

Well Decommissioning Worksheet

Part 1. Cont	act Information	า			W\	VDR:	
						,	to Description on Back
Name of Land	d Owner(s):				Telephone No.:		
Mailing Addre	ess:						
Land Location	n:	W/NE/SE)	(Section)				_
			(Section)		- ' '	Range)	(Meridian)
GPS Coordin	ates:(E	'(')	(A.L. arth.')	_	SPS Datum Used: UTM (NAD 83)	Well De	commissioned By:
			(Northing)		UTM (NAD 63)	□ Se	
Name of Con	tractor:				□ LAT/LONG	□ Co	ntractor
Part 2. Deve	eloping A Plan	To Seal The Wel	I				
well. Once the	measurements o	n the top (2 a) porti	rksheet will be used to do on of this section are det refer to the reverse side	ermined	then the values on t	ne bottom (2 l	o) can be determined
2 a: Measure	ed values						
Well Depth: _	(a)	Depth to Water:	(b) Casing	Diamet	er: C	asing Mater	ial:
	(ft)		(ft)		(in)		
2 b: Calculat	ed Values (conv	versions on reverse	side of page)				
Volume/ft Cas (Obtain from ta reverse side of		(c) Length c (Subtract	of Water Column: line (a) from line (b)	(ft)	d) Total Casing (Multiply line (
	1 0 /	to Obtain Target	Concentration:				sinfection:
(Obtain from ta	ble 2 on reverse s	side of page)	(litres	s) (L	ine (d) multiplied by	Line (e))	(litres
Dort 2 Cton	a Takan Ta Sas	al The Well					
(This is to doc		aken to seal the wel	II. Include information of bentonite seals).		<u>Diagram of I</u>	<u>Decommiss</u>	ioned Well
	Casi	ing Removal					
From (ft)	To (ft)	М	laterial				
	Materials	Used to Seal We	ell				
From (ft)	To (ft)	Material	and Quantity				
omments:							
							_
_							
	Signati	ure of Land Owner	r		Date		

This worksheet is part of a series of fact sheets outlining how to decommission abandoned wells. Please refer to the fact sheets or contact the Water Security Agency, Groundwater Services at 306.694.3980 or by email at groundwater@wsask.ca for guidance.

Table 1: Casing Volume

Casing diameter	Volume per foot casing		
inches	cubic feet		
4	0.087		
5	0.136		
6	0.196		
7	0.267		
8	0.348		
24	3.136		
30	4.900		
36	7.056		

Conversions/Abbreviations:

1 cu. ft. = 28.32 litres

1 litre = 0.22 imp. gal.

1 imp. gal. = 4.54 litres

1 ft = 0.3048 meters

ft = foot

in = inches

cm = centimetres

m = metres

cu. ft = cubic feet

cm = # inches

g = # pounds

cu. ft = cu. yard

Table 2: Chlorine Calculation to Obtain 250 mg/l

Casing Diameter	* 5.25% Domestic Chlorine Bleach Litres needed per 1 foot (30 cm) of water in casing	12% Industrial Sodium Hypochlorite Litres needed per 1 foot (30 cm) of water in casing	** 70% Granular Calcium Hypochlorite Grams dry weight needed per 1 foot (30 cm) of water in casing
Inches	Litres	Litres	Grams
4	0.012	0.005	0.9
5	0.018	0.008	1.4
6	0.026	0.012	2.0
7	0.036	0.016	2.7
8	0.047	0.020	3.5
24	0.424	0.185	31.7
30	0.667	0.292	50.0
36	0.952	0.417	71.3

^{*} Domestic bleach has a relatively low concentration of 5.25%, which decreases over time as the product is stored. For this reason, its effectiveness for disinfection may be limited.

Example:

Part 2. Developing A Plan To Seal The Well

The information determined in this portion of the worksheet will be used to determine the quantities of material required to decommission the well. Once the measurements on the top (2 a) portion of this section are determined then the values on the bottom (2 b) can be determined from the tables on the reverse side of page. Please refer to the reverse side of page for an example on how to complete the following.

2 a: Measured values

galvanized Well Depth: 30 Depth to Water: 17 (b) Casing Diameter _ (a) Casing Material:

2 b: Calculated Values (conversions on reverse side of page)

Length of Water Column: 13 (30 - 17) 4.9 Volume/ft Casing: (c) Total Casing Volume: _ (Multiply line (a) by line (c) (ft) (Obtain from table 1 on (cu. ft) (Subtract line (a) from line (b) reverse side of page)

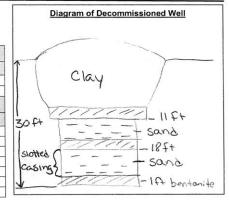
Quantity of Chlorine per foot to Obtain Target Concentration: Obtain from table 2 on reverse side of page)

Quantity of Chlorine for Disinfection: (Chlorine for Disinfection: (Line (d) multiplied by Line (e)) (litres) (Line (d) multiplied by Line (e))

Part 3. Steps Taken To Seal The Well

(This is to document the steps taken to seal the well. Include information such as the amount of casing removed and location of bentonite seals).

From (ft)	To (ft)	Material	
0	- 11	remared galu. Casino	
	Material	s Used to Seal Well	
From (ft)	To (ft)	Material and Quantity	
0	10	local Clay	
10	- 11	bentonite	
1)	17	sand	
17	18	bentonite	
18	29	Sand	
29	30	bentonite	



comments: well decommissioned due to high iron levers

^{**} If dry chemical is used, it should be mixed with warm water to form a chlorine solution prior to placing in the well.

^{***}Always follow the manufactures recommended handling precautions.