

Technical Report

Fine Crushing and Precious Metal Leaching of Bedrock Samples from
Mineral Claim 514080

Victoria Mining Division

092C/059

UTM Co-ordinates

401049E 5374065N

Owner of Claim Dean M. Arbic

Work Performed by Dean M. Arbic

Report Written by Dean M. Arbic

May 03 2010

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Print and Close

Cancel

Mineral Titles Online

Mineral Claim Exploration and Development Work/Expiry Date Change

Confirmation

Recorder: ARBIC, DEAN MICHAEL (133434) Submitter: ARBIC, DEAN MICHAEL (133434)
 Recorded: 2010/FEB/09 Effective: 2010/FEB/09
 D/E Date: 2010/FEB/09

Confirmation

If you have not yet submitted your report for this work program, your technical work report is due in 90 days. The Exploration and Development Work/Expiry Date Change event number is required with your report submission. **Please attach a copy of this confirmation page to your report.** Contact Mineral Titles Branch for more information.

Event Number: **4469013**
 Work Type: Technical Work
 Technical Items: Geochemical
 Work Start Date: 2009/DEC/04
 Work Stop Date: 2010/FEB/08
 Total Value of Work: \$ 584.90
 Mine Permit No:

Summary of the work value:

Tenure Number	Claim Name/Property	Issue Date	Good To Date	New Good To Date	# of Days Forward	Area in Ha	Applied Work Value	Sub- mission Fee
514080	VENATICI	2005/jun/07	2010/feb/10	2011/mar/10	393	21.40	\$ 184.31	\$ 9.22
517523	SOCRATES	2005/jul/12	2010/feb/10	2011/mar/10	393	21.40	\$ 184.31	\$ 9.22
360261	CHANTERELLE	1997/oct/27	2010/feb/10	2011/mar/10	393	25.00	\$ 215.34	\$ 10.77

Financial Summary:

Total applied work value: \$ 583.96

PAC name: DEAN ARBIC
 Debited PAC amount: \$ 0.0
 Credited PAC amount: \$ 0.94

Total Submission Fees: \$ 29.2

Total Paid: **\$ 29.2**

Please print this page for your records.

The event was successfully saved.

Please use **Back** button to go back to event confirmation index.

Introduction and Claim History

Mineral Claim 514080 is situated approximately 10 kilometers south of the Town of Port Renfrew. The claim is bordered to the south by the Juan De Fuca Marine Trail and to the north by NSR 366666. One creek flows through the claim, it is named Kuitshe Creek and has two small seasonal unnamed tributaries. There is very little exposed bedrock on the claim except along the banks of Kuitshe creek.

The Claim is accessed by driving west from Lake Cowichan along the Circle Route to Port Renfrew then south 10 km to a parking spot on the west side of the West Coast Road near the bridge over Minute Creek. There is an overgrown de-activated forestry road that is used as a hiking trail to access the claim. The trail is about 3 km in length.

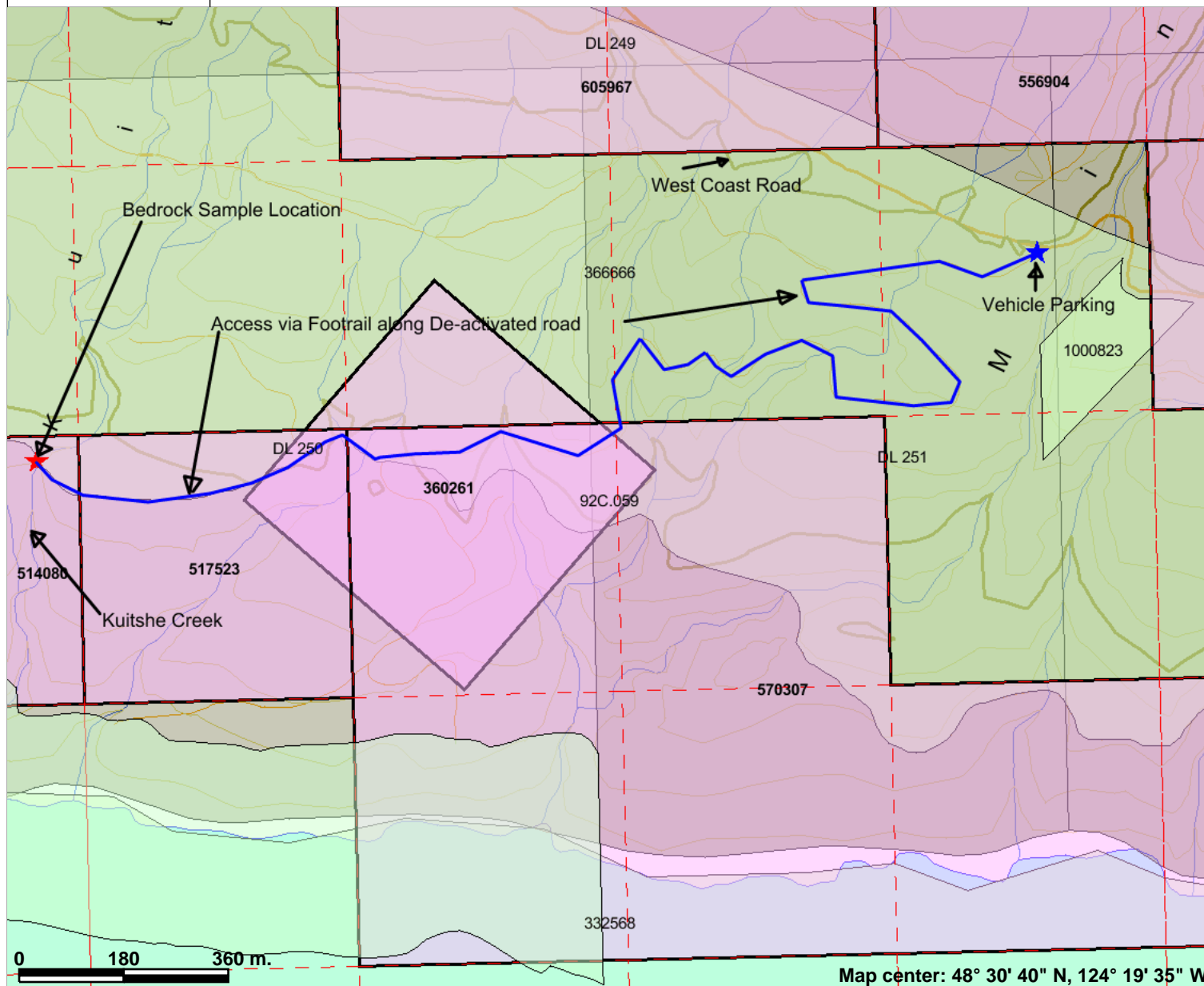
Mineral Claim 514080 named Venatici, was staked by the author using the electronic MTO system on June 07 2005.

Prospecting in this area began when the Spanish arrived and discovered gold some 200 years ago. More recently around the turn of the century placer gold was discovered at Sombrio Beach. Yet the hard rock source of the Sombrio Placers has not been successfully located.

On August 22 2005 the first samples taken from this claim were the mineral Ferroan Dolomite with many small 2-3 millimeter cubes of pyrite. The author collected these samples and they were assayed at Acme Laboratories in Vancouver BC on April 27 2006 and May 03 2006 and returned values of 5052 parts per billion gold and 6 parts per million gold which is about 6 grams per ton of gold. And 7.3 parts per million silver which is about 7 grams per ton silver.

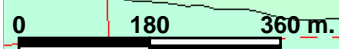
On June 01 2008 another vein of Ferroan Dolomite with many cubes of pyrite was discovered in close proximity to the first vein and samples were taken.

Access Map for Sample Location 514080



Legend

- Indian Reserves
- National Parks
- Conservancy Areas
- Parks
- MTO Grid (MTO)
- Blocked by MEM
- Other
- Mineral Tenure (current)
- Mineral Claim
- Mineral Lease
- Mineral Reserves (current)
- Placer Claim Designation
- Placer Lease Designation
- No Staking Reserve
- Conditional Reserve
- Release Required Reserve
- Surface Restriction
- Recreation Area
- Others
- Integrated Cadastral Fabric
- Survey Parcels
- BCGS Grid
- Contours (TRIM)
- Contour - Index
- Contour - Index.Indefinite
- Contour - Index.Depression
- Contour - Index.Depression Indefinite
- Contour - Intermediate
- Contour - Intermediate.Indefinite
- Contour - Intermediate.Depression
- Contour - Intermediate.Depression Indefinite
- Area of Exclusion



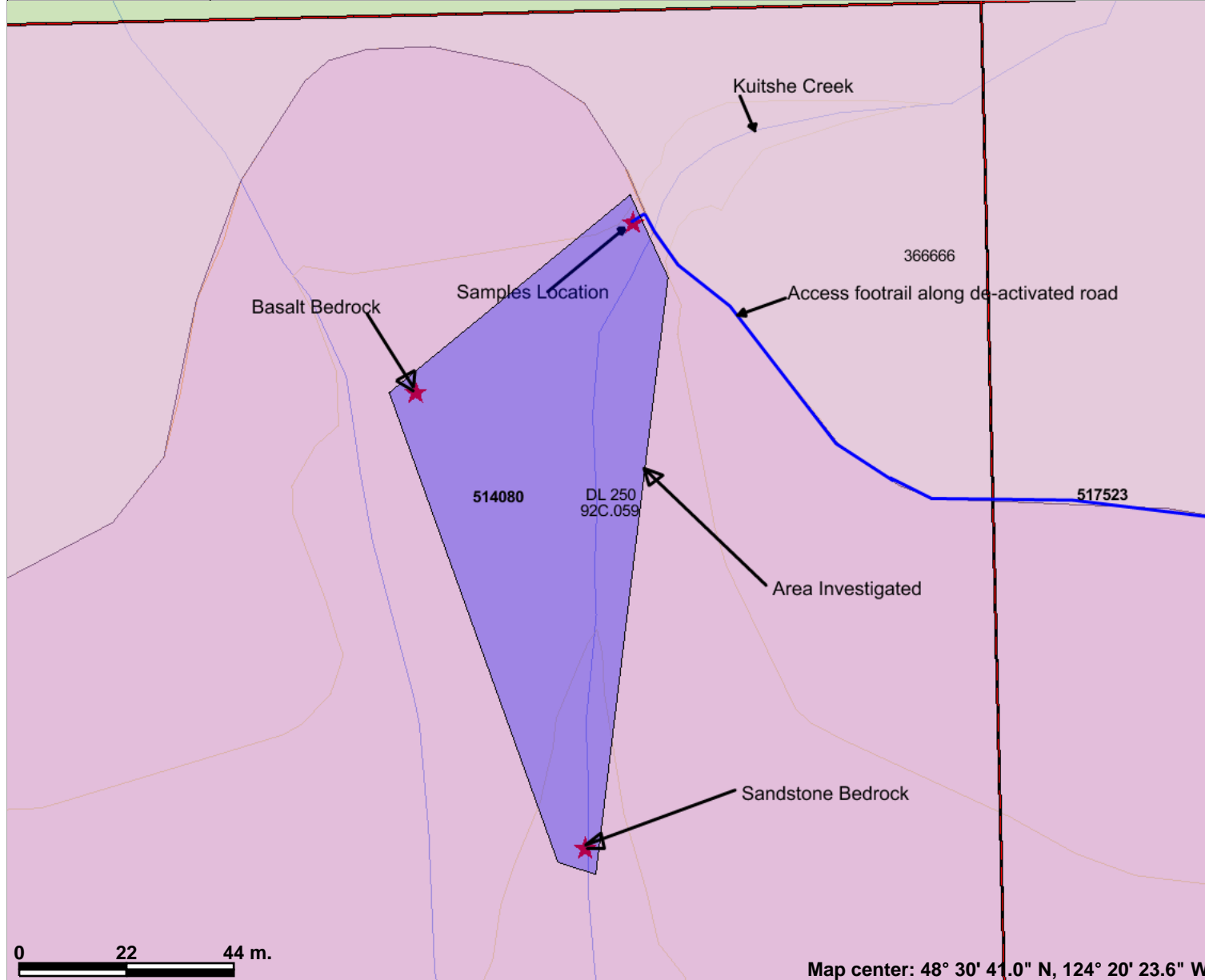
Map center: 48° 30' 40" N, 124° 19' 35" W



Scale: 1:10,404

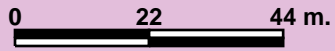
This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Samples Location Map



Legend

- Indian Reserves
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- MTO Grid (MTO)
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- Other
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- Contour - Index.Depression Indefinite
- Contour - Intermediate
- Contour - Intermediate.Indefinite
- Contour - Intermediate.Depression
- Contour - Intermediate.Depression Indefinite
- Area of Exclusion



Map center: 48° 30' 41.0" N, 124° 20' 23.6" W

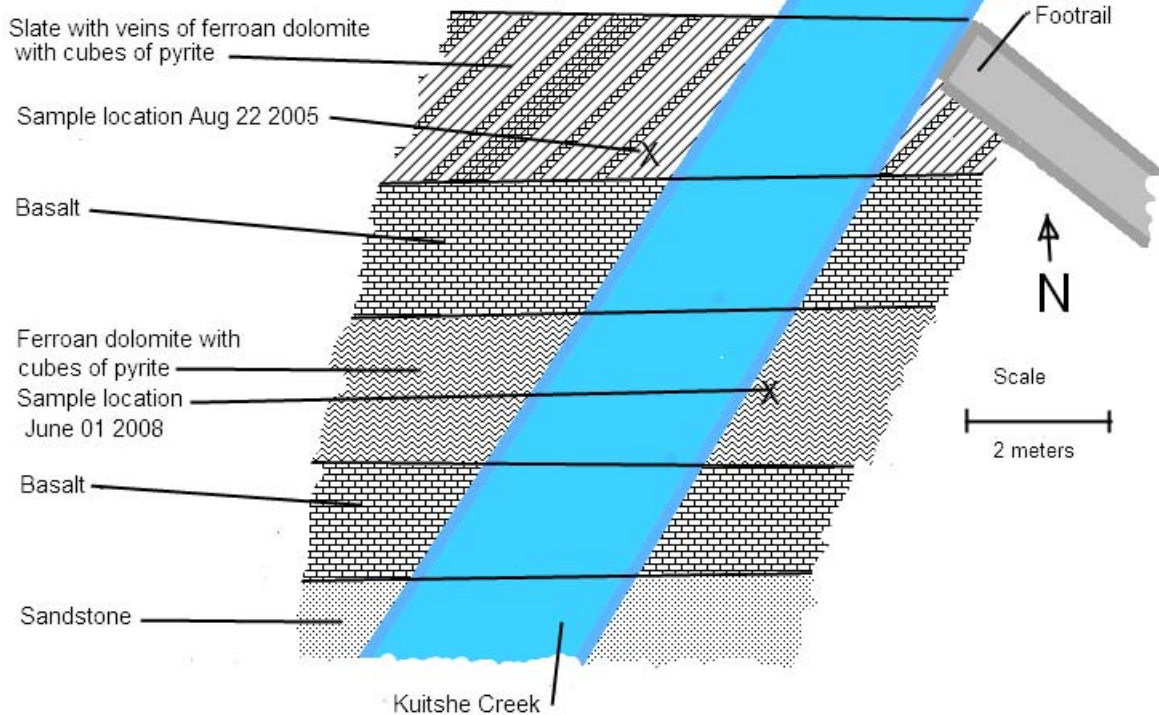


Scale: 1:1,240

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: Samples Location- 401049E 5374065N
 Basalt Location-401003E 5374032N
 Sandstone Location 401034E 5373937N

Sketch of Auriferous Sample Locations





The partially crushed ore samples that were used.



Samples of Ferroan Dolomite from claim 514080 obtained on June 01 2008
Note the sparkle from the cubes of pyrite contained in the ore.



Samples of Ferroan Dolomite from claim 514080 obtained on Aug 22 2005

Technical Work Description Summary

Step 1 Crushing Samples

Bedrock samples that were previously taken from Mineral Claim 514080 were crushed by hand with a hammer and anvil until the ore was approximately 2 cm in diameter. 6.2 kilograms was crushed this way. 4 kilograms of dry bedrock was placed in a ball mill with 25 steel ball bearings. The ball bearings are 2 cm in diameter. 2.5 liters of water was added to the ball mill. The ball mill was operated for 4.2 hours. Then another 2.2 kilograms of ore was added with another 2 liters of water. The ball mill was then operated for another 6.8 hours.

Total amount of ore crushed in ball mill – 6.2 kilograms

Total amount of water used for wet crushing – 4.5 liters

Total hours of operation - 11 hours

Step 2 Collecting Slurry

The rotating drum of the ball mill was then disconnected from the belt drive and hoisted from its horizontal position till vertical. So the contents of the mill would flow out into a 1 cm metal mesh screen to separate the uncrushed pieces of ore and ball bearings from the slurry. Another liter of water was used to wash the uncrushed ore and ball bearings into a 1 millimeter plastic mesh screen to further separate the fine slurry from the uncrushed ore. 12 liters of fine slurry were obtained this way. This took 1 hour.

Total amount of slurry – 12 liters

Total time – 1 hour

Mesh size of screens 1 cm. and 1 mm.

Step 3 Operation of Leaching Cell

The 12 liters of slurry were then placed in the leaching cell. The cell is then stirred by an overhead agitator/impeller driven by an electric motor. And aerated by the injection of compressed air into the bottom of the cell by an air hose. As the cell was operating, approximately 25 grams of NaCN was added as a leaching reagent and 30 grams of Lime containing 55% CaCO₃ and 37% MgCO₃. The leaching cell agitated and aerated for 2 hours then let stand for 1 day. Then another 30 grams of lime was added and the cell was run for another 2 hours then let stand for 1 day. After another 2 hours of operation the leaching time was completed and the slurry was allowed to settle for 1 day.

Total reagents added to slurry - 25 grams NaCN and 60 grams CaCO₃/MgCO₃

Total leaching cell operation time agitation and aeration – 6 hours

Total standing time for adsorption - 3 days

Step 4 Settling and Filtering

After standing for 36 hours the clear solution containing metal values was skimmed from the surface with a skimmer ladle. The rest of the slurry was filtered through a combination of fine cloth and paper filters separating the liquids from the suspended solids. 4 liters of clear solution were collected in large glass jars. Then poured into a paper filter funnel to remove very fine suspended particles. The funnel was placed on top of a glass tube 2 cm in diameter. The glass tube carbon pillar was used to remove the dissolved metals from the solution. The glass tube was half filled with activated charcoal.

Total amount of clear adsorbed solution obtained – 4 liters

Total time filtering – 1 hour

Step 5 Smelting

The activated charcoal was then removed from the glass tube and placed in a ceramic crucible. A small propane torch was used to heat the activated charcoal till it turned to ash. The ashes were further heated until they congealed into small beads of metal. These small beads of metal are suspected to be comprised of a ratio of silver and gold.

Total amount of precious metal obtained approximately 150 milligrams

Total time smelting – 1 hour

Equipment and Tools

Tools used are:

Hand tools – hammer and anvil

Equipment Used:

Ball Mill - Rotating Steel Drum Cylinder 36 cm in diameter and 1 meter long
Electric Motor A.C. 110 Volts, 4.5 Amps, 0.25 horsepower, 1753 rpm
Rubber Belt 183 cm long and 2 cm wide
25 steel balls 2 cm. in diameter
Hand powered Hoist Winch Model DL 1000, pulleys and wire cable and hook
1 cm sized metal wire mesh screen filter
1 mm sized plastic mesh screen filter

Leaching Cell - Plastic Cell Tank capacity 20 liter
Electric Motor A.C. 120 Volt, 2.6 Amps, 1200 rpm
Agitator Impeller 36 cm long metal shaft with 7 cm wide impeller
Electric Air Compressor A.C. 120 Volts, 2.5 Amps
2 Air Hoses, 1.5 meter, 2 cm dia. rubber and 1 meter, 4 cm dia. plastic

Settling Tank – 2 Plastic Cell Tanks capacity 20 liter
-Cloth and Paper filters

Carbon Pillar Filter – 2 large glass jars with lids, capacity 4 liter
Glass tube 23 cm long and 2 cm wide
Plastic funnel with slats
Paper filters
Activated Charcoal

Smelter – Ceramic Crucible 14 cm by 10 cm
Hand Held Propane Torch

Statement of Work and Cost

Date Work Began: Dec 04 2009

Date Work Completed Feb 08 2010

Crushing and Ball Mill operation- Dec 04 - .5 hours
Jan 21 - 1 hour
Jan 23 - 2 hours
Jan 24 - 1.5 hours
Jan 29 - 2 hours
Jan 30 - 1.5 hours
Feb 02 - 1.5 hours
Feb 03 - 1 hour
Total time crushing..... 11 hours

Total time collecting slurry from Ball Mill Feb 03 – 1 hour

Leaching Cell operation – Feb 04 – 2 hours
Feb 05 – 2 hours
Feb 06 - 2 hours
Total time leaching 6 hours

Total time Filtering – Feb 08..... 1 hour

Total time Smelting – Feb 08.....1 hour

Total Labour number of Hours spent working - 20 hours X \$25.00 per hour equals \$500.00

Cost of Materials used – Leaching reagents NaCN purchased from Anachemia Science
Total Cost \$84.90

Total Costs

Labour costs \$500.00 plus Materials cost \$84.90 equals \$584.90

Total Cost - \$584.90

I certify that this is true and correct Date May 03 2010

87405



Anachemia Science

Anachemia Canada Inc.
 10 - 3571 VIKING WAY, RICHMOND, BC V6V 1W1
 TEL.: (604) 270-2252 (800) 361-0209

CUSTOMER - CLIENT
 039996-298

CUSTOMER ORDER NO.
 N° DE COMMANDE DU CLIENT

DEAN ARBIC/VISA

DATE REQUIRED REQUIR POUR LE	SHIPPING DATE EXPÉDIE LE
11 10 09	11 12 09

ATT'N:
 DEAN ARBIC

DEAN ARBIC, FREE MINER
 212 KWASSIN CRESCENT
 LAKE COWICHAN BC V0R 2G0
 CANADA 026

SHIPPING INSTRUCTIONS - INSTRUCTIONS D'EXPÉDITION
 OUR ORDER NO. / NOTRE N° DE COMMANDE: 969111696
 ORDER DATE / DATE DE LA COMMANDE: 11 10 09

PUROLATOR (X) 2 Prepaid-Bill

PART NO. N° PIECE	DESCRIPTION	QTY ORD'D QTE COMM.	U/M	QTY SHP'D QTE EXP.	B/O À SUIVRE
	No Conditions				

250-749-4807

 SUB TOTAL: \$75.80
 PST: \$ 5.31
 FREIGHT: \$
 GST: \$ 3.79
 TOTAL: \$84.90

 CHARGED ANITA L GENOVESE
 AUTH:074360 11/10/09

 PAID FOR GOODS
 NEED TO CHARGE FREIGHT

01	8325-500G	82110-300	1 EA	1	0
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SODIUM CYANIDE, GRANUL, REAG, ACS

1 pc @ 2.4 kg / 5 lb.

COLD. / CUEILLI	CHK'D. / VÉRIFIÉ	PCK'D. / EMPAQUETÉ	SHIPPING NO. N° D'EXPÉDITION
	Purolator	32915373584	V262593

ALL CLAIMS MUST BE MADE WITHIN 5 DAYS AFTER RECEIPT OF GOODS. RETURNED GOODS WILL NOT BE ACCEPTED UNLESS WRITTEN CONSENT IS GIVEN. UNLESS OTHERWISE PROVIDED. DELIVERIES MAY BE MADE IN ONE OR MORE SHIPMENTS. GOODS SHIPPED AT BUYER'S RISK AFTER DELIVERY TO CARRIER. IN CASE OF DELAY, SHORTAGE OR DAMAGE, BUYER'S CLAIM SHOULD BE MADE DIRECTLY WITH THE CARRIER.
 TOUTE DEMANDE DOIT ÊTRE FAITE DANS LES 5 JOURS SUIVANT RÉCEPTION DE LA MARCHANDISE. AUCUNE MARCHANDISE NE PEUT ÊTRE RETOURNÉE SANS NOTRE AUTORISATION ÉCRITE. À MOINS D'AVIS CONTRAIRE. LES EXPÉDITIONS PEUVENT ÊTRE FAITES EN LIVRAISONS MULTIPLES. LES MARCHANDISES SONT LIVRÉES AU RISQUE DE L'ACHETEUR, APRÈS LIVRAISON À LA COMPAGNIE DE TRANSPORT. TOUTES RÉCLAMATIONS DOIVENT ÊTRE FAITES À LA COMPAGNIE DE TRANSPORT.

KPL GRAPHIC GROUP 514-688-9788

Conclusions and Interpretations

The bedrock samples used for this leaching procedure previously assayed 5 to 6 grams per ton gold and 7.3 grams per ton silver. By combining these values one can conclude that the ore contains approximately 13 grams per ton of precious metal. Thus one kilogram would contain about 13 milligrams of precious metal. Since all the ore was not crushed completely during the milling process. Only about 5 kilograms was crushed to very small micron sized particles.

If 100 % of the gold and silver was adsorbed into the solution and recovered by the activated charcoal, I would expect to have recovered 65 milligrams of gold and silver. Since 150 milligrams was produced, residual carbon, silica or other metals like zinc may be present. To discover exactly the percentage of gold and silver in the metallic beads produced by this leaching process, the metallic particles will be sent to be further analyzed by ICP spectroscopy.

I intend to further explore this claim with the hopes of locating veins of ferroan dolomite with greater amounts of gold and silver, to increase the potential yield from leaching. And take larger bedrock samples and experiment with heap leaching to compare the results with this project.

Qualifications

Dean Michael Arbic -Grade 12 diploma Erindale Secondary School, Ontario

Software

This Report was written with Open Office. Org 3.2.0
The maps were prepared with Adobe Acrobat 9.0 and the MTO online map viewer
The sketch was drawn with paint.NET v3.5.5

Hardware

GPS UTM co-ordinates were gathered with a Magellan Explorist 100 GPS Unit
Photograph were taken with a Kodak EasyShare C530 digital camera
the computer used to prepare and upload this report is a IBM Think Center running Windows XP Professional
The scanner used to scan documents for this report is a HP office 5510 all in one scanner.

References

Annual Report of the Minister of Mines 1930, Sombrio Placers (Kootenay Central Mining and Development Company, Limited)