

**BC Geological Survey Assessment Report** 31020

Assessment Report On **Falkland Property** 

EOLOGICAL SURVEY BRANCH Geology, Prospecting, Sampling And Analytical Report

Tenure Numbers:

520398, 534000, 534001, 534003, 534004, 534027, 534028, 563125.

Lat: 50.30° N. Long: //9,39° w.

Owner And Author Of This Report:

Jeremy Marlow

Date: July 11/09.

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#### 1. Summary

The Falkland Property is situated over an extensive area believed to be of Eocene and/or Miocene sediments and tuffs underlying Miocene lahars.

The property has undergone regional zeolite facies metamorphism along with ground water zeolite formation. The main zeolite species present is mordenite. Clinoptilite is also present as a secondary mineral.

Mordenite is classified as one of the two "Super Zeolites". "Super Zeolites" are zeolites which were thought of as having better properties and capabilities than the other zeolite species. Ferrierite is the other "Super Zeolite". Clinoptillite is of high end use in commercial grade properties.

Logging is recent years has uncovered a large area exposing zeolite material approx.600 meters long and approx 250 meter wide. Sampling pertaining to this report was done in this area. Results were encouraging as they prove potential for millions of tonnes of economic grade zeolite present.

#### 2. Introduction

This report summarizes sample locations, sample preparations and results and interpretations of the Falkalnd zeolite property.

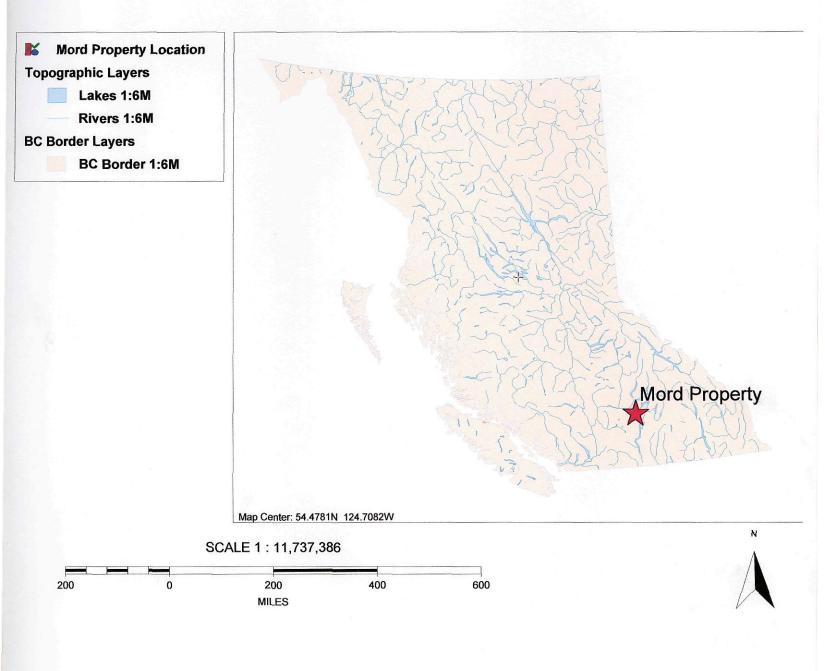
### 3. Location, Access And Physiography

The property is located approx. 9 km. west of Falkland accessible on a good secondary road from the Falkland garbage dump. The property is at an elevation of approx. 1250 meters above sea level. The road is usually accessible from April to October throughout the year.

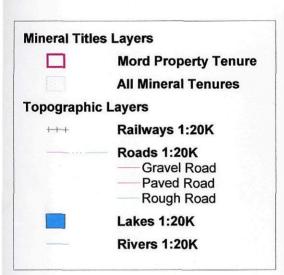
#### 4. Property And Ownership

The Falkland zeolite property area consist of 513.74 Ha. These claims are owned by Jeremy Marlow and details are as follows.

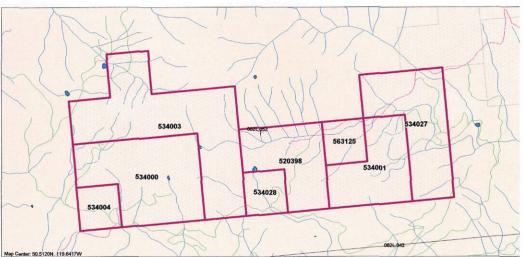
### Mord Property Location Map



### Mord Property Claim Map



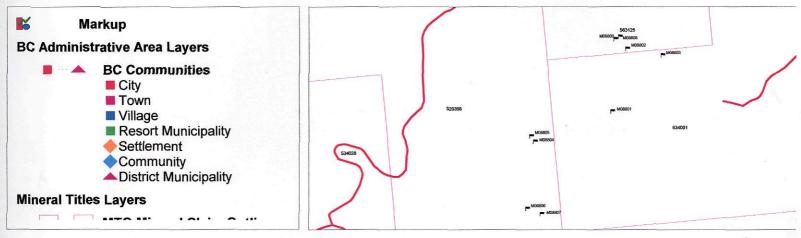
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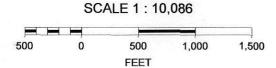


SCALE 1 : 40,182 0 2,000 4,000 6,000 FEET

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# **BCGS** Geology







Tenure #	Area In Ha	Units	Expiry Date*
520398	61.65		2009/sep/22
534000	102.75		2009/sep/21
534001	61.65		2009/sep/22
534003	143.84		2009/sep/21
534004	20.55		2009/sep/21
534027	82.20		2009/sep/21
534028	20.55		2009/sep/21
563125	20.55		2009/sep/22

• Expiry Date contingent on acceptance of this report.

### 5. History

Previous work on this property has included geological mapping, prospecting, sampling, grid establishment and a resource of minimum of three million tons of various grades of zeolite. (Aris # 25,071).

### 6. Regional Geology

The area is of Quesnellia Terrane. East of property is bordered by sediments and volcanics of Triassic age. West and lower down in the sequence, Nicola sediments appear in outcrops. To the north, Eocene volcanics and sediments are present. Large faults are common in the area.

### 7. Property Geology And Prospecting

Property geology and prospecting was limited due to time available. Previous years work is repeated here, although the sample descriptions for the period of this report are expanding the area prospected. Prospecting is not

included within this report.

The property itself is centered on a lake sediment-tuff sequence, covered by what could be a volcanic glass or a perlitic breccia. The main area is yellow to white, glassy in appearance and is, in fact, the mineral mordenite.

The beds of interest are up to 50 meters thick, over 750 meters long and over 200 meters wide. The sediments are largely mordenite along with some clinoptillite. The zeolites are interbedded with opal which may have commercial applications. All the zeolites are of commercial grade. See previous Aris #25071

### 8. Sample Preparations, Locations And Descriptions

A total of 9 samples were taken September 12 and 13, 2008. The samples were crushed and screened to -100 mesh. This was done by Jeremy Marlow and L.C. Marlow. Two of the samples were soaked in Nitrogen fertilizer so a total of 11 samples were analyzed. The samples were then sent to Pacific Soils Analysis Inc. for C.E.C. And Exchangeable analysis.

Samples M08801 to M08805 inclusive along with M08808 and M08809 are sedimentary zeolites. They are fine grained and range in color from white to yellow.

Samples M08806 and M08807 are ash flows, consisting of lapilli tuff. There are fragments of sedimentary zeolites present along with minor opal. They are beige color. There are vugs and fractures of the mineral clinoptillite in sample M08806. The vugs and fractures are of unknown species in sample M08807.

Samples N-06 and N-07 are analogous to M08806 and M08807 respectively, but they are loaded with 48-0-0 Nitrogen fertilizer. The procedure for this was as follows. Samples were crushed and pieces 1/4" to 1/2" were soaked in 2000 mL of water, in which 100 mL of 48-0-0 Nitrogen fertilizer was added earlier. The samples were soaked for ten minutes. The samples were then drained and washed with water continuously for two minutes, then they were left soaking in water for five more minutes. The samples were washed with water again for two minutes and left to dry. They were then crushed and screened to -100 mesh.

### Sample Locations And Descriptions

M08801- Lat:

50.506840

Elevation: 1260 m

-119.630175

Pictures: 1, 2, 3 & 4.

5 m by 1 m trench was hand dug with shovel and pick. Trench was then sampled by taking material across, up and down throughout trench. We made sure all sedimentary zeolite layers exposed vertically were sampled equally.

M08802-

Lat:

50.508311

Elevation: 1245 m

-119.629403

Pictures: 5, 6 & 7.

At the edge of a hill, we dug the next trench. A 4 m by 1 m chip sample was taken here.

M08803- Lat:

50.508052

Elevation: 1234 m

Long:

-119.628129

Pictures: 8 & 9.

On a trench previously exposed, little digging was required, only to get down into fresh zeolite. A sample was taken across trench approx. 1.5 meters long.

M08804- Lat:

50.506265

Elevation: 1269 m

Long:

-119.633178

Pictures: 10 & 11.

The highest sample in elevation. This was a small trench, 2 m by 1 m, along a road cut.

M08805- Lat:

50.506426

Elevation: 1268 m

Long:

-119.633315

Pictures: 12 & 13.

An outcrop grab sample approx 1 m<sup>2</sup>.

Lat: M0880650.504697

Elevation: 1251 m

-119.633698

Pictures: 14 & 15.

This sample is of a hard volcanic matrix. This is a 50 m<sup>2</sup> representative sample.

M08807- Lat:

50.504538

Elevation: 1251 m

Long:

-119.633160

No Picture Taken.

Sample if of hard volcanic matrix. A 5 m<sup>2</sup> representative sample was taken here.

M08808-Lat: 50.508617

Elevation: 1242 m

-119.629642

Pictures: 16 & 17.

Along a large skid trail, a 3 m by 1 m down and 3 m by 1 m across trench was dug out. A panel sample was taken here.

M08809- Lat:

50.508574

Elevation: 1244 m

Long:

-119.629825

Pictures: 18, 19 & 20.

A 2 m trench was dug and panel sampled here.



M08801



M08801



M08801



M08801



M08802



M08802



M08802



M08803



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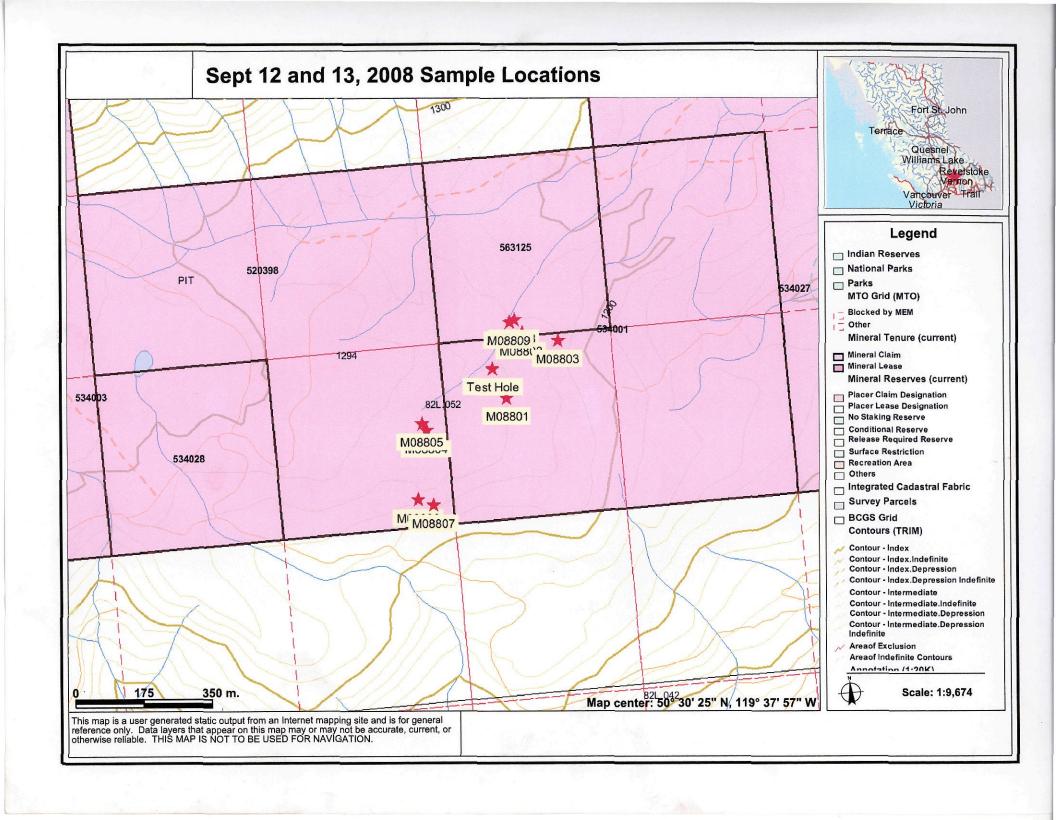


M08809





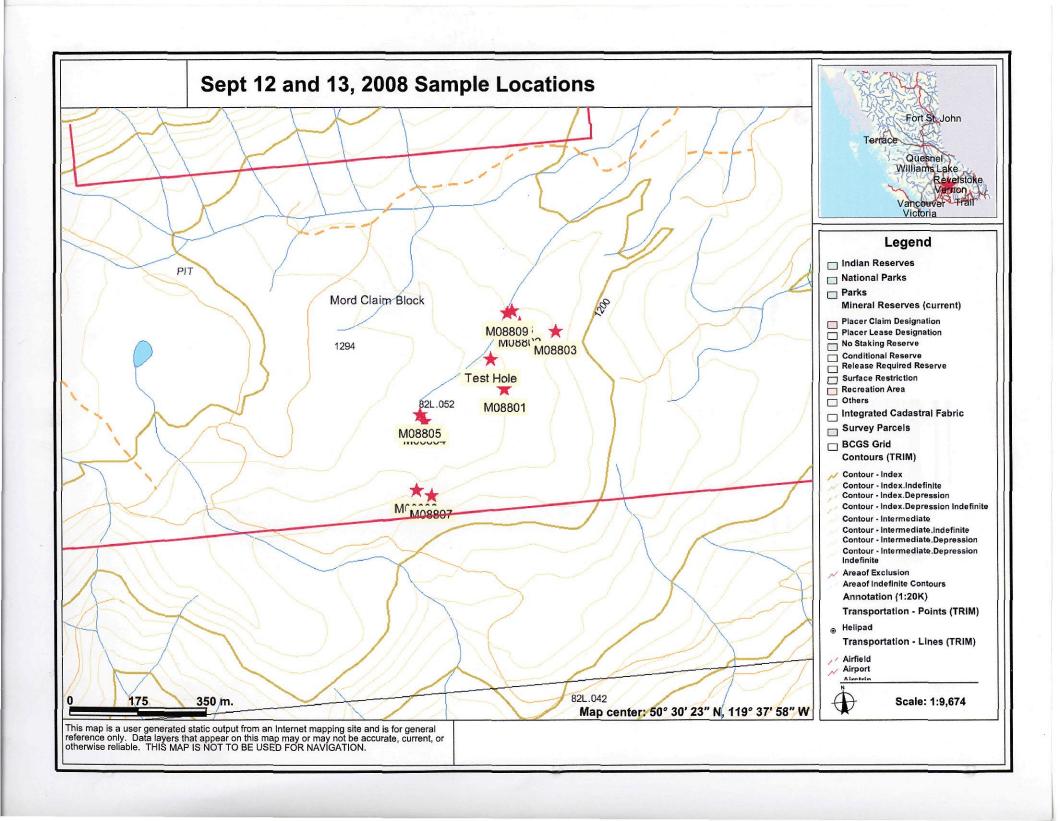
M08808 and M08809





Trenching And Sampling Sites

Sept 12, Sept 13, L.C. Marlow And Jeremy Marlow



Pictures 21 & 22 are taken from approx. 150 meters bearing approx. 20° from sample sites M08808 and M08809.

### 9. Analytical Work

A total of 11 samples were prepared and then sent to Pacific Soils Analysis Inc. The sample were analyzed for C.E.C and Exchangeable. Two samples, N-06 and N-07 were supposed to be tested for total Nitrogen content but the tests were not done as yet. Future reports will remedy this lack of information. Results were sporadic over the area of interest. I was encouraged by the fact sample within close proximity to another, returned values similar to one another. This supports large tonnage within the same grade of material. This might lessen mining costs associated with production stages of development.

The results returned are all potassium-magnesium dominant. This is good as the zeolites classed in the top grades are of potassium-magnesium dominance with respect to C.E.C. values.

#### 10. Conclusions And Recommendations

The work done within this report is limited due to time available on the property. The area in focus was large and is early in development. Zeolite property development is easy when private parties involved understand the main hurdle of zeolite production is in marketing and not in quarrying material. Zeolites are environmentally friendly in all areas of life and are beneficial to all levels of nature.

Conclusions drawn from samples analyzed are:

The main exchangeable is potassium.

There is more than one area feasible for quarrying on property.

All samples are zeolite.

Low C.E.C. values do not reflect on quality of zeolite, values are used to differentiate grades within each property, not between different properties.

The recommendations from this report are:

Further study is needed on the samples M08806 and M08807. These samples are of higher temperature, pressure and/or higher silica content during formation than the rest of area explored. The two samples are harder and show a bigger more defined crystalline structure. They also returned the highest potassium exchangeable values. When these two samples were loaded with nitrogen, the values for the potassium exchangeable increased. I do not know the

reason for this but maybe the nitrogen opened up the structure of the zeolite. The whole area sampled is good quality of zeolite and can be used for agriculture and environmental applications as is with little costs to quarry and bag for sales.

### APPENDIX I

### PSAI\_\_\_

Jeremy Marlow

April 19, 2009

		Exchangeable				
Sample		CEC	Ca	Mg	Na	K
		me	me	me	me	me
		100 gm	100 gm	100 gm	100 gm	100 gm
	MO 8801	68.8	40.0	12.0	1.28	7.35
	8802	91.1	45.0	22.3	2.44	5.78
	8803	28.9	13.8	5.98	0.43	8.07
	8804	28.9	12.5	5.57	0.75	3.81
	8805	25.5	10.0	3.30	0.26	8.20
	8806	43.9	22.5	6.39	0.38	12.01
	8807	45.3	27.5	5.78	1.22	11.35
	8808	23.8	8.75	4.95	0.87	1.38
	8809	25.2	7.50	5.16	1.00	1.58
9	N - 06	44.7	22.5	5.05	1.55	15.29
	N - 07	43.7	25.0	4.54	1.25	13.78

### **APPENDIX II**

### STATEMENT OF COSTS

ANALYTICAL COSTS: \$323.40

SHIPPING: \$14.61

SAMPLE PREPARATION: 10 HOURS @ \$20.00 PER HOUR: \$200.00

REPORT PREPARATION: \$300.00

TOTAL: \$838.01

### PACIFIC SOIL ANALYSIS INC.-

SOIL AND PLANT ANALYSES

Tereny Marlow PO Box 1472 Kamlops, BC V2C 6L8	Date	Ap29/09
Attention	Invoice No C	9-259
For the requested analyses as follows:		
To the requested analyses as renewe.	Y	
	X	
	X	
	X	
CEC + Ex Cations	11 × 28	30800
CLC VERMINGIO	X	<u> </u>
	X	
	X	
	X	
* Please Note CFC + Excation		
are \$28 per sample *		
	X	
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	X	
	X	
	X	
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	X	
Please include our invoice number on the face of your chequ	<i>e</i> .	<b>\$</b>
	Total Lab Fees	308.∞
G.S.T. Registration No.: 104 044 516	G.S.T.	15,40
	Net Invoice	323.40
	Paid #	315.00
<b>5791</b>	ove:	# 8.40

### **APPENDIX III**

### STATEMENT OF QUALIFICATIONS

I, JEREMY MARLOW OF P.O. BOX 1472 KAMLOOPS B.C. DO HEREBY SOLEMNLY SWEAR TO THE FOLLOWING:

I HAVE WORKED MAINLY IN MINING EXPLORATION FOR FOURTEEN YEARS STARTING IN THE SUMMER OF 1995 FOR TECK EXPLORATIONS PROCESSING CORE, SOIL SAMPLING, ROCK SAMPLING AND OTHER DUTIES.

I HAVE BEEN A PROSPECTOR AND HAVE HAD TENURE TO MY OWN CLAIMS FOR OVER TEN YEARS.

I WORKED SEVEN YEARS AS A DIAMOND DRILL HELPER AND TWO YEARS AS A DIAMOND DRILLER FOR L.D.S. AND MATRIX.

I AM PRESENTLY EMPLOYED AS A HIGH ROCK SCALER AND BLASTER.

JULY 11 2009 SINCERELY,

JEREMY MARLOW