# Exploration and Development Work Technical Report

# Geochemical Analyses of Two Bedrock Samples from Mineral Claim Sovereign

Nanaimo Mining District

BC Geological Survey Assessment Report 30264

Map 92C.099 Cell ID 092C16J017C

EASTING	NORTHING
SW 411090.377	5420270.88
SE 411548.169	5420263.619
NE 411555.505	5420726.843
NW 411097.752	5420734.103

Owner of Claim Dean M. Arbic

Operator of Work Dean M. Arbic

Work Performed By Dean M. Arbic

Report Written By Dean M. Arbic

October 10 2008 Amended June 01 2009

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#### Introduction

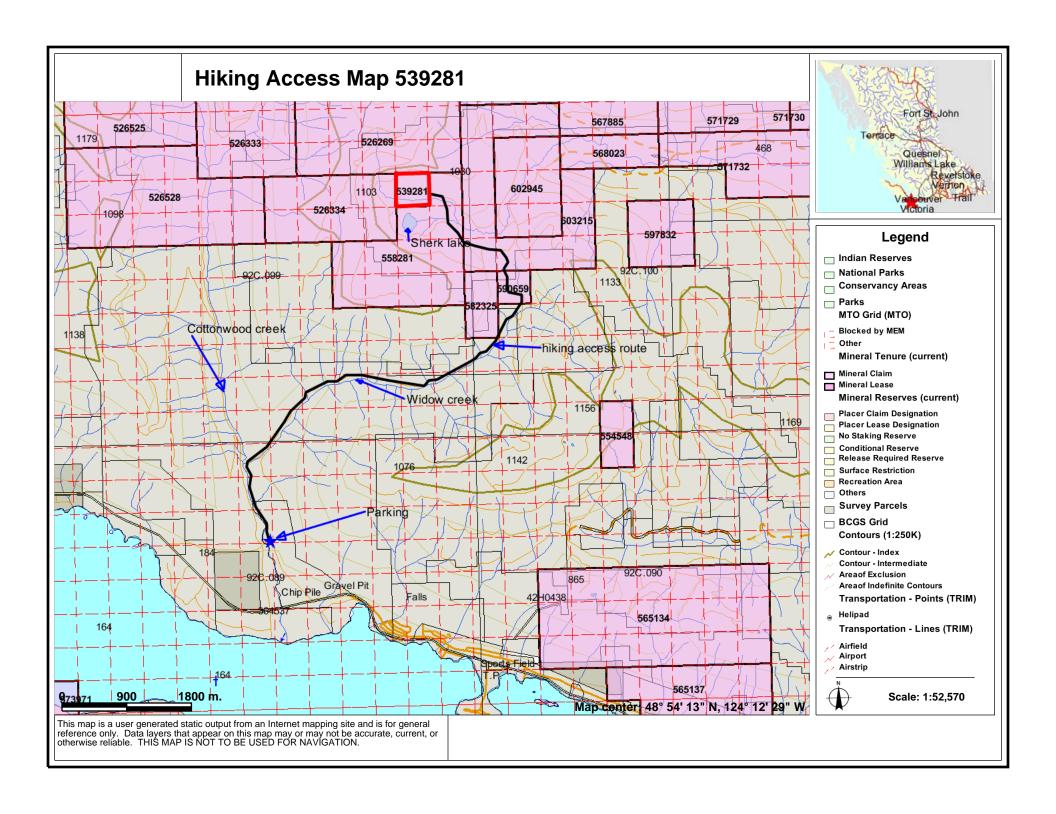
After reading pages C 337 and C 338 of the Annual Report of the Minister of Mines for 1927 detailing the discovery of Gold at the El Capitan claim. I became interested in prospecting in the Widow Creek area just north of Youbou. To search for oxidized veins and sulphide ores that may yield metals like gold, silver or copper.

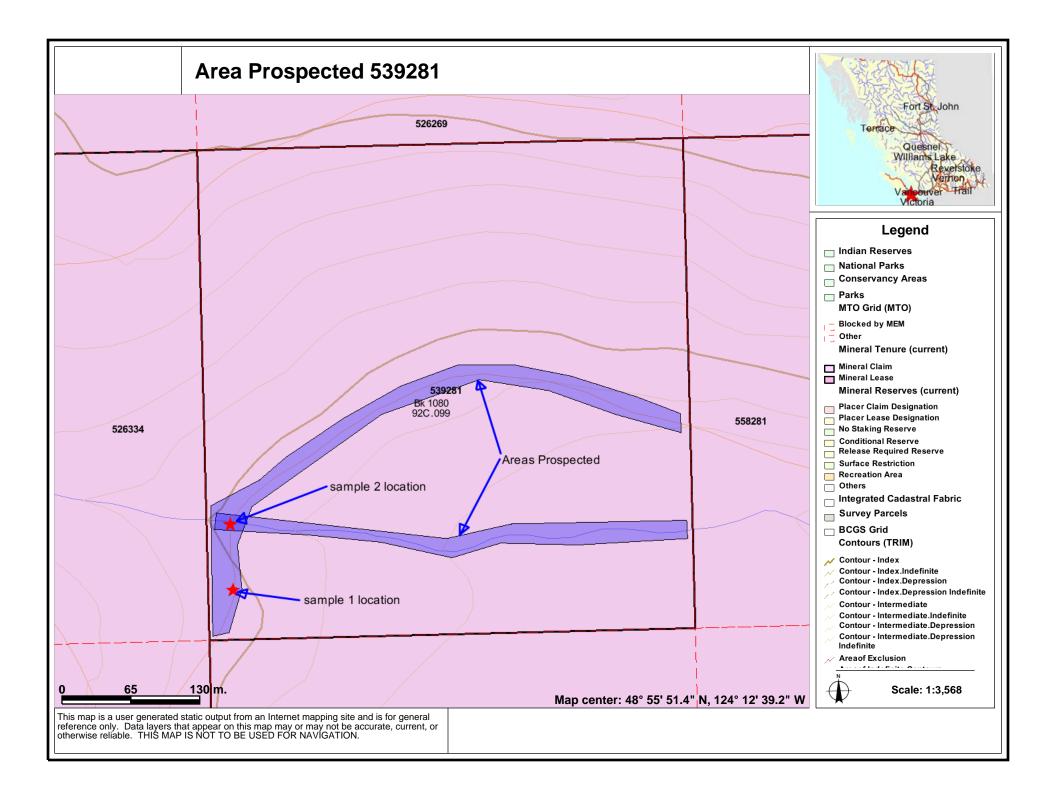
Mineral cell claim 539281 is situated approximately 10 km north of Youbou near Sherk lake. The claim has been accessed by driving northwest from Youbou and parking where the main logging road crosses over Cottonwood creek then hiking up old partially deactivated logging roads that lead along Widow creek to the claim.

On August 14, 2006, I staked the Sovereign Mineral Claim with the hopes of locating small gold veins similar to the ones described in the 1927 report.

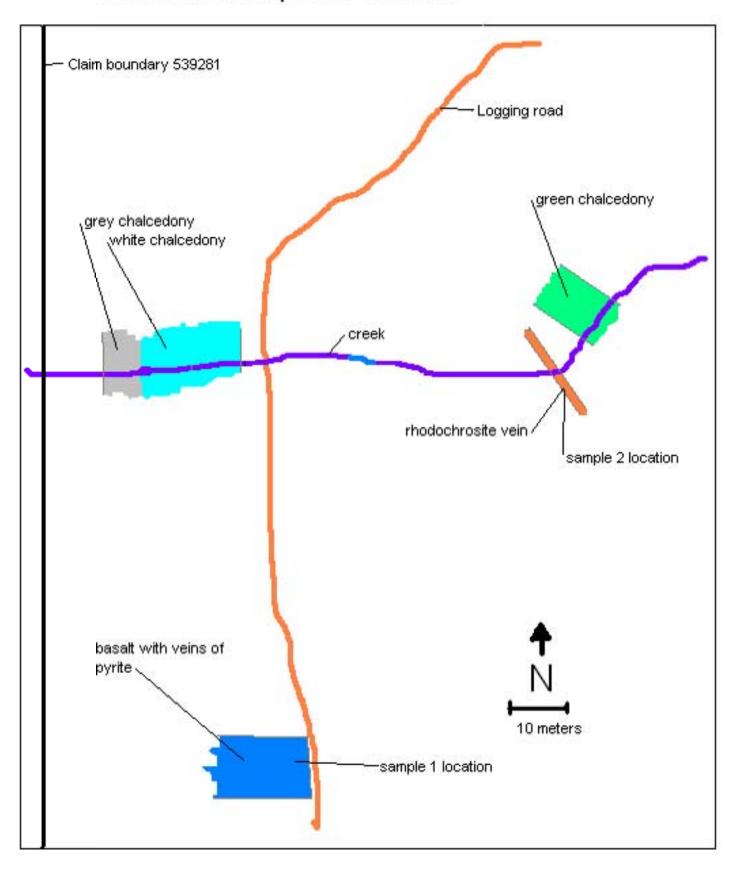
On August 8, 2007, while hiking along a creekbed that traverses the claim I found two small boulders that contained what appears to be pyrite.

On August 13, 2007, I hiked further along the same creek and located two areas of outcropping bedrock within the claim. One in the creek bed and one beside a logging road that contained pyrite and a red highly oxidized mineral with round white crystals. Two bedrock rock chip samples were taken for further analyses with a hammer and chisel. And the location recorded with an eXplorist 100 Magellan GPS unit.





# Sketch of Areas of Exposed Bedrock



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## GEOCHEMICAL ANALYSIS CERTIFICATE

44

Arbic, Dean Michael File # A706565

P.O. Box 415 Lake Cowicha, B.C. VOR 2GO Submitted by: Dean Michael Arbic



SAMPLE#	Мо	Cu	РЬ	7n	Aq	Ni	Со	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Вi	٧	Са	Р	La	Сг	Mg	Ва	Τi	В	Αl	Na	K	W
SPARI EEP	ррп	ppm	ppm	ppm	ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppm	ppm	ррп	ppπ	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ррт
G-1	<1	3	8	46	<.3	5	5	580	2.02	3	<8	<2	4	63	<.5	<3	<3	36	.49	.076	7	31	.63	236	.13	<20	1.12	.10	.56	<2
Sovereign 1	10	51	70	161	.4	35	18	584	6.38	33	<8	<2	<2	13	1.2	<3	5	159	.11	.067	14	70	1.57	27	.01	<20	1.67	.02	.13	<2
Sovereign 2 OX	<1	9	17	75	<.3	9	25	2815	7.32	7	<8	<2	<2	78	.9	<3	6	82	1.54	.013	7	43	.59	124	<.01	<20	.43	.01	.07	<2
Jupiter 1E	21>1	10000	11	162	21.1	39	140	758	29.94	239	8	<2	<2	- 1	3.6	<3	6	8	3.79	.012	13	11	.03	8	<.01	<20	.20	<.01	<.01	>100
STANDARD DS7	21	117	76	420	.7	58	9	641	2.51	51	<8	<2	5	74	6.4	5	7	85	.98	.078	12	203	1.09	409	.12	40	1.06	.10	.47	3

GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.

(>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: ROCK R150

Data FA \_\_\_\_

DATE RECEIVED: AUG 29 2007 DATE REPORT MAILED: GCT 2 3 2007



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GEOCHEM PRECIOUS METALS ANALYSIS

Arbic, Dean Michael File # A706565

P.O. Box 415 Lake Cowicha, B.C. VOR 2GO Submitted by: Dean Michael Arbic

SAMPLE#	Au** Pt** Pd** ppb ppb ppb	
G-1 Sovereign 1 Sovereign 2 OX Jupiter 1E STANDARD FA-10R	<2 <3 <2 8 <3 <2 3 <3 <2 42 <3 <2 515 485 517	

GROUP 3B - FIRE GEOCHEM AU, PT, PD - 30 GM SAMPLE FUSION, DORE DISSOLVED IN AQUA - REGIA, ICP ANALYSIS. UPPER LIMITS = 10 PPM. GROUP 6 AU RECOMMENDED IF >10PPM FOR 30 GM, >5PPM FOR 50 GM.

- SAMPLE TYPE: ROCK R150

Data\_\_\_ FA \_\_\_\_ DATE RECEIVED: AUG 29 2007 DATE REPORT MAILED:....



Exploration and Development Work Technical Report

Report Date October 10, 2008

Report Author: Dean Michael Arbic

Mineral Claim Tenure #539281

Mining District; Nanaimo

Work Type/ Technical Work/Geochemical

Date Work Began; August 21, 2007

Date Work Completed: November 17, 2007

GPS Location of Samples; Sample #1- E411114 N5420317

Sample #2- E411114 N5420379



Aug. 21, 2007- Examine and crush samples of bedrock from claim #539281. Each sample is a kilogram piece of bedrock that I broke up with a hammer.

Sample #1 is a piece of basalt type bedrock with veinlets and blebs of pyrite. I crushed and selected 150 grams of the 1 kg sample.

Sample #2 is a piece red iron oxide vein in bedrock with white round intersecting disk type crystals approximately 15 millimeters in diameter. I crushed and selected 220 grams of the 1 kg sample of this type of bedrock.

Aug. 28, 2007-The samples were packaged and labeled and sent by Greyhound to Acme labs.

Nov. 17, 2007- Receive Assay results in mail from Acme labs.

## Statement of Work and Cost

Sample Preparation Aug. 21, 2007 3 hours @ \$30.00 per hour	\$90.00
Shipping by Greyhound Aug. 28, 2007	
Assay costs 2-Geo4 @ 21.95 each	
Processing costs 2-R150 @ 6.20 each	
Surcharge and tax for 2 samples	\$12.45
Total Technical Cost	\$169.96

I declare this to be true and correct Dam M di

\_ Date OCT 10 2008

## Additional Comments and Conclusions

This claim is just north of Youbou and is only accessible by hiking on foot through deactivated logging roads. It is very interesting and is situated in a metallic mineral rich area and the potential for a valuable discovery exists. But these two bedrock samples do not indicate any incredible surface value. The assay results confirm the possible presence of two valuable ore-bodies.

Sample #1 was obtained from an outdropping of basalt bedrock that is visible at the side of a logging road and based on its appearance I assume it is quite large and extends quite deeply into the underlying mountain. I speculate that the veinlets and blebs of pyrite seen in this specimen would increase in size the further down I was to dig. And based on the assay results there may be some valuable metals there.

The results indicate that the metallic blebs and veinlets seen are in fact iron pyrite indicated by a reading of 6.38% iron. With some other metals in the pyrite, 1.57% magnesium, 584 grams per ton manganese, 161 grams per ton zinc, 159 grams per ton vanadium, 70 grams per ton lead, 51 grams per ton copper, 35 grams per ton nickel, 18 grams per ton cobalt, 10 grams per ton molybdenum and a trace of gold at 8 parts per billion.

Sample #2 was found at the side of a creek bed and was taken from a narrow vein measuring four inches wide. The mineral is very soft and resembles ochre with areas of white round crystals. Based on the assay results I have determined the mineral is a type of ferrous rhodochrosite because the iron value is 7.32% and has a manganese value of 2815 grams per ton. In the future I hope to trace this vein and if it is found to become larger and wider, it might be a source of manganese ore for small scale commercial milling. I had hoped it might yield gold but no gold was detected.

### **Interpretations**

Sample #1 as labeled on the Area Prospected map corresponds to Sovereign 1 of the assay certificates and to UTM co-ordinates E411114 N5420317.

Sample #2 as labeled on the Area Prospected map corresponds to Sovereign 2 OX of the assay certificates and UTM co-ordinates E411114 N5420379.

The majority of the claim is recently logged in the last 20 years with few areas of exposed bedrock. The topography steep to the north but relatively flat at the southern half of the claim.

Based on the types of bedrock discovered (i.e Basalt, Chalcedony, Rhodochrosite) thus far on this claim, I conclude that the area sampled is a metamorphic contact alteration zone, deformed by the heat of ancient volcanic activity.

Qualifications

Dean Michael Arbic FMC 133434 Grade 12 Diploma

Raymond Chan British Columbia Certified Assayer

Acme Analytical Laboratories LTD. (ISO 9001 Accredited Co.)

Equipment and Software

UTM Co-ordinates collected with eXplorist 100 Magellan GPS
Report prepared with Microsoft Internet explorer 8
Typewritten Documents prepared with MS Word
Maps prepared with Adobe Acrobat 7.0 pdf documents by MTO map viewer
Sketch prepared with Microsoft Internet Explorer paint program as an ACDSee BMP
Documents scanned with a HP officejet 5500 series scanner and formatted as ACDSee
Jpeg images

#### References

Annual Report of the Minister of Mines 1927- George A. Clothier, pages 337-338