	<20	90	<.01	<10	112	<10	15	47
35.1-38.1	13	.2	1.21	25	6	130	<5	3.99	<1	22	38	25	5.34	.10	<10	2.31	1209	<1	.07	9	780	10	<5	<20	97	<.01	<10	126	<10	17	57
38.1-41.1	14	.2	.84	35	2	60	<5	4.74	<1	21	32	27	5.21	.09	<10	2.49	1230	<1	.05	12	730	10	5	<20	111	<.01	<10	143	<10	16	57
41.1-44.2	15	.4	.56	30	6	35	<5	12.38	<1	21	64	41	5.32	.02	<10	5.94	1078	1	.04	29	300	12	10	<20	156	<.01	<10	163	<10	14	80
44.2-47.2	16	.2	.54	70	6	5	<5	8.65	<1	29	191	35	5.00	.01	<10	4.58	1052	2	.03	89	190	14	5	<20	110	<.01	<10	146	<10	10	56
47.2-50.3	17	.2	.82	55	4	70	<5	8.07	1	31	124	28	6.07	.04	<10	3.59	1297	<1	.03	78	780	12	5	<20	106	<.01	<10	159	<10	16	65
50.3-53.3	18	.2	.97	65	12	35	<5	7.84	1	36	96	27	6.45	.06	<10	3.33	1487	<1	.03	71	860	10	<5	<20	100	<.01	<10	173	<10	16	72
53.3-56.4	19	.2	.79	80	12	30	<5	5.85	<1	30	76	36	6.06	.06	<10	2.65	1323	<1	.03	55	970	8	10	<20	76	<.01	<10	151	<10	14	70
56.4-59.4	20	.4	.82	65	8	50	<5	6.63	<1	32	84	29	6.37	.03	<10	3.17	1523	<1	.03	52	940	10	15	<20	95	<.01	<10	175	<10	16	74
59.4-62.5	21	.2	.67	50	12	50	<5	7.29	<1	26	93	39	5.62	.03	<10	4.09	1247	4	.03	46	750	12	20	<20	110	<.01	<10	151	<10	11	63
62.5-65.5	22	.2	.93	115	14	80	<5	6.59	<1	32	81	30	5.53	.07	<10	3.53	1381	1	.05	56	880	10	30	<20	136	<.01	<10	137	<10	13	63
65.5-68.6	23	.2	.84	25	12	55	<5	4.87	3	8	32	10	3.41	.03	<10	2.05	909	2	.03	6	590	8	10	<20	73	<.01	<10	48	<10	6	55
68.6-71.6	24	.4	.94	15	16	245	<5	6.24	1	28	48	44	5.99	.07	<10	3.26	1339	2	.03	40	1170	12	15	<20	117	<.01	<10	108	<10	12	81
71.6-74.7	25	.2	.64	30	12	105	<5	6.14	<1	35	35	47	6.42	.05	<10	3.44	1348	2	.03	40	1310	10	30	<20	113	<.01	<10	133	<10	13	75
74.7-77.7	26	.4	.82	50	12	85	<5	6.22	1	46	109	53	7.43	.06	<10	3.40	1513	2	.04	96	890	10	25	<20	125	.01	<10	147	<10	15	99

Model-Anne Property

ECO-TECH LABORATORIES LTD.

MAD RIVER RESOURCES INC. - ETK 89-976A

D.H. 89-1 metres	DESCRIPTIONS	AG	AL(Z)	AS	B	BA	BI	CA(Z)	CD	CO	CR	CU	FE(Z)	K(Z)	LA	MO	NA(Z)	NI	P	PB	SB	SN	SR	TI(Z)	U	V	W	Y	ZN	
77.7-80.8	27	.4	1.59	10	14	105	<5	5.79	<1	41	138	67	8.65	.09	<10	1628	4	.04	93	1030	12	10	<20	159	.02	<10	134	<10	19	113
80.8-83.8	28	.4	2.38	30	12	150	<5	5.16	<1	47	177	52	8.10	.09	<10	1627	5	.05	80	1160	8	10	<20	160	.01	<10	182	<10	20	112
83.8-86.9	29	.2	2.17	25	18	115	<5	5.59	<1	45	157	64	7.36	.06	<10	1654	5	.05	85	1150	10	20	<20	145	.01	<10	158	<10	18	93
86.9-89.9	30	.4	2.40	30	16	150	<5	5.27	<1	47	177	64	8.31	.05	<10	1471	4	.05	94	1010	8	10	<20	156	.02	<10	172	<10	17	105

< = LESS THAN
> = GREATER THAN

CC: M. MORRISON
684 BALSAM ROAD
KELOWNA, B.C.
V1W 1B9

Jutta Jealouse
ECO-TECH LABORATORIES LTD.
JUTTA JEALOUSE
K.C. Certified Assessor

ECO-TECH LABORATORIES LTD.

MAD RIVER RESOURCES INC. - ETK89-983A

10041 EAST TRANS CANADA HWY.
 KAMLOOPS, B.C. V2C 2J3
 PHONE - 604-573-5700
 FAX - 604-573-4557

1600 BOW VALLEY SQUARE 11
 205 5TH. AVE. S.W.
 CALGARY, ALBERTA
 T2P 2V7
 ATTENTION: MR. J. HAMILTON

DECEMBER 27, 1989

VALUES IN PPM UNLESS OTHERWISE REPORTED

113 ROCK SAMPLES RECEIVED DEC. 18, 1989

D.H. 89-2 DESCRIPTIONS	AG	AL(%)	AS	B	BA	BI	CA(%)	CD	CO	CR	CU	FE(%)	K(%)	LA	MG(%)	MN	MO	NA(%)	NI	P	PB	SB	SN	SP	TI(%)	U	V	W	Y	ZN
<i>metres</i>																														
4.6 - 7.6	131	.2	.98	10	8	125	(5 2.11	(1	17	19	25	3.99	.14	(10 2.11	1135	1	.06	5	750	16	10	(20	83	(.01	(10	92	(10	15	44	
7.6 - 10.7	132	.2	.82	15	10	295	(5 3.15	(1	15	16	19	4.08	.13	(10 2.19	1192	2	.05	5	660	8	10	(20	81	(.01	(10	89	(10	15	49	
10.7 - 13.7	33	.4	.93	20	8	505	(5 4.38	(1	21	33	27	4.42	.08	(10 2.19	1167	2	.04	11	490	8	15	(20	85	(.01	(10	154	(10	12	64	
13.7 - 16.8	34	.4	.64	25	8	45	(5 4.59	(1	24	24	30	5.27	.03	(10 2.34	1341	1	.04	12	540	18	20	(20	84	(.01	(10	168	(10	14	72	
16.8 - 19.8	35	.4	1.15	20	14	395	(5 4.86	(1	21	20	35	4.66	.09	(10 2.55	1278	1	.06	13	740	8	10	(20	151	(.01	(10	98	10	18	74	
19.8 - 22.9	36	NO SAMPLE																												
22.9 - 25.9	37	NO SAMPLE																												
25.9 - 29.0	38	.4	.68	45	16	50	(5 4.47	(1	18	32	53	4.91	.01	(10 2.03	1171	2	.03	19	500	8	25	(20	74	(.01	(10	155	(10	15	71	
29.0 - 32.0	39	.4	.60	45	16	25	(5 5.36	(1	24	38	43	5.76	.02	(10 2.45	1449	3	.04	15	450	6	25	(20	80	(.01	(10	188	(10	14	70	
32.0 - 35.1	40	.2	.65	25	12	45	(5 5.63	(1	24	31	43	5.28	.01	(10 2.76	1627	3	.02	15	550	6	20	(20	81	(.01	(10	195	(10	15	70	
35.1 - 38.1	41	.4	.70	40	18	20	(5 4.29	(1	27	32	49	5.69	.02	(10 2.58	1331	2	.04	19	400	6	20	(20	60	(.01	(10	185	(10	16	79	
38.1 - 41.1	42	.2	.61	100	16	20	(5 4.32	(1	29	36	50	5.84	.01	(10 2.24	1243	3	.03	28	280	6	25	(20	59	(.01	(10	187	(10	12	74	
41.1 - 44.2	43	.2	.53	85	18	15	(5 4.74	(1	23	35	57	5.58	.01	(10 2.54	1233	3	.05	22	230	6	25	(20	66	(.01	(10	205	10	12	82	
44.2 - 47.2	44	.2	.53	85	22	225	(5 8.20	(1	23	27	38	5.42	.01	(10 4.20	1343	6	.08	28	190	8	25	(20	115	(.01	(10	161	10	13	89	
47.2 - 50.3	45	.2	.67	70	22	70	(5 6.72	(1	22	81	32	4.74	.01	(10 3.31	1253	5	.03	70	210	6	15	(20	132	(.01	(10	115	(10	9	54	
50.3 - 53.3	46	.2	.54	50	20	25	(5 6.50	(1	33	58	27	5.00	.02	(10 2.74	1213	5	.03	59	840	6	15	(20	111	(.01	(10	120	(10	12	61	
53.3 - 56.4	47	.2	.63	35	14	25	(5 6.64	(1	25	69	29	4.69	.02	(10 2.82	1213	3	.04	54	710	8	20	(20	108	(.01	(10	128	(10	12	57	
56.4 - 59.4	48	.4	.57	35	22	100	(5 6.96	(1	25	63	23	5.30	.04	(10 3.00	1293	5	.05	54	830	8	15	(20	118	(.01	(10	122	(10	13	67	
59.4 - 62.5	49	.4	.58	25	22	30	(5 6.64	(1	26	59	29	5.04	.02	(10 2.71	1191	6	.03	59	850	8	20	(20	106	(.01	(10	122	(10	12	64	
62.5 - 65.5	50	.4	.68	90	18	140	(5 6.18	(1	29	50	37	5.14	.04	(10 2.72	1149	3	.03	51	1000	8	40	(20	114	(.01	(10	108	(10	14	61	
65.5 - 68.6	51	.4	.74	110	18	95	(5 6.49	(1	32	33	45	5.58	.07	(10 3.42	1353	4	.05	49	1280	10	35	(20	141	(.01	(10	123	(10	17	75	
68.6 - 71.6	52	.4	.50	45	14	45	(5 6.64	(1	27	38	33	5.34	.05	(10 2.91	1287	1	.05	42	1040	8	20	(20	126	(.01	(10	102	(10	15	63	
71.6 - 74.7	53	.2	.65	190	14	65	(5 4.84	(1	27	68	37	4.46	.04	(10 2.24	1124	3	.04	57	750	6	25	(20	102	(.01	(10	127	(10	13	72	
74.7 - 77.7	54	.2	1.17	65	10	110	(5 4.36	(1	27	74	44	4.59	.09	(10 2.40	1128	(1	.06	55	750	8	25	(20	88	(.01	(10	125	10	13	71	
77.7 - 80.8	55	.2	1.04	35	10	110	(5 4.50	(1	21	58	31	3.83	.12	(10 1.87	1015	3	.07	39	660	8	20	(20	93	(.01	(10	99	(10	11	70	
80.8 - 83.8	56	.2	.45	20	8	70	(5 2.72	(1	9	19	12	2.48	.06	(10 .97	706	1	.08	10	550	4	10	(20	50	(.01	(10	33	(10	5	62	

Model-Anne Property

ECO-TECH LABORATORIES LTD.

MAD RIVER RESOURCES INC. - ETK89-983A

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D.H. 89-3

metres

DESCRIPTIONS	AG	AL(%)	AS	B	BA	BI	CA(%)	CD	CO	CR	CU	FE(%)	K(%)	LA	MG(%)	MN	MO	NA(%)	NI	P	PB	SB	SN	SR	TI(%)	U	V	W	Y	ZN
108.2-111.3	094	.2	.43	15	10	45	(5 3.11	(1	15	30	16	3.02	.06	(10	1.45	975	1	.07	19	690	2	5	(20	58	(.01	(10	31	(10	7	63
111.3-114.3	095	NO SAMPLE																												
114.3-117.3	096	.2	1.55	20	10	60	(5 5.02	(1	33	91	38	5.39	.08	(10	2.57	1365	2	.05	77	1110	6	10	(20	107	(.01	(10	92	(10	15	107
117.3-120.4	097	.2	2.27	15	22	330	(5 5.74	(1	28	99	37	4.69	.09	(10	2.24	935	1	.05	70	890	4	(5	(20	129	.01	(10	78	(10	13	62
D.H. 4.6-7.6	098	.2	.90	5	18	30	(5 3.85	(1	21	32	27	5.26	.11	(10	2.21	1050	3	.05	12	760	14	10	(20	81	(.01	(10	134	(10	13	60
89-4 7.6-10.7	099	.2	1.06	10	26	30	(5 4.27	(1	21	42	29	5.02	.06	(10	1.97	1093	3	.04	10	610	16	20	(20	81	.01	(10	142	(10	12	53
10.7-13.7	100	.2	.82	20	24	15	(5 4.09	(1	21	45	27	4.88	.03	(10	2.17	1250	3	.04	11	510	14	10	(20	77	(.01	(10	139	(10	10	60
13.7-16.8	101	.2	.94	80	28	10	(5 4.58	(1	22	42	34	5.42	.03	(10	2.28	1149	3	.04	11	420	14	10	(20	94	(.01	(10	140	(10	9	65
16.8-19.8	102	.2	.83	45	24	35	(5 4.14	(1	21	54	37	5.42	.02	(10	2.26	1364	3	.04	12	550	14	15	(20	70	(.01	(10	157	(10	11	61
19.8-22.9	103	.2	.62	30	26	20	(5 5.35	(1	23	45	28	4.93	.02	(10	2.54	1304	7	.05	12	430	16	10	(20	81	(.01	(10	134	(10	9	63
22.9-25.9	104	.2	.60	35	30	15	(5 4.53	(1	22	45	34	5.33	.02	(10	2.49	1250	2	.04	16	540	14	15	(20	78	(.01	(10	162	(10	10	69
25.9-29.0	105	.2	.80	110	34	90	(5 3.59	(1	26	59	43	6.91	.03	(10	2.17	1519	2	.04	17	570	12	15	(20	57	(.01	(10	182	(10	11	73
29.0-32.0	106	.2	.82	30	40	100	(5 4.36	(1	25	57	29	5.39	.04	(10	2.19	1058	4	.06	18	550	14	20	(20	74	(.01	(10	128	(10	13	70
32.0-35.1	107	.2	.88	50	24	5	(5 4.03	(1	19	26	38	4.64	.04	(10	1.84	891	1	.05	9	360	8	15	(20	64	(.01	(10	177	(10	10	51
35.1-38.1	108	.2	1.04	20	22	70	(5 4.85	(1	18	29	33	4.37	.05	(10	2.32	812	2	.04	8	370	6	20	(20	90	(.01	(10	164	(10	12	61
38.1-41.1	109	NO SAMPLE																												
41.1-44.2	110	.2	.82	25	26	15	(5 4.23	(1	15	23	37	5.00	.05	(10	2.26	966	2	.05	8	400	6	20	(20	78	(.01	(10	207	(10	11	54
44.2-47.2	111	.2	.78	15	20	35	(5 4.60	(1	16	30	39	4.53	.06	(10	2.26	987	3	.04	8	460	6	25	(20	85	(.01	(10	189	(10	12	56
47.2-50.3	112	NO SAMPLE																												
50.3-53.3	113	NO SAMPLE																												
53.3-56.4	114	NO SAMPLE																												
56.4-59.4	115	NO SAMPLE																												
59.4-62.5	116	.2	1.04	30	20	15	(5 5.32	(1	18	23	38	4.81	.07	(10	2.59	984	3	.05	12	440	8	15	(20	89	.01	(10	171	(10	11	50
62.5-65.5	117	NO SAMPLE																												
65.5-68.6	118	.2	.65	35	14	10	(5 7.09	(1	19	50	38	5.16	.02	(10	3.28	951	4	.05	22	140	4	25	(20	109	.01	(10	238	(10	11	61
68.6-71.6	119	.2	.56	85	16	25	(5 7.52	(1	23	62	40	4.35	.03	(10	4.34	898	4	.05	31	140	8	25	(20	110	.01	(10	187	(10	10	62
71.6-74.7	120	NO SAMPLE																												
74.7-77.7	121	NO SAMPLE																												
77.7-80.8	122	.2	.81	65	18	35	(5 6.71	(1	19	39	37	4.53	.03	(10	3.49	889	6	.05	21	140	10	10	(20	111	.02	(10	185	(10	9	60
80.8-83.8	123	NO SAMPLE																												
83.8-86.9	124	.2	.80	50	14	25	(5 7.56	(1	16	55	37	4.01	.04	(10	3.61	772	11	.05	30	1000	14	20	(20	117	.02	(10	162	(10	9	51
86.9-89.9	125	.2	.65	50	18	25	(5 6.58	(1	18	44	36	4.45	.03	(10	3.56	886	34	.05	34	250	32	30	(20	106	.02	(10	170	(10	7	52
89.9-93.0	126	.2	1.71	20	20	295	(5 5.12	(1	20	27	38	4.94	.27	(10	3.04	1138	4	.07	11	600	6	5	(20	244	.02	(10	168	(10	15	52
93.0-96.0	127	.2	1.21	30	14	55	(5 4.06	(1	19	11	44	5.14	.19	(10	2.65	1032	5	.07	7	1110	6	10	(20	248	.01	(10	162	(10	16	46
96.0-99.1	128	.2	1.88	20	16	235	(5 4.29	(1	23	35	36	4.60	.15	(10	2.61	1017	2	.08	12	600	6	15	(20	197	.02	(10	161	(10	15	47
99.1-102.1	129	NO SAMPLE																												
102.1-105.2	130	.2	1.41	20	12	255	(5 5.52	(1	18	12	49	5.36	.09	(10	3.14	1025	5	.08	8	1250	6	15	(20	320	(.01	(10	179	(10	16	52

Model-Anne Property

ECO-TECH LABORATORIES LTD.

MAD RIVER RESOURCES INC. - ETK89-983A

PAGE 4

D. H. 89-4	DESCRIPTIONS	AG	AL(%)	AS	B	BA	BI	CA(%)	CD	CO	CR	CU	FE(%)	K(%)	LA	MG(%)	MN	MO	NA(%)	NI	P	PB	SB	SN	SR	TI(%)	U	V	W	Y	ZN
metres																															
105.2-108.2	131	.2	2.38	15	8	615	<5	5.06	<1	14	4	42	5.21	.12	<10	2.25	1144	3	.11	4	660	6	10	<20	542	<.01	<10	135	10	18	50
108.2-111.3	132	.2	1.06	70	6	120	<5	6.16	<1	22	33	40	4.98	.05	<10	3.36	1170	3	.07	22	650	6	25	<20	272	<.01	<10	156	<10	16	76
111.3-114.3	133	.2	.47	75	12	45	<5	8.35	<1	19	65	36	4.16	.02	<10	4.53	786	5	.05	36	130	6	20	<20	159	<.01	<10	177	10	9	63
114.3-117.3	134	.1	.67	30	13	45	<5	7.67	<1	12	92	17	3.2	.02	<10	3.28	909	5	.05	25	220	6	5	<20	161	<.01	<10	86	<10	7	55
117.3-120.4	135	.2	.92	45	14	15	<5	5.16	<1	15	88	19	4.4	.05	<10	2.58	839	3	.06	34	270	4	5	<20	79	<.01	<10	76	<10	6	59
120.4-123.4	136	.4	1.06	55	14	25	<5	6.93	<1	24	96	25	5.51	.04	<10	3.64	1100	2	.05	49	600	4	10	<20	115	<.01	<10	126	10	13	72
123.4-126.5	137	.2	.54	45	16	25	<5	6.57	<1	27	93	33	4.94	.03	<10	2.99	1180	3	.06	49	780	6	15	<20	86	<.01	<10	144	<10	14	51
126.5-129.5	138	.6	.56	35	8	40	<5	3.52	<1	13	70	36	3.35	.06	<10	1.81	654	5	.05	33	630	8	10	<20	72	<.01	<10	67	<10	12	88
129.5-132.6	139	.4	.86	50	10	25	<5	5.23	<1	24	97	33	4.60	.03	<10	2.60	1010	5	.05	47	720	8	25	<20	77	<.01	<10	128	<10	13	56
132.6-135.6	140	.6	.70	75	10	50	<5	4.35	<1	18	64	41	3.77	.06	<10	2.18	731	5	.05	45	340	6	15	<20	64	<.01	<10	87	10	13	75
135.6-138.7	141	.2	1.17	25	6	95	<5	4.78	<1	25	94	37	4.67	.07	<10	2.44	1025	2	.06	60	760	6	15	<20	93	<.01	<10	106	<10	14	73
138.7-141.7	142	.2	1.38	15	10	40	<5	4.75	<1	28	86	41	5.33	.10	<10	2.63	1139	3	.06	70	690	6	20	<20	93	.01	<10	103	<10	15	106
141.7-144.8	143	.2	1.80	15	8	125	<5	4.81	<1	27	111	40	5.01	.10	<10	2.29	1078	1	.06	74	940	6	10	<20	86	.01	<10	112	<10	15	75

NOTE: < = LESS THAN

CC: MR. M. MORRISON
684 BALSAM ROAD
KELOWNA, B.C.
V1W 1B9

SC89/K9

Jutta Jealouse
ECO-TECH LABORATORIES LTD.
JUTTA JEALOUSE
B.C. CERTIFIED ASSAYER

Model-Anne Property

ECO-TECH LABORATORIES LTD.

MAD RIVER RESOURCES INC. - ETK89-990A

10041 EAST TRANS CANADA HWY.
 KAMLOOPS, B.C. V2C 2J3
 PHONE - 604-573-5700
 FAX - 604-573-4557

1600 BOW VALLEY SQUARE 11
 205 5TH. AVE. S.W.
 CALGARY, ALBERTA
 T2P 2V7
 ATTENTION: MR. J. HAMILTON

JANUARY 3, 1990

VALUES IN PPM UNLESS OTHERWISE REPORTED

PAGE 1

88 ROCK CHIP SAMPLES RECEIVED DEC. 22, 1989

D.H. 89-5	DESCRIPTIONS	AG	AL(%)	AS	B	BA	BI	CA(%)	CD	CO	CR	CU	FE(%)	K(%)	LA	MG(%)	MN	MO	NA(%)	NI	P	PB	SB	SN	SR	TI(%)	U	V	W	Y	ZN
metres																															
7.6-10.7	144	.2	.91	275	8	5	<5	3.87	<1	28	40	53	5.27	.02	<10	1.71	1053	3	.02	38	240	12	25	<20	40	<.01	<10	208	10	11	64
10.7-13.7	145	.2	.54	115	6	<5	<5	6.07	<1	22	50	48	4.35	.01	<10	2.44	978	5	.02	30	130	12	20	<20	56	<.01	<10	166	<10	10	60
13.7-16.8	146	.2	.71	195	8	70	5	6.89	1	25	76	52	4.81	.01	<10	2.90	1008	2	.02	47	110	10	35	<20	102	<.01	<10	202	10	11	61
16.8-19.8	147	.2	.53	85	10	10	<5	6.79	<1	29	113	66	4.94	.01	<10	3.75	955	3	.03	48	70	10	25	<20	108	<.01	<10	236	<10	11	67
19.8-22.9	148	.2	.45	85	6	5	<5	6.68	<1	19	104	46	3.96	.02	<10	2.50	899	4	.03	48	60	8	15	<20	75	<.01	<10	149	<10	7	65
22.9-25.9	149	.2	.48	50	8	5	<5	5.94	<1	24	86	25	4.44	.05	<10	2.35	953	2	.02	56	390	10	10	<20	83	<.01	<10	146	<10	9	71
25.9-29.0	150	.2	.57	40	6	10	<5	7.00	<1	24	103	39	4.52	.02	<10	2.96	1065	3	.02	65	520	12	15	<20	103	<.01	<10	148	<10	11	67
29.0-32.0	151	.2	.47	40	6	15	5	6.77	<1	23	71	47	4.44	.03	<10	2.61	1069	4	.03	56	740	10	15	<20	86	<.01	<10	131	<10	13	68
32.0-35.1	152	.2	.53	25	4	25	<5	5.36	<1	14	42	18	3.41	.04	<10	1.81	858	2	.03	20	560	8	10	<20	65	<.01	<10	77	<10	9	55
35.1-38.1	153	.2	.52	25	8	50	<5	4.53	<1	11	58	20	3.18	.04	<10	1.55	700	5	.02	14	600	8	10	<20	60	<.01	<10	57	<10	7	46
38.1-41.1	154	.2	.52	40	6	50	<5	5.37	<1	19	55	55	4.00	.05	<10	2.07	861	4	.03	27	760	8	20	<20	76	<.01	<10	103	<10	11	59
41.1-44.2	155	.2	.43	165	4	40	<5	5.14	1	17	67	28	3.69	.06	<10	1.81	891	5	.03	35	540	8	15	<20	67	<.01	<10	86	<10	10	64
44.2-47.2	156	.2	1.53	25	2	105	<5	4.16	1	22	97	39	4.43	.06	<10	1.85	883	2	.04	47	700	8	10	<20	74	<.01	<10	122	<10	14	64
47.2-50.3	157	.2	.70	160	4	35	<5	4.09	<1	24	84	21	4.19	.04	<10	1.52	943	4	.03	43	680	6	20	<20	62	<.01	<10	115	<10	11	65
50.3-53.3	158	.2	.57	105	4	110	<5	3.20	1	10	65	34	3.19	.05	<10	1.15	762	4	.06	15	590	8	10	<20	46	<.01	<10	54	<10	8	69
53.3-56.4	159	.2	1.22	25	4	150	<5	5.92	<1	22	76	76	3.85	.05	<10	1.83	1043	2	.07	49	680	10	5	<20	70	<.01	<10	99	<10	15	70
56.4-59.4	160	.2	1.11	25	4	180	<5	4.93	<1	32	90	50	4.99	.04	<10	2.63	1240	1	.07	72	730	8	20	<20	96	<.01	<10	143	<10	19	107
59.4-62.5	161	.2	2.52	15	6	75	<5	5.20	<1	30	117	49	4.68	.04	<10	2.81	1043	2	.06	77	750	12	5	<20	95	.01	<10	111	<10	18	82
62.5-65.5	162	.2	1.41	20	10	120	<5	5.22	1	34	87	53	5.34	.06	<10	2.96	1226	3	.06	82	800	10	15	<20	105	.01	<10	142	<10	17	98
65.5-68.6	163	.2	1.00	20	10	50	<5	6.05	<1	28	91	40	4.61	.07	<10	2.10	1054	2	.05	61	800	12	10	<20	115	.01	<10	116	<10	15	78
68.6-71.6	164	.2	1.91	15	4	175	<5	5.18	1	31	102	54	4.87	.06	<10	3.32	1173	3	.05	76	800	12	10	<20	100	.01	<10	109	<10	18	77
71.6-74.7	165	.2	1.93	10	4	95	<5	5.29	1	27	89	46	4.53	.07	<10	3.00	1083	2	.04	62	950	10	5	<20	85	.01	<10	88	<10	15	65
74.7-77.7	166	.2	1.85	15	6	115	<5	4.31	<1	30	84	36	4.81	.08	<10	3.19	1016	4	.06	69	1050	12	15	<20	88	.03	<10	110	10	19	85
77.7-80.8	167	.4	2.64	10	4	160	<5	3.85	<1	33	94	46	5.00	.08	<10	3.68	1108	2	.05	79	820	12	10	<20	84	.02	<10	101	<10	17	93
80.8-83.8	168	.2	2.39	15	4	60	<5	4.29	<1	32	98	26	4.73	.08	<10	2.79	1021	2	.06	67	1000	14	5	<20	82	.02	<10	109	<10	18	89
83.8-86.9	169	.4	2.24	10	2	50	<5	4.76	<1	25	52	43	4.44	.09	<10	2.59	1071	2	.05	65	730	10	5	<20	69	.01	<10	74	<10	13	81

Hodel-Anne Property

ECO-TECH LABORATORIES LTD.

MAD RIVER RESOURCES INC. - ETKB9-990A

D.H. 89-5 metres	DESCRIPTIONS	AG	AL(Z)	AS	B	BA	BI	CA(Z)	CD	CO	CR	CU	FE(Z)	K(Z)	LA	MG(Z)	MN	MO	NA(Z)	NI	P	PB	SB	SN	SR	TI(Z)	U	V	W	Y	ZN
86.9-89.9	170	.2	2.21	10	2	125	<5	5.38	<1	28	68	51	4.44	.07	<10	2.75	1150	1	.06	71	770	8	5	<20	78	.01	<10	74	<10	16	84
89.9-93.0	171	.2	1.58	10	2	125	5	6.17	<1	27	55	49	4.51	.06	<10	2.61	1259	2	.05	54	680	10	5	<20	105	.01	<10	74	<10	15	74
93.0-96.0	172	.2	2.19	10	4	95	<5	5.22	<1	31	69	68	4.77	.07	<10	2.96	1209	2	.05	66	650	10	5	<20	82	.01	<10	73	<10	15	85
96.0-99.1	173	.4	2.27	10	2	70	5	4.79	<1	30	69	89	4.96	.08	<10	2.92	1155	3	.05	71	650	10	5	<20	70	.02	<10	74	<10	16	95
99.1-102.1	174	.4	2.51	10	4	95	5	4.42	<1	37	75	62	4.86	.07	<10	3.17	1223	2	.06	74	670	8	10	<20	66	.01	<10	74	10	14	97
102.1-105.2	175	.4	2.83	10	4	35	5	4.71	<1	32	77	80	5.45	.03	<10	2.94	1214	2	.04	70	720	14	10	<20	54	<.01	<10	75	10	13	146
105.2-108.2	176	.4	1.32	15	2	15	5	5.31	<1	29	75	71	4.70	.04	<10	2.73	1298	4	.04	62	590	8	15	<20	74	<.01	<10	80	10	11	87
108.2-111.3	177	.2	.88	10	4	50	<5	5.81	<1	23	100	34	3.86	.07	<10	3.49	1179	3	.05	59	600	12	10	<20	137	.01	<10	127	<10	11	42
111.3-114.3	178	.2	2.06	5	2	55	<5	5.33	<1	27	140	41	3.94	.06	<10	3.42	1100	2	.05	73	730	8	5	<20	96	<.01	<10	115	<10	14	47
114.3-117.3	179	.2	2.51	15	6	155	<5	6.32	1	29	156	50	4.89	.07	<10	3.48	1289	5	.04	88	840	10	5	<20	112	<.01	<10	138	<10	16	81
117.3-120.4	180	.2	3.35	20	14	80	<5	5.8	1	30	168	43	6.5	.04	<10	3.34	1243	4	.06	84	1050	14	5	<20	103	.02	<10	157	10	20	117
120.4-123.2	181	.2	3.34	10	8	265	<5	5.08	<1	32	134	69	5.65	.06	<10	3.61	1321	4	.06	70	820	14	10	<20	87	.04	<10	162	10	15	99
D.H. 4.6-7.6	182	.2	.67	30	<2	20	<5	4.76	1	19	83	39	4.30	.07	<10	1.70	1092	3	.05	39	770	6	5	<20	74	<.01	<10	95	<10	12	56
89-6 7.6-10.7	183	.2	1.89	10	<2	20	<5	6.11	<1	24	66	33	4.63	.07	<10	1.77	1106	1	.04	55	880	8	<5	<20	66	<.01	<10	83	<10	14	66
10.7-13.7	184	.2	2.69	10	<2	50	<5	7.55	<1	19	69	23	4.18	.04	<10	1.72	969	1	.04	52	820	8	5	<20	90	<.01	<10	102	<10	15	47
13.7-16.8	185	.2	3.01	10	<2	140	<5	6.47	1	24	80	24	3.86	.04	<10	2.43	1051	2	.05	52	890	8	5	<20	109	.01	<10	96	<10	14	54
16.8-19.8	186	.2	3.33	10	<2	70	<5	5.20	1	31	120	51	4.74	.03	<10	3.12	1088	2	.04	58	920	6	5	<20	86	.11	<10	137	<10	12	59
19.8-22.9	187	.2	4.35	15	<2	45	<5	5.04	<1	32	120	42	5.03	.03	<10	3.36	1309	3	.05	62	860	8	5	<20	48	.19	<10	167	<10	13	79
22.9-25.9	188	.2	4.12	10	<2	90	<5	6.18	<1	27	92	37	4.64	.05	<10	2.63	1146	3	.04	63	900	8	5	<20	75	.14	<10	130	<10	14	64
25.9-29.0	189	.2	2.09	10	<2	175	<5	5.28	<1	28	65	28	4.67	.07	<10	2.22	1077	2	.03	58	920	6	15	<20	85	.02	<10	106	<10	14	61
29.0-32.0	190	.2	2.41	10	<2	115	<5	4.91	<1	21	42	46	3.94	.05	<10	1.94	921	1	.04	35	850	6	5	<20	74	.02	<10	91	<10	13	55
32.0-35.1	191	.2	1.95	10	<2	50	<5	5.29	<1	20	16	49	4.79	.05	<10	1.86	980	2	.04	10	890	6	5	<20	96	.01	<10	143	<10	15	59
35.1-38.1	192	.2	3.47	10	<2	30	<5	4.44	<1	25	28	52	5.01	.06	<10	2.08	978	2	.04	18	1000	8	<5	<20	127	.09	<10	150	10	15	64
38.1-41.1	193	.2	4.04	10	4	40	5	4.77	1	39	127	84	5.84	.06	<10	3.26	1224	2	.03	80	940	10	5	<20	88	.19	<10	170	<10	14	100
41.1-44.2	194	.2	3.75	10	10	10	5	4.69	2	40	151	42	6.26	.06	<10	3.52	1340	3	.04	89	1020	10	5	<20	84	.13	<10	161	10	20	102
44.2-47.2	195	.2	3.80	10	<2	20	5	4.05	1	35	131	56	5.46	.04	<10	3.96	1232	3	.03	87	770	10	5	<20	99	.09	<10	116	<10	14	73
47.2-50.3	196	.2	2.81	15	2	50	<5	3.15	1	33	85	41	5.58	.07	<10	3.26	1085	2	.05	78	860	8	5	<20	78	.04	<10	114	10	20	111
50.3-53.3	197	.2	4.18	15	4	20	5	3.47	2	43	128	58	6.24	.06	<10	4.49	1243	1	.05	95	760	10	10	<20	99	.28	<10	156	10	15	98
53.3-56.4	198	.2	2.70	10	<2	225	5	4.13	<1	32	119	44	5.30	.06	<10	3.07	1031	2	.05	78	920	10	<5	<20	73	.03	<10	107	<10	18	97
56.4-59.4	199	.2	3.02	10	6	120	5	3.75	<1	34	114	42	5.45	.03	<10	3.23	1015	4	.05	66	1340	8	5	<20	88	.19	<10	99	<10	16	77
D.H. 1.5-4.6	200	.2	.49	10	<2	15	<5	5.62	<1	15	61	27	4.79	.02	<10	2.26	1139	2	.02	12	430	12	10	<20	96	<.01	<10	121	<10	14	61
7 4.6-7.6	201	.2	.61	15	<2	5	<5	4.74	1	26	53	41	6.29	.02	<10	2.13	1585	3	.03	21	670	10	15	<20	72	<.01	<10	212	<10	17	65
7.6-10.7	202	.2	.61	30	<2	10	5	5.81	<1	21	67	40	4.82	.01	<10	2.38	1281	3	.03	21	480	10	15	<20	80	<.01	<10	156	<10	15	67
10.7-13.7	203	.4	.66	20	<2	50	<5	6.17	2	23	71	38	5.19	.01	<10	3.18	1292	3	.02	25	270	10	20	<20	89	<.01	<10	170	<10	15	70
13.7-16.8	204	.2	.66	25	<2	10	<5	5.68	<1	24	78	42	4.94	.02	<10	2.89	1132	3	.04	22	300	120	20	<20	80	<.01	<10	173	<10	15	72
16.8-19.8	205	.2	.54	40	<2	5	<5	5.05	<1	32	70	73	6.07	.01	<10	2.89	1410	3	.04	28	290	10	30	<20	73	<.01	<10	223	<10	14	87
19.8-22.9	206	.4	.56	30	2	110	<5	5.78	1	27	70	45	5.52	.01	<10	3.28	1354	2	.03	27	350	8	20	<20	86	<.01	<10	177	<10	15	67

Hodel-Anne Property

ECO-TECH LABORATORIES LTD.

MAD RIVER RESOURCES INC. - ETK89-990A

PAGE 3
D.H. 89-7
metres

DESCRIPTIONS	AG	AL(%)	AS	B	BA	BI	CA(%)	CD	CO	CR	CU	FE(%)	K(%)	LA	MG(%)	MN	MO	NA(%)	NI	P	PB	SB	SN	SR	TI(%)	U	V	W	Y	ZN
22.9-25.9	207	.2	.67	30	<2	5	<5 5.66	<1	23	45	50	5.16	.01	<10	2.94	1275	2	.02	19	300	8	20	<20	68	<.01	<10	180	<10	13	65
25.9-29.0	208	.2	.59	20	<2	10	<5 4.97	2	21	68	38	4.73	.01	<10	2.56	1063	3	.04	19	270	10	15	<20	69	<.01	<10	150	<10	12	66
29.0-32.0	209	.4	.50	25	<2	20	<5 5.27	1	19	36	59	4.54	.01	<10	2.43	1010	4	.04	14	260	10	15	<20	70	<.01	<10	129	<10	12	66
32.0-35.1	210	.4	.54	25	<2	5	<5 5.25	<1	22	50	47	4.78	.01	<10	2.54	1162	4	.03	18	230	10	20	<20	68	<.01	<10	163	<10	11	66
35.1-38.1	211	.4	.49	30	<2	5	<5 5.14	<1	25	40	57	5.77	.01	<10	2.52	1255	4	.04	15	190	12	20	<20	60	<.01	<10	220	<10	12	83
38.1-41.1	212	.2	.55	30	<2	5	5 6.10	1	27	53	39	5.50	.01	<10	3.01	1257	3	.03	20	260	10	20	<20	58	<.01	<10	205	<10	14	81
41.1-44.2	213	.2	.39	40	<2	5	<5 4.87	<1	22	70	36	4.43	.01	<10	2.14	1055	21	.03	17	220	26	20	<20	50	<.01	<10	152	<10	11	58
44.2-47.2	214	.2	.47	35	<2	5	<5 3.42	<1	26	44	43	5.54	.01	<10	2.02	1210	6	.03	14	320	10	30	<20	44	<.01	<10	200	<10	13	73
47.2-50.3	215	.4	.48	20	<2	5	<5 5.60	1	31	110	45	5.86	.01	<10	2.82	1398	2	.02	35	240	8	25	<20	56	<.01	<10	212	<10	14	70
50.3-53.3	216	.4	.48	25	<2	5	<5 3.56	1	27	64	55	5.38	.01	<10	1.90	1230	3	.03	25	270	6	35	<20	38	<.01	<10	185	<10	13	66
53.3-56.4	217	.4	.54	20	<2	5	5 5.82	<1	24	41	47	5.65	.01	<10	3.02	1353	2	.03	16	240	10	20	<20	57	<.01	<10	206	<10	14	74
56.4-59.4	218	.2	.53	15	2	5	<5 6.21	<1	22	41	44	5.63	.01	<10	3.31	1250	2	.02	15	210	10	25	<20	63	<.01	<10	211	<10	14	72
59.4-62.5	219	.2	.61	15	<2	5	5 5.90	<1	19	60	34	4.87	.01	<10	3.05	1238	3	.02	15	180	8	15	<20	77	<.01	<10	160	<10	14	61
62.5-65.5	220	.2	.49	30	12	5	5 7.08	<1	21	65	38	5.22	.01	<10	3.11	1260	5	.04	18	220	8	20	<20	83	<.01	<10	180	<10	13	80
65.5-68.6	221	.4	.46	45	12	10	<5 8.50	1	21	90	23	5.33	.01	<10	3.64	1260	7	.04	28	100	8	15	<20	71	<.01	<10	208	<10	11	85
68.6-71.6	222	.2	.53	40	10	5	<5 7.40	<1	19	62	54	5.04	.01	<10	2.92	1127	16	.04	19	90	12	30	<20	61	<.01	<10	231	<10	11	90
71.6-74.7	223	.2	.68	45	8	155	5 7.34	<1	27	58	70	6.15	.05	<10	3.36	1400	8	.04	32	320	10	25	<20	184	<.01	<10	222	<10	15	86
74.7-77.7	224	.2	.48	15	12	25	<5 7.64	<1	25	73	26	5.19	.05	<10	3.52	1274	3	.04	56	840	6	<5	<20	135	<.01	<10	123	<10	15	74
77.7-80.8	225	.4	.52	15	8	20	5 8.10	<1	24	65	21	5.25	.03	<10	3.41	1224	6	.04	44	860	8	<5	<20	145	<.01	<10	124	<10	13	64
80.8-83.8	226	.2	1.48	10	6	20	<5 7.50	<1	26	97	79	5.02	.04	<10	1.77	1180	3	.05	60	930	6	<5	<20	147	<.01	<10	108	<10	16	65
83.8-86.9	227	.2	1.17	10	8	15	<5 3.88	1	25	97	37	5.52	.05	<10	1.89	1233	3	.06	57	1040	4	<5	<20	105	<.01	<10	117	<10	17	79
86.9-89.9	228	.4	1.46	15	10	70	<5 6.09	2	25	80	40	4.55	.04	<10	1.89	1196	3	.05	69	1010	8	10	<20	121	<.01	<10	105	<10	14	79
89.9-93.0	229	.2	2.06	15	12	20	<5 6.87	<1	25	101	52	4.92	.04	<10	2.11	1245	6	.04	70	1040	8	5	<20	138	<.01	<10	106	<10	16	82
93.0-96.0	230	.2	1.77	15	14	40	<5 6.63	<1	29	98	54	5.22	.04	<10	2.60	1199	3	.05	67	1310	8	<5	<20	121	<.01	<10	121	<10	16	78
96.0-99.1	231	.2	2.38	15	8	30	<5 5.93	1	24	133	32	4.73	.05	<10	2.32	1144	6	.04	72	990	6	<5	<20	128	<.01	<10	97	10	15	74

NOTE: < = LESS THAN

CC: MR. M. MORRISON
684 BALSAM ROAD
KELOWNA, B.C.
V1W 1B9

Jutta Jealouse

ECO-TECH LABORATORIES LTD.
JUTTA JEALOUSE
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Model-Anne Property

ECO-TECH LABORATORIES LTD.

10041 EAST TRANS CANADA HWY.
 KAMLOOPS, B.C. V2C 2J3
 PHONE - 604-573-5700
 FAX - 604-573-4557

MAD RIVER - ETK90-12A

1600 BOW VALLEY SQUARE II
 205 5th AVE. S.W.
 CALGARY, ALBERTA

JANUARY 22, 1990

ATTENTION: MR. J. HAMILTON

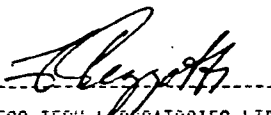
VALUES IN PPM UNLESS OTHERWISE REPORTED

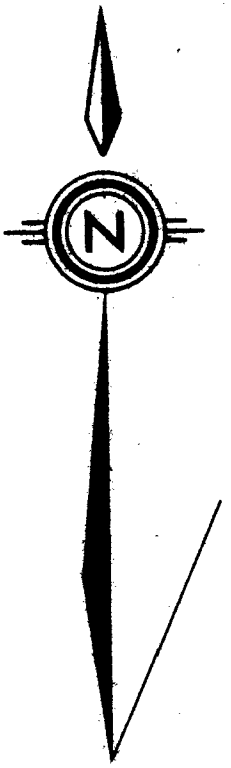
11 ROCK CHIP SAMPLES RECEIVED JANUARY 12, 1990

DESCRIPTIONS	Hq(abb)	AG	AL(Z)	AS	B	BA	BI	CA(Z)	CD	CO	CR	CU	FE(Z)	K(Z)	LA	MG(Z)	MN	MO	NA(Z)	NI	P	PB	SB	SK	SR	TI(Z)	U	V	W	Y	ZN	
89-2 19.8-22.9	36	2308	.2	1.93	35	10	340	<5	5.26	<1	26	21	62	5.47	.13	.08	<10	2.66	1412	.08	14	740	33	20	<20	205	.01	<10	133	<10	20	64
89-3 11.3-11.3	95	12226	.4	1.79	30	8	95	<5	7.02	<1	34	109	53	5.61	.07	.05	<10	2.95	1431	.05	89	870	23	20	<20	113	.01	<10	122	<10	18	120
89-4 38.1-41.1	109	22960	.4	.68	30	8	210	<5	6.21	<1	24	38	29	5.52	.03	.04	<10	2.50	1088	.04	13	540	17	25	<20	107	.01	<10	162	<10	14	81
47.2-50.3	112	35415	.2	1.03	50	10	40	<5	5.22	<1	27	61	46	5.76	.03	.04	<10	2.70	1318	.04	14	610	21	35	<20	105	.01	<10	200	<10	16	84
50.3-53.3	113	40639	.2	.95	35	10	25	<5	5.22	<1	28	71	55	5.78	.03	.06	<10	2.75	1391	.06	18	580	14	40	<20	79	.01	10	217	<10	15	90
53.3-56.4	114	35014	.4	.89	50	10	10	<5	6.60	<1	25	74	50	5.16	.05	.05	<10	2.90	1269	.05	18	470	56	45	<20	84	.01	<10	170	<10	14	86
56.4-59.4	115	8839	.4	.60	70	8	5	<5	6.07	1	20	48	57	4.90	.04	.04	<10	2.59	1096	.04	20	510	13	20	<20	83	<.01	<10	135	<10	15	61
62.5-65.5	117	28068	.4	.72	35	8	20	<5	7.60	<1	28	58	71	5.91	.02	.05	<10	3.76	1179	.05	28	210	14	40	<20	74	.01	<10	233	<10	14	92
71.6-74.7	120	14005	.2	.51	120	8	10	<5	8.98	<1	24	72	56	4.73	.01	.04	<10	3.68	1109	.04	36	140	12	30	<20	103	.01	<10	174	<10	11	79
74.7-77.7	121	12800	.4	.78	170	8	15	<5	8.73	<1	24	83	44	5.03	.02	.05	<10	3.63	1158	.05	35	160	16	25	<20	99	.02	<10	169	<10	11	79
80.8-83.8	123	12972	<.2	.56	110	6	40	<5	8.49	1	20	60	43	4.32	.02	.05	<10	3.60	1022	.05	23	160	14	25	<20	103	.02	<10	163	<10	10	72

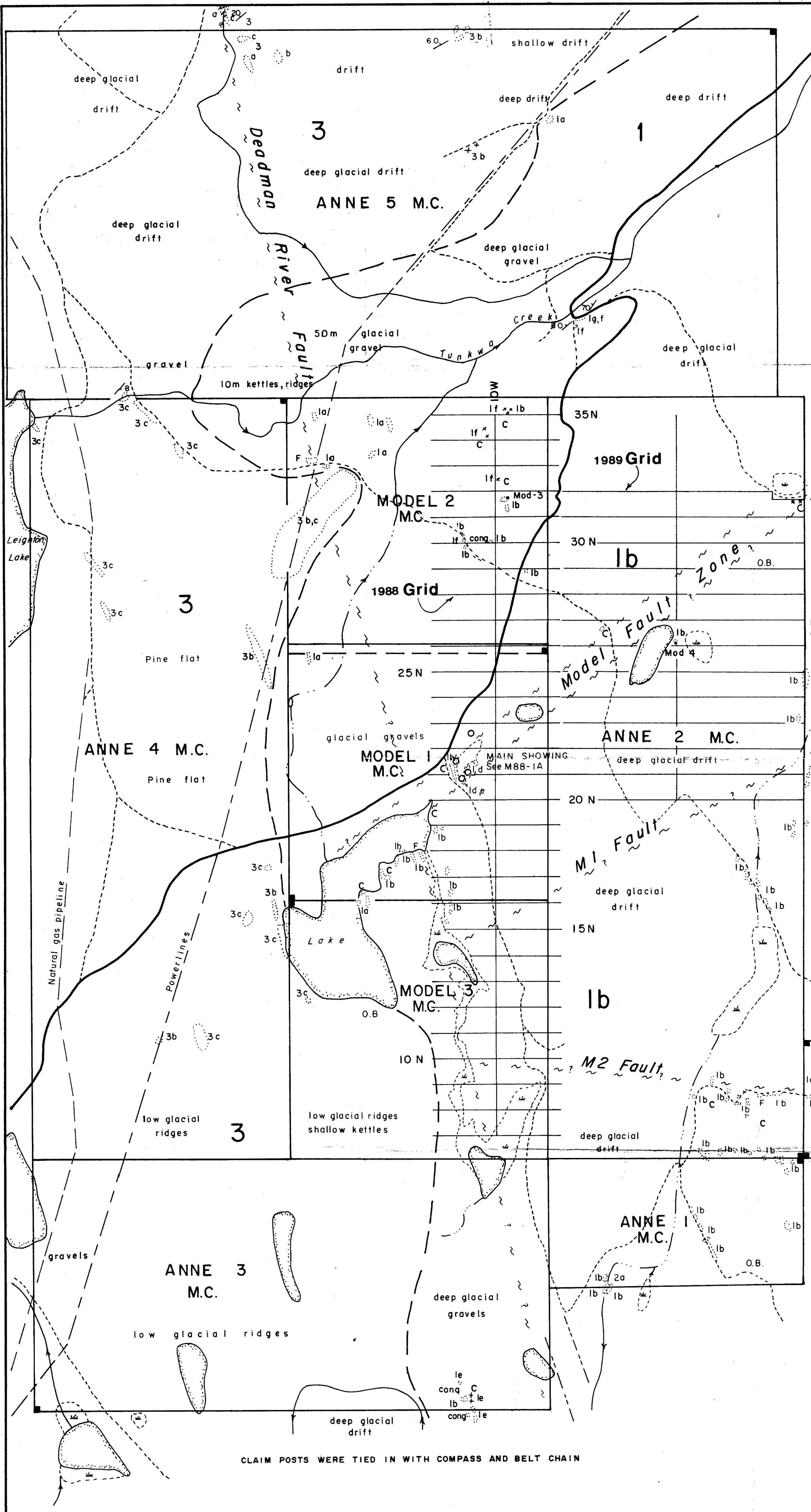
NOTE: < = LESS THAN

CC: MR. M. MORRISON
 684 BALSAM ROAD
 KELOWNA, B.C.
 V1W 1B9
 SC90/K1


 ECO-TECH LABORATORIES LTD.
 FRANK PEZZOTTI, A.Sc.T.
 B.C. CERTIFIED ASSAYER

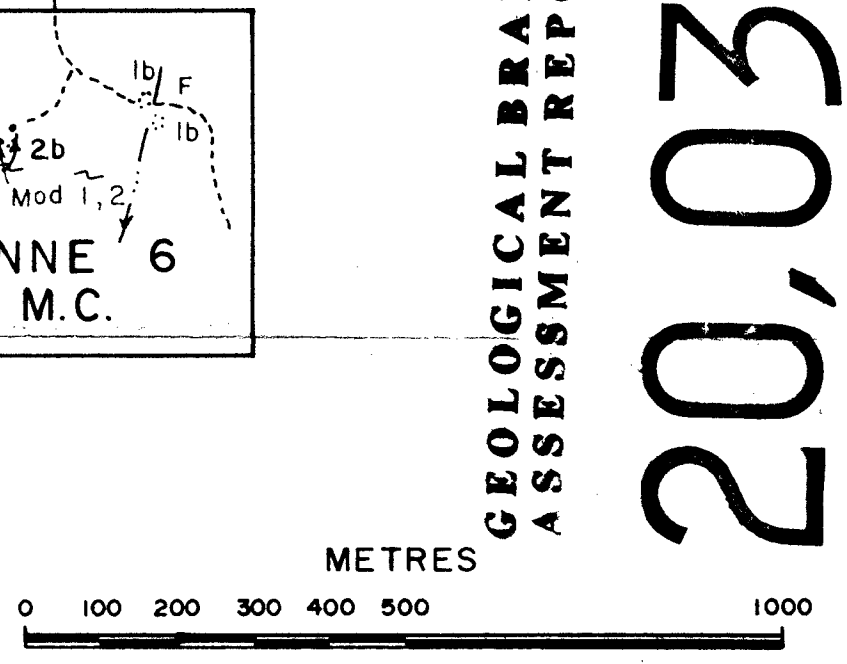


MAGNETIC DECLINATION 22° 30'



- GEOLOGY -

- TERTIARY
- 3 Kamloops Group
 - 3c olivine basalt
 - 3b vesicular andesite, scoria
 - 3a conglomerate, breccia (Kamloops Group clasts)
- CRETACEOUS (?) EARLY TERTIARY (?)
- 2 Intrusives
 - 2b aplite dykes
 - 2a diorite dykes/sills
- TRIASSIC
- 1 Nicola Group
 - 1g argillite
 - 1f siltstone
 - 1e sandstone
 - 1d limestone/dolomite
 - 1c feldspar porphyry andesite flows
 - 1b amygdaloidal andesite flows
 - 1a andesite breccias, agglomerates
- Legend symbols:
- Outcrop
 - ◌ Lake, marshes
 - ~ Creek
 - - - Road
 - Legal corner post
 - - - Inferred fault
 - - - " contact
 - Bedding
 - F Strong faulting
 - C " carbonate alteration
 - O Drill hole - Lacana 1984



GEOLOGICAL BRANCH ASSESSMENT REPORT 20,034

TO ACCOMPANY A GEOLOGICAL REPORT BY M. MORRISON

MAD RIVER RESOURCES INC.		
MODEL PROPERTY LOGAN LAKE AREA, KAMLOOPS M.D., B.C.		
PROPERTY GEOLOGY		
MODEL 1-3 & ANNE 1-5 MINERAL CLAIMS		
SURVEY BY M.M.	AUGUST 1988	N.T.S. 92-1-10W
DRAWN BY M.M./A.H.	SCALE 1:10000	MAP M-88-9

CLAIM POSTS WERE TIED IN WITH COMPASS AND BELT CHAIN