



**NORWEST  
LABS**

## Certificate of Potability

Norwest Labs  
#104, 19575-55 A Ave.  
Surrey, BC. V3S 8P8  
Phone: (604) 514-3322  
Fax: (604) 514-3323

**Bill to:** Discovery Islands Water Quality  
Services  
**Report to:** Discovery Islands Water Quality  
Services  
Box 180  
Quathiaski Cove, BC, Canada  
V0P 1N0  
Attn: Paul Flemming  
Sampled By:  
Company:

**Project**  
**ID:** Lot #6 - Well # 11317  
**Name:**  
**Location:**  
**LSD:**  
**P.O.:**  
**Acct. Code:**

**NWL Lot ID:** 406992  
**Control Number:**  
**Date Received:** Sep 08, 2005  
**Date Reported:** Sep 14, 2005  
**Report Number:** 744265

Page: 1 of 1

**Sample Description:** Well Head / Sisken Lane, Cortex Island / Lot #6 - Well #11317

The above mentioned water sample number **406992 - 1** supplied by **Discovery Islands Water Quality Services** meets the chemical and bacteriological requirements specified by the Oct. 19th 2004 Guidelines for Canadian Drinking Water Quality for the constituents tested.

### Comments:

Approved by:

Bill Warning, B.Sc.  
Lab Operations Manager

### Note:

All reports are the confidential property of our clients. Publication of statements, conclusions or extracts from or regarding our report is not permitted without our written approval. Any liability attached thereto is limited to the fee charged.



## Report Transmission Cover Page

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Contact	Company	Address									
Paul Flemming	Cash Account	Box 180									
Web		Quathiaski Cove, BC V0P 1N0									
Email Notification		Phone: (250) 830-3744									
		Fax:									
		Email: thewaterguy@uniserve.com									
<table><tr><th>Copies</th><th>Delivery Strategy</th><th>Format</th></tr><tr><td>1</td><td>Post</td><td></td></tr><tr><td>1</td><td>Email - Single Report</td><td>PDF</td></tr></table>		Copies	Delivery Strategy	Format	1	Post		1	Email - Single Report	PDF	
Copies	Delivery Strategy	Format									
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1	Email - Single Report	PDF									

NOTE: **P** indicates a preliminary report is required

NOTE: **A** indicates report is delivered using automated delivery

\_\_\_\_\_ # OF PAGES IN THIS TRANSMISSION

### Report Transmission Notes

#### Agreement Notes

#### Lot Notes

#### Sample Notes:

#### Notes to Clients

##### Lot Notes:

##### Sample Notes:

##### Batch Notes:

##### Method Notes:

##### Method Result Notes:

### Reports associated with this Lot

Id/Format/Reported Date

Id/Format/Reported Date

Id/Format/Reported Date

744265 Env Guide No Disp

### Comment:

See Methodology and Notes page of Analytical Report for all comments pertaining to this report.

If this report transmission is not satisfactory, please send report requirements to the address at the top of this page.

9/14/05

744265 14-Sep-2005

9/14/2005 11:58:14AM



## Analytical Report

Norwest Labs  
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Page: 1 of 3

NWL Number	406992-1
Sample Date	Sep 07, 2005 5:00:00PM
Sample Description	Well Head / Sisken Lane, Cortex Island / Lot #6 - Well #11317
Sample Matrix	Water - General

Analyte	Units	Result	Detection Limit	Guideline Limit	Guideline Comments
<b>Metals Extractable</b>					
Aluminum	Extractable mg/L	0.028	0.005	0.1	Acceptable
Antimony	Extractable mg/L	<0.0002	0.0002	0.006	Pass
Arsenic	Extractable mg/L	0.0005	0.0002	0.025	Pass
Barium	Extractable mg/L	0.005	0.001	1	Pass
Boron	Extractable mg/L	0.004	0.002	5	Pass
Cadmium	Extractable mg/L	<0.00001	0.00001	0.005	Pass
Chromium	Extractable mg/L	0.0011	0.0005	0.05	Pass
Copper	Extractable mg/L	0.002	0.001	1	Acceptable
Lead	Extractable mg/L	0.001	0.0001	0.01	Pass
Uranium	Extractable mg/L	<0.0005	0.0005	0.02	Pass
Zinc	Extractable mg/L	0.003	0.001	5	Acceptable
<b>Microbiological Analysis</b>					
Total Coliforms	Enzyme Substrate TestMPN/100 mL	<1.0	1	<1	Pass
Escherichia coli	Enzyme Substrate TestMPN/100 mL	<1	1	<1	Pass
Heterotrophic Count - Aerobic	SimPlate MPN/mL	<2	2	500	Acceptable
<b>Physical and Aggregate Properties</b>					
Colour	Apparent, Potable Colour units	16	5	15	Above Aesthetic
Turbidity	NTU	6.2	0.1	5	Above Aesthetic
Temperature	As Received °C	6.0	-		n/a
<b>Routine Water</b>					
pH		7.50	-	6.5 - 8.5	Acceptable
Sodium	Extractable mg/L	10.7	0.4	200	Acceptable
Iron	Extractable mg/L	0.66	0.03	0.3	Above Aesthetic
Manganese	Extractable mg/L	0.024	0.005	0.05	Acceptable
Chloride	Dissolved mg/L	9.2	0.4	250	Acceptable
Fluoride	mg/L	0.06	0.05	1.5	Pass
Nitrate - N	mg/L	0.04	0.01	10	Pass
Nitrite - N	mg/L	<0.005	0.005	1	Pass
Sulfate (SO4)	mg/L	2	0.9	500	Acceptable

Please Note: Related regulatory criteria are provided as a service to clients. Norwest Labs' responsibility is limited to analytical data. We are not responsible for ensuring that listed criteria are current, scientifically valid, appropriate and sufficient for the user of the data.



## Analytical Report

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Sample Description	Well Head / Sisken Lane, Cortex Island / Lot #6 - Well #11317
Sample Matrix	Water - General

Analyte	Units	Result	Detection Limit	Guideline Limit	Guideline Comments
<b>Routine Water - Continued</b>					
T-Alkalinity	as CaCO <sub>3</sub>	mg/L 48	5	250-650	Low
Total Dissolved Solids	mg/L	66	1	500	Acceptable
Hardness	as CaCO <sub>3</sub>	mg/L 40	-		Soft

Approved by:

Bill Warning, B.Sc.  
Lab Operations Manager

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## Methodology and Notes

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### Method of Analysis:

MethodName	Reference	Method	Date Analysis Started	Location
Alkalinity, pH, and EC in water	APHA	* Electrometric Method, 4500-H+ B	12-Sep-05	Norwest Labs Edmonton
Alkalinity, pH, and EC in water	APHA	* Titration Method, 2320 B	12-Sep-05	Norwest Labs Edmonton
Anions (Routine) by Ion Chromatography	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	13-Sep-05	Norwest Labs Edmonton
Chloride in Water	APHA	* Automated Ferricyanide Method, 4500-Cl- E	13-Sep-05	Norwest Labs Edmonton
Colour (Apparent) in water	APHA	* Visual Comparison Method, 2120 B	13-Sep-05	Norwest Labs Edmonton
E. coli - Colilert	APHA	Enzyme Substrate Test, 9223 B	8-Sep-05	Norwest Labs Surrey
Heterotrophic (Standard) Plate Count (Aerobic SP) - Surrey	APHA	Heterotrophic Plate Count - Pour Plate Method, 9215 B	8-Sep-05	Norwest Labs Surrey
Metals ICP-MS (Extractable) in water	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	13-Sep-05	Norwest Labs Edmonton
Metals Trace (Extractable) in water	APHA	* Inductively Coupled Plasma (ICP) Method, 3120 B	13-Sep-05	Norwest Labs Edmonton
Total Coliforms- Colilert	APHA	Enzyme Substrate Test, 9223 B	8-Sep-05	Norwest Labs Surrey
Turbidity in Water	APHA	* Nephelometric Method, 2130 B	13-Sep-05	Norwest Labs Edmonton

\* Norwest method(s) is based on reference method

### References:

APHA Standard Methods for the Examination of Water and Wastewater  
US EPA US Environmental Protection Agency Test Methods

### Comments:

Please direct any inquiries regarding this report to our Client Services group.  
Results relate only to samples as submitted

The test report shall not be reproduced except in full, without the written approval of the laboratory



COLUMBIA

WATER

WELL

RECORD

Date

05/07/13

BCGS MAP

WELL No.

ELEV

Location Accuracy

U  
T  
M

Z

E

N

U  
T  
M

Date 19

Well Type

Owners Name &amp; Address

Renewal Land Company, Suite 610-220 Cambie  
Vancouver, BC V6B 2

Legal Description &amp; Address

Descriptive Location

Lot H6

Well ID# 11317

1. TYPE  
OF WORK☒ New Well  
☐ Deepened☐ Reconditioned  
☐ Abandoned2. WORK  
METHOD☐ Cable tool ☐ Bored ☐ Jetted  
☒ Rotary a ☐ mud b ☒ air c ☐ reverse  
☐ Other

3. WATER

☒ Domestic ☐ Municipal ☐ Irrigation  
WELL USE ☐ Comm. & Ind. ☐ Other

4. DRILLING ADDITIVES

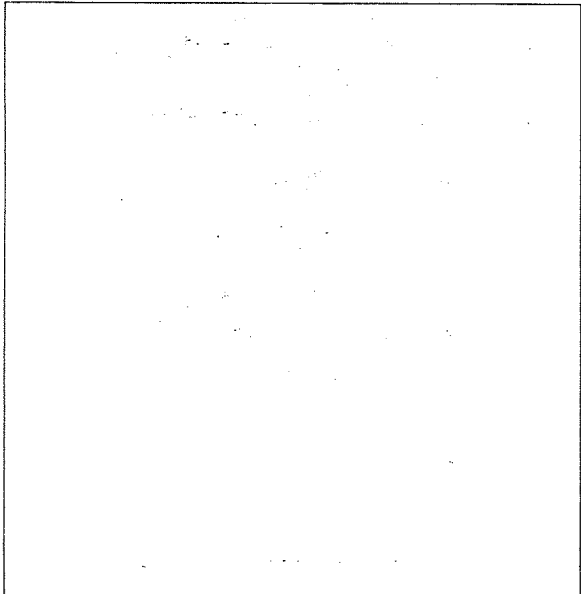
5. MEASUREMENTS from ☒ ground level ☐ top of casing  
casing height above ground level 2 ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	2	Cobbley brown Silty Sand.	
2	67	Grey Cobbley Silty fill	
67	91	Tan coarse grained to medium grained sand	
91	101	Grey Silty Sand, medium grained	
101	112	Grey Silty Sand, stony, medium grained	
112	117	Grey Silty Sand, medium grained	
117	153	Grey fine grained Silty Sand.	
153	157	Tan medium grained to coarse grained silty sand.	
157	190	Tan Sand & gravel	
190	210	Tan medium grained Sand.	
210	240	Grey medium grained Sand, water bearing	
WATER QUALITY & QUANTITY NOT GUARANTEED BY THE CONTRACTOR			

7. CONSULTANT

Address

8. WELL LOCATION SKETCH

9. CASING:  
Materials☒ Steel ☐ Galvanized ☐ Wood  
☐ Plastic ☐ Concrete  
☐ Other

Hole Diameter	from	to	Thickness	Weight	unit
	6	258'9"	219		in ft in lb/

Pitless unit ft ☐ above ☐ below ground level☒ Welded ☐ Cemented ☐ Threaded ☐ New ☐ Use  
Perforations:

Shoe(s): one six shoe

Open hole, from to ft Diameter

Grout: Ben Seal Clay

10. SCREEN: ☒ Nominal (Telescope) ☐ Pipe SizeType ☒ Continuous Slot ☐ Perforated ☐ Louvr  
☐ OtherMaterial ☒ Stainless Steel ☐ Plastic ☐ Other

Set from 227'4" to 231'10" ft below ground level

RISER, SCREEN & BLANKS						unit
Length	1'6"					ft
Diam. ID	5					in
Slot Size	10ft					in
from	227'4"					ft
to	231'10"					ft

Fittings, top K-packer bottom blank  
Gravel Pack11. DEVELOPED BY: ☐ Surging ☐ Jetting ☐ Air  
☐ Bailing ☐ Pumping ☐ Other12. TEST ☐ Pump ☐ Bail ☐ Air Date

Rate USgpm Temp °C SWL before test

Water Level ft after test of hrs

DRAWDOWN in ft				RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13. RECOMMENDED PUMP TYPE RECOMMENDED PUMP SETTING RECOMMENDED PUMPING F  
ft US14. WATER TYPE: ☒ fresh ☐ salty ☒ clear ☐ clou  
colour smell; gas ☐ yes ☒ no

15. WATER ANALYSIS: 1 Hardness mg

2 Iron mg/L 3 Chloride mg/L

4 pH Field Date

SITE ID No

Lab Date

16. FINAL WELL COMPLETION DATA approx

Well Depth 124'10" ft Well Yield 16 US gpm

Static Water Level 210'8" ft Artesian Flow US gpm Pressure Head

Back filled Native material/Ben Seal Clay

Well Head Completion Surface seal and well cap.

17. DRILLER PARKER ROBERT

Signature RED WILLIAMS WELL DRILLING LTD

18. CONTRACTOR,  
Address

980 PRATT ROAD

QUALICUM BEACH, BC

Member, BCGWA Yes no ; V9K1W5