

LOG NO: 0914	RD.
ACTION:	
FILE NO:	

ASSESSMENT REPORT

on the

BIERE CLAIMS

KAMLOOPS MINING DIVISION

NTS 82M/5W

Lat: 51° 17'N

Long: 119° 54'W

FILMED

Owner:
National Resource Explorations Ltd.
550-1040 Georgia Street,
Vancouver, V6E 4H1.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,047

Operator:
Minnova Inc.
4th Floor-311 Water Street,
Vancouver, B.C.
V6B 1B8

RECEIVED
SEP 8 1989
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VANCOUVER, B.C.

Cameron J. Clayton
Minnova Inc.
Sept. 7, 1989

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1.0 INTRODUCTION

1.1 General:

This report describes the results of a rock sampling program conducted on the Biere property on May 26, 1989. The sampling program was part of a more widespread exploration program designed to assess the economic potential of the Biere property. Existing grids (Fig. 1) were used for control. Samples were sent to Minen Labs of Vancouver for major element and trace element analysis.

1.2 Location and Access (Fig. 1):

The property is located in the Kamloops Mining Division on NTS Map Sheet 82 - M/5, Latitude 51° 17' North, Longitude 119° 54' West; approximately 17 km east of Barriere, B.C.

Access to the property is via the East Barriere Lake road. A network of logging roads provide good access to all parts of the property.

1.3 Topography, Vegetation and Climate:

The Biere property lies in an area of moderate relief at the junction of the Barriere River and East Barriere River. Steep south and west facing slopes typify much of the property area. Elevations range from 610m at the Barriere River to 1375m at the highest point. Vegetation consists of second growth fir and spruce forest at lower elevations and open, first growth balsam, pine, spruce and

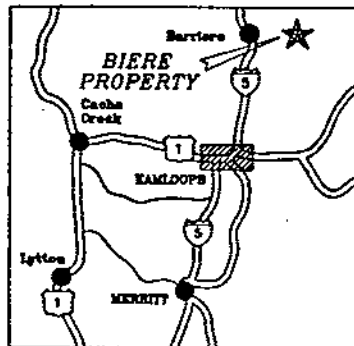
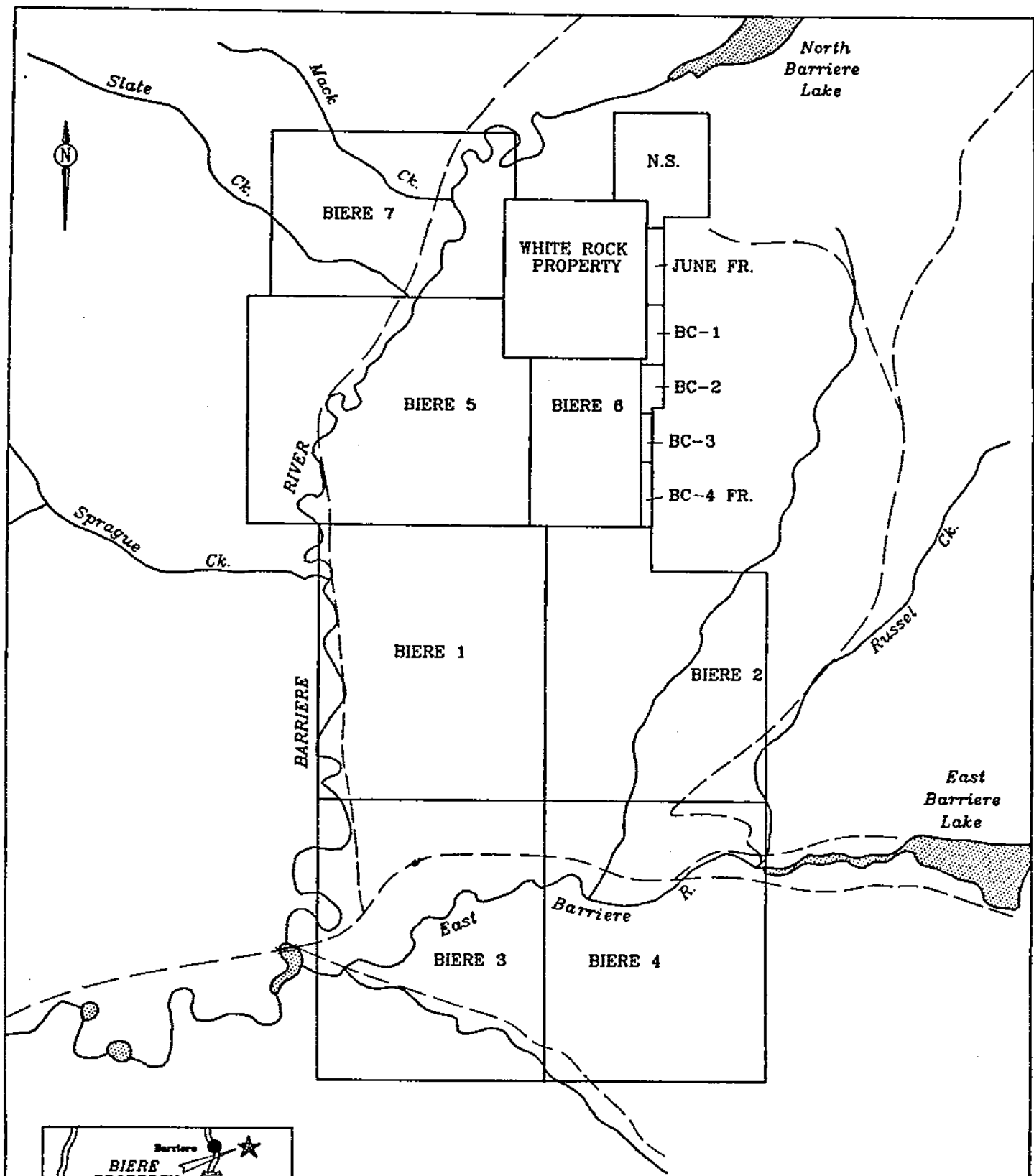


FIGURE 1



ADAMS/BARRIERE
BIERE PROPERTY
LOCATION MAP

fir forest at higher elevations. The southwest corner of the property has been recently clear-cut and replanted.

Outcrop exposure is sparse (5%) at lower elevatopns. Towards the valley floor, bedrock is hidden by thick Quaternary sand deposits. Best exposure is seen in steeply incised streams gulleys, road cuts, and on ridge tops.

Climate is typical of the south-central interior, with annual temperatures ranging from -25 C in winter to 30 C in the summer months. Precipitation during the summer months is limited thus drainages tend to dry.

1.4 Property and Ownership:

The Biere property is owned by National Resource Explorations Ltd. and operated by Minnova Inc. It consists of 8 contiguous MGS claims, 3 two post claims and 3 fractional claims that total 124 units (Fig. 1). Claim data are summarized in Table 1 below:

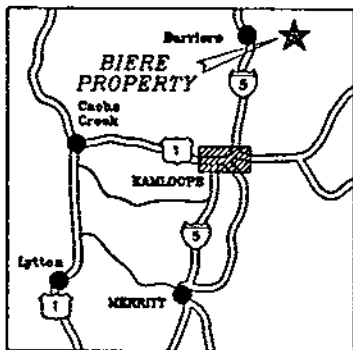
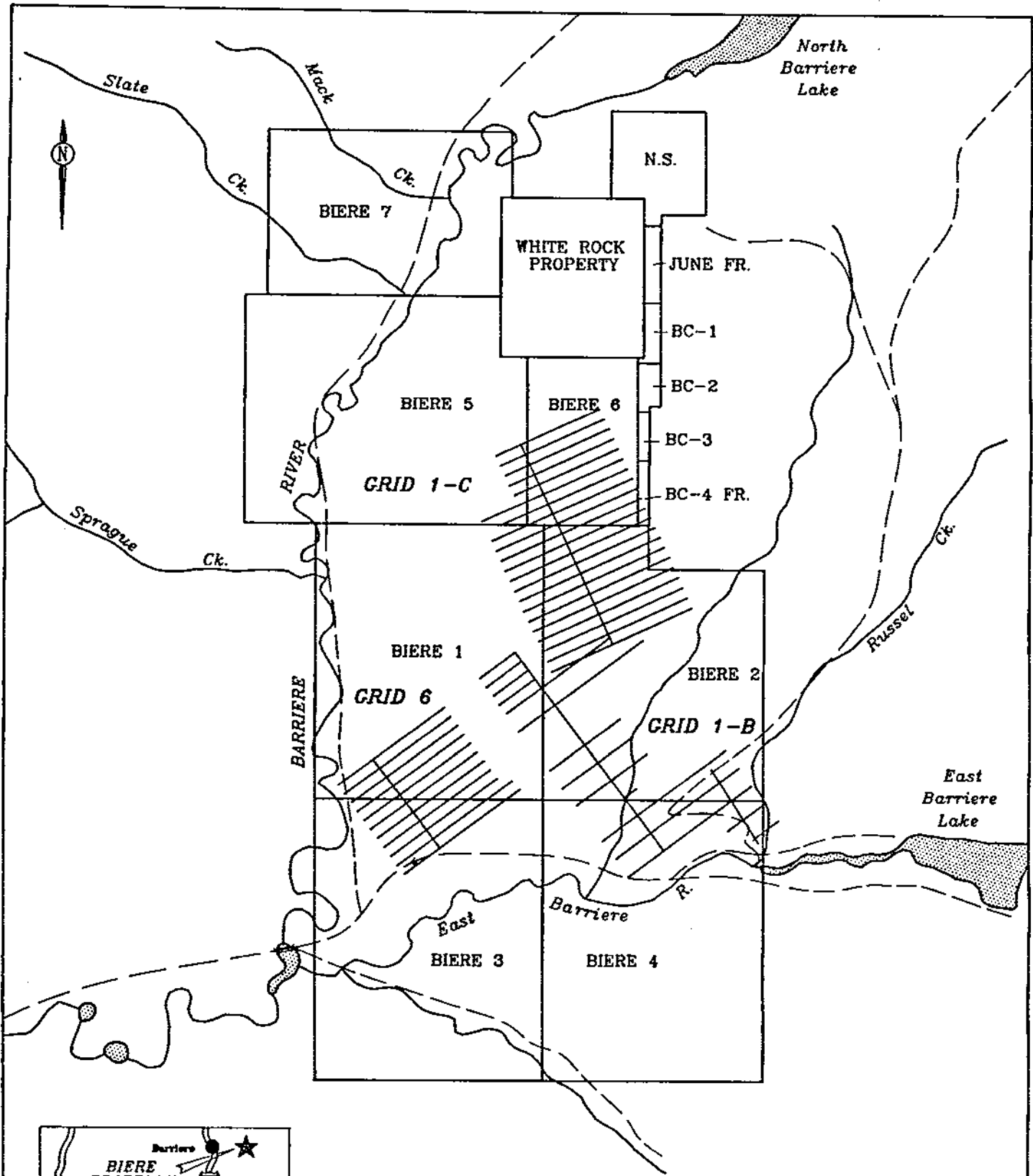
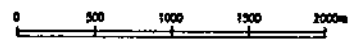


FIGURE 2



ADAMS/BARRIERE
 BIERE PROPERTY
 GRID LOCATION MAP

DH/sg

SEPTEMBER 1989

TABLE 1 CLAIM DATA			
CLAIM	REC No.	Units	Expiry Date
BIERE I	7090	20	06/08/91
BIERE II	7091	20	06/08/91
BIERE III	7092	20	06/08/91
BIERE IV	7093	20	06/08/91
BIERE V	7094	20	06/08/91
BIERE VI	7095	8	06/08/93
BIERE 7	7135	12	06/30/93
JUNE Fr.	7752	1	06/14/91*
NS	7751	1	06/14/91*
BIEREX Fr	7224	1	08/10/94
B.C. 1	7225	1	08/10/94
B.C. 2	7226	1	08/10/94
B.C. 3	7227	1	08/10/94
B.C. 4 Fr	7228	1	08/10/94

* Assuming acceptance of this report.

1.5 Property History:

In 1984 an airborne electro-magnetic (Dighem III) survey was conducted by Noranda Exploration Co Ltd. This was followed by an extensive ground follow-up consisting of geological mapping, geochemical sampling, Genie EM and magnetometer surveys. These surveys resulted in the delineation of several geophysical conductors (Miller and Wynne, 1988). These anomalies were not tested and the claims were allowed to expire. The area was restaked by National Resource Exploration Ltd. in 1987. During the 1987 field season further geochemical and geophysical surveys were completed. One diamond drill hole was drilled into a conductor on Grid 1A (Fig. 2). Argillite was encountered, thus explaining the EM anomaly.

1.6 Summary of 1989 Assessment Work:

Geology	1 man-day	Reconnaissance scale mapping on existing grids.
Geochemical	1 man-day sampling	Located on grid
	11 rock samples	Analyzed for Cu, Zn, Pb, Sb, Ag, Au, TiO ₂ , CaO, MgO, SiO ₂ , Fe ₂ O ₃ , K ₂ O, MnO, Al ₂ O ₃ , Zr, Na ₂ O, Ba.

2.0 RESULTS

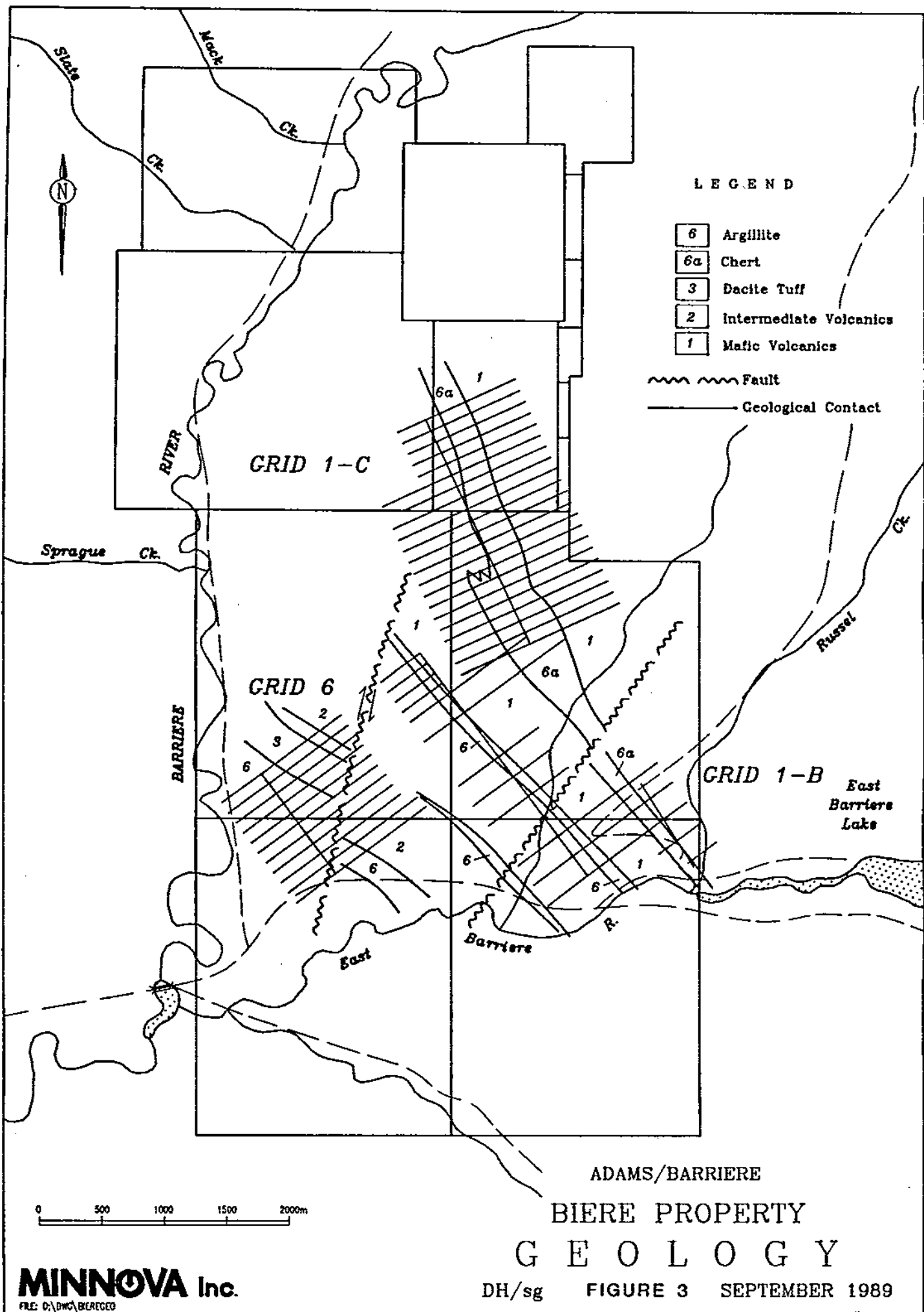
2.1 Regional Geology:

The property area is underlain by predominantly by mafic volcanic and sedimentary rocks of the Devonian-Mississippian Eagle Bay Assemblage (Schiarizza and Preto, 1987).

The stratigraphy is dominated by mafic volcanics (and derived schists) of Unit EBG. These contain minor amounts of interbedded grey chert, argillite and limestone. Rock units strike towards the northwest and dip moderately (40 to 60°) to the southeast.

2.2 Property Geology (Fig. 3):

Rock exposure over most of the property seldom exceeds 5%. On Grid 6, lower elevations are devoid of outcrop. Most exposure lies to the east of the baseline. The grid is underlain by phyllites, quartz-lithic arenites, dacitic tuffs, and andesitic tuffs. Structurally, the graphitic phyllites are the lowest member of the



LEGEND

- 6 Argillite
- 6a Chert
- 3 Dacite Tuff
- 2 Intermediate Volcanics
- 1 Mafic Volcanics

~~~~~ Fault  
 ——— Geological Contact

GRID 1-C

GRID 6

GRID 1-B

East Barriere Lake

Sprague Ck.

BARRIERE

East

Barriere R.

ADAMS/BARRIERE

BIERE PROPERTY

G E O L O G Y

DH/sg    FIGURE 3    SEPTEMBER 1989

**MINNOVA Inc.**  
 FILE: G:\DWC\BIERE\GEO

sequence. These grade up into weakly sericitized and ankeritized dacitic tuffs, that are in turn overlain by lithic wackes and cherts. Intermediate tuff is the highest unit exposed in the sequence.

### 2.3 Lithogeochemistry (Map 3)

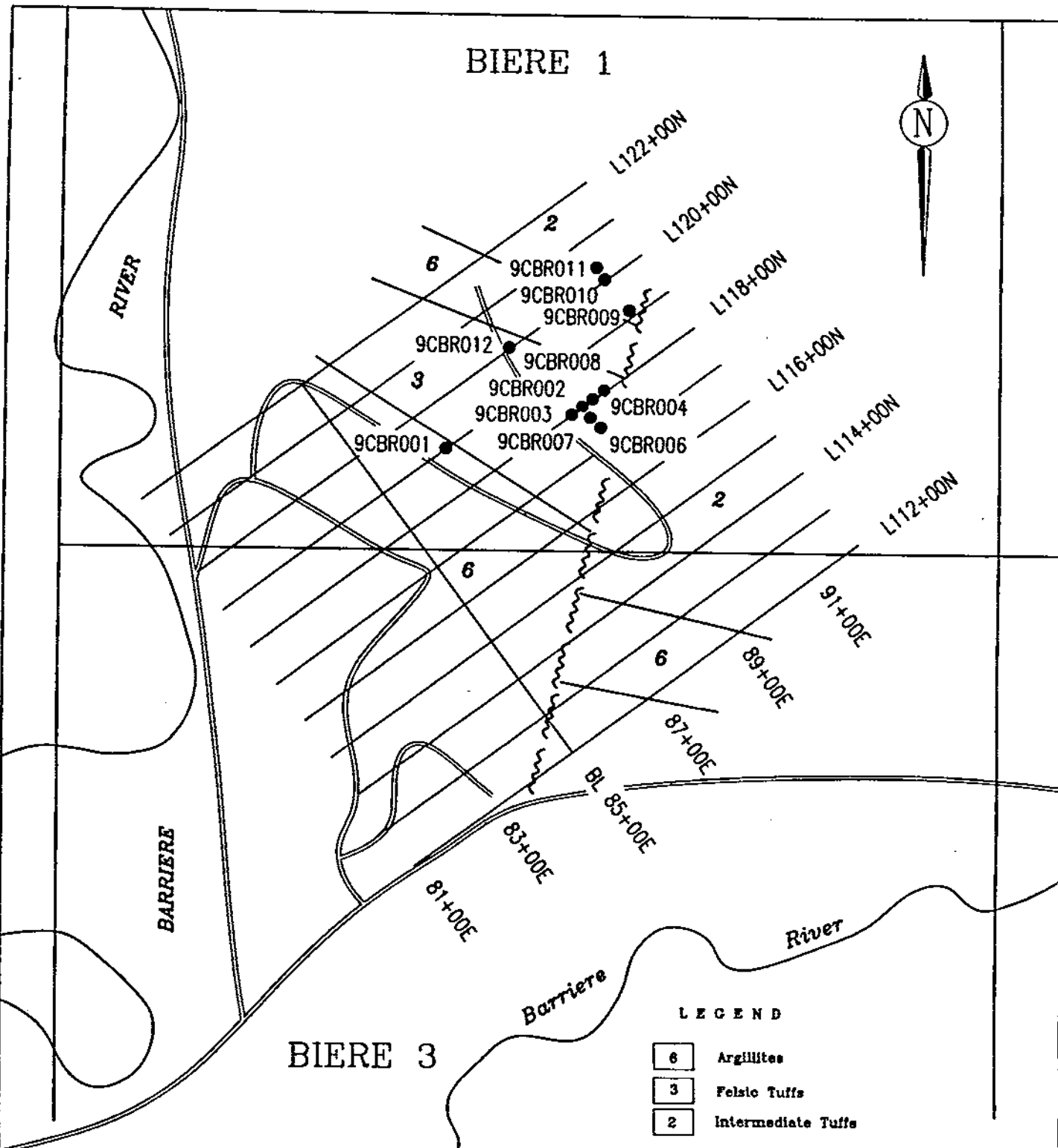
A total of 11 rock samples were taken for lithogeochemical analysis from Grid 6. The objective of the sampling was to determine the chemical composition of the volcanic units in the area in order facilitate rock identification. Sample numbers and locations are tabulated in Table II below and shown on Figure 3.

TABLE 2: Rock Sample Number and Location

| <u>Sample</u> | <u>Northing</u> | <u>Easting</u> |
|---------------|-----------------|----------------|
| 9CBR001       | 118+00N         | 86+51E         |
| 9CBR002       | 118+00N         | 89+18E         |
| 9CBR003       | 118+00N         | 89+00E         |
| 9CBR004       | 118+00N         | 89+25E         |
| 9CBR005       | 117+95N         | 89+25E         |
| 9CBR006       | 117+85N         | 89+25E         |
| 9CBR007       | 117+75N         | 89+25E         |
| 9CBR008       | 118+00N         | 89+60E         |
| 9CBR009       | 119+36N         | 91+13E         |
| 9CBR010       | 120+00N         | 91+20E         |
| 9CBR011       | 120+08N         | 91+20E         |
| 9CBR012       | 120+00N         | 88+80E         |

Analysis was conducted by Min-En Labs of North Vancouver. Major element oxides were determined by a standard fusion process and ICP finish, while trace elements were analysed by ICP after an aqua regia digestion. Gold was determined by wet geochemical method. Analytical results are tabulated in Appendix III

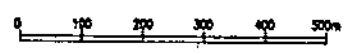
# BIERE 1



# BIERE 3

### LEGEND

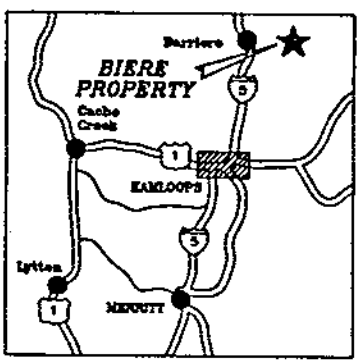
- 6 Argillites
- 3 Felsic Tuffs
- 2 Intermediate Tuffs
- Fault
- Geological Contact
- Rock Sample Location



## ADAMS/BARRIERE BIERE PROPERTY GRID 6

## GEOLOGY & SAMPLE LOCATIONS

DH/sg      FIGURE 4      SEPTEMBER 1989



**APPENDIX I**  
**STATEMENT OF COSTS**

## STATEMENT OF COSTS

|                                         |                   |
|-----------------------------------------|-------------------|
| Geologist: 1 manday @ \$300.00/day      | \$ 300.00         |
| Assistant: 1 manday @ \$150.00/day      | \$ 150.00         |
| 11 Lithogeochemical Analyses @ \$ 23.00 | \$ 253.00         |
| Room and Board: 2 mandays @ \$15.75/day | \$ 31.50          |
| Truck Rental: 1 day @ \$50/day          | \$ 50.00          |
| Freight:                                | \$ 25.00          |
| Report Preparation: 1 manday @ \$150.00 | \$ 150.00         |
| Drafting: 1 manday @ \$ 150.00          | \$ 150.00         |
| <b>TOTAL</b>                            | <b>\$1,109.50</b> |

APPENDIX II

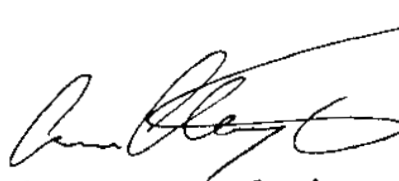
STATEMENTS OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Cameron J. Clayton certify that:

1. I am an Exploration Geologist temporarily residing at 1285 Bracknell Place, North Vancouver, B.C.
2. I will obtain a BSc in Geological Engineering, Mineral Resources and Exploration Option, from Queen's University at Kingston, Ontario in December, 1989.
3. I have successfully completed all geology requirements towards my degree.
4. I have practised my profession in the field for four summer field seasons.
5. I personally conducted or supervised the work reported herein.

Date SEPT. 7, 1989



Cameron J. Clayton

APPENDIX III  
ANALYTICAL RESULTS





**MIN-EN LABORATORIES**

SPECIALISTS IN MINERAL ENVIRONMENTS  
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

**VANCOUVER OFFICE:**  
705 WEST 15TH STREET  
NORTH VANCOUVER, B.C. CANADA V7M 1T2  
TELEPHONE (604) 980-5814 OR (504) 988-4524  
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

**TIMMINS OFFICE:**  
33 EAST IROQUOIS ROAD  
P.O. BOX 867  
TIMMINS, ONTARIO CANADA P4N 7G7  
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-0430-RG2

Company: MINNOVA INC.  
Project: CHU CHUA 616  
Attn: C.WILDE/I.PIRIE

Date: JUN-11-89

Copy 1. MINNOVA INC., BARRIERE, B.C.  
2. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Geochemical Analysis of 30 ROCK samples submitted JUN-05-89 by J.HOLLAND.

| Sample Number | LOI % |
|---------------|-------|
| BCD22351      | 4.65  |
| BCD22352      | 3.50  |
| BCD22353      | 3.70  |
| BCD22354      | 10.90 |
| BCD22355      | 8.95  |
| BCD22356      | 4.75  |
| BCD22357      | 4.85  |
| BCD22358      | 6.10  |
| BCD22359      | 7.75  |
| BCD22362      | 7.35  |
| CD22363       | 9.75  |
| CD22364       | 6.70  |
| 9ABR001       | 12.80 |
| 9ABR002       | 6.25  |
| 9ABR003       | 7.00  |
| 9ABR004       | 7.45  |
| 9CBR001       | 4.30  |
| 9CBR002       | 10.85 |
| 9CBR003       | 14.95 |
| 9CBR004       | 11.55 |
| 9CBR005       | 9.75  |
| 9CBR006       | 12.30 |
| 9CBR007       | 3.80  |
| 9CBR008       | 11.05 |
| 9CBR009       | .25   |
| 9CBR010       | 5.00  |
| 9CBR011       | 7.60  |
| 9CBR012       | 4.25  |

Certified by

MIN-EN LABORATORIES

COMPANY: MINNOVA INC.

MIN-EN LABS ICP REPORT

(ACT:F26) PAGE 2 OF 2

PROJECT NO: CHU CHUA 616

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 91V/0430/R/L/002

ATTENTION: C.WILDE/I.FIRIE

(604)980-5814 OR (604)988-4524

\* TYPE ROCK GEOCHEM \* DATE: 06-11-1989

| (VALUES IN %) | TOT(%) |
|---------------|--------|
| BCD22351      | 94.22  |
| 9CD22352      | 95.36  |
| BCB22353      | 95.59  |
| BCD22354      | 88.20  |
| BCD22355      | 90.28  |
| BCD22356      | 94.99  |
| BCD22357      | 95.72  |
| BCD22358      | 95.45  |
| BCD22359      | 94.29  |
| BCD22362      | 93.88  |
| BCD22363      | 90.18  |
| BCD22364      | 92.69  |
| 9ABR001       | 86.20  |
| 9ABR002       | 93.06  |
| 9ABR003       | 91.98  |
| 9ABR004       | 91.64  |
| 9CBR001       | 96.68  |
| 9CBR002       | 89.02  |
| 9CBR003       | 84.36  |
| 9CBR004       | 87.49  |
| 9CBR005       | 89.54  |
| 9CBR006       | 87.02  |
| 9CBR007       | 95.74  |
| 9CBR008       | 88.06  |
| 9CBR009       | 98.81  |
| 9CBR010       | 94.16  |
| 9CBR011       | 91.58  |
| 9CBR012       | 94.72  |

| (VALUES IN %) | AL2O3 | BAF   | CAO   | FE2O3 | K2O  | MGO   | MNO2 | NA2O | P2O5 | SI02  | TIO2 | S    |
|---------------|-------|-------|-------|-------|------|-------|------|------|------|-------|------|------|
| BCD22351      | 14.34 | .049  | 10.46 | 10.83 | .11  | 6.04  | .19  | 2.55 | .14  | 47.78 | 1.66 | .08  |
| BCD22352      | 14.76 | .076  | 10.80 | 10.61 | .15  | 5.95  | .18  | 2.88 | .13  | 48.05 | 1.70 | .06  |
| BCD22353      | 14.53 | .107  | 12.98 | 10.70 | .16  | 5.94  | .19  | 2.00 | .11  | 47.12 | 1.68 | .06  |
| BCD22354      | 12.62 | .238  | 13.45 | 9.48  | .52  | 5.20  | .17  | 1.56 | .12  | 43.22 | 1.44 | .19  |
| BCD22355      | 14.65 | .526  | 8.64  | 11.80 | .86  | 6.64  | .19  | 1.10 | .13  | 43.68 | 1.71 | .34  |
| BCD22356      | 14.42 | 1.252 | 8.98  | 11.09 | .75  | 6.17  | .19  | 1.36 | .14  | 48.28 | 1.69 | .67  |
| BCD22357      | 14.47 | 2.215 | 9.56  | 10.85 | 1.06 | 6.16  | .19  | 1.64 | .10  | 46.17 | 1.70 | 1.61 |
| BCD22358      | 13.87 | 4.581 | 8.59  | 10.69 | 1.01 | 6.14  | .18  | .82  | .11  | 45.17 | 1.61 | 2.68 |
| BCD22359      | 13.82 | 6.397 | 7.22  | 10.53 | .23  | 6.37  | .17  | .01  | .13  | 44.75 | 1.59 | 3.04 |
| BCD22362      | 9.41  | .716  | 1.09  | 10.75 | .52  | 10.94 | .15  | .01  | .08  | 57.34 | .68  | 2.20 |
| BCD22363      | 13.29 | 1.898 | 9.53  | 9.88  | .81  | 5.77  | .21  | .84  | .13  | 45.21 | 1.54 | 1.06 |
| BCD22364      | 14.25 | .705  | 9.49  | 11.27 | .40  | 6.08  | .20  | 2.48 | .14  | 45.62 | 1.67 | .39  |
| 9ABR001       | 15.08 | .086  | 8.21  | 7.41  | 2.70 | 3.21  | .05  | 2.10 | .05  | 46.59 | .64  | .09  |
| 9ABR002       | 17.62 | .089  | 2.80  | 7.39  | 1.93 | 3.87  | .09  | 4.20 | .09  | 54.13 | .78  | .06  |
| 9ABR003       | 17.14 | .128  | 3.79  | 7.14  | 1.99 | 4.11  | .08  | 3.35 | .06  | 53.38 | .74  | .06  |
| 9ABR004       | 16.21 | .052  | 7.00  | 6.58  | 2.74 | 1.36  | .06  | 1.37 | .06  | 55.50 | .65  | .06  |
| 9CBR001       | 9.65  | .011  | 2.98  | 4.71  | .21  | .88   | .16  | 5.30 | .01  | 70.86 | .30  | 1.62 |
| 9CBR002       | 13.99 | .093  | 7.89  | 6.23  | 2.23 | 2.32  | .08  | 1.47 | .03  | 54.01 | .60  | .08  |
| 9CBR003       | 15.44 | .071  | 9.11  | 7.54  | 2.09 | 3.16  | .08  | 1.64 | .08  | 44.40 | .68  | .06  |
| 9CBR004       | 17.61 | .099  | 7.63  | 5.58  | 2.70 | 2.32  | .09  | 1.76 | .05  | 48.82 | .77  | .06  |
| 9CBR005       | 17.34 | .092  | 8.93  | 6.85  | 2.78 | 2.84  | .10  | 1.54 | .08  | 48.12 | .79  | .08  |
| 9CBR006       | 17.11 | .091  | 9.77  | 6.50  | 3.18 | 2.31  | .07  | 2.10 | .09  | 45.01 | .79  | .01  |
| 9CBR007       | 1.78  | .012  | .01   | 8.88  | .12  | .24   | .02  | .74  | .01  | 83.63 | .03  | .28  |
| 9CBR008       | 14.01 | .047  | 11.08 | 5.52  | 1.91 | 1.58  | .07  | 1.10 | .07  | 52.14 | .56  | .06  |
| 9CBR009       | .17   | .005  | .01   | .42   | .01  | .02   | .01  | .01  | .01  | 98.12 | .01  | .06  |
| 9CBR010       | .23   | .005  | .01   | .37   | .01  | .01   | .01  | .09  | .01  | 93.38 | .01  | .08  |
| 9CBR011       | 15.40 | .077  | 5.07  | 5.29  | 1.32 | 1.70  | .10  | 6.55 | .01  | 55.39 | .61  | .06  |
| 9CBR012       | 19.29 | .079  | 1.51  | 7.30  | 1.02 | 2.89  | .03  | 7.06 | .06  | 54.62 | .81  | .06  |

COMPANY: MINNOVA INC.

MIN-EN LABS ICP REPORT

(ACT:F31) PAGE 1 OF 1

PROJECT NO: CHU CHUA 616

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 9/V/0430/R/J/002

ATTENTION: C.WILDE/I.PIRIE

(604)980-5814 OR (604)988-4524

\* TYPE ROCK GEOCHEM \* DATE: 06-10-1989

| (VALUES IN PPM) | AG  | AS | BA    | CU  | PB | SB | ZN  | AU-PFB |
|-----------------|-----|----|-------|-----|----|----|-----|--------|
| BCD22351        | 2.4 | 25 | 132   | 63  | 56 | 4  | 114 | 10     |
| D22352          | 2.4 | 31 | 135   | 58  | 53 | 2  | 91  | 5      |
| BCD22353        | 2.7 | 29 | 306   | 60  | 53 | 1  | 88  | 5      |
| BCD22354        | 3.0 | 54 | 452   | 141 | 61 | 4  | 93  | 5      |
| BCD22355        | 3.0 | 56 | 1368  | 304 | 77 | 4  | 113 | 10     |
| BCD22356        | 2.6 | 47 | 2580  | 145 | 57 | 2  | 98  | 5      |
| BCD22357        | 2.8 | 57 | 7347  | 91  | 58 | 3  | 93  | 10     |
| BCD22358        | 3.3 | 51 | 26516 | 96  | 62 | 7  | 98  | 5      |
| BCD22359        | 3.1 | 39 | 34240 | 96  | 75 | 8  | 111 | 5      |
| BCD22362        | .6  | 42 | 1053  | 43  | 81 | 5  | 260 | 5      |
| BCD22363        | 1.7 | 79 | 10594 | 60  | 70 | 4  | 104 | 5      |
| BCD22364        | 3.4 | 46 | 3063  | 65  | 62 | 4  | 102 | 10     |
| 9ABR001         | .8  | 24 | 444   | 21  | 55 | 1  | 96  | 5      |
| 9ABR002         | .5  | 24 | 302   | 10  | 49 | 1  | 99  | 5      |
| 9ABR003         | .6  | 20 | 254   | 23  | 46 | 1  | 90  | 5      |
| 9ABR004         | .3  | 9  | 137   | 35  | 28 | 1  | 81  | 5      |
| 9CBR001         | .3  | 4  | 98    | 55  | 34 | 1  | 43  | 5      |
| 9CBR002         | .4  | 12 | 112   | 18  | 32 | 1  | 53  | 5      |
| 9CBR003         | .6  | 27 | 86    | 18  | 48 | 1  | 90  | 5      |
| 9CBR004         | .7  | 24 | 98    | 29  | 42 | 1  | 71  | 5      |
| 9CBR005         | .7  | 23 | 100   | 19  | 48 | 1  | 73  | 5      |
| 9CBR006         | .7  | 24 | 97    | 23  | 40 | 1  | 60  | 10     |
| 9CBR007         | .3  | 53 | 40    | 19  | 67 | 1  | 42  | 60     |
| 9CBR008         | .6  | 16 | 62    | 19  | 39 | 1  | 71  | 5      |
| 9CBR009         | .1  | 1  | 13    | 7   | 6  | 1  | 11  | 5      |
| 9CBR010         | .1  | 1  | 13    | 9   | 10 | 1  | 11  | 5      |
| BR011           | .4  | 16 | 69    | 7   | 34 | 1  | 62  | 5      |
| 9CBR012         | .3  | 34 | 55    | 21  | 42 | 1  | 98  | 5      |

