How to Fill Out Well Log and Drilling Report Form DNR 7802.96

SELF TRANSCRIBING Divison of Water, 1939	PRILLING REPORT f Natural Resources Fountain Square Drive (614) 265-6739 Fax (614) 447-9503
WELL LOCATION	CONSTRUCTION DETAILS
County Township	□ Rotary □ Cable □ Augered □ Driven □ Other □ BOREHOLE/CASING (measured from ground surface)
	1 ☐ Borehole Diameterinches Depth ft.
Owner/Builder (Circle One or Both) First Last	Casing Diameterin. Lengthft.Thicknessin.
Address of	2 Borehole Diameterinches Depthft.
Well Location	Casing Diameterin. Lengthft.Thicknessin.
	Casing Height Above Groundft.
City Zip Code +4	Type 2 Steel 1 Galv. 1 PVC 1 Other
Permit No. Section/Lot No. (Circle One or Both)	
Location of Well in State Plane coordinates, if available: Use of Well	Joints 2 Threaded 1 Welded 1 Solvent 2 Other
N	SCREEN
S Y	Diameter Slot Size Screen Length ft.
Elevation of Well +/- ft. or m	Type
Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source	GRAVEL PACK(Filter Pack)
	Material/SizeVolume/Weight Used
Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and	Method of Installation
longitude are available please include here: Lat: Long:	Depth: Placed FROM ft. TO ft.
North ———	GROUT
	Material Volume/Weight Used
	Method of Installation
	Depth: Placed FROM ft. TO ft.
	DRILLING LOG*
	INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.
W	
W E a a s s t	sandstone, snale, limestone, gravel, clay, sand, etc.
t	
South	
WELL TEST*	
Pre-Pumping Static Level ft. Date	
Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other	-
Test Rategpm Duration of Testhrs. Feet of Drawdownft. Sustainable Yieldgpm	
*(Attach a copy of the pumping test record, per section 1521.05, ORC)	
Is Copy Attached? Yes No Flowing Well? Yes No	
Quality	
PUMP/PITLESS	-
Type of pumpgpm	
Pump set atft. Pitless Type	
Pump installed by	
I hereby certify the information given is accurate and correct to the best of my knowledge.	
Drilling Firm	
Address City, State, Zip	
Οιιχ, Οιαιο, Σιρ	
Signed Date	*(If more space is needed to complete drilling log, use next consecutively numbered form.)
ODH Registration Number	Date of Well Completionft.
	Total Boptil of WonIt
	

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

Introduction

The Ohio Department of Natural Resources, Division of Water is pleased to introduce the new and improved version of our well log and drilling report. The overall content of the well log has stayed the same, though some new data fields have been added. Some of these additions include spaces for recording the casing height above ground, the sustainable yield of the well, whether or not the well is flowing, and the total depth of the well. However, most of the changes are due to the reorganization of the required information into what we believe to be a more logical format. In October, 1995, we mailed copies of a preliminary draft of this new log to all active drilling contractors operating in the state of Ohio, and asked for comments about its content and layout. We received many responses, most very favorable, and a number of the suggestions sent in were incorporated into this new form.

The following pages contain instructions on how to fill out these new well log forms. The well log has been broken up into different sections, each with explanations of what information is required, and with appropriate examples of this information. Also, there is a blank well log form with each blank space numbered. The number in each space is referred to in the text; for a question about a particular space, look up that number in the text. There will be an explanation about what type of information is required for that section of the log. Be aware that, while the explanations discuss "writing in" information on the well log, it is perfectly acceptable to fill out the logs with a typewriter or on a computer that will print out the information on the log with an impact or laser printer. For more information about available computer software, call the Division of Water at the number given below.

A recent, though not new, addition to the well log form is the section devoted to the location of the well in state plane coordinates or latitude and longitude. The Division of Water is striving to obtain the best possible location information for each well log filed, and these coordinates will locate a well with an accuracy of a few feet (or meters). Further explanation about the GPS (global positioning system) units and their use in determining location coordinates is also readily available from the Division of Water by calling the number below.

The well log still has three colored copies attached to it, and the distribution of these copies is the same as it has been in the past: the blue copy is the customer's copy, the pink copy is the driller's copy, and the green copy is the local health department's copy. The original, of course, should be filed with the Ohio Department of Natural Resources, Division of Water, per Ohio Revised Code Section 1521.05 within thirty days after completion of construction of the well. The sections of the Ohio Revised Code relating to filing well log and drilling reports and associated penalties for non-compliance and falsification can be found on pages 2 & 3.

The staff of the Division of Water, Water Resources Section will be more than happy to provide any assistance needed with filling out these new well log forms. Contact our office at 614-265-6739 with any questions. And remember, we are always ready to answer your requests for ground water information. Thank you for your cooperation.

Ohio Law Relating to Filing Well Logs and Well Sealing Reports

Ohio Revised Code, Section 1521.01 Definitions.

- (B) "Well" means any excavation, regardless of design or method of construction, created for any of the following purposes:
 - (1) Removing ground water from or recharging water into an aquifer, excluding subsurface drainage systems installed to enhance agricultural crop production or urban or suburban landscape management or to control seepage in dams, dikes, and levees;
 - (2) Determining the quantity, quality, level, or movement of ground water in or the stratigraphy of an aquifer, excluding borings for instrumentation in dams, dikes, levees, or highway embankments;
 - (3) Removing or exchanging heat from ground water, excluding horizontal trenches that are installed for water source heat pump systems.
- (C) "Aquifer" means a consolidated or unconsolidated geologic formation or series of formations that are hydraulically interconnected and that have the ability to receive, store or transmit water.
- (D) "Ground water" means all water occurring in an aquifer.
- (F) "Person" has the same meaning as in section 1.59 of the Revised Code and also includes the United States, the state, any political subdivision of the state, and any department, division, board, commission, agency, or instrumentality of the United States, the state, or a political subdivision of the state.

Ohio Revised Code, Section 1521.05.

- (A) As used in this section:
 - (1) "Construct" or "construction" includes drilling, boring, digging, deepening, altering, and logging.
 - (2) "Altering" means changing the configuration of a well, including, without limitation, deepening a well, extending or replacing any portion of the inside or outside casing or wall of a well that extends below ground level, plugging a portion of a well back to a certain depth, and reaming out a well to enlarge its original diameter.
 - (3) "Logging" means describing the lithology, grain size, color, and texture of the formations encountered during the drilling, boring, digging, deepening, or altering of a well.
 - (4) "Grouting" means neat cement; bentonite products in slurry, granular, or pelletized form, excluding drilling mud or fluids; or any combination of neat cement and bentonite products that is placed within a well to seal the annular space or to seal an abandoned well and that is impervious to and capable of preventing the movement of water.
 - (5) "Abandoned well" means a well whose use has been permanently discontinued and that poses potential health and safety hazards or that has the potential to transmit surface contaminants into the aquifer in which the well has been constructed.
 - (6) "Sealing" means the complete filling of a abandoned well with grouting or other approved materials in order to permanently prevent the vertical movement of water in the well and thus prevent the contamination of ground water or the intermixing of water between aquifers.
- (B) Any person that constructs a well shall keep a careful and accurate log of the construction of the well. The log shall show all of the following:
 - (1) The character, including, without limitation, the lithology, color, texture, and grain size, the name, if known, and depth of all formations passed through or encountered;
 - (2) The depths at which water is encountered;
 - (3) The static water level of the completed well;

- (4) A copy of the record of all pumping tests and analyses related to those tests, if any;
- (5) Construction details, including lengths, diameters, and thicknesses of casing and screening and the volume, type of material, and method of introducing gravel packing and grouting into the well;
- (6) The type of pumping equipment installed, if any;
- (7) The name of the owner of the well, the address of the location where the well was constructed, and a description of the location of the property where the well was constructed:
- (8) The signature of the individual who constructed the well and filed the well log;
- (9) Any other information required by the chief of the Division of Water.

The log shall be furnished to the division within thirty days after the completion of construction of the well, upon forms prescribed and prepared by the division. The log shall be kept on file by the division.

In accordance with Chapter 119 of the Revised Code, the chief may adopt, amend, and rescind rules requiring other persons that are involved in the construction or subsequent development of a well to submit well logs under this division containing any or all of the information specified in divisions (B)(1) to (9) of this section and requiring any person that seals an abandoned well to submit a well sealing report under this division containing any or all of the information specified in those divisions and any additional information specified in the rules.

- (C)(1) No person shall fail to keep and submit a well log as required by this section.
 - (2) No person shall make a false statement in any well log required to be kept and submitted under this section. Violation of division (C)(2) of this section is falsification under section 2921.13 of the Revised Code.
- (D) For the purposes of prosecution of a violation of division (C)(1) of this section, a prima facie case is established when the division obtains either of the following:
 - (1) A certified copy of a permit for a private water system issued in accordance with rules adopted under section 3701.344 [3701.34.4] of the Revised Code, or a certified copy of the invoice or a cancelled check from the owner of a well indicating the construction services performed;
 - (2) A certified copy of any permit issued under Chapter 3734 or 6111 of the Revised Code for any activity that includes the construction of a well.

Ohio Revised Code, Section 1521.99 Penalties

(A) Whoever violates division (C)(1) of section 1521.05 of the Revised Code is guilty of a misdemeanor of the fourth degree.

Revised Code, Section 2921.13

Whoever violates division (C)(2) of section 1521.05 of the Revised Code is guilty of a misdemeanor of the first degree.

Revised Code, Section 2929.21

- (A) Whoever is convicted of or pleads guilty to a misdemeanor other than a minor misdemeanor shall be imprisoned for a definite term or fined, or both.
- (B) Terms of imprisonment for misdemeanor shall be imposed as follows:
 - (1) For a misdemeanor of the first degree, not more than six months.
 - (4) For a misdemeanor of the fourth degree, not more than thirty days.
- (C) Fines for misdemeanor shall be imposed as follows:
 - (1) For a misdemeanor of the first degree, not more than one thousand dollars.
 - (4) For a misdemeanor of the fourth degree, not more than two hundred fifty dollars.

Example of Completed Well Log and Drilling Report

DNR 7802.96 WELL LOG AND D	PRILLING REPORT		
TYPE OR USE PEN Ohio Department of	f Natural Resources		
PRESS HARD Columbus, Ohio 43224-9971 Voice	Fountain Square Drive (614) 265-6739 Fax (614) 447-9503		
WELL LOCATION	CONSTRUCTION DETAILS		
County _Delaware Township _Trenton	⊠ Rotary		
	1⊠ Borehole Diameter <u>7 7 / 8</u> inches Depth <u> </u>		
Owner Builder E. J. Fudd (Cide One or Both) First Last	Casing Diameter 5 in. Length 20 ft.Thick		
Address of Well Location 181 Green Cook Rd.	2□ Borehole Diameterinches Depth Casing Diameter5in. Length102ft.Thick		
Number Street Name	Casing Height Above Ground 1		
City_Sunbury Zip Code +443074-9761	1		
Permit No. 960.95 Section Lot No. 20 (Circle One on Berti)	Type 2 ☐ Steel 2 ☐ Galv. 1 ☑ PVC 1 ☐ Chher		
	Joints 1 ☐ Threaded 1 ☐ Welded 1 ☒ Solvent 1 ☐ 2 ☐ Other_		
Location of Well in State Plane coordinates, if available: Use of Well Residential N X 195339 .425 +/- 20 ft or m			
N X 195339 . 425 +/- 20	SCREEN		
S ☐ Y <u>1922944</u> . <u>533</u> +/- <u>20</u> (ff) or m Elevation of Well <u>1084</u> . <u>+/- 5</u> (ff) or m	Diameter <u>5 in</u> Slot Size <u>.050 in</u> Screen Leng Type <u>Machine-slotted</u> Material <u>PVC</u>	th5_	ft.
Datum Plain: NAD27 NAD83 Elevation Source Topo map	Set Between 122 ft. and 127		
Source of Coordinates: ☑ GPS ☐ Survey ☐ Other	GRAVEL PACK (Filter Pack)		
Clastable a seed about the distance well like from a supplicated bishuran a street	Material/Size #4 Parry sand Volume/Weight Used _	400 1	bs
Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and	Method of InstallationGravity_pour		
longitude are available please include here: Lat: 40°12'09"Long: 82°46'35' North	1 .		ft.
	GROUT Material Benseal/EZ Mud Volume/Weight Used	175 a	al
1	Method of Installation Pumped through 1" tremi		
	Depth: Placed FROM 118 ft. TO sur		
	·		
Tanna and a second a second and	DRILLING LOG* INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.		
W S E	Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	То
e s t			
T 37 8 "	Brown clay	0	15
BOSTON RD. 41	Gray sandy clay	15	20
ACC.	Sand & gravel (dry)	1 1	22
TRENTON AO			33
A CONTRACTOR OF THE CONTRACTOR	Gray clay w/gravel		
South	Sand & gravel (dry)	33	39
WELL TEST*	Gray clay	39	119
Pre-Pumping Static Level 20 ft. Date 12/10/95	Coarse sand & gravel	119	127
Measured from: ☑ Top of Casing ☐ Ground Level ☐ Other	1		
☑ Air ☐ Bailing ☐ Pumping* ☐ Other			
Test Rate 35 gpm Duration of Test 1 hrs. Feet of Drawdown 20 ft. Sustainable Yield 25 gpm	Water encountered at 122'	ļ	ļ
*(Attach a copy of the pumping test record, per section 1521.05, ORC)			
Is Copy Attached? ☐ Yes ☑ No Flowing Well? ☐ Yes ☑ No			
Quality Clear, 1ppm Fe, 30 gpg hardness, pH 7		†	
PUMP/PITLESS			ļ
Cubmous iblo			ļ
Type of pump Submersible Capacity 10 gpm Pump set at 65 ft. Pitless Type Adapter			
Pump installed by Acme Drilling Co.			
I hereby certify the information given is accurate and correct to the best of my knowledge.			
Drilling Firm Acme Drilling Co.			ļ
Address 1234 Main St.			
City, State, Zip <u>Anytown</u> , Ohio 56789			
Signed	*(If more space is needed to complete drilling log, use next consecutivel	y numbere	ed form.)
ODH Registration Number 1111	Date of Well Completion 12/10/95 Total Depth of	Well 1	27 ft.
· · · · · · · · · · · · · · · · · · ·			
Completion of this form is required by section 1521.05, Ohio ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1			71

Key to Well Log and Drilling Report Completion Instructions

TYPE OR USE PEN Ohio Department o SELF TRANSCRIBING Divison of Water, 1939	DRILLING REPORT f Natural Resources Fountain Square Drive
PRESS HARD Columbus, Ohio 43224-9971 Voice	e (614) 265-6739 Fax (614) 447-9503
WELL LOCATION	CONSTRUCTION DETAILS Rotary Cable Augered Driven Other
County Township 2	BOREHOLE/CASING (measured from ground surface)
3	1□ Borehole Diameter inches Depth ft.
Owner/Builder (Circle One or Both) First Last	Casing Diameterin. Lengthft.Thicknessininftft.
Address of Well Location	Casing Diameter in. Length ft. Thicknessin.
Number Street Name	Casing Height Above Groundft.
City Zip Code +4	Type Steel 3 Galv. 1 PVC 1 Other
Permit No. Section/Lot No. (Circle One or Both)	2
Location of Well in State Plane coordinates, if available: Use of Well	Joints 1 Threaded 1 Welded 2 Solvent 2 Other
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	SCREEN Diameter 18 Slot Size 19 Screen Length 20 ft
S Y	Diameter Slot Size Screen Length 20 ft. Type Material
Datum Plain: NAD27 NAD83 Elevation Source	Set Between ft. and ft.
Source of Coordinates: GPS Survey Other	GRAVEL PACK (Filter Pack)
Sketch a map showing distance well lies from numbered state highways, street	Material/Size
intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: Long:	Method of Installation
North	GROUT
	MaterialVolume/Weight Used
	Method of Installation
	Depth: Placed FROMft. TOft.
	DRILLING LOG*
	INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.
See Page 6	Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.
See Page 6	
S th	See Page 9
South WELL TEST*	-
Pre-Pumping Static Level 32 ft. Date 33	
Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other ☐ 34	
☐ Air ☐ Bailing ☐ Pumping* ☐ Other	
Test Rategpm Duration of Testhrs.	
Feet of Drawdown ft. Sustainable Yield gpm *(Attach a copy of the pumping test record, per section 1521.05, ORC)	
Is Copy Attached?	
Quality40	-
PUMP/PITLESS	
Type of pump Capacity 42 gpm	1
Pump set at	
Pump installed by 45	
I hereby certify the information given is accurate and correct to the best of my knowledge.	
Drilling FirmAddress	
City, State, Zip	
See Page 9	
Signed Date	*(If more space is needed to complete drilling log, use next consecutively numbered form.)
ODH Registration Number	Date of Well Completion Total Depth of Well ft.
ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1	Revised Code - file within 30 days after completion of drilling. 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971 copy Green - Local Health Dept. copy

Well Location

	EXAMPLE
WELL LOCATION	WELL LOCATION
County Township 2	County _Delaware Township _Trenton
Owner/Builder (Circle One or Both) First Last	Owner Builder E. J. Fudd Cinder One of Both) First Last
Address of Well Location Number Street Name	Address of Well Location 181 Green Cook Rd. Number Street Name
City Zip Code +4	City Sunbury Zip Code +4 43074-9761
Permit No. Section/Lot No. (Circle One or Both)	Permit No. 960.95 Section Lot No (Circle One on Burn) 20
Location of Well in State Plane coordinates, if available: Use of Well	Location of Well in State Plane coordinates, if available: Use of Well Residential
N	N X 195339 . 425 +/- 20 ft or m
S V See BOX.BeloW ft. or m	s □ Y <u>1922944</u> . <u>533</u> +/- <u>20</u> (ff) or m
Elevation of Well	Elevation of Well 1084 . +/- 5 ft or m
Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source	Datum Plain: NAD27 NAD83 Elevation Source Topo map
Source of Coordinates: GPS Guivey Guiter	Source of Coordinates: GPS Survey Other
Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: Long: North	Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: 40°12 ' 09" Long: 82°46 ' 35" North
W See Box Below Eas t	South South

- (1) Write in the county and (2) political township in which the well is located. County road maps are readily available from the county engineer's office, usually at no charge.
- **(3)** Write in the first and last name (or company name) of the owner and/or builder. Circle the appropriate description.
- **(4)** Write in the number and street name for the well location, not the owner's or builder's current address.
- **(5)** Note the city and **(6)** zip code for the address given in **(4)**.
- (7) Write in the permit number, if any. Permits are required for private water system (residential) wells and public supply wells.
- **(8)** Note the township section number or sub-division lot number if available.
- **(9)** Write in the use of the well, such as residential, irrigation, agricultural, fire protection, public supply, industrial, etc.

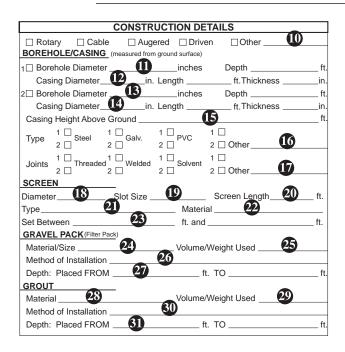
State Plane Coordinates

Those with the proper resources (GPS units, topographic maps, survey equipment) should locate the well with state plane coordinates and/or latitude and longitude and provide this information on the form. Also note the land surface elevation of the well, and the source of that measurement (such as a topographic map).

Sketch Map

Everyone must sketch a location map that includes nearest crossroads and distances from intersections, or copy a portion of the county road map and attach it in the sketch map space. Mark the location of the well on it (see example).

Construction Details



(10)Indicate the type of drilling rig used to construct the well. Check one of the listed options or write in the drilling method used.

Borehole/Casing

- (11) Note borehole diameter and depth.
- **(12)**Note casing diameter, length, and thickness set in that borehole.
- (13)Note second borehole diameter and depth information, if needed.
- **(14)**Note second casing diameter, length, and thickness information, if needed.
- **(15)**Write in the height of the casing above ground when the well is completed.
- **(16)**Check type of casing used in the well, or write it in if it is not listed.
- (17) Check type of joints used, or write it in if it is not listed.

Screen

- (18) Note the diameter of the screen installed, (19) slot size in inches, and (20) length of screen in feet.
- (21) Write in the type of screen used, such as wire-wrapped, machine-slotted, louvered, etc.
- **(22)** Write in the material of which the screen is composed, such as PVC, stainless steel, brass. etc.
- (23) Note the depths between which the screen is placed.

EXAMPLE

CONSTRUCTION DETAILS		
☑ Rotary ☐ Cable ☐ Augered ☐ Driven ☐ Other		
BOREHOLE/CASING (measured from ground surface)		
1⊠ Borehole Diameter <u>7 7/8</u> inches Depth <u>127</u>		
Casing Diameter 5 in. Length 20 ft.Thickness .327	_in.	
2 Borehole Diameterinches Depth	_ ft.	
Casing Diameter 5 in. Length 102 ft.Thickness .265	_in.	
Casing Height Above Ground	_	
Type 1 ☐ Steel 1 ☐ Galv. 1 ☑ PVC 1 ☐ 2 ☐ Other		
2 \(\text{2 \(\text{Other}\)		
Joints 1 □ Threaded 1 □ Welded 1 ⊠ Solvent 1 □ 2 □ Other		
SCREEN		
Diameter 5 in Slot Size 050 in Screen Length 5	ft.	
Type Machine-slotted Material PVC	_	
Set Between ft. and ft.	ft.	
GRAVEL PACK (Filter Pack)		
Material/Size #4 Parry sand Volume/Weight Used 400 lbs		
Method of Installation <u>Gravity pour</u>		
Depth: Placed FROM <u>118</u> ft. TO <u>127</u>	_ ft.	
GROUT		
Material Benseal/EZ Mud Volume/Weight Used 175 gal		
Method of Installation Pumped through 1" tremie tube		
Depth: Placed FROM 118 ft. TO surface	_ ft.	

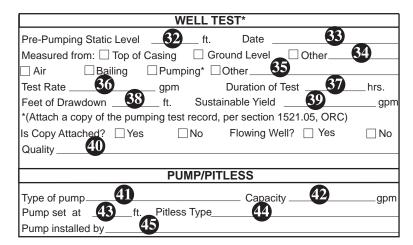
Gravel Pack

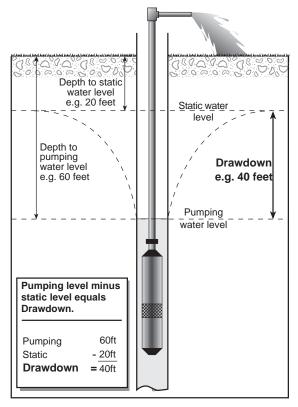
- (24) Note the type and size of gravel pack material used.
- **(25)** Note the volume or weight of the material used.
- **(26)** Write in the method of installation, such as gravity pour.
- **(27)** Write in the depths between which the gravel pack is placed.

Grout

- (28) Write in the grouting material(s) used, i.e., Benseal/EZ Mud, neat cement, etc.
- **(29)** Write in the volume or weight of the material used.
- (30) Note the method of installation, such as pumped through a tremie tube, dry driven, Halliburton method, poured, etc.
- **(31)** Note the depths between which the grout is placed.

Well Test





EXAMPLE				
WELL TEST*				
Pre-Pumping Static Level 20 ft. Date 12/10/95				
Measured from: ☒ Top of Casing ☐ Ground Level ☐ Other				
☑ Air □ Bailing □ Pumping* □ Other				
Test Rate 35 gpm Duration of Test 1 hrs.				
Feet of Drawdown 20 ft. Sustainable Yield 25				
*(Attach a copy of the pumping test record, per section 1521.05, ORC)				
s Copy Attached? ☐ Yes ☑ No Flowing Well? ☐ Yes ☑				
Quality Clear, 1ppm Fe, 30 gpg hardness, pH 7				
PUMP/PITLESS				
Type of pump_Submersible Capacity 10	gpm			
Pump set at 65 ft. Pitless Type Adapter				
Pumpinstalled by Acme Drilling Co.				

- (32) Write in the static water level measured after well development but before pumping. If development is the well test, measure the static water level before development begins.
- **(33)** Note the date that the static level measurement was taken.
- (34) Check or write in point from which the measurement was taken.
- **(35)** Check or write in the method of testing.
- **(36)** Write in the test rate in gallons per minute.
- **(37)** Write in the duration of test in hours.

The ODNR Pumping Test Record form should be attached to the well log for pumping tests 8 hours in duration or longer per Ohio Revised Code Section 1521.05.

- (38) Note the feet of drawdown measured (static water level subtracted from pumping water level, see diagram).
- **(39)** Give an estimate of the sustainable yield for the well; that is, in a residential well, what is a safe pumping rate for at least 6 to 12 hours of continuous pumping?
- (40) Write in water quality information, such as ppm or mg/l of iron, sulfate, or manganese, gpg or mg/l hardness, pH, presence of any taste or odor, clear or cloudy, etc.

Pump and Pitless Information

- **(41)** Write in what type of pump is installed in the well: submersible, shallow or deep well jet, turbine, hand, etc.
 - (42) Note the production capacity of the pump in gallons per minute for the depth at which it is set.
 - **(43)** Note the depth at which the pump or intake was set.
 - **(44)** Write in the type of pitless device used, such as an adapter or pre-assembled unit.
 - **(45)** Write in the name of the person or company that installed the pump. If it was the homeowner, write homeowner.

Do not delay filing the well log for lack of pump information.

Formation Descriptions and Depth Information

EXAMPLE

EAAWIFLE			
DRILLING LOG*			
INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	То	
Brown clay	0	15	
Gray sandy clay	15	20	
Sand & gravel (dry)	20	22	
Gray clay w/gravel	22	33	
Sand & gravel (dry)	33	39	
Gray clay	39	119	
Coarse sand & gravel	119	127	
Water encountered at 122'			

*(If more space is needed to complete drilling log, use next consecutively numbered form.)			
Date of Well Completion $12/10/95$ Total Depth of V	Well $\underline{1}$	27ft.	

EXAMPLE

I hereby certify the information given is accurate and correct to the best of my knowledge.		
Drilling Firm	Acme Drilling Co.	
Address	1234 Main St.	
City, State, Z	Zip <u>Anytown, Ohio 56789</u>	
Signed W.E. Coyote Date 1/23/96		
ODH Registration Number 1111		

Formations should be described as completely as possible, using color and texture (coarse, fine) descriptions. Please note the presence of fossils, fractures or other unusual features in the formation. Describe the type of formation encountered, i.e. sandstone, limestone, shale, sand and/or gravel. See page 10 for a list of references to help describe formations in the field.

Depths to the top and bottom of each formation should be noted in the "From" and "To" columns. "From" is the depth to the top of the formation from the ground surface, while "To" is the depth to the base of the formation from the ground surface.

Depths at which water is encountered during the drilling process should also be noted on the well log.

If more space is needed to record formation descriptions and depths, continue the process on the next consecutively numbered well log.

Do not forget to note the total depth of the well in the appropriate space at the bottom of the drilling log section. Also write in the date when the drilling of the well was completed.

Signature Block

Your signature (or that of a designated company representative) certifies that the information included in every section of the well log and drilling report is accurate and correct to the best of your knowledge. For a well log to become a valid legal document it must be signed and dated before it is filed with ODNR. It is also important to write in the registration number assigned by the Ohio Department of Health for all private water system contractors filling out these logs.

References for Further Information

ASTM Standards On Ground Water and Vadose Zone Investigations, Second Edition, 1994. Available from ASTM, 1916 Race St., Philadelphia, PA 19103. Telephone: 215-299-2632

Manual of Field Geology by Robert R. Compton, 1962. Available from most larger bookstores. Grain size folders based on classifications found in Compton are available from the Ohio Department of Natural Resources, Division of Water, while supplies last. Telephone: 614-265-6739

Munsell Soil Color Charts, 1994 Revised Edition. Available from Kollmorgan Instruments Corporation, 405 Little Britain Rd., New Windsor, NY 12553. Telephone: 800-622-2384

Ohio Topographic Maps pamphlet, 1995. Available from Ohio Department of Natural Resources, Division of Geological Survey, 4383 Fountain Square Dr., Bldg. B-2, Columbus, OH 43224. Telephone: 614-265-6576

List of Consolidated Formations

Consolidated formations encountered	Consolidated formations not
while drilling in Ohio	encountered in Ohio
Cl. 1	CI .

Shale Slate
Sandstone Granite
Limestone Schist
Dolomite Soapstone

Siltstone Coal

Classification of Grain Sizes (Compton, 1962) Approximate diameter in inches Name of loose aggregate

Boulder gravel
Cobble gravel
Very coarse pebble gravel
Coarse pebble gravel
Medium pebble gravel
Fine pebble gravel
Very fine pebble gravel
Very coarse sand
Coarse sand
Medium sand
Fine sand
Very fine sand
Silt
Clay



