



Surrey	Ph (604) 514-3322	FAX (604) 514-3323
Edmonton	Ph (780) 438-5522	FAX (780) 438-0396
Calgary	Ph (403) 291-2022	FAX (403) 291-2021
Lethbridge	Ph (403) 329-9266	FAX (403) 327-8527
Winnipeg	Ph (204) 982-8630	FAX (204) 275-6019

Lot Number: 407320 & 410755

Date Issued: 26-Sep-05

**Sample Id: Well Head Sisken Lane Cortez Island – Lot #14 Well #11315**

The above mentioned water sample number **407320-1 & 410755-1** supplied by **Discovery Islands Water Quality Services** meets the chemical and bacteriological requirements specified by the Oct. 10<sup>th</sup>, 2004 Guidelines for Canadian Drinking Water Quality (6<sup>th</sup> ed.) for the constituents tested.

Reviewed by:

Bill Warning BSc  
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.



**NORWEST  
LABS**

## Analytical Report

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:**  
**Name:** Well Head Sicken Lane Cortez Island  
**Location:** Lot # 14 Well # 11315  
**LSD:**  
**P.O.:**  
**Acct. Code:**

**NWL Lot ID:** 410755  
**Control Number:**  
**Date Received:** Sep 23, 2005  
**Date Reported:** Sep 26, 2005  
**Report Number:** 751720

Page: 1 of 2

NWL Number	410755-1
Sample Date	Sep 22, 2005 4:30:00PM
Sample Description	Well Head Sicken Lane Cortez Island / Lot # 14 Well # 11315
Sample Matrix	Water - General

Analyte	Units	Result	Detection Limit	Guideline Limit	Guideline Comments
<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>					
Temperature	As Received	°C	5	-	n/a

Approved by:

Marie England  
Consulting Scientist

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.



## Report Transmission Cover Page

Norwest Labs  
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Attn: Paul Flemming  
Sampled By:  
Company:

**Project**  
**ID:** Well Head # 11315 - Lot # 14  
**Name:**  
**Location:** Sisken Lane Cortez Island  
**LSD:**  
**P.O.:**  
**Acct. Code:**

**NWL Lot ID:** 407320  
Control Number:  
Date Received: Sep 09, 2005  
Date Reported: Sep 14, 2005  
Report Number: 744982

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><u>Copies</u></th><th><u>Delivery Strategy</u></th><th><u>Format</u></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>		<u>Copies</u>	<u>Delivery Strategy</u>	<u>Format</u>	1	Post		1	Email - Single Report	PDF	
<u>Copies</u>	<u>Delivery Strategy</u>	<u>Format</u>									
1	Post										
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

744982 Env Guide No Disp

Id/Format/Reported Date

Id/Format/Reported Date

### 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.

9/15/05

744982 15-Sep-2005

9/14/2005 11:59:24AM



## Analytical Report

Norwest Labs  
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V0P 1N0  
Attn: Paul Flemming  
Sampled By:  
Company:

**Project**  
**ID:** Well Head # 11315 - Lot # 14  
**Name:**  
**Location:** Sisken Lane Cortez Island  
**LSD:**  
**P.O.:**  
**Acct. Code:**

**NWL Lot ID:** 407320  
**Control Number:**  
**Date Received:** Sep 09, 2005  
**Date Reported:** Sep 14, 2005  
**Report Number:** 744982

Page: 1 of 3

NWL Number	407320-1
Sample Date	Sep 08, 2005 11:30:00AM
Sample Description	Sisken Lane Cortez Island / Well Head # 11315 - Lot # 14
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	0.0003	0.0002	0.025	Pass
Barium	Extractable mg/L	0.003	0.001	1	Pass
Boron	Extractable mg/L	0.014	0.002	5	Pass
Cadmium	Extractable mg/L	<0.00001	0.00001	0.005	Pass
Chromium	Extractable mg/L	0.0008	0.0005	0.05	Pass
Copper	Extractable mg/L	<0.001	0.001	1	Acceptable
Lead	Extractable mg/L	0.0003	0.0001	0.01	Pass
Uranium	Extractable mg/L	<0.0005	0.0005	0.02	Pass
Zinc	Extractable mg/L	0.016	0.001	5	Acceptable
<b>Microbiological Analysis</b>					
Total Coliforms	Enzyme Substrate TestMPN/100 mL	2.0	1	<1	Fail
Escherichia coli	Enzyme Substrate TestMPN/100 mL	<1	1	<1	Pass
Heterotrophic Count - Aerobic	SimPlate MPN/mL	>738	2	500	Above Aesthetic
<b>Physical and Aggregate Properties</b>					
Colour	Apparent, Potable Colour units	23	5	15	Above Aesthetic
Turbidity	NTU	8.4	0.1	5	Above Aesthetic
Temperature	As Received °C	5.0	-		n/a
<b>Routine Water</b>					
pH		7.59	-	6.5 - 8.5	Acceptable
Sodium	Extractable mg/L	8.2	0.4	200	Acceptable
Iron	Extractable mg/L	0.57	0.03	0.3	Above Aesthetic
Manganese	Extractable mg/L	0.035	0.005	0.05	Acceptable
Chloride	Dissolved mg/L	7.7	0.4	250	Acceptable
Fluoride	mg/L	<0.05	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	1	0.9	500	Acceptable

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Company:

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**ID:** Well Head # 11315 - Lot # 14  
**Name:**  
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**P.O.:**  
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Page: 2 of 3

NWL Number	407320-1
Sample Date	Sep 08, 2005 11:30:00AM
Sample Description	Sisken Lane Cortez Island / Well Head # 11315 - Lot # 14
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 42	5	250-650	Low
Total Dissolved Solids	mg/L	54	1	500	Acceptable
Hardness	as CaCO <sub>3</sub>	mg/L 30	-		Soft

Approved by:

Bill Warning, B.Sc.  
Lab Operations Manager

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## Methodology and Notes

Norwest Labs  
#104, 19575-55 A Ave.  
Surrey, BC. V3S 8P8  
**Phone:** (604) 514-3322  
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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	14-Sep-05	Norwest Labs Edmonton
Alkalinity, pH, and EC in water	APHA	* Titration Method, 2320 B	14-Sep-05	Norwest Labs Edmonton
Anions (Routine) by Ion Chromatography	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	14-Sep-05	Norwest Labs Edmonton
Chloride in Water	APHA	* Automated Ferricyanide Method, 4500-Cl- E	14-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	9-Sep-05	Norwest Labs Surrey
Heterotrophic (Standard) Plate Count (Aerobic SP) - Surrey	APHA	Heterotrophic Plate Count - Pour Plate Method, 9215 B	9-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	14-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	9-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

B C G S MAP [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] WELL No. [ ] [ ] [ ] ELEV [ ] [ ] [ ] [ ] Location Accuracy \_\_\_\_\_

UTM [Z] [ ] [ ] [ ] [ ] [ ] [E] [ ] [ ] [ ] [ ] [N] UTM Date 19 [ ] [ ] Well Type [ ] [ ]

Owners Name & Address Renewal Land Company, Suite 610-220 Cambie St.  
Legal Description & Address Vancouver, BC V6B 2M9

Descriptive Location Lot 14 ID# 11315

I. TYPE OF WORK

1 <input checked="" type="checkbox"/> New Well	2 <input type="checkbox"/> Reconditioned
3 <input type="checkbox"/> Deepened	4 <input type="checkbox"/> Abandoned

2. WORK METHOD

1 ☐ Cable tool    2 ☐ Bored    3 ☐ Jetted  
4 ☒ Rotary    a ☐ mud    b ☒ air    c ☐ reverse  
☐ Other

3. WATER WELL USE 1 ☒ Domestic 2 ☐ Municipal 3 ☐ Irrigation  
4 ☐ Comm. & Ind. ☐ Other

#### 4. DRILLING ADDITIVES

5. MEASUREMENTS from 1 ☒ ground level 2 ☐ top of casing  
casing height above ground level \_\_\_\_\_ 2 \_\_\_\_\_ ft.

[illegible]

7. CONSULTANT \_\_\_\_\_  
Address \_\_\_\_\_

### 8. WELL LOCATION SKETCH

[illegible]

9. CASING: 1 ☒ Steel 2 ☐ Galvanized 3 ☐ Wood  
Materials 4 ☐ Plastic 5 ☐ Concrete  
☐ Other

Hot Diameter							
Diameter	6						
from	2						
to	2.89						
Thickness	2						
Weight							

Pitless unit \_\_\_\_\_ ft 1 ☒ above 2 ☐ below ground level  
 1 ☒ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☐ New 2 ☐ Used  
 Perforations: \_\_\_\_\_

Shoe (s): One Six inch  
Open hole, from \_\_\_\_\_ to \_\_\_\_\_ ft Diameter \_\_\_\_\_  
Grout: Barreel Chief

10. SCREEN: 1 ☒ Nominal (Telescope) 2 ☐ Pipe Size  
Type 1 ☒ Continuous Slot 2 ☐ Perforated 3 ☐ Louver  
☐ Other \_\_\_\_\_

Material 1 ☒ Stainless Steel, 2 ☐ Plastic ☐ Other \_\_\_\_\_  
Set from 28'6" to 29'3" ft below ground level

RISER, SCREEN & BLANKS								unit
Length	7							
Diam. I.D.	5							
Slot Size	12H							
from	28616 <sup>17</sup>							
to	29316 <sup>18</sup>							

Fittings, top K-packer bottom blank  
Gravel Pack

II. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☐ A  
4 ☐ Bailing 5 ☐ Pumping ☐ Other \_\_\_\_\_

12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☐ Air Date     /    /      
Rate      USgpm Temp      °C SWL before test       
Water Level      ft after test of      hrs

<input type="checkbox"/> DRAWDOWN in ft				<input type="checkbox"/> RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING
	ft	l

14. WATER TYPE: 1 ☒ fresh 2 ☐ salty 3 ☒ clear 4 ☐ cloudy  
colour \_\_\_\_\_ smell \_\_\_\_\_; gas 1 ☐ yes 2 ☒ no

15. WATER ANALYSIS:

2 Iron	<div><div></div><div></div><div></div><div></div><div></div></div>	mg/L	1 Hardness	<div><div></div><div></div><div></div><div></div><div></div></div>	m
4 pH	<div><div></div><div></div><div></div><div></div></div>		3 Chloride	<div><div></div><div></div><div></div><div></div><div></div></div>	mg
			Field Date	<div><div></div><div></div><div></div><div></div><div></div></div>	

SITE ID No. \_\_\_\_\_ Lab Date   /  /    
YR MO

16. FINAL WELL COMPLETION DATA Approx

Well Depth	<u>300</u>	ft	Well Yield	<u>10</u>	US gpm
Static Water Level	<u>    </u>	ft	Artesian Flow	<u>    </u>	US gpm
Back filled	<u>Native material / Baseal clay</u>				
Well Head Completion	<u>Surface Seal 4 well</u>				
<u>On Cap</u>					

17. DRILLER PARKER SURNAME ROBERT FIRST NAME  
PLEASE PRINT  
Signature RED WILLIAMS WELL DRILLING LTD

18. CONTRACTOR,  
Address **980 PRATT ROAD**

980 PRATT ROAD  
QUALICUM BEACH, BC

Member, B C G W A ☒ yes ☐ no ; V9K 1W5