Technical Report

for the

Valentine Placer Project

Tenure Numbers:
575069; 575070

EVENT# 5373612

Satellite Remote Sensing Survey And Analyses of the Valentine Group of Placer Tenures:

Victoria Mining District
of
British Columbia
Canada

Minfile Occurrences: 092B108

ARIS #s: 6298; 6598; 6844; 8678; 9050; 10110; 11398; 12642; 14199; 14640; 14691; 15509; 16409; 16818; 17259; 17381; 17949; 17950; 17998; 18813; 18827; 18900; 18901; 18955; 19358; 19359; 19358; 19359; 19362; 20100; 22683; 24345; 24431; 25024; 25243; 25244; 25245; 25577; 25806; 26183; 26517; 26774; 27107; 27360; 27726; 30402

Lat: 48.518º Long: -123.888º
NAD 83

For

Mill Bay Ventures

By
Auracle Geospatial Science Inc.
325 Dorset Road
Qualicum Beach B.C.
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INTRODUCTION

In April of 2012, Auracle Geospatial Science Inc was asked by William Glasier of Mill Bay Ventures Inc. to conduct Paletrough detection using remote sensing work for their Valentine Mountain Group of Placer tenures. The Valentine Mountain tenures are located 17.5 km north west of the city of Sooke, British Columbia on southern Vancouver Island. These tenures are within the Historic Leech River Placer area, and are considered to be prospective for placer gold.
The project was designed to use Radar microwave data and Digital elevation Data to search for blind or buried ancient river channels.
Satellite data is being used to detect paleo surfaces, and can in cases pentrate overburden. This is for the most part a direst read analysis. The results of these analyses are an extension of the project GIS, and knowledge model from which a series of representative maps were projected.

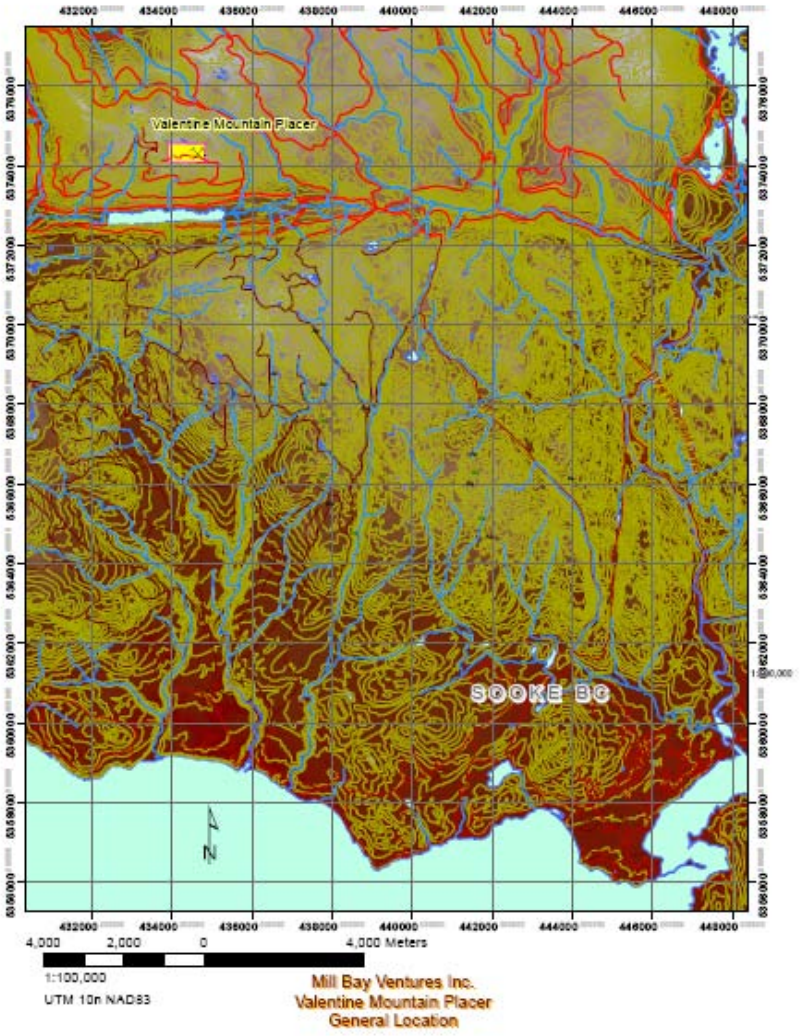

Illustration 1-General Location

Physiography and Access *(See Appendix figure 1)*

The Valentine Placer Group occupies approximately 42.8 hectares of surface area, consisting of 2 Placer tenures. The Group is located approximately 19.5 kilometres north-west of Sooke BC within the Coastal temperate zone Temperatures range from -10 to 30º C. This is an area of logged forest with replanted coniferous trees.
Access is from the Sooke Hydroelectric Service Road and a left turn at the 6km junction (immediately north of the East end of the BC Hydro water reservoir.
Elevation ranges 150 metres from 700 to 850 metres.

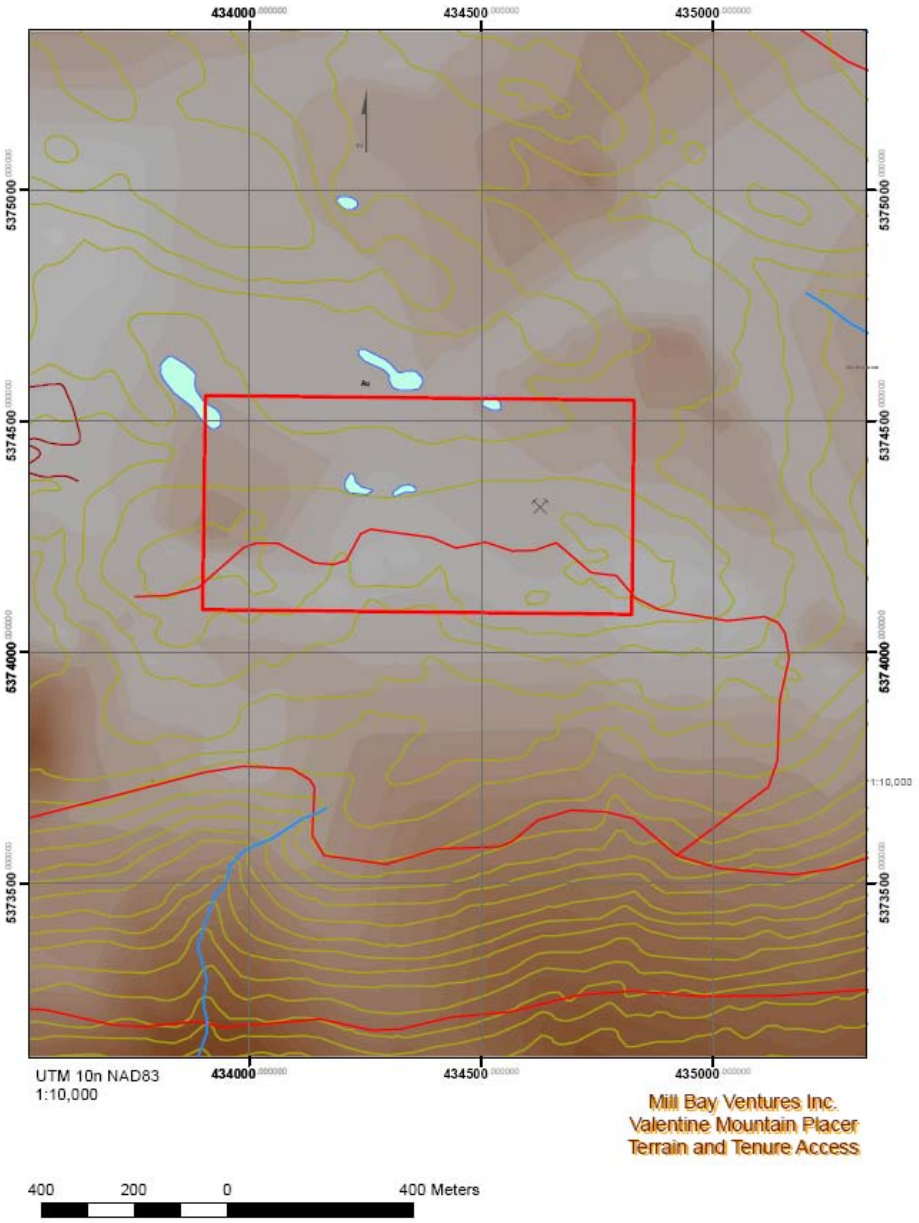

Illustration 2- Digital elevation Model

Regional Geology *(See Appendix figure1)*

Regional geology, as delineated, is extracted from the BC Geological Survey Branch's Digital Download link:

http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/MAPPLACE/GEODATA/Pages/default.aspx

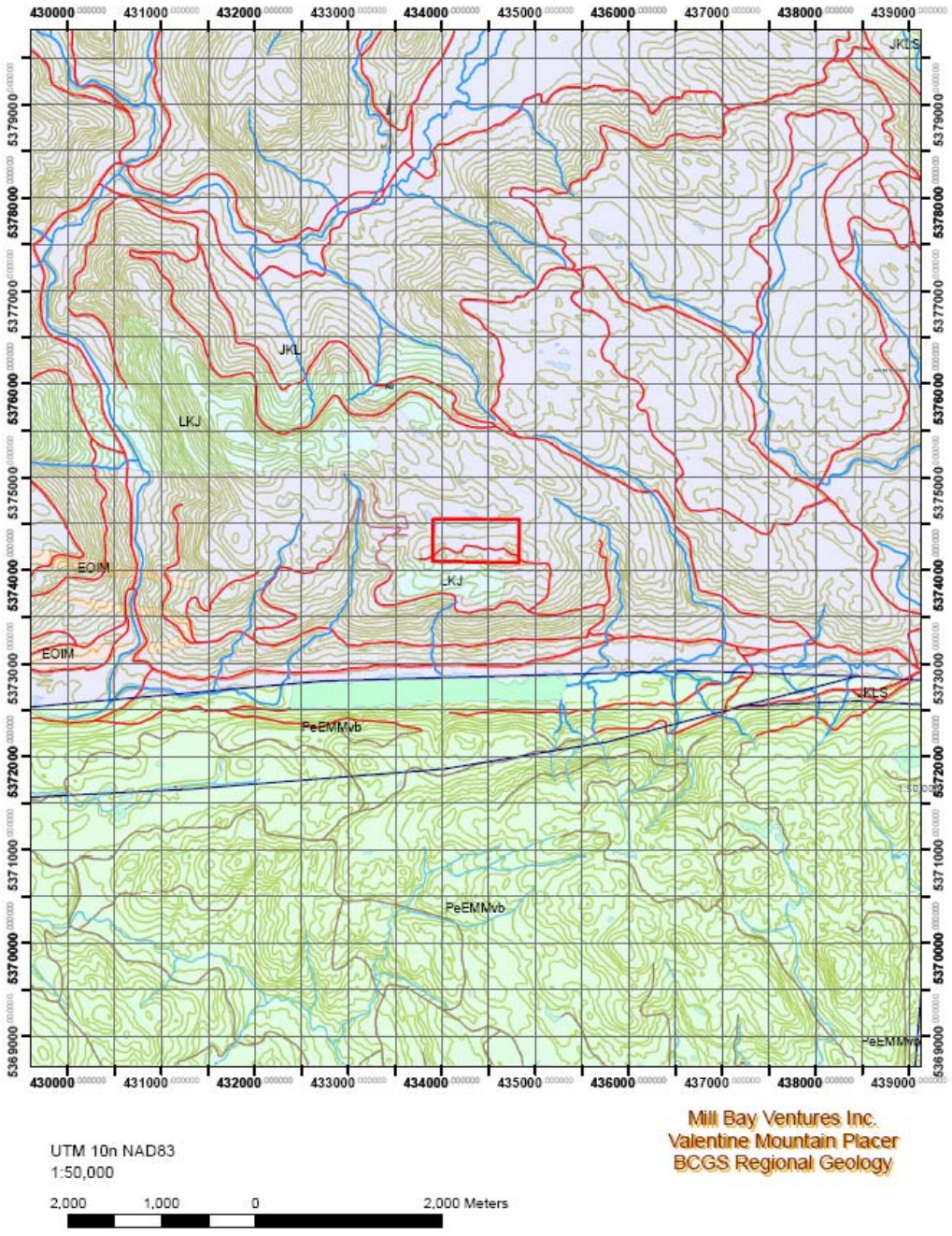

Illustration 3- Regional Geology

Mineral Tenure:

The Valentine Placer tenures include: 575069 and 575070. See attached "Covering Confirmation Letter" for verification of ownership and status.

Previous Work (Appendix Figure 3)
This is a historic placer, at the upper drainage of the Leech River which was named after Royal Engineers Lieutenant John Leech, who discovered placer gold on the now named Leech River in 1864.
Government Recorded 'Minfile' Developed Prospect 092B108 lies within the bounds of these tenures. This is a Gold- quartz type occurrence with "Narrow quartz veins cutting both metasedimentary, and metavolcanic rocks carry(ing) spectacular coarse free gold."- Minfile

http://minfile.gov.bc.ca/Summary.aspx?minfilno=092B++108

DATA ACQUISITION

Archived mineral exploration, geology and geographic data were collected from various sources including:

- BCGS

Satellite Remote Sensing data selection was based on suitability and angularity of Synthetic Aperture Radar (SAR) Data.

- RadarSat 2 Fine 6.25 m VV Synthetic Aperture c-band microwave Radar data from MDA Corporation Richmond BC

Data Pre-Processing
RadarSat 1 Fine CEOS data was converted to .tif format and corrected for:

- Antenna pattern
- Slant Range
- Radiometry
- Topographic distortion (Layover and foreshortening)

The ortho-corrected 6.25 m data was then filtered for speckle using a Sobel edge detection algorithm. This pre-processed radar data was checked for alignment against the optical data and corrected by shifting.

DATA PROCESSING

Radar
The noise reduced and pre-processed Radar data was re-processed using a series of protocols including: Directional filters: 135º and 90º; Laplace Transforms; and mathematic convolutions. Results from Mathematical Convolution images included Co-occurrence: Dissimilarity; Homogeneity; Entropy; and Means. These were projected using both nearest neighbour and cubic convolution resampling to improve and discriminate their varied linearity, texture or arcuate pattern. Results were projected using custom histogram display for improved visual discrimination.

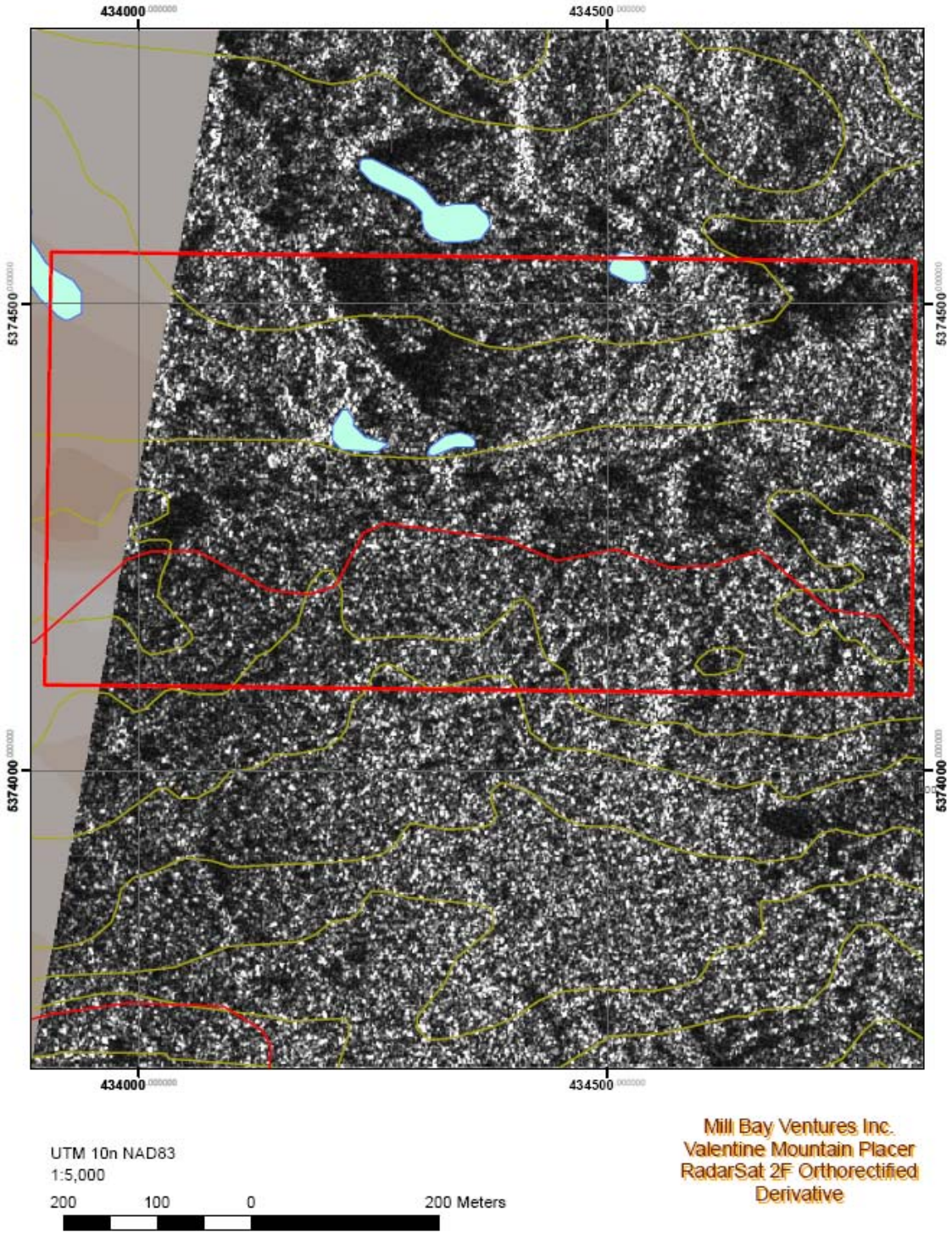

Illustration 4- RadarSat Ortho Laplace Derivative

DATA DESCRIPTION

Radar Data:

The acquired radar data was RadarSat-2 Fine, 6.25 metre spectral resolution C-Band microwave VV type, Synthetic Aperture (SAR) data. The RadarSat data is geocoded high density format data which was georeferenced and projected to the state datum. The georeferenced raw data was then ortho-corrected using a proprietary script. Radar data does not directly correspond to visual established geographic features and requires very specialized knowledge, software and equipment in order to correct for foreshortening and antenna pattern. This data was corrected spatially using a proprietary script and subsequently filtered using mathematical filters to enhance edges and to reduce inherent speckle and noise. The noise reduced data was re-processed using a series of protocols including: Directional filters: 120º and 90º; Laplace Transforms; and mathematic convolutions. Results from Mathematical Convolution images included Co-occurrence: Dissimilarity; Homogeneity; Entropy; and Means. These were projected using both nearest neighbour and cubic convolutions to improve and discriminate their varied: linearity; texture or arcuate pattern.

REMOTE SENSING SOFTWARE

The following computing and analyses programs were used for the analyses of this study:

- Arc GIS with Spatial Modeller;
- ENVI 4.8 with IDL 6.3 plus atmospheric correction model ModTran 4;
- Digital Elevation and Model extraction and Orthorectification suite;
- Arc GIS 10 plus X Tools Pro

RESULTS

All result images were histogram balanced using a combination of linear and Gaussian filtering.

A Digital Elevation Model (DEM) covering the entire AOI was generated to an elevation accuracy of 10 m vertical located within a 10 m radius area. This greatly improves elevation and spatial accuracy of existing topographic data, (currently available at 1:20 0000 scale, at +/- 25m vertical and located within a 30 m radius area.) The spatial accuracy of the DEM maps is significantly better in locating and placing geological, geophysical and geochemical information on maps and subsequently in using this information in UTM space to locate drill holes and trenches.

The altitude, orbital location, yaw and attitude of the satellite collecting the data are recorded at the point of capture of the data. When these are combined with

the orbit velocity of 15 000 km/h, the data capture is relatively instant. On the other hand, the air photos used to construct 1:50,000 topographic maps are collected as clusters of images collected on flights lines from a moving aircraft that have more highly variable YAW, tilt and attitude and much less accurate position location systems. Consequently printed topographic maps (and their shape file equivalents) often display by comparison, spatial offsets or error in the locations of features such as lakes, trails and streams. In other words, the internal accuracies of position within the satellite images are relatively more precise. Any improvement in accuracy results is a significant improvement in multivariate data alignment. This improvement allows us to integrate and fuse multidisciplinary data such as geophysics and geochemistry which are part of the strategic plan for further work.

Two final radar derivative maps were generated to provide linearity and texture. Domains of density depicting potential blind channels were mapped where they differed from the surface topography

CONCLUSION

There are two potential areas delineated as prospective targets which represented inconsistencies between apparent surface and buried surface elevations along linear trends.

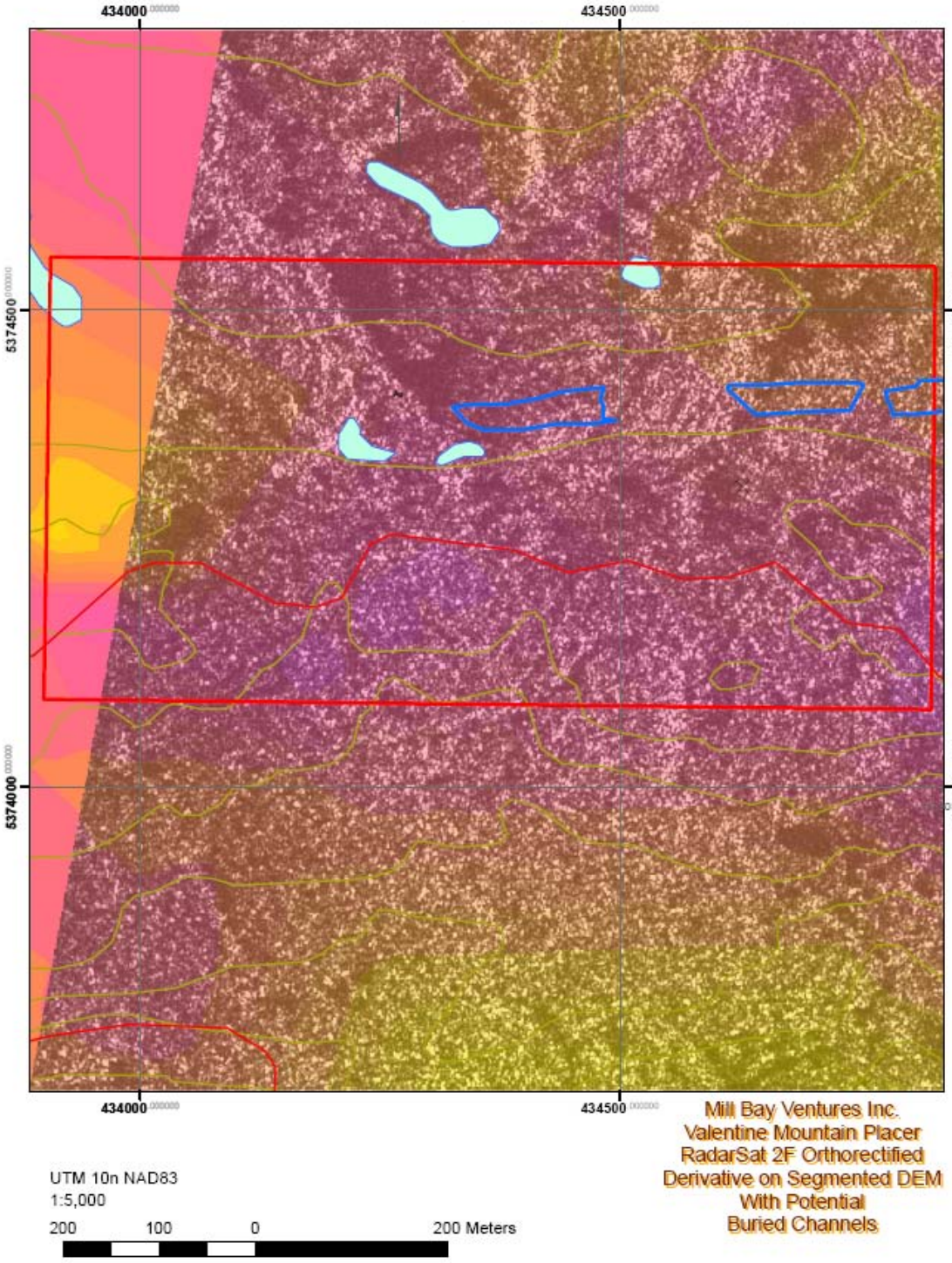

Illustration 5

RECOMMENDATIONS

General

A ground search of the terrain should be conducted to determine whether these two anomalies represent paleochannel type occurrences.

Statement of Qualification

I, David J. McLelland, do hereby certify that:

1. I am a Principal in:
Auracle Geospatial Science Inc,
325 Dorset Road Qualicum Beach,
British Columbia, Canada V9K 1H5

2. I have received a Master of Science with Distinction in Remote Sensing and Geospatial Science from Manchester Metropolitan University's faculty of Earth and Environmental Science, and have received a postgraduate diploma in applied and theoretical GI Science from Simon Fraser University.

3. I have completed the B.C.I.T. B.C.Y.C.M. Mineral Exploration program, and Completed the B.C.I.T. B.C.Y.C.M. Advanced field School.

4. I have 10 years of experience in Remote Sensing, and I am the Remote Sensing Project Manager and responsible for the acquisition and management of data and execution of analyses.

5. This report was prepared on behalf of Auracle Geospatial Science Inc. who has been engaged by Mill Bay Ventures Inc., to complete a remote sensing program on this property.

6. I have no material or financial interest in the subject properties or the companies that own them.

7. This report has been prepared in accordance with generally accepted scientific principles and is based upon the best information available at the time of preparation.

I am not aware of any material fact or material change with respect to the subject matter of the report that is not reflected in the report and therefore the omission of fact.

Date: 22/09/2012
Qualicum Beach, British Columbia, Canada

David J McLelland MSc, PGdip, (FRGS, MCRSS)

BC								
Mill Bay Ventures								
Statement of Work								
2012 Work	Start 18-06-2012		Tenure Area 42.8 Hectares					
Project Area: ***Valentine Mountain Placer***				Mineral Expl	***Remote Sensing***			
Cost Categories		Type	Descript	Units	Rate	#	Qty	extended
Personnel								
	Project Manager	Est Plan/acqu		$/Day(8hr.)	$600.00	0	1	$0.00
	QP			$/Day(8hr.)	$650.00	4	0	$0.00
	Field Assistants			$/Day(8hr.)	$350.00	1	0	$0.00
	GIStech			$/Day(8hr.)	$275.00	0	1	$0.00
	Geospatial Analyst			$/Day(8hr.)	$600.00	2	1	$1,200.00
	Remote Sensing Analyst			$/Day(8hr.)	$625.00	3	1	$1,875.00
Data Acquisition							1	
	ASTER							$0.00
	TRIM							$0.00
	WV2Stereo	100km						
	3.8m Multi		3.8m				2	
	1 Pan		1m					
	SAR	Rsat 1F			$0.50			$1,680.00
	preprocessing	Rsat						$0.00
	Processing	RS			$500.00	24	1	
	Scanning Digital	36"	map	per lin inch	$0.50	2,736	0	$0.00
	Digitization	processing						$0.00
Mapping and Reporting								
	Mapping							$0.00
	Reporting	ppt						
	Priniting and copying							$0.00
	LS Printing							$0.00
Licences and Permits								
	Exploration Permit							
	Bond							
	WCB	inc						
	Insurances	Equipment						
		Liability						
	ATV	in rental						
Total								$4,755.00

Plus HST (ap

Reduced to 4000.00 for Budgetary reasons