

PROSPECTING REPORT

on the

NADINE(696) and MICHAEL(697) CLAIMS

Raffuse Creek Area, Vancouver Mining Division

92G10W, Lat. 49 38' Long. 122 58'

by

K.R. Mackenzie, B.Sc. M.D.

Owner/Operator: Alpen Exploration Ltd.

Squamish, B.C.

June 1981

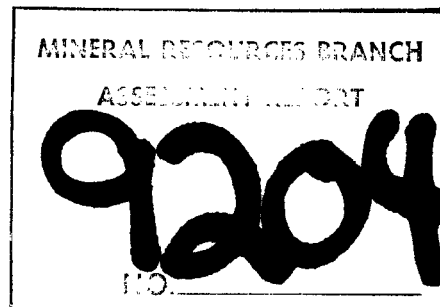
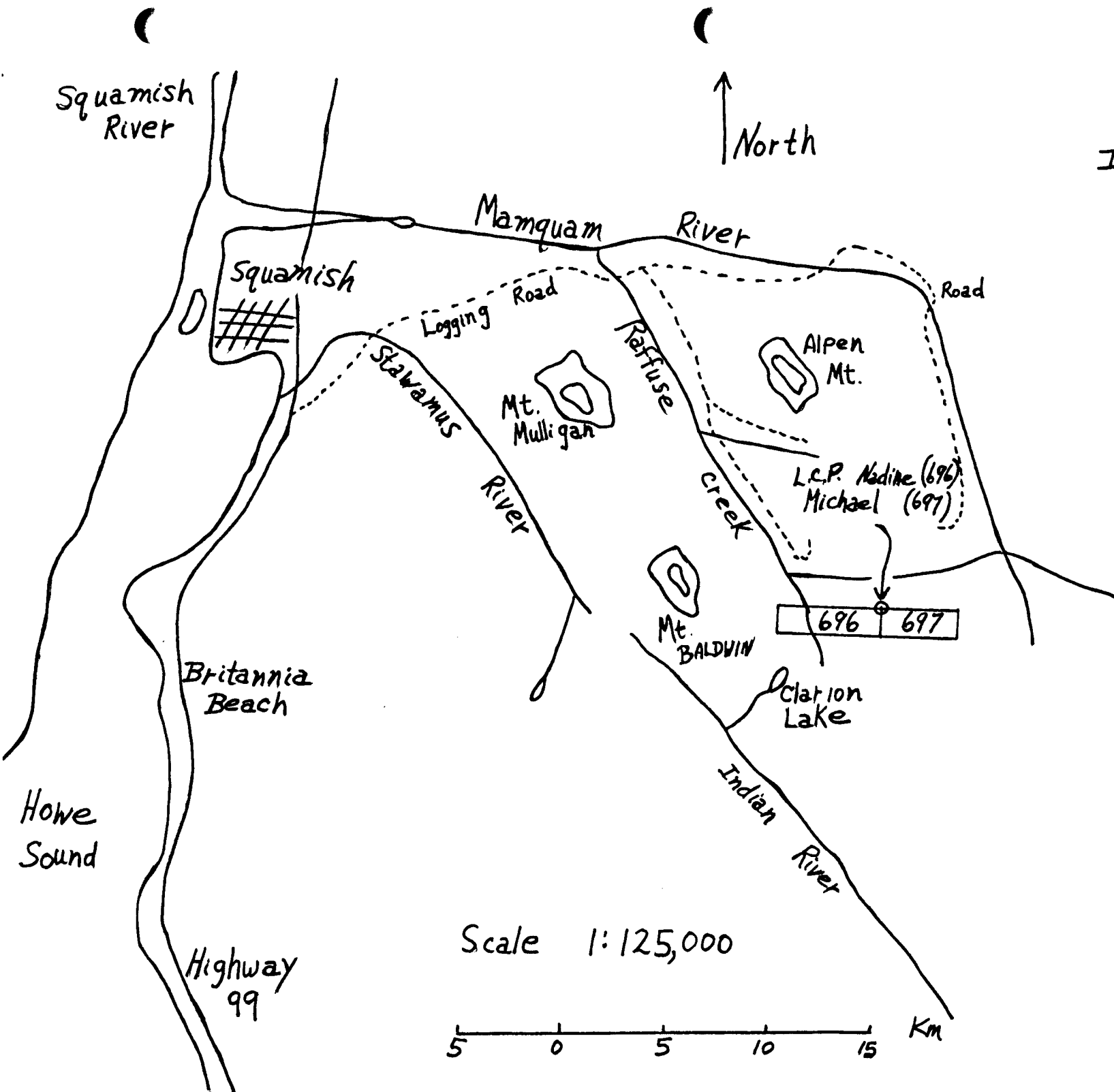


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Index Map (i)



Map #1  
92G 10 + 11  
Location Map  
For prospecting  
Report on  
Nadine (696) And  
Michael (697) claims

## INTRODUCTION

The Nadine and Michael claims, which form part of the Alpen South mineral prospect are located approximately fifteen kilometers southeast of Squamish. The claims straddle a ridge that separates the headwaters of Raffuse creek and the Mamquam River, just north of Clarion Lake.

Access is by logging road that leaves Highway 99 approximately one-half kilometer south of the turnoff to Squamish. The road is used for active logging by MacMillan-Bloedel and Weldwood. Permission to use the road can be obtained from the MacMillan-Bloedel offices near the entrance to the road. The logging roads to the area are shown on the index map (Map #1).

To my knowledge, this area has not been staked in the past. The property is owned by Alpen Exploration Ltd. of Squamish.

The Nadine and Michael claims have been explored by geochemical and regular prospecting methods. The geochemical assessment of the property has been done with a Dithizone kit sold by Bondar-Clegg & Company Ltd. Lab analyses were done by Bondar-Clegg & Company Ltd.

The Dithizone kit was used to test silt twenty-six times and shear gouge once. Two laboratory analyses were done on silt samples.

The total area prospected was one hundred and seventy-five hectares or seven units.

#### TECHNICAL DATA AND INTERPRETATION

The Dithizone kit was used to test silt from many creeks in the area. It was also used to test the only shear gouge found.

The Dithizone field test is a colorimetric measure of the total heavy metals in a given sample. It measures the total of zinc, lead, copper, tin, silver, cobalt and nickel, but it is most sensitive to zinc.

The test is roughly quantitative and can distinguish between low, medium and high totals of heavy metals. The higher the number of cc's of dithizone to reach an end point, the higher is the total heavy metal content. The range of the test is from zero to fifty according to the company literature, however, it was found that a high reading of fifty was insufficient and the reading of the test has been modified to give an upper limit of one hundred.

The results of the silt and shear sample survey done are shown on Map #2. They are given in cc's of dithizone and are shown as a circled number, i.e. (50).

For the purposes of prospecting, the rock in this area has been classified into three groups:

1. The Gambier Group rocks that include rhyolites, rhyodacites, andesites, pyroclastics and chert.

2. Quartz Diorite.

3. Diorite.

The names and definitions for these rocks were taken from G.S.C. Memoir #335 by J.A. Roddick pp. 58-61.

The approximate boundaries of these rock groups are shown on Map #2. The contacts are shown as linear but in actual fact, they interdigitate in a very complicated manner.

In looking at Map #2, it is seen that on the Nadine and Michael claims, no highly anomalous results are found anywhere. The general background with the Dithizone test is zero or one, as measured in many streams around Squamish. Therefore, Dithizone test results of ten to forty-five probably represent a slight increase in the total heavy metals usually present in this area.

In order to rule out false negatives, two silt samples were analysed for copper, lead, zinc, and gold, with gold levels given in parts per billion and the other metal levels given in parts per million. These results are plotted on Map #2 and are given as well

in the following table.

Sample Number	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
430	74	46	200	0.2	5
431	72	35	147	0.2	5

The above analysed results are approximately what one would expect from the observed Dithizone readings of ten to twenty. They probably represent slightly higher than background levels for Gambier Group rocks and as such can be considered as part of the halo that surrounds the presumed mineralized area.

#### CONCLUSION

The Nadine and Michael claims contain a mixture of intrusive and Gambier Group rocks that do not appear to contain any significant concentration of metallic minerals. This area may represent part of the geochemical halo that seems to surround the more highly anomalous area described in previous reports on the Ursula and Diddi claims.

*Ken MacKenzie*  
June 1/81

## APPENDIX A

### AUTHOR'S QUALIFICATIONS

K. R. MacKenzie, B.Sc., M.D.

Doctor MacKenzie is a medical doctor who graduated from the University of British Columbia in 1963 with a B.Sc. in Chemistry and Mathematics. Geology 105 was taken as part of his undergraduate studies. He spent three summers working for the Geological Survey of Canada under Dr. J. O. Wheeler.

After graduating from U.B.C. in 1968 with a medical degree, Dr. MacKenzie has continued to prospect as a hobby.

Recent reading by the author includes:

- G.S.C. Memoir No. 335 - J.A. Roddick
- Prospecting in Canada (G.S.C.) by A.H. Lang.
- G.S.C. Paper 72-53, Rock and Mineral Collecting in British Columbia, by S. Leaming.
- G.S.C. Paper 72-22, Precambrian Volcanogenic Massive Sulphide Deposits in Canada: A Review by D.F. Sangster.
- Geol. Soc. Malaysia, Bulletin 9, Nov. 1977, pp.1-16, Mineralization in the Coast Plutonic Complex of British Columbia, south of latitude 55°N by G.J. Woodsworth and J.A. Roddick.
- International Geologic Congress, Field Excursion A09-C09, Copper and Molybdenum Deposits of the Western Cordillera.
- Exploration and Mining Geology by William C. Peters.
- A Field Guide to Rocks and Minerals by Pough.
- Volcanogenic Deposits and their Regional Setting in the Canadian Cordillera - Abstracts from the Geological Association of Canada Conference, January 25, 26, 1980.
- Colorimetric determination of traces of Metals by E.B. Sandell
- Geology and Economic Minerals of Canada (G.S.C.) by Douglas



- The Geochemistry of Silver and its Deposits (G.S.C.) by Boyle.
- The Geochemistry of Gold and its Deposits (G.S.C.) by Boyle.
- Geophysics and Geochemistry in the search for Metallic Ores by Duncan R. Derry, Michener, Booth.
- Geochemistry in Mineral Exploration by Rose, Hawkes, Webb.
- Time and Stratabound Ore Deposits by Klemm, Schneider.
- Theory and Practice of Regional Geochemical Exploration by M. Foldvari-Vogl.
- Summary Report on War Eagle, Clarke and Janette Claims (Maggie Mines Ltd.) by Andrew E. Nevin Ph.D., P.Eng. September 18, 1980.
- Western Mines- Myra, Lynx and Price deposits by R.H. Seraphim C.I.M. Bulletin, December 1980.
- Western Mines-Myra, Lynx and Price deposits: a discussion by R.R. Walker C.I.M. Bulletin, December 1980.

APPENDIX B

ITEMIZED COST STATEMENT

NADINE (696) AND MICHAEL (697) CLAIMS

Value of Man-Hours of Work Performed

K. Mackenzie

Period - 1980 September 15, 25.  
 1981 March 2, 10. April 20.  
 May 20( $\frac{1}{2}$  day) 26, 27.

Total 7 $\frac{1}{2}$  days @ \$75.00 562.50

Transportation

19 miles on 7 days	133 miles	
90 miles on 2 days	180 miles	
Total	313 miles	
	@\$0.31 per mile	97.03

Dithizone Testing

Cost of 27 samples @ \$1.00 27.00

Lab analyses

Cost of 2 samples @ \$9.85 19.70

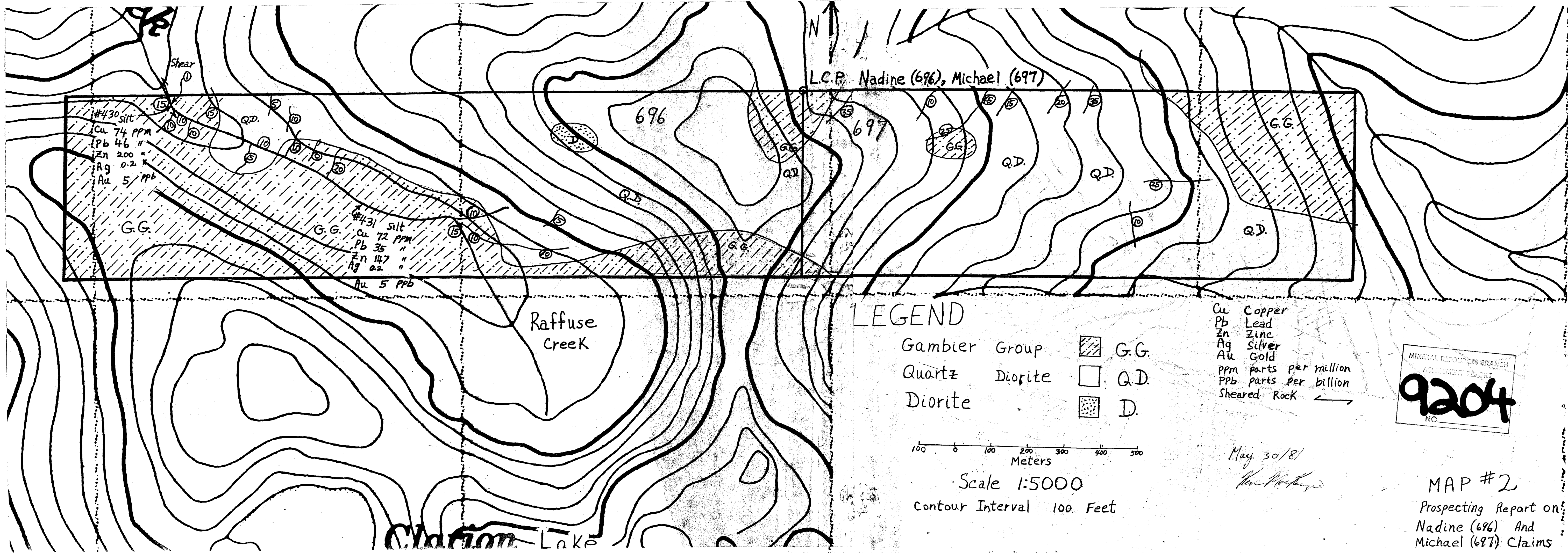
Report Preparation Costs

Preparation time: May 28-6hrs,  
 29-8hrs, 30-10 hrs,  
 June 1-4 hrs.

Total	28 hours @ \$7.50/hr	210.00
Maps		20.00
Miscellaneous		25.00

Total Cost

961.23



L.C.P. Nadine (696), Michael (697)

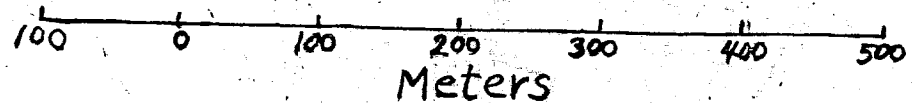
#430 silt  
 Cu 74 ppm  
 Pb 46 "  
 Zn 200 "  
 Ag 0.2 "  
 Au 5 ppb

#431 silt  
 Cu 72 ppm  
 Pb 35 "  
 Zn 147 "  
 Ag 0.2 "  
 Au 5 ppb

LEGEND

- Gambier Group  G.G.
- Quartz Diorite  Q.D.
- Diorite  D.

Cu Copper  
 Pb Lead  
 Zn Zinc  
 Ag Silver  
 Au Gold  
 ppm parts per million  
 ppb parts per billion  
 Sheared Rock ←



Scale 1:5000

Contour Interval 100 Feet

May 30/81  
*[Signature]*

MINERAL RESOURCES BRANCH  
 ACCESSION REPORT  
**9204**  
 NO.

MAP #2  
 Prospecting Report on  
 Nadine (696) And  
 Michael (697) Claims