



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

Stamp company name/address/
phone/fax/e-mail here, if desired.

Ministry Well ID Plate Number: 14176
 Ministry Well Tag Number: _____
 Confirmation/alternative specs. attached
 Original well construction report attached

Red lettering indicates minimum mandatory information. See reverse for notes & definitions of abbreviations.

Owner name: Betty Friesen
 Mailing address: 166 Meninick Drive Town Salt Spring Is. Prov. BC Postal Code V8R
 Well Location: Address: Street no. _____ Street name _____ Town _____
 Legal description: Lot _____ Plan _____ D.L. _____ Block _____ Sec. _____ Twp. _____ Rg. _____ Land District _____
 PID: _____ (and) Description of well location (attach sketch, if nec.): _____

NAD 83: Zone: _____ (and) UTM Northing: _____ m (or) Latitude (see note 3): _____
 UTM Easting: _____ m (or) Longitude: _____
 Method of drilling: air rotary cable tool mud rotary auger driving jetting excavating other (specify): _____
 Orientation of well: vertical horizontal Ground elevation: _____ ft (asl) Method (see note 4): _____
 Class of well (see note 5): _____ Sub-class of well: _____
 Water supply wells: 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	10			overburden		
10	55			granite	1/4 55 ft	
55	135			granite quartz		
135	225			granite	3 200 ft	

Casing details

From ft (bgl)	To ft (bgl)	Dia in	Casing Material / Open Hole	Wall Thickness in	Drive Shoe
				188	

Screen details

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

Surface seal: Type: cement Depth: _____ ft
 Method of installation: Poured Pumped Thickness: _____ in
 Backfill: Type: _____ Depth: _____ ft
 Liner: PVC Other (specify): _____
 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: Bail Plug Plate Other (specify): _____
 Filter pack: From: _____ ft To: _____ ft Thickness: _____ in
 Type and size of material: _____

Developed by:
 Air lifting Surging Jetting Pumping Bailing
 Other (specify): _____ Total duration: _____ hrs
 Notes: _____

Final well completion data:
 Total depth drilled: 225 ft Finished well depth: 225 ft (bgl)
 Final stick up: 18 in Depth to bedrock: 10 ft (bgl)
 SWL: _____ ft (btoc) Estimated well yield: 9 USgpm
 Artesian flow: _____ USgpm, or Artesian pressure: _____ ft
 Type of well cap: _____ Well disinfected: Yes No
 Where well ID plate is attached: _____

Well yield estimated by:
 Pumping Air lifting Bailing Other (specify): _____
 Rate: _____ USgpm Duration: 1 hrs
 SWL before test: _____ ft (btoc) Pumping water level: _____ ft (btoc)

Well closure information:
 Reason for closure: _____
 Method of closure: Poured Pumped
 Sealant material: _____ Backfill material: _____
 Details of closure (see note 17): _____

Obvious water quality characteristics:
 Fresh Salty Clear Cloudy Sediment Gas
 Colour/odour: _____ Water sample collected:

Well driller (print clearly):
 Name (first, last) (see note 19): Robert Kaye
 Registration no. (see note 20): no 06101805
 Consultant (if applicable; name and company): _____

Date of work (YYYY/MM/DD):
 Started: Oct 27/10 Completed: Oct 31/10
 Comments: _____

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 Water Protection Regulation.
 Signature of Driller Responsible: [Signature]

Please pay in Canadian Funds by cash, cheque or money order.
Thank you.

Total \$168.00

HST No. 869947879

Agrichem Analytical Drinking Water Report

409 Stewart Rd
Salt Spring Island, BC
V8K 1Y6

Phone/Fax: 250.538.1712
web: www.agrichem.ca
email: info@agrichem.ca

Betty Friesen
166 Menhinick
current treatment
unknown

sample 73133
date received 25-Jan-13
time/temperature 15:15 7 °C
date of report 05-Feb-13
sampled by agrichem

Potable Water Quality Standards
Health Canada (2008) Island Trust (2001)

		Health Canada (2008)	Island Trust (2001)
Total Coliforms	0 MPN/100ml	0	0
E. coli	0 MPN/100ml	0	0
pH	7.57	6.5 to 8.5 *	6.5 to 8.5 *
Conductivity	363 uS/cm	no limit set	
Total Dissolved Solids (TDS)	278 mg/L	500*	500*
Hardness (as CaCO3)	158 mg/L	80-100	80-100
Alkalinity (as CaCO3)	161 mg/L	no limit set	
Residual Chlorine	< 0.02 mg/L		0
Turbidity	0.13 NTU	****	1
Fluoride (F)	0.04 mg/L	1.5 **	1.5
Chloride	9.64 mg/L	250 *	250 *
Nitrate (N)	0.05 mg/L	10 **	10 **
Nitrite (N)	< 0.01 mg/L	3.2 **	
Phosphate (P)	< 0.02 mg/L	no limit set	
Sulphate (S)	2.24 mg/L	500 *	no limit set
Sodium (Na)	9 mg/L	200 ***	500 *
Potassium (K)	0.9 mg/L	no limit set	200 ***
Magnesium (Mg)	6.4 mg/L	500 *	
Calcium (Ca)	54.4 mg/L	no limit set	
Iron (Fe)	< 0.03 mg/L	0.3 *	0.3 *
Copper (Cu)	< 0.01 mg/L	1 *	
Manganese (Mn)	0.63 mg/L	0.05 *	0.05 *
Zinc (Zn)	0.05 mg/L	5 *	
Arsenic (As)	< 1 ug/l	10**	10**
Lead (Pb)	< 2 ug/L	10**	

< is "less than" > is "greater than"

* aesthetic - no health risk
** maximum
*** 20 mg/L for restricted diets
**** surface water or surface influenced groundwater (drilled well) source 1 NTU
secure groundwater (drilled well) source 5 NTU
the presence of Total Coliform bacteria indicates surface influenced water source

For the Total Coliforms and E. coli method, 0 is UNDETECTED and is technically < 1 MPN/100ml

This water sample meets the Health Canada Guidelines for Potability for all parameters tested. The following parameters have not met the Aesthetic Objectives: hardness and manganese - these are not Health concerns and may only contribute to an undesirable smell, taste or color or may cause scale buildup on appliances.

metals and minerals are dosed as per APHA 3030E2
Aesthetic Objective - values pose no health risk but may affect the taste, color or smell or cause scaling

John Harris BSc



Ministry of Environment

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

DRILLWELL ENTERPRISES LTD.
 4994 Polkey Road
 Duncan, B.C. V9L 6W3
 Phone: 250-746-5268
 Stamp copy phone/fax/e-mail here, if desired.

Ministry Well ID Plate Number: 14176
 Ministry Well Tag Number: _____
 Confirmation/alternative specs. attached
 Original well construction report attached

Red lettering indicates minimum mandatory information. See reverse for notes & definitions of abbreviations.

Owner name: Betty Friesen
 Mailing address: PO Box 95074 Town Vancouver Prov. BC Postal Code V5T 4T8
 Well Location: Address: Street no. 166 Street name Menhinick Town Salt Spring Island
 Legal description: Lot 3 Plan VIP 12534 D.L. Block Sec. 54 Twp. Rg. Land District Cowichan
 PID: 004-778-359 (and) Description of well location (attach sketch, if nec.): In Back yard up hill above house
 NAD 83: Zone: 10 UTM Easting: 469364 m Latitude (see note 3): _____
 (see note 2) UTM Northing: 5400805 m Longitude: _____
 Method of drilling: air rotary cable tool mud rotary auger driving jetting excavating other (specify): _____
 Orientation of well: vertical horizontal Ground elevation: 100 ft (asl) Method (see note 4): Google Earth
 Class of well (see note 5): Water Supply Sub-class of well: Domestic
 Water supply wells: 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
				Originally Drilled by Albert Kaye for Betty Friesen in 2010: Oct. 31		
				Well Record Stated Depth 225 ft stated yield 9 US GPM		
				Video camera inspection determined casing depth at 20 ft below ground: 6" casing bent in at bottom.		
0	20			Cased 6"		
20	43			4" pvc lined with packers at 40 & 41 ft.		
43	225			open hole in rock		
3	40			Cement grout between 4" & 6" hole & casing		

Casing details

From ft (bgl)	To ft (bgl)	Dia in	Casing Material / Open Hole	Wall Thickness in	Drive Shoe
0	20	6"	Steel	0.219	No
3	43	4"	Class 160 4" PVC	0.25	No
43	225	6"	open hole		

Screen details

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

Surface seal: Type: Cement grout Depth: 40 ft
 Method of installation: Poured Pumped Thickness: 1 in
 Backfill: Type: _____ Depth: _____ ft
 Liner: PVC Other (specify): _____
 Diameter: 4" in Thickness: Class 160 / 0.25 in
 From: 3 ft (bgl) To: 43 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: Bail Plug Plate Other (specify): _____
 Filter pack: From: _____ ft To: _____ ft Thickness: _____ in
 Type and size of material: _____

Developed by: Original Driller
 Air lifting Surging Jetting Pumping Bailing
 Other (specify): _____ Total duration: _____ hrs
 Notes: _____

Final well completion data:
 Total depth drilled: N/A ft Finished well depth: 225 ft (bgl)
 Final stick up: 18 in Depth to bedrock: 10 ft (bgl)
 SWL: Flowing ft (btoc) Estimated well yield: 9 USgpm
 Artesian flow: 2 gpm USgpm, or Artesian pressure: +4 ft
 Type of well cap: pitless Well disinfected: Yes No
 Where well ID plate is attached: Clamped to casing

Well yield estimated by: Original Driller
 Pumping Air lifting Bailing Other (specify): _____
 Rate: _____ USgpm Duration: _____ hrs
 SWL before test: _____ ft (btoc) Pumping water level: _____ ft (btoc)

Well closure information:
 Reason for closure: _____
 Method of closure: Poured Pumped
 Sealant material: _____ Backfill material: _____
 Details of closure (see note 17): _____

Obvious water quality characteristics:
 Fresh Salty Clear Cloudy Sediment Gas
 Colour/odour: Sulphur odour Water sample collected:

Date of work (YYYY/MM/DD):
 Started: 2013/02/21 Completed: 2013/02/21
 Comments: Install & grout line to 40 ft to contain artesian flow.

Well driller (print clearly):
 Name (first, last) (see note 19): David Slade
 Registration no. (see note 20): WD 04121404
 Consultant (if applicable; name and company): GW Solutions Katherine

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 Water Protection Regulation.

Signature of Driller Responsible [Signature]