Minnova Inc.
January 24 th, 1991

Kettle River Resources Ltd.
Dentonia Resources Ltd.
Greenwood, B.C.
VOH 1 JO

Attention: George stewart

## Dear George:

Re:RainbownTam O'Shanter Option: Summary to Dec. 31,1990

Minnova is pleased to provide you with a summary report on it's exploration activities during the first year of the Rainbow Tam o'Shanter option. Also attached is a project expenditure summary and a current claim status for your information.

As you know, most our work thus far has been directed at the claims subject to the Moore Option. That option was kept in good standing by payment of the required $\$ 20,000$ in December. Further work, both on and around the Moore claims, will be carried out in 1991. Work is also planned for the Tam O'Shanter and other areas of the property.

Most of our 1990 work has been detailed in four reports filed or to be filed for assessment. Copies of two of these accompany this letter for your files. The other two are still in prep and will be sent upon completion.

We are looking forward to continuing our exploration of your property in 1991 and trust that this will be a year of discovery.

Yours truly,
!


Ian D. Pirie
District Geologist

## RAINBOW - TAM O'SHANTER

PN 661

Ian D. Pirie

## INTRODUCTION

The Rainbow - Tam O'Shanter property is part of the Brenda JV. It was optioned in January of 1990 to cover a large part of the Tertiary Toroda Graben west of the town of Greenwood. The rocks on the $300+$ unit property hold significant potential for skarn, porphyry and epithermal mineralization.

The property is under option from Dentonia Resources and Kettle River Resources and a small portion of it is subject to an underlying agreement with D . Moore ("the Moore Option"). Minnova was attracted to it by past results from work done by various operators who had various parts (but never all) of the property at various times. In addition, a 1989 heavy mineral stream sediment survey had highlighted several of the property's drainages.

## 1990 PROGRAM

Work by Minnova in 1990 was concentrated in the Midway Mine and Tam O'Shanter areas of the property with only limited reconnaissance work elsewhere. It consisted of the following:
Linecutting - 52.3 km on the Midway and Tam grids
Geology - 52 km

Geophysics - 45.8 km Mag and VLF

| Geochemistry - <br> 2189 soils  <br> 272 lithos  |  |  |
| :--- | :--- | :--- |
| Trenching | - | 411 m in 9 trenches - Midway area |
| Drilling | 1171 m in 7 holes - Midway area |  |
| Assays \& Geochem. - | 374 samples from trenching and drilling |  |

## RESULTS

Surface work in the Midway mine area produced both soil and rock geochemical anomalies related to an altered and mineralized quartz-feldspar porphyry intrusion. This intrusion believed to be of Jurassic age, cuts Late Paleozoic sediments and volcanics and an extensive serpentine unit marking a pre-Triassic thrust fault. Drilling and trenching of anomalies produced a $2.8 \mathrm{~g} / \mathrm{t} \mathrm{Au}, 218 \mathrm{~g} / \mathrm{t} \mathrm{Ag}$ and $0.33 \% \mathrm{Zn}$ over 4.5 m (trench) and $0.33 \mathrm{~g} / \mathrm{t} \mathrm{Au}$ and $52.7 \mathrm{~g} / \mathrm{T} \mathrm{Ag}$ over 10.5 m (drill hole) as well as numerous other altered and mineralized zones. However, no potentially economic discoveries were made.

Also intersected in drilling were strong, northeast trending Tertiary structures which remain to fully tested.

Work in the Tam O'Shanter area was centred around the Deadwood fault, a strong NW trending Tertiary structure. Silicification and clay alteration related to this structure has permeated both basement (Paleozoic) and Tertiary sediments and volcanics. A typical epithermal signature of anomalous $\mathrm{Sb}, \mathrm{As}$, and Mo is present and precious metal values are locally anomalous ( Au to 2070 ppb ). An unexplained gold in soil anomaly is also present and will be further evaluated in 1991.

## RECOMMENDATIONS

1. Follow up epithermal targets in the Tain O'Shanter area.
2. Further evaluate Tertiary structures in the Midway area and test for skarn potential at the Phoenix stratigraphic level.
3. Evaluate Tertiary structures on the rest of the property.


# PROJECT EXPENDITURE SUMMARY <br> 1990 

## PROJECT NAME: <br> MAMEOW

PROJECT NO. 681

GEOLOGY

GEOPHYSICS

GEOCHEMISTRY

DRILLING

| Salaries | $\$ 48,552$ |
| :--- | ---: |
| Travel Expenses | $\$ 1,718$ |
| Contract Payments | $\$ 0$ |
| Field Expenses | $\$ 24,061$ |
| Analyses | $\$ 0$ |

Salaries \$0
Travel Expenses $\$ 0$
Contract Payments $\quad \$ 50,076$
Field Expenses
\$0

Salaries $\quad \$ 10,313$
Travel Expenses \$0
Contract Payments \$0
Field Expenses $\$ 1,399$
Analyses \$31,177
\$42,889 $13 \%$

Salaries $\quad \$ 11,078$
Travel Expenses \$0
Contract Payments $\$ 68,434$
Field Expenses $\$ 4,598$
Analyses $\$ 5,233$
\$89,343
$27 \%$

Line Cutting
Trenching
Hotels and Meals
Option Payments
Property Maintenance
Other (property acquisition)

| \$9,200 | 3\% |
| :---: | :---: |
| \$10,000 | 3\% |
| \$10,276 | 3\% |
| \$38,000 | 11\% |
| \$4,770 | 1\% |
| \$7,134 | 2\% |

TOTAL EXPENDITURES
\$336,019
ADMIN (12\% of direct expenditures)
\$35,762

MINNOVA INC
EXPIRY OATE NOTICES
project name

PROJECT CLAIM NAME NUMBER

RECORD MONTH UMITS
NUMBER

AREA RECORD EXPIRY (ha) DATE DATE

| RAINBOW-TAK | o'shanter | 66188 | tan o'shanter | 161 | '11 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RAINBOW-TAM | o'shanter | 66180 | IVA LENORE | 162 | 11 |  |
| RAINBOW-TAM | o'shanter | 66188 | Midhay | 412 | 88 | 9 |
| RAIMBOH-TAM | o'shanter | 66180 | MF | 769 | 15 | 1 |
| RAIMBOW-tah | o'shanter | 66180 | SHAMTER | 1176 | 07 | 16 |
| RAINBOL-tam | o'shanter | 66180 | viceroy fraction | 1561 | 06 | 1 |
| RAINBOW-tan | o'shanter | 66180 | ARLINGTON FR, HO. و | 1562 | 86 | 1 |
| RAINBOW-TAH | o'shanter | 66180 | salamanca fr | 1563 | 16 | 1 |
| RAIMBOL-TAM | o'shanter | 66188 | tan | 1616 | 06 | 6 |
| RAINBOH-TAM | O'Shanter | 66180 | HOT | 1754 | 08 | 8 |
| RAINBOW-TAK | o'shamter | 66180 | Buck | 1613 | 06 | 8 |
| RAINBOW-TAK | O'Shanter | 66188 | montrose fraction | 1644 | 01 | 1 |
| RAInbow-tah | O'SHANTE? | 66189 | MOTHER | 2148 | 14 | 8 |
| RAINBOW-TAM | O'SHANTER | 66180 | WET | 2148 | 14 | 6 |
| RAINBOW-tan | O'SHANTER | 66180 | 6010 BUG NO. 2 | 2249 | 16 | 1 |
| RAIHBOW-TAM | O'SHAMTER | 66180 | mioway fraction | 3401 | 01 | 1 |
| RAINBOH-TAM | O'SHANTER | 66188 | AMMEX | 3402 | 11 | 20 |
| RAINBOH-TAM | O'SHANTER | 66180 | grahay camp | 3403 | 01 | 18 |
| gainboh-tan | O'Shanter | 66180 | RAINBOW | 3404 | 11 | 20 |
| RAINBOH-TAM | O'Shanter | 66188 | OOLHHILL | 3405 | 01 | 8 |
| RAINBOW-tah | O'SHANTER | 66180 | trout | 5206 | 11 | 12 |
| RAINBOW-TAM | O'SHANTER | 66180 | INGRAM 1 | 5334 | 01 | 9 |
| Rainbow-tan | O'SHANTER | 66181 | INGRAM? | 5335 | 11 | 18 |
| RAINBOW-TAM | O'SHAMTER | 66188 | RIN 11 | 5615 | 12 | 20 |
| RAINBOW-tan | O'SHANTER | 66188 | HIN 12 | 5616 | 12 | 16 |
| RAINBOW-TAM | O'SHAMTEM | 66180 | MIN 13 | 5617 | 12 | 12 |
| RAINBOW-TAM | O'SHANTER | 66180 | MIN 14 | 5618 | 12 | 20 |
| RAIMBOH-TAK | O'Shanter | 66180 | MULE 1 | 5619 | 01 |  |
| RAINBOW-TAh | O'SHAMTER | 66180 | nute ? | 5620 | 11 |  |
| RAINBOH-TAM | o'shantel | 66180 | nule 3 | 5621 | 01 |  |
| RAINBOW-TAM | O'SHANTER | 66180 | WULE 4 | 5622 | 11 |  |
| RAINBOW-TAH | O'Shanter | 66180 | nule 5 | 5623 | 11 |  |
| RAINBOL-tan | O'SHANTER | 66180 | MULE 6 | 5624 | 11 |  |
| RAINBOW-TAM | O'Shantel | 66180 | NULE 7 | 5625 | 11 |  |
| RAINBOL-tah | O'SHAMTER | 66188 | HULE 8 | 5626 | 11 |  |
| RAINBOW-TAM | O'Shanter | 66188 | NULE 9 | 5627 | 11 |  |
| RAIMBOW-TAM | O'Shanter | 66180 | WULE 10 | 5628 | 11 |  |
| RAINBOW-TAM | O'SHAMTER | 66180 | WULE 11 | 5633 | 01 |  |
| RAIMBOL-TAM | O'SHAMTER | 66180 | graham fraction | 5634 | 11 | 1 |
| RAINBOL-TAM | O'SHANTER | 66180 | mule a fraction | 5691 | 11 |  |
| RAINBOW-TAM | O'Shanter | 66181 | taxpayer | 5336 | 11 | 2 |
| RAIMBOL-TAM | O'Shanter | 66180 | pork fractioa | 5354 | 12 |  |
| RAIMBOL-TAR | o'shanter | 66181 | HOOF | 5355 | 82 | 20 |
| RAINBOW-TAM | O'Shanter | 66180 | HIDE | 5356 | $\theta 2$ | 20 |
| RaInBOH-TAM | O'Shanter | 66188 | HORN | 5357 | 13 | 15 |
| RAINBOL-TAM | o'shanter | 66180 | MULE 12 | 5886 | 13 | 1 |
| RAINBOL-tan | o'shanter | 66180 | HULE 13 | 5688 | 13 |  |
| $\begin{aligned} & \text { RAINBOW-TAK } \\ & \text { RAIHBOW-TAM } \end{aligned}$ | o'shanter <br> o'shanter | 66188 66180 | MULE 14 MULE 15 | 5689 5698 | 13 13 |  |
| RAINBOW-TAM | o'shanter | 66188 | MIN 6 | 5687 | 03 |  |


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| 50.00 | 01/10/89 | 11/10/93 |
|  | 02/11/89 |  |
|  | 02/18/89 |  |
|  | 02/18/89 | 02/18/95* |
| 375.81 | 03/04/89 | 03/81/95* |
|  | 03/14/90 | 83/14/94* |
| 25.81 | 03/14/90 | 83/14/94* |
|  | $03 / 14 / 98$ $03 / 14 / 98$ | $83 / 11 / 94^{*}$ $83 / 14 / 94^{*}$ |
| 50.08 | 13/15/98 | 83/15/93* |

18.88 11/20/75 11/20/94* 225.00 08/16/76 88/16/980 108.00 05/16/7705/16/98* 400.00 07/07/78 01/97/93* 25.07 06/11/7906/11/94 $8.9806 / 11 / 79$ 16/11/94 $20.2706 / 11 / 7906 / 11 / 94$ 150.08 06/28/79 06/28/93 200.00 88/29/7988/29/95 200.08 86/28/79 06/28/94 19.02 31/09/79 1/89/94 20.8 04/29/88 04/29/93 20.9186/95/80 06/05/95 25.01 01/14/8301/14/98* 508.01 11/14/83 11/14/95 $450.0101 / 14 / 83$ 11/14/95 508.00 01/14/83 1//14/93 200.08 81/14/83 01/14/95 300.00 01/15/88 07/15/95 225.01 81/06/89 01/06/94* 450.81 11/08/89 01/88/93 508.81 12/22/89 12/22/92* $400.0112 / 21 / 8912 / 21 / 92^{*}$ 300.08 12/23/09 12/23/92* 500.00 12/28/89 12/28/93 25.01 01/05/90 01/85/94* 25.00 01/05/90 01/85/94* 25.01 $01 / 05 / 9001 / 05 / 94^{\circ}$ 25.00 01/05/90 01/85/94* 25.00 01/06/91 01/06/94 25.00 01/08/90 01/06/94 25.00 01/08/98 81/08/95 25.01101/08/9181/08/95 25.00 11/08/91 11/18/95 25.00 01/11/90 01/11/95 25.01 01/11/90 11/11/95 25.00 13/15/90 03/15/94* 500.00 01/10/89 01/10/93 25.00 02/17/89 02/17/95* 50 8.80 02/18/89 02/18/95 500.08 02/18/89 02/18/95* 375.80 03/84/89 03/04/95* 25.81 03/14/90 83/14/94* 25.00 03/14/90 83/14/94* 25.00 83/14/98 03/14/94. 150.08 83/15/90 03/15/93*

## MINHOVA INC expiay oate notices

## project name

RAINBOW-TAM O'SHANTER RAINBOW-TAM O'SHANTER RAINBOW-TAM O'SHANTER RAINBOH-TAM O'SHANTER RAINBOW-TAK O'SHANTER RAINBOW-TAM O'SHANTER rainbow-tan o'shanter raingow-tan o'shanter rainbow-tam o'shanter RAINBOW-TAM O'SHANTER RAINBOW-TAM O'SHANTER RAINBOW-TAM O'SHANTER RAINBOW-TAM O'SHANTER RAINBOW-TAK O'ShANTER rainbow-tan o'shanter RAINBOW-TAM O'SHAHTER raInbow-tan o'shanter RAINBOW-TAH O'ShAITEER RAINBOH-TAM O'SHANTER RAINBOW-TAM O'SHANTER RAINBOH-TAM O'ShANTER rainbow-tan o'shanter rainboh-tan o'shanter RAINBOW-TAM O'SHANTER RAINBOW-TAM O'SHANTER RAINBOW-TAM O'SHAMTER RAINBOW-TAK o'SHANTER rainboh-tah o'shanter RAINBOW-TAM D'SHANTER RAINBOW-TAM O'SHANTER RAINBOW-TAM O'SHANTER RAINBOW-TAM o'shanter rainbow-tan o'shanter rainbow-tah o'shanter rainboh-tan o'shanter RAINBOW-TAM O'SHANTER rainboh-tan o'shanter RAINBOW-TAM O'SHANTER rainboh-tan o'shanter RAINBOW-TAM O'SHANTER rainboh-tan o'shanter raInboh-tan o'shanter rainboh-tan o'shanter RAINBOW-TAM O'SHAMTER RAINBOW-TAM O'SHANTER RAINBOW-TAM O'SHANTER rainbow-tan o'shanter rainbow-tan o'shanter rainbow-tam o'shanter RAINBOW-TAM O'SHANTER
project clail name number

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| 66180 | tam o'shanter | 161 | 11 | 1 | 16.09 | 11/28/75 | 11/20/94* |
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| 66180 | IVA lemore | 162 | 11 | 1 | 18.68 | 11/20/75 | 11/20/94* |
| 66180 | MIDWAY | 472 | 08 | 9 | 225.08 | 08/16/76 | 88/16/98* |
| 66180 | MF | 769 | 15 | 4 | 109.08 | 25/16/71 | 05/16/98* |
| 66180 | SHANTER | 1176 | 01 | 16 | 400.00 | 07/07/78 | 07/07/93* |
| 56188 | VICEROY fraction | 1561 | 86 | 1 | 25.01 | 06/11/79 | 06/11/94 |
| 66180 | ARLIMGTON FR, NO. 9 | 1562 | 06 | 1 | 8.98 | 06/11/79 | 06/11/94 |
| 66188 | salamanca fr | 1563 | 06 | 1 | 20.27 | 06/11/79 | 06/11/94 |
| 66180 | tal | 1616 | 06 | 6 | 150.08 | 06/28/79 | 06/28/93 |
| 66180 | HOT | 1754 | 08 | 8 | 200.00 | 08/29/79 | 08/29/95 |
| 66188 | Buck | 1613 | 06 | 8 | 200.00 | 86/28/79 | 06/28/94 |
| 66180 | montrose fraction | 1644 | 01 | 1 | 19.02 | 07/09/79 | 01/09/94 |
| 66188 | nother | 2146 | 14 | 8 | 200.00 | 04/29/88 | 04/29/93* |
| 66180 | WET | 2148 | 14 | 6 | 150.00 | 04/29/80 | 04/29/93* |
| 66188 | $60 L 0$ BUG NO. 2 | 2249 | 16 | 1 | 20.90 | 06/05/88 | 86/85/95 |
| 66188 | MIOWAY fraction | 3401 | 01 | 1 | 25.00 | 01/14/83 | 01/14/98* |
| 66180 | ANHEX | 3402 | 11 | 20 | 500.00 | 11/14/83 | 01/14/95 |
| 66130 | grahan camp | 3483 | 81 | 18 | 450.08 | 01/14/83 | 81/14/95 |
| 66180 | RAINBOW | 3104 | 11 | 20 | 500.00 | 01/14/83 | 01/14/93 |
| 66180 | OOWNHILL | 3485 | 01 | 8 | 200.08 | 01/14/83 | 01/14/95 |
| 66188 | trout | 5206 | 81 | 12 | 300.00 | 07/15/88 | 07/15/95 |
| 66130 | Ingran 1 | 5334 | 01 | 9 | 225.08 | 01/06/89 | 01/16/94* |
| 66180 | Ingram 2 | 5335 | 11 | 18 | 450.80 | 01/08/89 | 01/88/93 |
| 66188 | MIN 11 | 5615 | 12 | 20 | 500.00 | 12/22/89 | 12/22/92******** |
| 66180 | MIN 12 | 5616 | 12 | 16 | 488.00 | 12/21/89 | 12/21/92* |
| 66180 | MIN 13 | 5617 | 12 | 12 | 308.08 | 12/23/89 | 12/23/92* |
| 66180 | MIN 14 | 5618 | 12 | 20 | 508.88 | 12/28/89 | 12/28/93 |
| 66181 | hule 1 | 5619 | 1 | 1 | 25.08 | 01/05/00 | 01/05/94* |
| 66181 | MULE ? | 5620 | 01 | 1 | 25.08 | 01/85/9 | 01/05/94* |
| 66180 | MULE 3 | 56.11 | 01 | 1 | 25.00 | 01/05/90 | 01/05/94* |
| 66188 | NULE 4 | 5622 | 01 | 1 | 25.00 | 01/05/90 | 01/05/94* |
| 66181 | MULE 5 | 5623 | 01 | 1 | 25.00 | 01/06/91 | 01/86/94* |
| 66180 | HULE 6 | 5624 | 01 | 1 | 25.00 | 01/06/90 | 01/06/94* |
| 66188 | MULE 7 | 5625 | 81 | 1 | 25.00 | 01/08/90 | 11/08/95. |
| 66188 | MULE 8 | 5626 | 11 | 1 | 25.08 | 01/08/98 | 11/88/95 |
| 66180 | MULE 9 | 5627 | 11 | 1 | 25.00 | 01/06/01 | 11/08/95 |
| 66180 | NULE 10 | 5628 | 11 | 1 | 25.08 | 01/08/91 | 11/08/95 |
| 66180 | mule 11 | 5633 | 01 | 1 | 25.00 | 01/11/90 | 01/11/95 |
| 66180 | grahan fraction | 5634 | 11 | 1 | 25.00 | 01/11/90 | 01/11/95 |
| 66180 | MULE 4 FRACTIOM | 5691 | 11 | 1 | 25.00 | 01/15/90 | 83/15/94* |
| 66180 | taxpayer | 5336 | 11 | 20 | 508.00 | 01/10/89 | 11/10/93 |
| 66189 | PORK FRACTION | 5354 | 02 | 1 | 25.00 | 02/17/89 | 02/17/95* |
| 66180 | HOOF | 5355 | 02 | 20 | 500.08 | 02/18/89 | 82/18/95 |
| 66189 | MIDE | 5356 | 02 | 20 | 500.08 | 02/18/89 | 02/18/98* |
| 66180 | HORN | 5357 | 03 | 15 | 375.00 | 03/01/89 | 03/84/95* |
| 66188 | MULE 12 | 5686 | 03 | 1 | 25.80 | 13/14/90 | 03/14/94* |
| 66181 | Mule 13 | 5688 | 83 | 1 | 25.08 | 03/14/90 | 03/14/94* |
| $\begin{aligned} & 66188 \\ & 66188 \end{aligned}$ | WULE 14 WULE 15 | $\begin{aligned} & 5689 \\ & 5690 \end{aligned}$ | 03 03 | 1 | 25.00 25.08 | $03 / 14 / 98$ $03 / 14 / 98$ | $\begin{aligned} & 83 / 14 / 94^{*} \\ & 33 / 14 / 94^{*} \end{aligned}$ |
| 66180 | MIN 6 | 5687 | 03 | 6 | 150.80 | 83/15/90 | $03 / 15 / 93^{*}$ |

