



Ministry of Environment

- Well Construction Report
- Well Closure Report
- Well Alteration Report

Edited by Foxit Reader  
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Ministry Well ID Plate Number: 34151  
Ministry Well Tag Number: 34151

- Confirmation/alternatives open, attached
- Original well construction report attached

Remove or replace information in this information. Remove or replace graphics & definitions of abbreviations.

Owner name: Mike & Jacinta Kidd

Mailing address: Town Roberts Creek Prov. BC Postal Code V0N2W5

Well Location: Address: Street no. 1041 Street name Firburn Rd Town Roberts Creek

Legal description: Lot D Plan EPP34688 D.L. 1621 Block Sec. Twp. Rg. Land District

Group 1 New Westminster District

NAD 83: Zone: 10U UTM Northing: 0457086 UTM Easting: 5474426

Method of drilling:  air rotary  cable tool  mud rotary  auger  driving  jeting  excavating  other (specify):

Orientation of well:  vertical  horizontal Ground elevation: ft (sea) Method (see note 4):

Class of well (see note 5): Sub-class of well:

Water supply econ. indicate intended water use:  private domestic  water supply system  irrigation  commercial or industrial  other (specify):

Lithologic description (see notes 7-14) or closure description (see notes 15 and 16)

From ft (bgl)	To ft (bgl)	Relative Hardness	Colour	Material Description (Use recommended terms on reverse. List in order of decreasing amount, if applicable)	Water-bearing Estimated Flow (USgpm)	Observations (e.g., fractured, weathered, well sorted, silty wash, closure details)
0'	28'-8"	S/F	T/GY	Layered Tan Sand With Layers of Packed Silt and Dry Gravel		
28'-6"	70'	D	R/G/W	Feldspar Marbled With Greenstone		
70'	87'	D	W/B	White to Black Granite		
87'	305'	D	R/W/B	Marbled Feldspar .White to Black Granite		

Water Found @ 119'-183' 225'-301'

Casing details

From ft (bgl)	To ft (bgl)	Lin. in	Casing Material / Open Hole	Wall Thickness in	Drive Shoe
0'		6"	Steel Casing	.219	Yes Weld On
Total 6" Casing Used- 30'					

Screen details

From ft (bgl)	To ft (bgl)	Dia in	Type (see note 18)	Slot Size
N/A				

Surface seal Type: 3/8" bentonite chips Depth: 19'-28' ft  
 Method of installation:  Poured  Pumped Thickness: 2" in  
 Backfill Type: N/A Depth: ft  
 Liner:  PVC  Other (specify): N/A  
 Diameter: in Thickness: in  
 From: ft (bgl) To: ft (bgl) Perforated: From: ft (bgl) To: ft (bgl)

Intake:  Screen  Open bottom  Uncased hole  
 Screen type:  Telescope  Pipe size  
 Screen material:  Stainless steel  Plastic  Other (specify):  
 Screen opening:  Continuous slot  Slotted  Perforated pipe  
 Screen bottom:  Ball  Plug  Plate  Other (specify):  
 Filter pack From: ft To: ft Thickness: in  
 Type and size of material: N/A

Developed by:

Air lifting  Surging  Jetting  Pumping  Belling  
 Other (specify): Total duration: 2:5 hrs  
 Notes:

Well yield estimated by:

Pumping  Air lifting  Belling  Other (specify):  
 Rate: USgpm Duration: 2:5 hrs  
 SWL before test: 50'-6" ft (btoc) Pumping water level: ft (btoc)

Obvious water quality characteristics:

Fresh  Salty  Clear  Cloudy  Sediment  Gas  
 Colour/odour: Clear Water sample collected:

Well driller (print clearly):

Name (first, last) (see note 15): Anderson Paul  
 Registration no. (see note 20): WD06061501

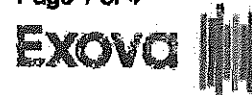
Consultant (if applicable; name and company): Canwest Well Drilling Ltd  
 DECLARATION: Well construction, well alteration or well closure, as the case may be, has been done in accordance with the requirements in the Water Act and the Ground

Date of work (YYYYMM/DD):

Started: January 2004 Completed: January 2004

Comments:

Etone  
 #107, 19577-67A Ave.  
 Surrey, British Columbia  
 V3S 3P6, Canada  
 T +1 (604) 514-3422  
 F +1 (604) 514-3423  
 E sales@etone.com  
 W www.etone.com



**Analytical Report**

<b>Bill To:</b> Aaron Service	<b>Project:</b>	<b>Lot ID:</b> 961012
<b>Report To:</b> Aaron Service	<b>ID:</b> CW Well Test-Tag 34151	<b>Control Number:</b> B15118
4703 Marine Avenue	<b>Name:</b> Mike Kid	<b>Date Received:</b> Sep 26, 2013
Powell River, BC, Canada	<b>Location:</b> 1041 Firburn	<b>Date Reported:</b> Oct 2, 2013
V8A 2L2	<b>LSD:</b>	<b>Report Number:</b> 1859532
<b>Attn:</b> Coranne Anderson	<b>P.O.:</b> 885822	
<b>Sampled By:</b>	<b>Auct code:</b>	
<b>Company:</b>		

<b>Reference Number</b>	961012-1
<b>Sample Date</b>	September 24, 2013
<b>Sample Time</b>	NA
<b>Sample Location</b>	
<b>Sample Description</b>	1041 Firburn / CWW Well Test Tag 34151
<b>Sample Matrix</b>	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments	
<b>Metals Extractable</b>						
Aluminum	Extractable mg/L	0.014	0.005	0.1	Below OG	
Antimony	Extractable mg/L	<0.0002	0.0002	0.006	Below MAC	
Arsenic	Extractable mg/L	0.0058	0.0002	0.010	Below MAC	
Barium	Extractable mg/L	0.005	0.001	1	Below MAC	
Boron	Extractable mg/L	0.025	0.005	5	Below MAC	
Cadmium	Extractable mg/L	<0.00007	0.00007	0.005	Below MAC	
Chromium	Extractable mg/L	0.0007	0.0005	0.05	Below MAC	
Copper	Extractable mg/L	0.022	0.001	1.0	Below AO	
Lead	Extractable mg/L	0.0037	0.0001	0.01	Below MAC	
Selenium	Extractable mg/L	<0.0008	0.0008	0.01	Below MAC	
Uranium	Extractable mg/L	<0.0005	0.0005	0.02	Below MAC	
Vanadium	Extractable mg/L	0.0006	0.0001			
Zinc	Extractable mg/L	0.089	0.001	5.0	Below AO	
<b>Microbiological Analysis</b>						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Heterotrophic Count - Aerobic	SimPlate	MPN/mL	<2	2		
<b>Physical and Aggregate Properties</b>						
Turbidity		NTU	1.6	0.1		
Colour	Apparent	Colour units	<5	5		
<b>Routine Water</b>						
pH	at 25 °C		8.09		6.5-8.5	Within AO
Electrical Conductivity		µS/cm at 25 C	123	1		
Calcium	Extractable	mg/L	13.6	0.1		
Iron	Extractable	mg/L	0.017	0.005	0.3	Below AO
Magnesium	Extractable	mg/L	0.48	0.1		
Manganese	Extractable	mg/L	0.004	0.001	0.05	Below AO
Potassium	Extractable	mg/L	0.2	0.1		
Silicon	Extractable	mg/L	6.84	0.05		
Sodium	Extractable	mg/L	13.6	0.1	200	Below AO
T-Alkalinity	as CaCO3	mg/L	55	5		
Chloride	Dissolved	mg/L	2.83	0.05	250	Below AO
Fluoride	Dissolved	mg/L	0.07	0.01	1.5	Below MAC
Nitrate - N	Dissolved	mg/L	<0.01	0.01	10	Below MAC

Exova  
 8104 15672-65 Ave  
 Surrey, British Columbia  
 V5S 6P4, Canada  
 T +1 604 514-3622  
 F +1 604 514-3623  
 E [Sales@exova.com](mailto:Sales@exova.com)  
 W [www.exova.com](http://www.exova.com)



**Analytical Report**

<b>Bill To:</b> Aaron Service	<b>Project ID:</b> CW Well Test-Tag 34151	<b>Lot ID:</b> <b>961012</b>
<b>Report To:</b> Aaron Service	<b>Name:</b> Mike Kid	<b>Control Number:</b> B15119
4708 Marine Avenue	<b>Location:</b> 1041 Firburn	<b>Date Received:</b> Sep 26, 2013
Powell River, BC, Canada	<b>LSD:</b>	<b>Date Reported:</b> Oct 2, 2013
V8A 2L2	<b>P.O.:</b> 885822	<b>Report Number:</b> 1859532
<b>Attn:</b> Coranne Anderson	<b>Acct code:</b>	
<b>Sampled By:</b>		
<b>Company:</b>		

<b>Reference Number</b>	961012-1
<b>Sample Date</b>	September 24, 2013
<b>Sample Time</b>	NA
<b>Sample Location</b>	
<b>Sample Description</b>	1041 Firburn / CWW Well Test Tag 34151
<b>Sample Matrix</b>	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments	
<b>Routine Water - Continued</b>						
Nitrite - N	Dissolved	mg/L	<0.01	0.01	1	Below MAC
Sulfate (SO4)	Dissolved	mg/L	38	0.5	500	Below AO
Hardness	as CaCO3	mg/L	36	1		
Total Dissolved Solids	Extractable	mg/L	84	1		

Approved by:   
 Mathieu Simoneau  
 Operations Manager

Exova  
 #138, 12876-15A Ave.  
 Surrey, BC V4N 1C6  
 V6S 4P3 (Canada)

T: (604) 544-9325  
 F: (604) 514-4323  
 E: [Surrey@exova.com](mailto:Surrey@exova.com)  
 W: [www.exova.com](http://www.exova.com)



**Methodology and Notes**

Bill To: Aaron Service	Project:	Lot ID: <b>961012</b>
Report To: Aaron Service	ID: CW Well Test-Tag 34151	Control Number: B15119
4703 Marine Avenue	Name: Mike Kid	Date Received: Sep 26, 2013
Powell River, BC, Canada	Location: 1041 Firburn	Date Reported: Oct 2, 2013
V8A 2L2	LSD:	Report Number: 1858532
Attn: Coranne Anderson	P.O.: 885822	
Sampled By:	Acct code:	
Company:		

**Method of Analysis**

Method Name	Reference	Method	Date Analysis Started	Location
Alk, pH, EC, Turb in water (Surrey)	APHA	* Alkalinity - Titration Method, 2320 B	28-Sep-13	Exova Surrey
Alk, pH, EC, Turb in water (Surrey)	APHA	* Conductivity, 2510 B	28-Sep-13	Exova Surrey
Alk, pH, EC, Turb in water (Surrey)	APHA	* pH - Electrometric Method, 4500-H+ B	28-Sep-13	Exova Surrey
Alk, pH, EC, Turb in water (Surrey)	APHA	* Turbidity - Nephelometric Method, 2130 B	28-Sep-13	Exova Surrey
Anions by iEC in water (Surrey)	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond, 4110 B	28-Sep-13	Exova Surrey
Apparent Color (Surrey)	APHA	* Spectrophotometric - Single Wavelength Method, 2120 C	28-Sep-13	Exova Surrey
Heterotrophic (Standard) Plate Count (Aerobic SP) - Surrey	US EPA	* Approval of Analytical Methods for Chemical and Microbiological Contaminants, CFR40 Part 141	28-Sep-13	Exova Surrey
Metals SemiTrace (Extractable) in water (Surrey)	US EPA	* Metals & Trace Elements by ICP-AES, 8010C	28-Sep-13	Exova Surrey
Total and E-Coli - Coliart - DW (Surrey)	APHA	Enzyme Substrate Test, APHA 9223 B	28-Sep-13	Exova Surrey
Trace Metals (extractable) in Water (Surrey)	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200 B	28-Sep-13	Exova Surrey

\* Reference Method Modified

**References**

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

**Guidelines**

Guideline Description: Health Canada GCDWQ  
 Guideline Source: Guidelines for Canadian Drinking Water Quality, Health Canada, August 2012  
 Guideline Comments: MAC = Maximum Acceptable Concentration  
 AO = Aesthetic Objective  
 OG = Operational Guideline for Water Treatment Plants  
 Refer to Health Canada GCDWQ for complete guidelines and additional drinking water information at [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)

**Comments:**

- Temperature of sample 961012-1 on arrival was 4.9 °C.
- The analysis of water sample 961012-1 is below Maximum Acceptable Concentrations for the chemical and bacteriological health related guidelines specified by the August 2012 Guidelines for Canadian Drinking Water Quality for the parameters tested.
- Sample 961012-1 was received in a 250 plastic bottle which does not meet the sample requirements for bacterial analysis as specified by the reference method.
- Sample 961012-1 exceeded 30 hour recommended hold time for microbiology testing. Excess time between sampling and analysis may affect the validity of the result.
- Sampling time not provided.
- pH analysis was performed past the recommended holding time of 15 minutes from sample collection.

Exova  
11675-89 4 Ave  
Surrey British Columbia  
V4A 6P8, Canada

T 61604: 614-3322  
F 61604: 614-3323  
E [Support@exova.com](mailto:Support@exova.com)  
or [V4A@exova.com](mailto:V4A@exova.com)

**Exova**



**Methodology and Notes**

Bill To:	Aaron Service	Project:		Lot ID:	<b>961012</b>
Report To:	Aaron Service	ID:	CW Well Test-Tag 34151	Control Number:	B15119
	4703 Marine Avenue	Name:	Mike Kid	Date Received:	Sep 28, 2013
	Powell River, BC, Canada	Location:	1041 Firburn	Date Reported:	Oct 2, 2013
	V8A 2L2	LSD:		Report Number:	1959532
Attn:	Coranne Anderson	P.O.:	665822		
Sampled By:		Acct code:			
Company:					

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The comparison of test results to guideline limits is provided for information purposes only. This is not to be taken as a statement of conformance / nonconformance to any guideline, regulation or limit. The data user is responsible for all conclusions drawn with respect to the data and is advised to consult official regulatory references when evaluating compliance.

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.