

BC Geological Survey
Assessment Report
33183

NTS 92 L/3 W, TRIM 092L.014

LAT. 50 09' 22" N

LONG. 127 19 02" W

GEOLOGICAL AND GEOCHEMICAL
REPORT ON MINERAL TENURES 501873 & 501945
WOOD COVE MARBLE DEPOSIT
KASHUTL INLET, KYUQUOT SOUND, B.C.

Alberni Mining Division

by

Andris Kikauka, P.Geo.
406-4901 East Sooke Rd., Sooke, B.C.
V9Z 1B6

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

33,183

June 28, 2012

TABLE OF CONTENTS AND LIST OF FIGURES

	page #
1.0 Introduction	1
2.0 Location, Access, & Physiography	1
3.0 Property Status	1
4.0 Area History	2
5.0 Wood Cove Property History	3
6.0 General Geology	6
7.0 2012 Field Program	7
7.1 Methods and Procedures	7
7.2 Property Geology	8
8.0 Discussion of Results	11
9.0 Conclusion	11
References	12
Certificate and Date	13

LIST OF FIGURES

Fig.1 General Location Map

Fig.2 Regional MINFILE and Mineral Tenure Location Map 1:50,000 scale

Fig.3 Regional Geology 1:75,000 scale

Fig. 4 Upper and Lower Marble Bed on Google Earth Image

Fig. 5 General Geology and Sample Location Map 1:5,000 scale

Fig. 6 Geology and Sample Location Map 1:2,500 scale

APPENDIX A Geochemical and Assay Certificates

APPENDIX B Rock Chip Sample descriptions



Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geological, Geochemical TOTAL COST: \$4949.50

AUTHOR(S): Andris Kikauka SIGNATURE(S): A. Kikauka

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): _____ YEAR OF WORK: 2012

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5324417

PROPERTY NAME: Wood Cove Marble

CLAIM NAME(S) (on which the work was done): 501873, 501945

COMMODITIES SOUGHT: High Ca limestone

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092L 187

MINING DIVISION: Alberni NTS/BCGS: 92L/3W, 092L.014

LATITUDE: 50° 09' 22" LONGITUDE: 127° 19' 02" (at centre of work)

OWNER(S):
1) W. E. Pfaffenberger 2) _____

MAILING ADDRESS:
4-4522 Gordon Point Rd
Victoria, BC V8N 6L4

OPERATOR(S) [who paid for the work]:
1) Same 2) _____

MAILING ADDRESS:

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Lower Jurassic Bomanza Grp volcanic rocks host 2 beds of 40-60 m thickness high-calcium marble. The marble is well exposed in a creek bed about 200-400 m west of fidewater (Wood Cove). The marble beds strike NE with a moderate SE dip.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 24034, 26389

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping	1:2500 2 has	501873, 501945	1,000.00
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock	20 whole rock ICP-AES	501945	3,949.50
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
TOTAL COST:			4,949.50

Physical Items: performed)

Financial Summary:

Total Required Work Amount: \$6991.53

PAC Name: PFAFFENBERGER

PAC Debit: \$2,042.03

PAC Credit: \$0.00

Total Submission Fees: \$349.79

Total Paid: \$349.79

Work Start Date: 2012/may/17

Work Stop Date: 2012/may/20

Total Value of Work: 4949.50

Mine Permit No:

Summary of the work value:

Tenure Number: 501873

Tenure Type: Mineral Claim

Claim Name/Property:

FW: SOW-M (5324417) 2012/MAY/27 10:44:43 Mineral Titles Online Event Confirmation

Bill Pfaffenberger (pfaffgau@telus.net)
May-27-12 10:56:29 AM
'andris kikauka' (andriskikauka@hotmail.com)

FYI

From: MT.Online@gov.bc.ca [mailto:MT.Online@gov.bc.ca]
Sent: May-27-12 10:45 AM
To: pfaffgau@telus.net
Subject: SOW-M (5324417) 2012/MAY/27 10:44:43 Mineral Titles Online Event Confirmation

This email is to confirm submission of the following Mineral Titles Online event:

Event Number: 5324417

Event Type: SOW -- Exploration and Development Work / Expiry Date Change

Recording Date: 2012/MAY/27

Tenure Type: Mineral Claim

Owner(s): PFAFFENBERGER, WILLIAM ELMER (143363), 100.0%

Event Detail: <https://www.mtonline.gov.bc.ca/mtov/eventDetail.do?eventID=5324417>

Work Type Description: Technical Work

Geochemical, Geological, PAC Withdrawal (up to 30% of technical work

1.0 INTRODUCTION

This report summarizes geological and geochemical surveys carried out between May 17-20, 2012 on mineral tenures 501873 and 501945. The purpose of the survey is to locate and define limits of high calcium limestone (marble), and interpret the relation between geology, rock sample geochemistry & descriptions. Mapping and rock was performed in the area where marble is best exposed on surface in the main creek gully located at the south portion of MTO tenure number 501945 and north portion of MTO tenure number 501873.

2.0 LOCATION, ACCESS AND PHYSIOGRAPHY (FIG. 2-4)

Mineral tenures 501873 & 501945 are located 35 km northwest of Zeballos, B.C. The 'high-calcium limestone' beds are located on the west shore of Kashutl Inlet within Kyuquot Sound. The property is within the Alberni Mining Division on N.T.S. 92 L/3 W (BCGS TRIM 092L.014), latitude 50 09' 22" N, longitude 127 19' 02" W.

Elevations on the claim group range from 0-420 meters (1,377.6 feet) above sea level. Slopes are moderate and get steeper to the west portion of the claims where some cliffs are exposed between 55-350 m (180-1,148 ft) elevation above sea level.. There are mature fir, hemlock, cedar and spruce trees throughout the claim area.

The claim group is accessed by driving from Zeballos to Fair Harbour and 12 km by boat to Kashutl Inlet. Fair Harbour is accessible by all-weather gravel road from Zeballos, B.C. There are no roads or development on the claims. There was an active helicopter logging in the area directly west of Wood Cove in 1999 (see Fig 4, Google Earth image).

3.0 PROPERTY STATUS

Claim 501873 and 501945 are contiguous mineral tenures, and were originally staked as 2-post mineral claims (Kash 1 & 2) by Andris A. Kikauka January 5, 2000, converted to cells in January, 2005, and transferred to Fundamental Resource Corp, William E Pfaffenberger in Nov. 2011. Details of the claims are as follows:

Claim Name	Tenure No.	Hectares	Record Date	Expiry Date
	501873	82.834	Jan. 5, 2000	June 18, 2019*
	501945	41.412	Jan. 5, 2000	June 18, 2019*
		Total- 124.246		

Mineral tenures 501873 and 501945 are adjoining and cover an area of 124.246 hectares. Fieldwork carried out by writer resulting in expiry date change*.

4.0 AREA HISTORY

Major mineral deposits in the area include the Island Copper Cu-Mo deposit located on east Holberg Inlet. Utah Mines Ltd developed and mined the Island Copper deposit which produced 257,000,000 tonnes @ 0.52% Cu and 0.017% Mo.

Boliden Resources owns the Myra Falls mine site which has produced approximately 8,000,000 tonnes @ 0.06 opt Au, 3.3 opt Ag, 1.5% Cu, 1.1% Pb, 7.6% Zn. The massive sulphide ore is hosted in Permian/Carboniferous Sicker Group mafic/felsic volcanics underlain by a pyrite stringer zone.

The Zeballos mining camp consists of high grade quartz-sulphide veins associated with a Tertiary stock intruding Jurassic volcanic rocks of the Bonanza Group and some limestones of the Late Triassic Quatsino Fm. Production and reserves are approximately 1,078,936 tonnes grading about 12 g/t Au (0.35 opt Au) coming from Spud Valley and New Privateer. The productive veins are generally less than 30 cm in width but they are continuous and display little lateral or vertical variation in width or grade. They mostly strike northeast and are found along the contact zone between Eocene intrusive and Jurassic volcanic/carbonate. Quartz-sulphide veins cut Eocene and Jurassic host rocks.

The Monteith quartz-pyrophyllite occurrence is located 4 km south of the Kashuti Inlet High-Calcium Limestone. Several hundred tonnes of quartz-phyllite was extracted between 1910-1914 and mixed with shale to be used as a refractory for sewer pipe and fireproofing material. It was also used as polishing powder, soap and cleanser. Further testing of the quartz-pyrophyllite determined it to be a satisfactory ingredient of whiteware batches for both slip-cast and clay process tiles (BCMin EM&PR, Minfile 092L117).

5.0 WOOD COVE PROPERTY HISTORY

The Wood Cove marble occurrence has been mapped and sampled by Dolmage Campbell & Associates Ltd., Vancouver, B.C. in 1973. The high calcium limestone deposit is comprised of two marble beds separated by 30-45 m of argillaceous siltstone, which is overlain by Lower Jurassic Bonanza Formation amygdaloidal andesite/dacite. This sequence has been subject to low grade metamorphism by a lower middle Jurassic granite/quartz diorite /granodiorite intrusive complex located immediately to the north of the marble beds. The marble beds strike northeast and dip 30-60 degrees south. The upper (western) bed is approximately 46 m thick while the lower (eastern) bed is approximately 61 m thick. The carbonate beds consist of massive, pearl grey to white, medium to coarse grained limestone (marble). Three samples from comprised of chips taken at 4.6 m intervals across accessible outcrops of the upper bed assayed as follows:

Sample	CaCO ₃	Acid Insol.	MgO	Fe ₂ O ₃	Al ₂ O ₃	undeter.
K1	98.26 %	0.60 %	0.30 %	0.34 %	0.36 %	0.14 %
K2	98.01 %	1.01 %	0.20 %	0.32 %	0.30 %	0.16 %
K3	97.84 %	1.20 %	0.30 %	0.25 %	0.31 %	0.10 %

Probable (indicated) reserves are calculated at 7.6 million tons of limestone (marble) that can be readily quarried and loaded onto barges or ships (Campbell, D.D., 1973). The tonnage reserve estimate is based on a density of 12.5 cubic feet/ton and assuming a strike length of 180 m for each bed, and a down dip extension of 150 m. The deposit is estimated to contain a total potential reserve of at least 27 million tons (Campbell, D.D., 1973). A rough production estimate of 410,000 tons per year (i.e. about 1,370 tons per day) using an air track mounted pneumatic drill (3 inch diameter holes to a depth of 44 feet using 8 X 9 foot drilling pattern) to break the marble, a 4 cubic yard front end loader is required to transport broken quarry rock to the proposed stockpile sites located near shore for loading on barges with a conveyor system.

In May, 2000 the author took 3-4 meter wide rock chip composite samples of the upper and lower marble bed described as coarsely crystalline, massive and pearl grey to white coloured.

A summary of the rock chip samples taken in 2000 by the writer are listed as follows:

Sample No.	Width	Description	% CaO
104831	4.0 m	Bleached white silicified, medium grained marble	38.14
104832	4.0 m	Pearl grey, coarse grained marble	53.21
104833	4.0 m	Pearl grey to white, coarse & medium grained marble	50.65
104834	4.0 m	Pearl grey to white, coarse & medium grained marble	55.23
104835	4.0 m	Pearl grey to white, coarse & medium grained marble	55.58
104836	4.0 m	Pearl grey to white, coarse & medium grained marble	56.18
104837	4.0 m	Pearl grey to white, coarse & medium grained marble	56.07
104838	4.0 m	Pearl grey to white, coarse & medium grained marble	53.79
104839	4.0 m	Pearl grey to white, coarse & medium grained marble	55.65
104840	4.0 m	Pearl grey to white, coarse & medium grained marble	55.29
104841	3.0 m	Pearl grey to white, coarse grained marble	55.62
104842	3.0 m	Pearl grey to white, coarse grained marble	55.48
104843	3.0 m	Pearl grey to white, coarse & medium grained marble	53.56
104844	3.0 m	Pearl grey to white, coarse & medium grained marble	55.58
104845	3.0 m	Pearl grey to white, coarse & medium grained marble	55.16
104846	3.0 m	White silica with coarse & medium grained marble	1.05

Rock samples were taken in four groups as continuous chip channel samples which are described by the following table:

Sample Number Series	Individual Sample Width	Combined width & average % CaO (combined %CaO & LOI)	Upper or Lower Marble Bed
104831	4.0 m	4.0 m 38.14 % (62.34 %)	Upper
104832- 104833	4.0 m	8.0 m 51.93 % (87.93 %)	Upper
104834-104837	4.0 m	16.0 m 55.76 % (98.99 %)	Upper
104838- 104840	4.0 m	12.0 m 54.91 % (97.38 %)	Upper
104841- 104842	3.0 m	6.0 m 55.55 % (98.6 %)	Lower
104843-104845	3.0 m	9.0 m 54.77 % (97.0 %)	Upper
104846	3.0 m	3.0 m 1.05 % (24.4 %)	Upper

Sampling the lower and upper bed exposed in the creek bed has identified zones of high calcium limestone (i.e. greater than 97.5% CaO - LOI). The purest limestone is situated in the middle portion of the 'Upper Bed' and the 6.0 m exposure of the 'Lower Bed'. The high silica samples (104831 & 104846) were taken on the upper & lower contact of 'Upper Bed' (Kikauka, 2000).

In 2006, additional rock chip sampling was carried out by the writer. Rock chip sample AR-1 was taken from the upper marble bed near the location of 104837 and AR-2 was taken near from the lower marble bed near the location of sample 104841. A compilation of analytical results from rock chip sampling are presented in the following table:

Sample Number (zone)	Width (specific gravity)	Easting NAD 83	Northing NAD 83	% SiO ₂	% Al ₂ O ₃	% Fe ₂ O ₃	% CaO	LOI
AR-1 (upper bed)	3.0 meters (s.g. = 2.57)	620433	5557655	0.18	0.03	0.12	56.00	43.3
AR-2 (lower bed)	3.0 meters (s.g. = 2.62)	620539	5557639	0.35	0.10	0.24	55.55	43.2

The sample from the upper bed (AR-1) has 0.15% combined aluminum and iron oxide content, whereas the lower bed sample (AR-2) contains 0.34% combined aluminum and iron oxide. For industrial mineral applications, the values obtained from rock chip sampling indicate AR-1 & 2 are acceptable for classification as 'high-calcium limestone'.

A compilation of analytical results from soil samples taken in 2006 at 50 meter spacing along a 300 meter long east-west oriented grid line are presented in the following table:

Sample Number	Easting NAD 83	Northing NAD 83	Depth	% Mg	% Fe	% Al	% P	% Ca
WC-06-AS-1	620300	5557545	30 cm	1.66	4.04	3.19	.214	2.84
WC-06-AS-2	620350	5557545	30 cm	2.02	4.53	3.51	.152	4.81
WC-06-AS-3	620400	5557545	25 cm	0.96	3.15	2.48	.170	6.49
WC-06-AS-4	620450	5557545	25 cm	1.13	2.74	1.97	.127	14.05
WC-06-AS-5	620500	5557545	30 cm	1.07	2.43	1.77	.085	14.73
WC-06-AS-6	620550	5557545	30 cm	1.06	2.48	1.81	.079	14.29
WC-06-AS-7	620600	5557545	35 cm	1.07	2.48	1.84	.082	14.42

The first 3 soil samples (AS-1 to AS-3) were taken on altered and weakly pyritic Bonanza Group volcanic rocks. The first 3 samples show relative increases in Fe, Al, and P. AS-1 to AS-3 also show a relative decrease in Ca compared to samples AS-4 to AS-7 which are located on or adjacent to the marble beds. Soils sampling suggests there is a lithological contact between AS-3 and AS-4. The > 100% increase in Ca content is likely the indication of marble bedrock in this area of overburden.

Thin section and photomicrograph work was carried out by Vancouver Petrographics Ltd, Langley, BC in 2006 on rock chip samples AR-1 and AR-2. The subtle re-crystallization and deformation of calcite twin lamellae suggests that the Wood Cove marble beds were subject to a modest degree of heat and pressure during presumed Jurassic age metasomatic alteration and low-grade metamorphism.

The 2006 soil survey shows an increase in %Ca located approximately 125-275 meters from tidewater along the east-west trending survey line, and this correlates with previous mapping of the trace of the limestone beds south of the exposure in the creek located on the south portion of mineral tenure 501945.

6.0 GENERAL GEOLOGY

The Lower Jurassic Bonanza Formation andesite-rhyodacite flows and tuffs underlie the southern portion of Kashutl Inlet, which includes the Wood Cove marble prospect. The marble beds are within the Bonanza Group sequence. There are massive 300 m thick outcroppings of Upper Triassic Quatsino limestone in Brooks Bay and Quatsino Inlet (to the north), but this limestone has not proven to be favourable for quarries because of chemical impurities such as iron and aluminum. The best chemical grade limestone that have been found on Vancouver Island are in relatively thin, (100-500 ft) local beds of limestone. The Kashutl Inlet deposit consists of two relatively narrow beds isolated within the Bonanza Group volcanics.

The north end of Kashutl Inlet is cut by a 4 X 8 km elliptically shaped intrusive body of Mid-Jurassic age composed of quartz diorite, quartz monzonite, granodiorite and quartz porphyry. In the vicinity of Wood Cove, the contact with the Bonanza Group volcanics and the Island Intrusion trends roughly east-west and dips sub-vertical. The Bonanza Group is weakly metamorphosed with chlorite-prehnite-epidote-calcite assemblages and trace-3% pyrite which is disseminated throughout the sequence. Local concentrations of quartz and sulphide mineralization suggest there may be base and precious metal potential in the Bonanza Group in the Kashutl Inlet area, but no significant deposits of base or precious metal bearing minerals are known in this area.

The limestone beds present on mineral tenures 501873 and 501945 are metasomatically altered and re-crystallized, thus their technical geological reference is 'marble beds'. Due to the high-calcium level of the this marble, industrial mineral textbooks references this as 'high-calcium limestone', as it is suitable for numerous industrial applications that include: ballast, aggregate, agricultural, chemical, and metallurgical applications, as well as fillers, extenders, whiting material, acid-water treatment, and dimension stone.

7.0 2012 FIELD PROGRAM

7.1 METHODS AND PROCEDURES

A total of 20 rock chip samples were taken along the creek gully at the south portion of mineral tenure 501945 at elevations ranging from 47 to 153 meters above sea level (Fig 6). Approximately 1 kg of 1-3 cm sized rock chips were collected from 2 meter wide channel cuts in the bedrock exposures from the creek that cuts the south portion of mineral tenure 501945. All rock chip samples were collected with a rock hammer and maul, placed in marked poly bags, and shipped to ALS Minerals, North Vancouver, BC for sample preparation crushing, splitting and pulverizing with subsequent whole rock chemical analysis of cementitious material (ME-ICP91) and loss of ignition by TGA furnace (ME-GRA05). Methods and procedures for analysis are discussed in certificate VA12112559 (Appendix A). Total abundances of the major oxide and several minor elements are reported on a 0.2 gram sample analyzed by ICP-emission spectrometry following a lithium metaborate/tetraborate fusion and dilute nitric digestion. Loss on ignition (LOI) is by weight difference after ignition at 1,000 degrees C.

Sample locations were surveyed with GPS (Garmin MAPGPS 60 Cx), and Silva compass.

Sample locations are marked with black marker on flagging tape and embossed with pen on aluminum tags.

Geological mapping was carried out over 300 X 200 m area (6 hectares), at a scale of 1: 2,500.

7.2 PROPERTY GEOLOGY

The claims are underlain by Lower Jurassic Bonanza Group andesitic to rhyodacitic composition, amygdaloidal flows and tuffs with minor breccia. These Bonanza Group volcanics are weakly metamorphosed by a large Middle Jurassic quartz diorite to quartz monzonite composition intrusive complex. The intrusion outcrops in the north part of the claim group and appears to be quartz monzonite composition from the abundance of salmon pink colour K-feldspar, however the overall composition of the Jurassic Island intrusions range from quartz diorite/granodiorite to quartz feldspar porphyry (Muller, J.E., 1973). The portion of the Bonanza Fm volcanics/sediments adjacent to the Island intrusion are characterized by weak, pervasive secondary epidote-pyrite-chlorite (propylitic) alteration, suggesting the Island intrusion deformed and chemically altered the Bonanza Fm.

The large creek valley, located on the south portion of mineral tenure 501945 contains two waterfalls that mark the upper contacts of the lower and upper marble beds located 300 m and 460 m respectively from tidewater. This increase in steepness marks the upper contact of the upper marble bed with the indurated Bonanza Group sub-aerial/submarine volcanic rocks. The same dramatic increase in slope occurs in the large creek in the north part of mineral tenure 501873 where Bonanza Group dacitic to andesitic tuffs and flows outcrop in the base of the slot canyon about 430 m from tidewater. The abrupt change in slope follows the upper contact of the upper bed, but no limestone outcrops on the creek. The main exposure of the two 40-60 m thick marble beds is in the creek which runs through the south edge of mineral tenure 501945. This exposure was mapped and sampled. The marble consists of two 40-60 m wide beds forming sharp contacts with the 30-50 m wide argillaceous siltstone which occurs between the two marble beds. This contact between the marble and argillaceous siltstone was not observed in the creek or elsewhere, but the upper marble beds upper contact with indurated Bonanza Group volcanics was sharp and difficult to trace because of the steep terrain, but the apparent trend of the marble-volcanic contact is in a northeast direction with a moderate southeast dip. This moderate dip to the southeast general follows the slope of the topography and is considered to be advantageous for surface exposure of the marble beds which cover an estimated area of about 20 hectares.

Rock sampling of the marble beds was confined to a creek gully located 170 to 300 meters from tidewater on the south portion of mineral tenure 501945 (Fig 5 & 6). The main exposure of the upper marble bed is between 215 to 400 meters from tidewater. There is some karst developed near the center of the Lower Bed, located about 290 meters from tidewater where a cave system has developed underground water movement through the marble bed.

Rock chip samples 671-683 were taken from the lower marble bed, and rock chip samples 684-690 were taken from the upper marble bed (Fig 5 & 6). A compilation of analytical results from rock chip sampling are presented in the following table:

Sample ID	Zone Name	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	Lithology	Lith Alteration
671	Lower bed	620494	5557605	47	Rock chip	Marble	re-crystallized
672	Lower bed	620491	5557609	55	Rock chip	Marble	re-crystallized
673	Lower bed	620487	5557616	59	Rock chip	Marble	re-crystallized
674	Lower bed	620476	5557623	66	Rock chip	Marble	re-crystallized
675	Lower bed	620464	5557626	70	Rock chip	Marble	re-crystallized
676	Lower bed	620459	5557630	72	Rock chip	Marble	re-crystallized
677	Lower bed	620454	5557633	81	Rock chip	Marble	re-crystallized
678	Lower bed	620447	5557619	85	Rock chip	Marble	re-crystallized
679	Lower bed	620433	5557621	88	Rock chip	Marble	re-crystallized
680	Lower bed	620462	5557608	90	Rock chip	Marble	re-crystallized
681	Lower bed	620457	5557606	81	Rock chip	Marble	re-crystallized
682	Lower bed	620450	5557611	85	Rock chip	Marble	re-crystallized
683	Lower bed	620399	5557613	93	Rock chip	Marble	re-crystallized
684	Upper bed	620354	5557614	98	Rock chip	Marble	re-crystallized
685	Upper bed	620332	5557615	102	Rock chip	Marble	re-crystallized
686	Upper bed	620311	5557616	111	Rock chip	Marble	re-crystallized
687	Upper bed	620274	5557630	134	Rock chip	Marble	re-crystallized
688	Upper bed	620265	5557636	149	Rock chip	Marble	re-crystallized
689	Upper bed	620266	5557533	152	Rock chip	Marble	re-crystallized
690	Upper bed	620258	5557630	153	Rock chip	Marble	re-crystallized

Sample ID	Banding strike	Banding dip	Width (cm)	Comments
671	34	27 E	200	pearl grey-white, med grain marble, massive
672	35	30 E	200	pearl grey-white, med grain marble, massive
673	32	36 E	200	pearl grey-white, med-coarse grain marble, massive
674	32	35 E	200	pearl grey-white, med-coarse grain marble, massive
675	37	35 E	200	pearl grey-white, med-coarse grain marble, massive
676	35	38 E	200	pearl grey-white, med-coarse grain marble, massive
677	35	35 E	200	pearl grey-white, med-coarse grain marble, massive
678	40	33 E	200	pearl grey-white, med-coarse grain marble, massive
679	35	38 E	200	pearl grey-white, med coarse grain marble, massive
680	35	35 E	200	pearl grey-white, med-coarse grain marble, massive
681	37	33 E	200	pearl grey-white, med grain marble, massive
682	30	36 E	200	pearl grey-white, med grain marble, massive
683	33	38 E	200	pearl grey-white, med grain marble, massive
684	33	44 E	200	pearl grey-white, med-coarse grain marble, massive
685	35	40 E	200	pearl grey-white, med-coarse grain marble, massive
686	34	45 E	200	pearl grey-white, coarse grain marble, massive
687	32	46 E	200	pearl grey-white, coarse grain marble, massive

Sample ID				
688	34	42 E	200	pearl grey-white, coarse grain marble, massive
689	34	48 E	200	pearl grey-white, coarse grain marble, massive
690	33	46 E	200	pearl grey-white, coarse grain marble, massive

Sample ID	CaO %	MgO %	Al ₂ O ₃ %	Fe ₂ O ₃ %	SiO ₂ %	MnO ₂ %	Na ₂ O %	K ₂ O %	SO ₃ %	Na ₂ O %
671	55.4	0.18	0.11	0.23	0.38	0.1	0.01	<0.01	0.1	0.01
672	55.4	0.21	0.15	0.31	0.33	0.06	0.01	0.01	0.1	0.01
673	55.4	0.16	0.12	0.22	0.25	0.09	0.01	<0.01	0.2	0.01
674	55.6	0.16	0.11	0.19	0.25	0.07	0.01	0.01	0.2	0.01
675	55.5	0.19	0.13	0.2	0.24	0.08	0.02	<0.01	0.1	0.02
676	55.5	0.23	0.18	0.16	0.4	0.06	0.02	0.02	<0.1	0.02
677	55	0.28	0.31	0.2	0.56	0.07	0.02	0.02	0.1	0.02
678	54.9	0.31	0.51	0.26	0.74	0.08	0.03	0.03	0.1	0.03
679	55.5	0.15	0.13	0.19	0.18	0.09	0.03	0.02	0.1	0.03
680	55.4	0.2	0.14	0.25	0.27	0.1	0.05	<0.01	0.2	0.05
681	55.5	0.17	0.12	0.21	0.17	0.1	0.04	0.04	0.1	0.04
682	55.4	0.18	0.14	0.18	0.21	0.11	0.05	<0.01	0.1	0.05
683	52.1	0.53	0.84	1.86	2.1	0.17	0.05	0.03	2.3	0.05
684	55.3	0.16	0.1	0.11	0.69	0.05	0.06	0.03	<0.1	0.06
685	55.4	0.18	0.09	0.15	0.24	0.05	0.05	0.03	0.1	0.05
686	55.5	0.17	0.06	0.1	0.03	0.09	0.09	0.03	<0.1	0.09
687	54.4	0.59	0.52	0.36	1.49	0.1	0.1	0.01	0.1	0.1
688	55	0.3	0.19	0.22	0.47	0.05	0.09	0.03	0.1	0.09
689	55.3	0.23	0.06	0.1	0.25	0.04	0.08	0.05	0.1	0.08
690	55.3	0.3	0.07	0.11	0.53	0.07	0.1	0.03	<0.1	0.1

The marble beds are weakly metamorphosed producing a banding that strikes at 030 to 040 degrees (bearing from true north), and dips 27 to 48 degrees (from horizontal) to the east (Fig 6). This easterly dip direction makes the beds follow the slope (i.e. dip slope), and the dip of the banding in the marble appears to increase in the upper bed. This increase in dip also coincides with steeper terrain (i.e. steeper slope), and increased fault activity mapped in the creek gully (Fig 6).

The most important geochemical analysis value is % CaO, whereby pure calcite (the main component of limestone & marble) is exactly 56.03% CaO. Thus, the values of 54.4 % CaO to 55.6 % CaO are equivalent to 97.1 % to 99.2 % pure marble. For industrial mineral applications, the values obtained from rock chip sampling indicate that upper bed (rock chip sample numbers 684 to 690), and the lower bed (rock chip sample numbers 671 to 683) are acceptable for classification as 'high-calcium limestone'.

The samples from the upper bed (rock chip sample numbers 684 to 690) average 0.16% Al₂O₃ and the lower bed (rock chip sample numbers 671 to 683) average 0.23% Al₂O₃. The higher Al₂O₃ averages for the lower bed are largely due to sample number 683 which contains 0.84% Al₂O₃ suggesting there are some clay minerals present as this sample was taken near a west trending, steeply dipping fault structure that follows the creek gully where the marble is exposed.

The samples from the upper bed (rock chip sample numbers 684 to 690) average 0.16% Fe₂O₃ and the lower bed (rock chip sample numbers 671 to 683) average 0.36% Fe₂O₃. The higher Fe₂O₃ averages for the lower bed are largely due to sample number 683 which contains 1.86% Fe₂O₃ suggesting there are some iron oxide minerals present as this sample site that is located adjacent to a fault structure in the creek.

8.0 DISCUSSION OF RESULTS

The present mineral tenures were logged shortly before Dolmage Campbell & Associates Ltd mapped the marble beds in 1973. This gave good exposure of bedrock, but currently there is thick second growth vegetation over the bedrock areas mapped as limestone by Dolmage Campbell in 1973. There has been recent helicopter logging in the area of the upper marble bed, but since there is little surface disturbance, the logging has not exposed any outcrop. Presently, the best exposure of high calcium limestone (re-crystallized to marble) is in the creek gullies.

Rock chip samples taken in 2012 compare favorably with results from previous sampling in 1972, 2000 and 2006. The high calcium content combined with low deleterious elements (e.g. Al, Fe, Si) indicates that Wood Cove marble is suitable for a wide range of applications (e.g. fillers, extenders, whiting material, agricultural, aggregate, acid-water treatment, and in coal mines for explosion suppressant when ground to -325 mesh).

Chemical specifications for high calcium limestone generally are industry or application specific. Specifications are unique to a particular industry and require testing numerous physical and chemical properties.

The brightness grade, thermal decrepitation and crystallinity of Wood Cove marble has not been tested, but it is likely that this is variable throughout and may be related to texture and/or bedding planes within the marble bed. In order to perform further testing (including ASTM standards for Wood Cove marble), a program of core drilling and/or trenching is recommended.

9.0 CONCLUSION

The Kashut Inlet, Wood Cove marble occurrence has the potential to contain economic mineralization based on the following facts:

- 1) There is a demand for pure high calcium limestone (with low content of iron and aluminum) and based on geological mapping and geochemical sampling, Wood Cove marble deposit contains several million tonnes of readily accessible material.
- 2) The close proximity to tidewater and waterway transportation.

3) Barge ships with payloads of approximately 50,000 tonnes can be loaded a short distance from shore.

Results from sampling and mapping suggest that a program of approximately 14 diamond drill holes (200 feet 60 m) deep vertical holes at 50 m centers), are proposed to be located near the upper contact of both marble beds. The proposed diamond drill holes would be accessed by developing a proposed road on the lower limestone bed from tidewater using a small excavator to facilitate moving a small portable core drill. The cost of this drill program with support would be approximately \$300,000.

The purpose of the program would be to develop drill indicated tonnage and grade to evaluate the economics of shipping high calcium limestone.

REFERENCES

EMPR Open File 1992-18, pp. 46-47

EMPR Private File (Geology Report- Kashutl Inlet Limestone by Campbell, D.D., 1973)

GSC Bulletin 242

GSC Map 4-1974; 225A; 1552A

GSC Open File 9; 170; 463 (Sheet 2)

Muller, J.E., 1973

GSC Paper 69-1A; 70-1A; 74-8; 79-30

**ITEMIZED COST STATEMENT
WOOD COVE MINERAL TENURES 501945, 501873
FIELDWORK PERFORMED MAY 17-20, 2012,
WORK PERFORMED ON MINERAL TENURES 501945 AND 501873
ALBERNI MINING DIVISION, NTS 92L 03W (TRIM 092L 014)**

FIELD CREW:

A. Kikauka (Geologist) 4 days (surveying, mapping) \$ 1,763.00

FIELD COSTS:

Mob/demob/preparation	202.30
Meals and accommodations	208.00
Truck mileage & fuel	508.20
Fusion ICP AES geochemical analysis (20 rock samples)	1,218.00
Water Taxi	400.00
Report	650.00
Total=	\$ 4,949.50

CERTIFICATE AND DATE

I, Andris Kikauka, of 4901 East Sooke Rd., Sooke B.C. V9Z 1B6 am a self employed professional geoscientist. I hereby certify that:

1. I am a graduate of Brock University, St. Catharines, Ont., with an Honours Bachelor of Science Degree in Geological Sciences, 1980.
2. I am a Fellow in good standing with the Geological Association of Canada.
3. I am registered in the Province of British Columbia as a Professional Geoscientist.
4. I have practiced my profession for twenty five years in precious and base metal exploration in the Cordillera of Western Canada, U.S.A., Mexico, Central America, and South America, as well as for three years in uranium exploration in the Canadian Shield.
5. The information, opinions, and recommendations in this report are based on fieldwork carried out in my presence on the subject property May 17-20, 2012 during which time a technical evaluation consisting of geochemical rock chip sampling (20 rock chip samples) and geological mapping of the marble beds on mineral tenures 501873 & 501945 was carried out by the writer.
6. I am employed as an independent consultant.
7. I am not aware of any material fact or material change with respect to the subject matter of this Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

Andris Kikauka, P. Geo.,

June 28, 2012





ALS Canada Ltd.
 2103 Dollarton Hwy
 North Vancouver BC V7H 0A7
 Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: KIKAUKA, ANDRIS
 406 - 4901 E. SOOKE RD.
 SOOKE BC V9Z 1B6

Page: 1
 Finalized Date: 18-JUN-2012
 Account: KIKAND

Appendix A pg 1

CERTIFICATE VA12112559

Project: WOOD COVE MARBLE
 P.O. No.:
 This report is for 20 Rock samples submitted to our lab in Vancouver, BC, Canada on 22-MAY-2012.
 The following have access to data associated with this certificate:
 ANDRIS KIKAUKA BILL PFAFFENBERGER

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP91	Cementitious Material	ICP-AES
ME-GRA05	H2O/LOI by TGA furnace	TGA

To: KIKAUKA, ANDRIS
 406 - 4901 E. SOOKE RD.
 SOOKE BC V9Z 1B6

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature: 
 Shaun Kenny, Brisbane Laboratory Manager



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Page: 2 - A
 Total # Pages: 2 (A)
 Finalized Date: 18-JUN-2012
 Account: KIKAND

Appendix A pg 2

Project: WOOD COVE MARBLE

CERTIFICATE OF ANALYSIS VA12112559

Sample Description	Method Analyte Units LOR	WFI-21	MF-ICP91	MF-ICP91	MF-ICP91	MF-ICP91	MF-ICP91	MF-ICP91	ME-ICP91	ME-ICP91	MF-ICP91	MF-ICP91	ME-ICP91	ME-ICP91	
		Recvd WL kg	CaO %	SiO2 %	Fe2O3 %	Al2O3 %	Mn2O3 %	MgO %	Na2O %	K2O %	SO3 %	TiO2 %	Cr2O3 %	P2O5 %	SrO %
		0.02	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.01	0.01	0.02	0.01
671		1.02	55.4	0.38	0.23	0.11	0.10	0.18	0.01	<0.01	0.1	<0.01	<0.01	0.07	0.01
672		1.02	55.4	0.33	0.31	0.15	0.06	0.21	0.01	0.01	0.1	0.01	<0.01	0.05	0.02
673		0.84	55.4	0.25	0.22	0.12	0.09	0.16	0.01	<0.01	0.2	<0.01	<0.01	0.05	0.02
674		0.78	55.6	0.25	0.19	0.11	0.07	0.16	0.01	0.01	0.2	<0.01	<0.01	0.05	0.01
675		1.02	55.5	0.24	0.20	0.13	0.08	0.19	0.02	<0.01	0.1	<0.01	<0.01	0.05	0.01
676		0.80	55.5	0.40	0.16	0.18	0.06	0.23	0.02	0.02	<0.1	0.01	<0.01	0.02	0.02
677		0.72	55.0	0.56	0.20	0.31	0.07	0.28	0.02	0.02	0.1	0.01	<0.01	0.02	0.02
678		0.46	54.9	0.74	0.26	0.51	0.08	0.31	0.03	0.03	0.1	0.02	<0.01	0.02	0.02
679		0.66	55.5	0.18	0.19	0.13	0.09	0.15	0.03	0.02	0.1	<0.01	<0.01	0.02	0.01
680		0.62	55.4	0.27	0.25	0.14	0.10	0.20	0.05	<0.01	0.2	<0.01	<0.01	0.02	0.01
681		0.74	55.5	0.17	0.21	0.12	0.10	0.17	0.04	0.04	0.1	<0.01	<0.01	0.02	0.01
682		0.82	55.4	0.21	0.19	0.14	0.11	0.18	0.05	<0.01	0.1	<0.01	<0.01	0.02	0.01
683		0.50	52.1	2.10	1.86	0.84	0.17	0.53	0.05	0.03	2.3	0.05	0.01	0.02	0.01
684		0.60	55.3	0.69	0.11	0.10	0.05	0.16	0.05	0.03	<0.1	<0.01	<0.01	0.02	0.01
685		0.64	55.4	0.24	0.15	0.09	0.05	0.18	0.05	0.03	0.1	<0.01	<0.01	0.02	0.02
686		0.70	55.5	0.03	0.10	0.06	0.09	0.17	0.09	0.03	<0.1	<0.01	<0.01	0.02	0.01
687		0.88	54.4	1.49	0.36	0.52	0.10	0.59	0.10	0.01	0.1	0.02	<0.01	0.02	0.02
688		0.60	55.0	0.47	0.22	0.19	0.05	0.30	0.09	0.03	0.1	0.01	<0.01	0.02	0.02
689		0.48	55.3	0.25	0.10	0.05	0.04	0.23	0.08	0.05	0.1	<0.01	<0.01	0.05	0.04
690		0.54	55.3	0.53	0.11	0.07	0.07	0.30	0.10	0.03	<0.1	<0.01	<0.01	0.02	0.02

Sample ID	Zone Name	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	Lithology	Lith Alteration
671	Lower bed	620494	5557605	47	Rock chip	Marble	low grade metamorphism
672	Lower bed	620491	5557609	55	Rock chip	Marble	low grade metamorphism
673	Lower bed	620487	5557616	59	Rock chip	Marble	low grade metamorphism
674	Lower bed	620476	5557623	66	Rock chip	Marble	low grade metamorphism
675	Lower bed	620464	5557626	70	Rock chip	Marble	low grade metamorphism
676	Lower bed	620459	5557630	72	Rock chip	Marble	low grade metamorphism
677	Lower bed	620454	5557633	81	Rock chip	Marble	low grade metamorphism
678	Lower bed	620447	5557619	85	Rock chip	Marble	low grade metamorphism
679	Lower bed	620433	5557621	88	Rock chip	Marble	low grade metamorphism
680	Lower bed	620462	5557608	90	Rock chip	Marble	low grade metamorphism
681	Lower bed	620457	5557606	81	Rock chip	Marble	low grade metamorphism
682	Lower bed	620450	5557611	85	Rock chip	Marble	low grade metamorphism
683	Lower bed	620399	5557613	93	Rock chip	Marble	low grade metamorphism
684	Upper bed	620354	5557614	98	Rock chip	Marble	low grade metamorphism
685	Upper bed	620332	5557615	102	Rock chip	Marble	low grade metamorphism
686	Upper bed	620311	5557616	111	Rock chip	Marble	low grade metamorphism
687	Upper bed	620274	5557630	134	Rock chip	Marble	low grade metamorphism
688	Upper bed	620265	5557636	149	Rock chip	Marble	low grade metamorphism
689	Upper bed	620266	5557533	152	Rock chip	Marble	low grade metamorphism
690	Upper bed	620258	5557630	153	Rock chip	Marble	low grade metamorphism

Appendix B pg. 1

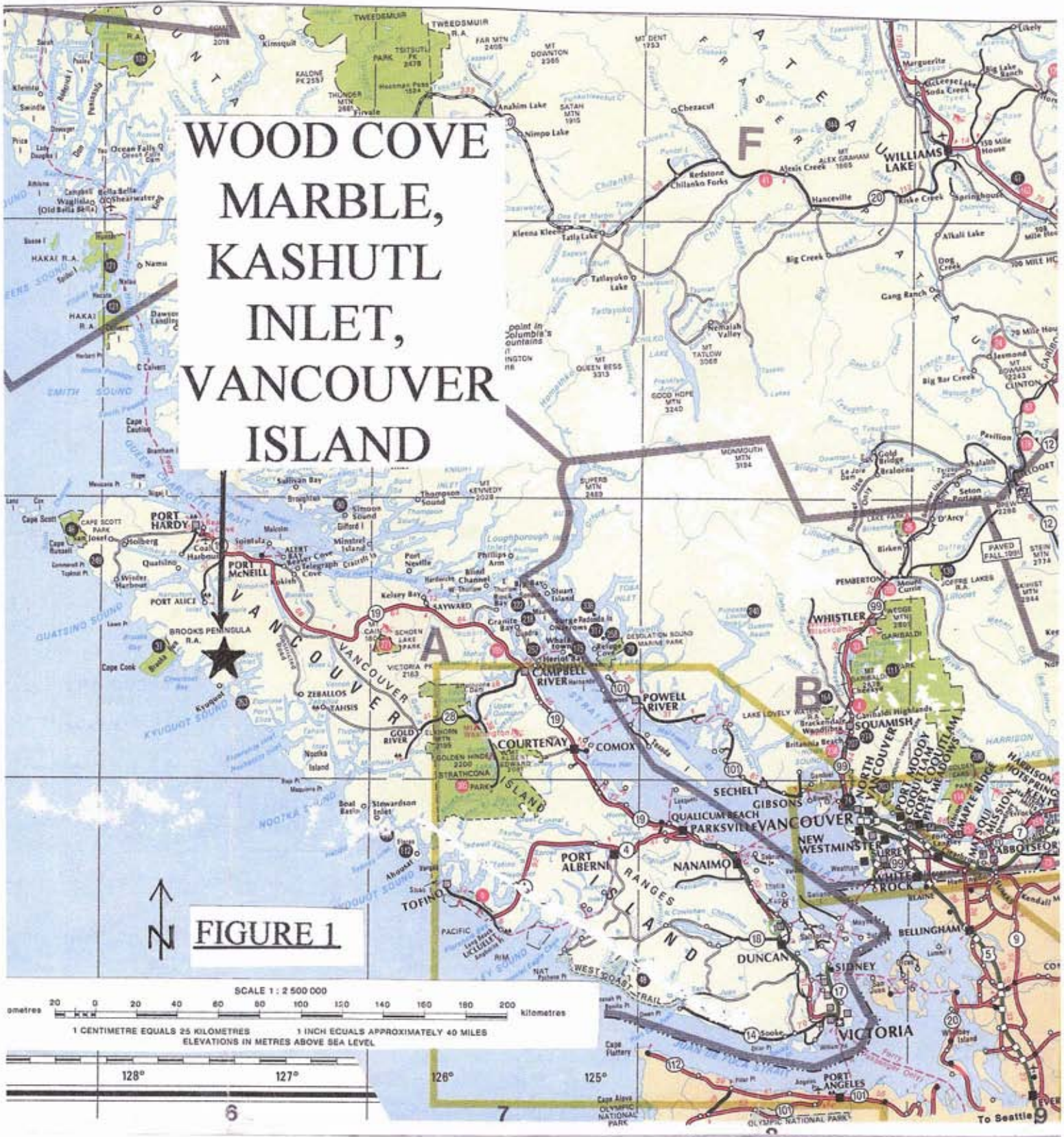
Sample ID	Banding strike	Banding dip	Width (cm)	Comments
671	34	27 E	200	pearl grey-white, med grain marble, massive
672	35	30 E	200	pearl grey-white, med grain marble, massive
673	32	36 E	200	pearl grey-white, med-coarse grain marble, massive
674	32	35 E	200	pearl grey-white, med-coarse grain marble, massive
675	37	35 E	200	pearl grey-white, med-coarse grain marble, massive
676	35	38 E	200	pearl grey-white, med-coarse grain marble, massive
677	35	35 E	200	pearl grey-white, med-coarse grain marble, massive
678	40	33 E	200	pearl grey-white, med-coarse grain marble, massive
679	35	38 E	200	pearl grey-white, med-coarse grain marble, massive
680	35	35 E	200	pearl grey-white, med-coarse grain marble, massive
681	37	33 E	200	pearl grey-white, med grain marble, massive
682	30	36 E	200	pearl grey-white, med grain marble, massive
683	33	38 E	200	pearl grey-white, med grain marble, massive
684	33	44 E	200	pearl grey-white, med-coarse grain marble, massive
685	35	40 E	200	pearl grey-white, med-coarse grain marble, massive
686	34	45 E	200	pearl grey-white, coarse grain marble, massive
687	32	46 E	200	pearl grey-white, coarse grain marble, massive
688	34	42 E	200	pearl grey-white, coarse grain marble, massive
689	34	48 E	200	pearl grey-white, coarse grain marble, massive
690	33	46 E	200	pearl grey-white, coarse grain marble, massive

Appendix B pg. 2

Sample ID	CaO %	MgO %	Al2O3 %	Fe2O3 %	SiO2 %	MnO2 %	Na2O %	K2O %	SO3 %	Na2O
671	55.4	0.18	0.11	0.23	0.38	0.1	0.01	<0.01	0.1	0.01
672	55.4	0.21	0.15	0.31	0.33	0.06	0.01	0.01	0.1	0.01
673	55.4	0.16	0.12	0.22	0.25	0.09	0.01	<0.01	0.2	0.01
674	55.6	0.16	0.11	0.19	0.25	0.07	0.01	0.01	0.2	0.01
675	55.5	0.19	0.13	0.2	0.24	0.08	0.02	<0.01	0.1	0.02
676	55.5	0.23	0.18	0.16	0.4	0.06	0.02	0.02	<0.1	0.02
677	55	0.28	0.31	0.2	0.56	0.07	0.02	0.02	0.1	0.02
678	54.9	0.31	0.51	0.26	0.74	0.08	0.03	0.03	0.1	0.03
679	55.5	0.15	0.13	0.19	0.18	0.09	0.03	0.02	0.1	0.03
680	55.4	0.2	0.14	0.25	0.27	0.1	0.05	<0.01	0.2	0.05
681	55.5	0.17	0.12	0.21	0.17	0.1	0.04	0.04	0.1	0.04
682	55.4	0.18	0.14	0.18	0.21	0.11	0.05	<0.01	0.1	0.05
683	52.1	0.53	0.84	1.86	2.1	0.17	0.05	0.03	2.3	0.05
684	55.3	0.16	0.1	0.11	0.69	0.05	0.06	0.03	<0.1	0.06
685	55.4	0.18	0.09	0.15	0.24	0.05	0.05	0.03	0.1	0.05
686	55.5	0.17	0.06	0.1	0.03	0.09	0.09	0.03	<0.1	0.09
687	54.4	0.59	0.52	0.36	1.49	0.1	0.1	0.01	0.1	0.1
688	55	0.3	0.19	0.22	0.47	0.05	0.09	0.03	0.1	0.09
689	55.3	0.23	0.06	0.1	0.25	0.04	0.08	0.05	0.1	0.08
690	55.3	0.3	0.07	0.11	0.53	0.07	0.1	0.03	<0.1	0.1

Appendix B pg 3

WOOD COVE MARBLE, KASHUTL INLET, VANCOUVER ISLAND

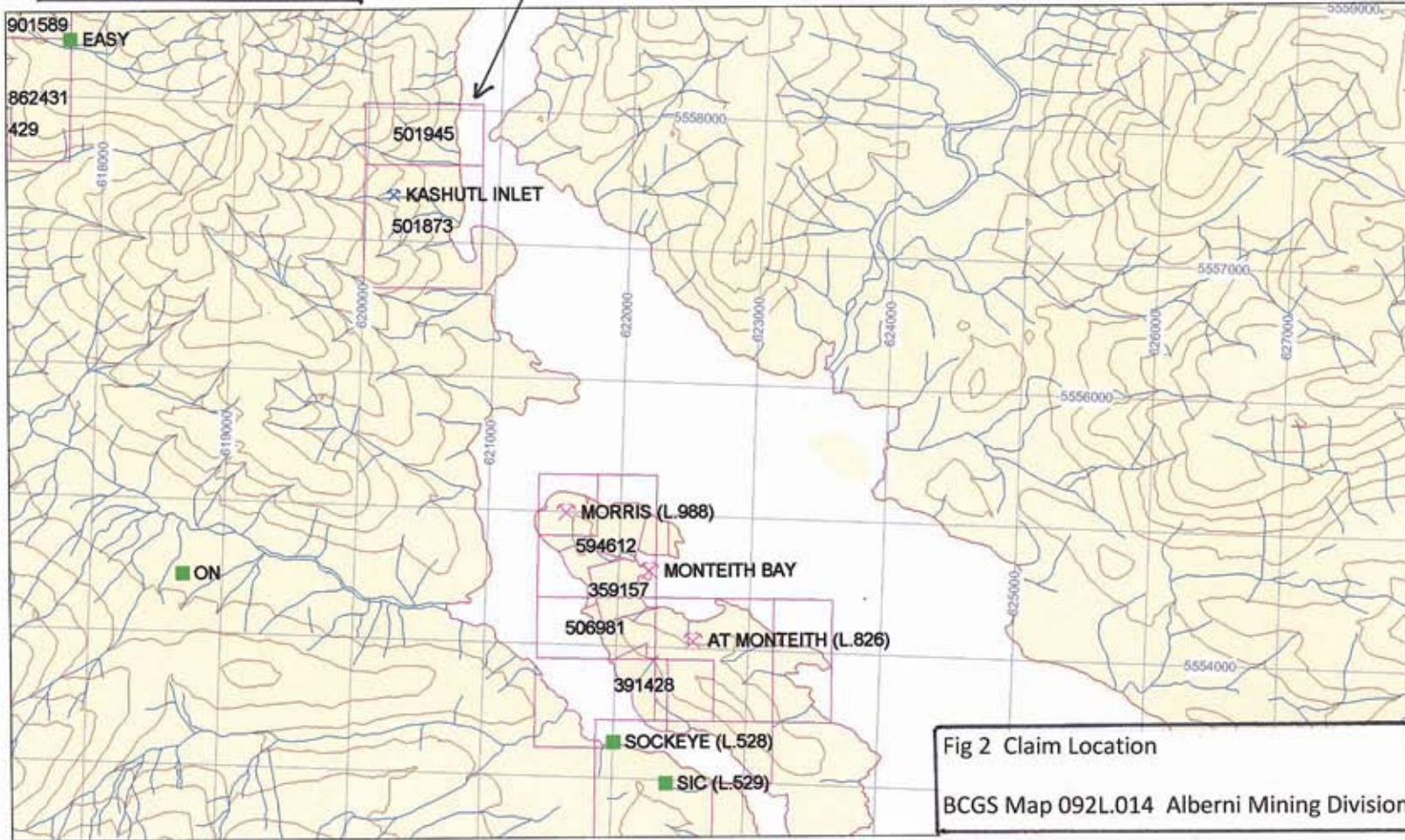


Fundamental Resource Corp
Wood Cove Marble Project
Fig 1 General Location

Kashutl Inlet, Wood Cove Marble General Location

Fundamental Resource Corp
Wood Cove Marble Project

2 MTO mineral tenures



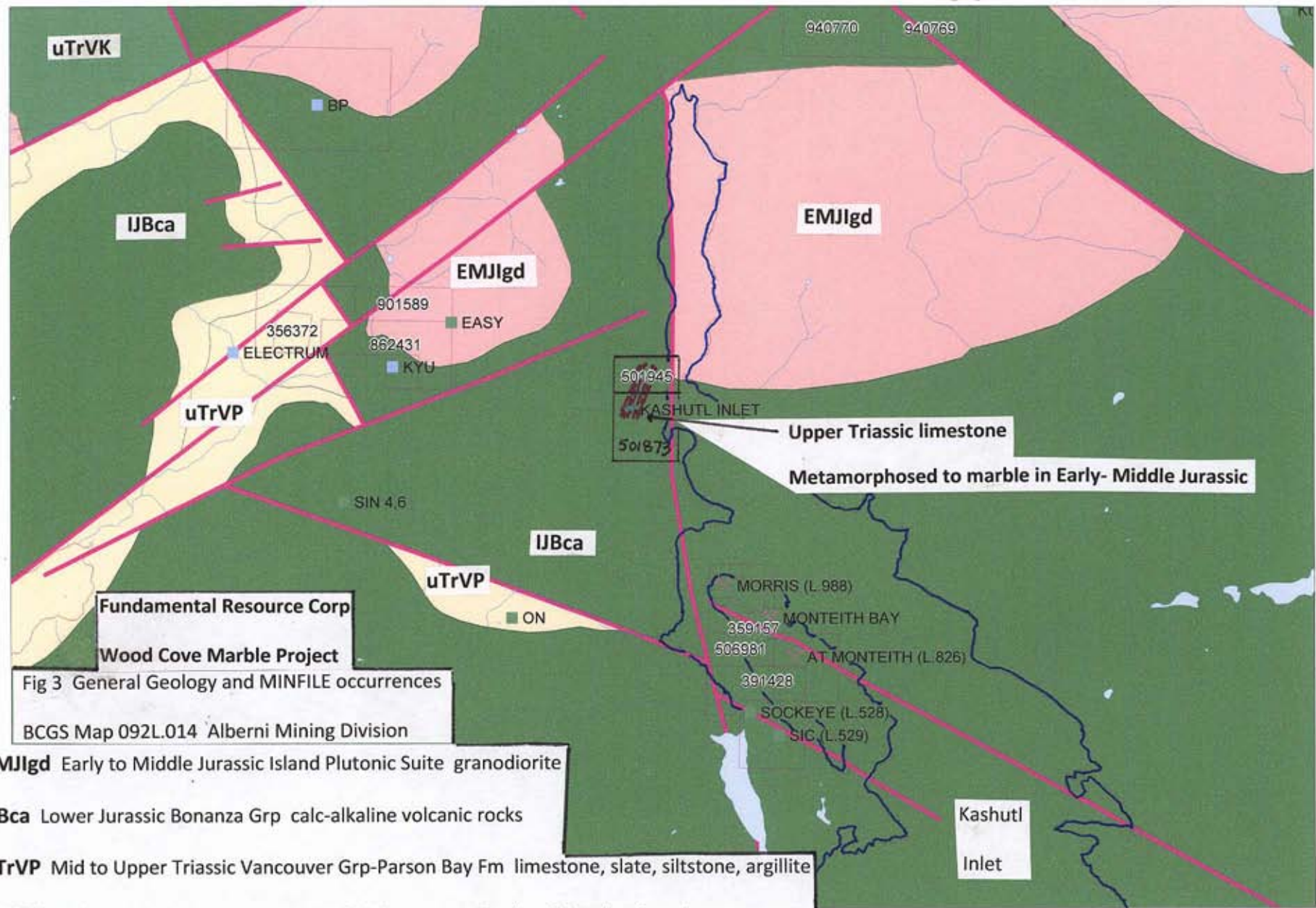
SCALE 1 : 50,000



Nov., 2011



Wood Cove Marble General Geology & Faults



Fundamental Resource Corp
Wood Cove Marble Project

Fig 3 General Geology and MINFILE occurrences

BCGS Map 092L.014 Alberni Mining Division

EMJlgd Early to Middle Jurassic Island Plutonic Suite granodiorite

IJBca Lower Jurassic Bonanza Grp calc-alkaline volcanic rocks

uTrVP Mid to Upper Triassic Vancouver Grp-Parson Bay Fm limestone, slate, siltstone, argillite

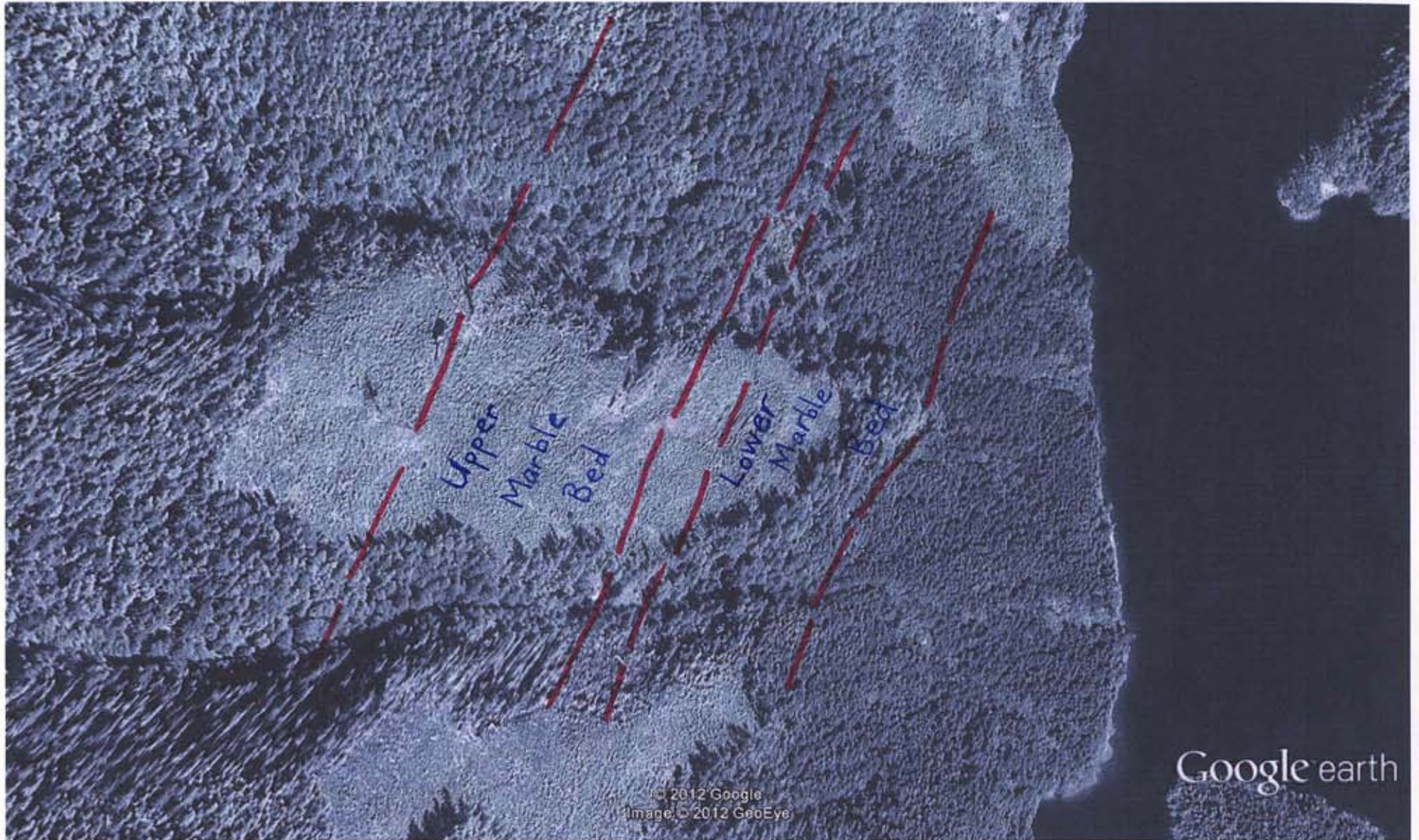
uTrVK Mid to Upper Triassic Vancouver Grp-Karmutsen Fm basaltic volcanic rocks

SCALE 1 : 75,000



MINFILE occurrences listed by name — Fault





Google earth

feet
meters

2000

800



Fundamental Resource Corp

Wood Cove Marble Project

Fig 4 Upper & Lower Marble Bed Location (Google Earth)

BCGS Map 092L.014 Alberni Mining Division

Wood Cove Marble General Geology & Sample Locations

