



|            |                   |                    |
|------------|-------------------|--------------------|
| 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: 407319 & 410766

Date Issued: 26-Sep-05

**Sample Id: Well Head Sisken Lane Cortez Island – Lot #13 Well #11314**

The above mentioned water sample number **407319-1 & 410766-1** 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 Sisken Lane Cortez Island  
**Location:** Lot # 13 Well # 11314  
**LSD:**  
**P.O.:**  
**Acct. Code:**

**NWL Lot ID:** 410766  
**Control Number:**  
**Date Received:** Sep 23, 2005  
**Date Reported:** Sep 26, 2005  
**Report Number:** 751735

Page: 1 of 2

|                    |  |
|--------------------|--|
| NWL Number         | 410766-1   |
| Sample Date        | Sep 22, 2005 1:00:00PM   |
| Sample Description | Well Head Sisken Lane Cortez Island / Lot # 13<br>Well # 11314 |
| Sample Matrix      | Water - General  |

| Analyte                                  | Units                           | Result | Detection<br>Limit | Guideline<br>Limit | Guideline<br>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 -<br>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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V0P 1N0  
Attn: Paul Flemming  
Sampled By:  
Company:

**Project**  
**ID:** Well Head # 11314 - Lot 13  
**Name:**  
**Location:** Sisken Lane Cortez Island  
**LSD:**  
**P.O.:**  
**Acct. Code:**

**NWL Lot ID:** 407319  
Control Number:  
Date Received: Sep 09, 2005  
Date Reported: Sep 14, 2005  
Report Number: 744968

| 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

744968 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

744968 15-Sep-2005

9/14/2005 11:59:19AM



## 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:** Well Head # 11314 - Lot 13  
**Name:**  
**Location:** Sisken Lane Cortez Island  
**LSD:**  
**P.O.:**  
**Acct. Code:**

**NWL Lot ID:** 407319  
**Control Number:**  
**Date Received:** Sep 09, 2005  
**Date Reported:** Sep 14, 2005  
**Report Number:** 744968

Page: 1 of 3

|                    |  |
|--------------------|--|
| NWL Number         | 407319-1   |
| Sample Date        | Sep 08, 2005 3:00:00PM                                   |
| Sample Description | Sisken Lane Cortez Island / Well Head # 11314 - Lot # 13 |
| Sample Matrix      | Water - General  |

| Analyte                                  | Units                           | Result   | Detection Limit | Guideline Limit | Guideline Comments |
|--|---------------------------------|----------|-----------------|-----------------|--------------------|
| <b>Metals Extractable</b>                |                                 |          |                 |                 |                    |
| Aluminum                                 | Extractable mg/L                | 0.072    | 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                | 0.005    | 0.001           | 1               | Pass               |
| Boron                                    | Extractable mg/L                | 0.038    | 0.002           | 5               | Pass               |
| Cadmium                                  | Extractable mg/L                | <0.00001 | 0.00001         | 0.005           | Pass               |
| Chromium                                 | Extractable mg/L                | 0.0006   | 0.0005          | 0.05            | Pass               |
| Copper                                   | Extractable mg/L                | 0.001    | 0.001           | 1               | Acceptable         |
| Lead                                     | Extractable mg/L                | 0.0002   | 0.0001          | 0.01            | Pass               |
| Uranium                                  | Extractable mg/L                | <0.0005  | 0.0005          | 0.02            | Pass               |
| Zinc                                     | Extractable mg/L                | 0.022    | 0.001           | 5               | Acceptable         |
| <b>Microbiological Analysis</b>          |                                 |          |                 |                 |                    |
| Total Coliforms                          | Enzyme Substrate TestMPN/100 mL | 14.3     | 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  | 25       | 5               | 15              | Above Aesthetic    |
| Turbidity                                | NTU                             | 15.4     | 0.1             | 5               | Above Aesthetic    |
| Temperature                              | As Received °C                  | 5.0      | -               |                 | n/a                |
| <b>Routine Water</b>                     |                                 |          |                 |                 |                    |
| pH                                       |                                 | 7.53     | -               | 6.5 - 8.5       | Acceptable         |
| Sodium                                   | Extractable mg/L                | 8.2      | 0.4             | 200             | Acceptable         |
| Iron                                     | Extractable mg/L                | 1.28     | 0.03            | 0.3             | Above Aesthetic    |
| Manganese                                | Extractable mg/L                | 0.071    | 0.005           | 0.05            | Above Aesthetic    |
| Chloride                                 | Dissolved mg/L                  | 7.6      | 0.4             | 250             | Acceptable         |
| Fluoride                                 | mg/L                            | <0.05    | 0.05            | 1.5             | Pass               |
| Nitrate - N                              | mg/L                            | 0.03     | 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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Services  
**Report to:** Discovery Islands Water Quality  
Services  
Box 180  
Quathiaski Cove, BC, Canada  
V0P 1N0  
Attn: Paul Flemming  
Sampled By:  
Company:

**Project**  
**ID:** Well Head # 11314 - Lot 13  
**Name:**  
**Location:** Sisken Lane Cortez Island  
**LSD:**  
**P.O.:**  
**Acct. Code:**

**NWL Lot ID:** 407319  
**Control Number:**  
**Date Received:** Sep 09, 2005  
**Date Reported:** Sep 14, 2005  
**Report Number:** 744968

Page: 2 of 3

|                    |  |
|--------------------|--|
| NWL Number         | 407319-1   |
| Sample Date        | Sep 08, 2005 3:00:00PM                                   |
| Sample Description | Sisken Lane Cortez Island / Well Head # 11314 - Lot # 13 |
| 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 37 | 5               | 250-650         | Low                |
| Total Dissolved Solids           | mg/L                 | 51      | 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  
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Page: 3 of 3

### 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



COLUMBIA

WATER

WELL

RECORD

Date 05/07/17

BCGS MAP

WELL No.

ELEV

Location Accuracy

UTM

Z

E

UTM

Date 19

Well Type

Owners Name & Address Renewal Land Company, Suite 610-220 Oakvie St  
Legal Description & Address Vancouver, BC V6B 2Descriptive Location Lot 13Well Tag # 113141. TYPE OF WORK 1 ☒ New Well 2 ☐ Reconditioned  
3 ☐ Deepened 4 ☐ Abandoned2. WORK METHOD 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted  
4 ☒ Rotary a ☐ mud b ☒ air c ☐ reverse  
☐ Other3. 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 3 ft9. CASING: Materials 1 ☒ Steel 2 ☐ Galvanized 3 ☐ Wood  
4 ☐ Plastic 5 ☐ Concrete  
☐ Other

| Hole Diameter | Diameter from to | Thickness | Weight |
|---------------|------------------|-----------|--------|
| 6             | 3                | 70'7"     | 15'    |

Pitless unit 1 ft 1 ☐ above 2 ☐ below ground level  
1 ☒ Welded 2 ☐ Cemented 3 ☐ Threaded 1 ☐ New 2 ☐ Use  
Perforations:Shoe(s): one six inch

Open hole, from to ft Diameter

Grout: Ben Seal clay10. SCREEN: 1 ☒ Nominal (Telescope) 2 ☐ Pipe Size  
Type 1 ☒ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre  
☐ OtherMaterial 1 ☒ Stainless Steel 2 ☐ Plastic ☐ OtherSet from 269'4 to 276 ft below ground level

| RISER, SCREEN & BLANKS |        |  |  |  |  | unit |
|------------------------|--------|--|--|--|--|------|
| Length                 | 6'8"   |  |  |  |  | ft   |
| Diam. I.D.             | 5      |  |  |  |  | in   |
| Slot Size              | 12K    |  |  |  |  | in   |
| from                   | 269'4" |  |  |  |  | ft   |
| to                     | 276    |  |  |  |  | ft   |

Fittings, top K-packer bottom blank

Gravel Pack

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☐ Air  
4 ☐ Bailing 5 ☐ Pumping ☐ Other12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☐ Air Date 05/07/17  
Rate 1 USgpm Temp 15 °C SWL before test 1  
Water Level 1 ft after test of 1 hrs

| DRAWDOWN in ft |    |      |    | RECOVERY in ft |    |      |    |
|----------------|----|------|----|----------------|----|------|----|
| mins           | WL | mins | WL | mins           | WL | mins | WL |
|                |    |      |    |                |    |      |    |
|                |    |      |    |                |    |      |    |

13. RECOMMENDED PUMP TYPE RECOMMENDED PUMP SETTING RECOMMENDED PUMPING RATE  
ft USG14. WATER TYPE: 1 ☒ Fresh 2 ☐ Salty 3 ☒ Clear 4 ☐ Cloud  
colour 1 smell 1; gas 1 ☐ yes 2 ☒ No15. WATER ANALYSIS: 1 Hardness 1 mg/L  
2 Iron 1 mg/L 3 Chloride 1 mg/L  
4 pH 1 Field Date 05/07/17

SITE ID No

Lab Date 05/07/17

16. FINAL WELL COMPLETION DATA

Well Depth 280 ft Well Yield 110 USgpmStatic Water Level 2110 ft Artesian Flow 1 USgpm Pressure Head 1Back-filled Nature material / Ben Seal clayWell Head Completion Surface Seal & well cap17. DRILLER SURNAME PARKER FIRST NAME ROBERT

Signature

RED WILLIAMS WELL DRILLING LTD

18. CONTRACTOR, Address

980 PRATT ROAD

QUALICUM BEACH, BC

Member, BCGWA ☒ Yes ☐ No

V9K1W5