Water Right Conditions Tracking Slip

Groundwater/Hydrology Section

FILE # # G-17127

ROUTED TO: Water Rights - Jeana ?

TOWNSHIP/
RANGE-SECTION: 5S/39E-34 bc

CONDITIONS ATTACHED?: [✓] yes [ ] no

REMARKS OR FURTHER INSTRUCTIONS:
Third Review

Reviewer: Mike Zwart

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date **April 24, 2013**

FROM: Ground Water/Hydrology Section **Mike Zwart**
Reviewer's Name

SUBJECT: Application G- **17127** Supersedes review of **February 9, 2010**
Date of Review(s)

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

OAR 690-310-130 (1) *The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525.* Department staff review ground water applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. **This review is based upon available information and agency policies in place at the time of evaluation.**

A. GENERAL INFORMATION: Applicant's Name: **Heffernan Family Trust** County: **Union**

A1. Applicant(s) seek(s) **2.77** cfs from **one** well(s) in the **Powder** Basin, **Clover Creek** subbasin Quad Map: **North Powder**

A2. Proposed use: **Irrigation, 400 acres** Seasonality: **March 1 to October 31**

A3. Well and aquifer data **(attach and number logs for existing wells; mark proposed wells as such under logid)**:

Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	**Proposed**	**1**	**Basin Fill**	**3.119**	**5S/39E-34 SW-NW**	**25' E, 2640' S fr NW cor S 34**
2						
3						
4						
5						

* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	**3354**											

Use data from application for proposed wells.

A4. **Comments: This application is amended to include only proposed well #1 to make up for a deficiency in rate for lands described in Permit G-16386. Well #2 and proposed well #3 are being dropped.**

A5. ☒ **Provisions of the Powder** Basin rules relative to the development, classification and/or management of ground water hydraulically connected to surface water ☐ **are**, *or* ☒ **are not**, activated by this application. (Not all basin rules contain such provisions.)
Comments:

A6. ☐ **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
Name of administrative area:
Comments:

B. GROUND WATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

B1. **Based upon available data**, I have determined that ground water* for the proposed use:

a. ☐ **is** over appropriated, ☐ **is not** over appropriated, *or* ☒ **cannot be determined to be** over appropriated during any period of the proposed use. * This finding is limited to the ground water portion of the over-appropriation determination as prescribed in OAR 690-310-130;

b. ☐ **will not** *or* ☐ **will** likely be available in the amounts requested without injury to prior water rights. * This finding is limited to the ground water portion of the injury determination as prescribed in OAR 690-310-130;

c. ☐ **will not** *or* ☐ **will** likely to be available within the capacity of the ground water resource; or

d. ☒ **will, if properly conditioned**, avoid injury to existing ground water rights or to the ground water resource:
   i. ☒ The permit should contain condition #(s) 7N;
   ii. ☐ The permit should be conditioned as indicated in item 2 below.
   iii. ☐ The permit should contain special condition(s) as indicated in item 3 below;

B2. a. ☐ **Condition** to allow ground water production from no deeper than _____ ft. below land surface;

b. ☐ **Condition** to allow ground water production from no shallower than _____ ft. below land surface;

c. ☐ **Condition** to allow ground water production only from the _____ ground water reservoir;

d. ☐ **Well reconstruction** is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Ground Water Section.

Describe injury –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc): _____

B3. **Ground water availability remarks:** _____

C. GROUND WATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

C1. **690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	**Basin fill**	☒	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: Aquifer testing from May 2-5, 2008 by Department staff demonstrated confined aquifer storage conditions.

C2. **690-09-040 (2) (3):** Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected? YES	NO	ASSUMED	Potential for Subst. Interfer. Assumed? YES	NO
1	**1**	**Clover Creek**	**3348±**	**3333**	**6500**	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Long term monitoring of water levels during and following the 2009 irrigation season revealed that the shallow well (UNIO 52008) responded to the sustained pumping during 2009. This indicates that pumping of the deeper confined to semiconfined system is propagated into the shallow unconfined system and that there is hydraulic connection with surface water sources.
Water Availability Basin the well(s) are located within: JIMMY CR > POWDER R - AT MOUTH (30920306).

C3a. **690-09-040 (4):** Evaluation of stream impacts for each well that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% *natural* flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked ☒ box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. **Complete only if Q is distributed among wells**. Otherwise same evaluation and limitations apply as in C3a above.

	SW #		Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐

Comments:

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													

Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

Basis for impact evaluation:

C4b. **690-09-040 (5) (b) The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.**

C5. ☐ **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or ground water use under this permit can be regulated if it is found to substantially interfere with surface water:

i. ☐ The permit should contain condition #(s)_____;

ii. ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions**

References Used: **Local well logs; Recon. Geologic Map of the Oregon Part of the Grangeville Quadrangle, by Walker, 1979; OWRD aquifer test May 2-5, 2008, unpublished data collected at local wells; previous reviews of G-16902 and G-17035.**

D. WELL CONSTRUCTION, OAR 690-200

D1. **Well #:** _____ **Logid:** _____

D2. **THE WELL does not meet current well construction standards based upon:**
- a. ☐ review of the well log;
- b. ☐ field inspection by _____;
- c. ☐ report of CWRE _____;
- d. ☐ other: (specify) _____

D3. **THE WELL construction deficiency**:
- a. ☐ constitutes a health threat under Division 200 rules;
- b. ☐ commingles water from more than one ground water reservoir;
- c. ☐ permits the loss of artesian head;
- d. ☐ permits the de-watering of one or more ground water reservoirs;
- e. ☐ other: (specify) _____

D4. **THE WELL construction deficiency is described as follows:** _____

D5. **THE WELL**
- a. ☐ **was**, *or* ☐ **was not** constructed according to the standards in effect at the time of original construction or most recent modification.
- b. ☐ I don't know if it met standards at the time of construction.

D6. ☐ **Route to the Enforcement Section.** I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Enforcement Section and the Ground Water Section.

THIS SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL

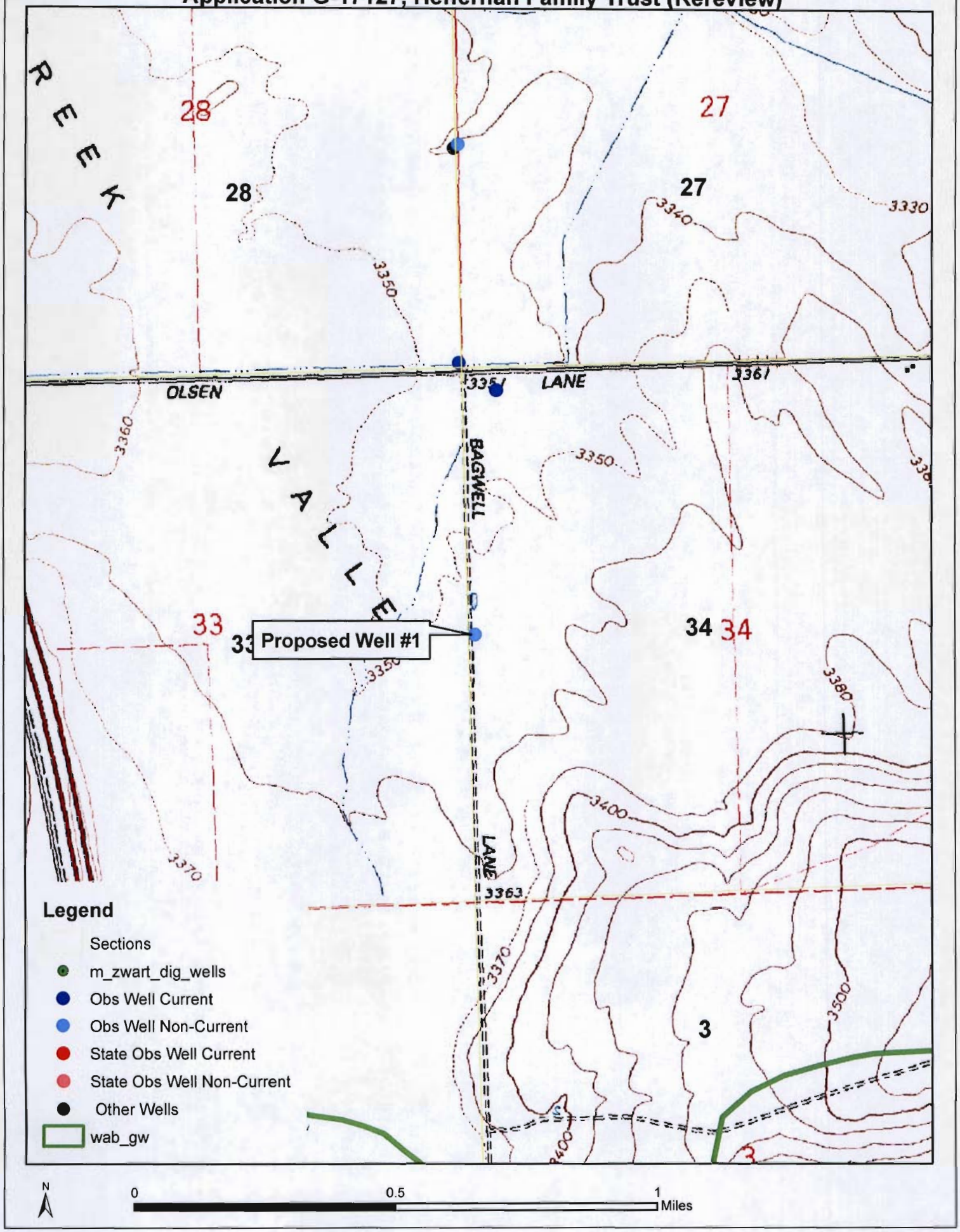
D7. ☐ Well construction deficiency has been corrected by the following actions: _____

_____ _____, 200____.

(Enforcement Section Signature)

D8. ☐ **Route to Water Rights Section (attach well reconstruction logs to this page).**

Application G-17127, Heffernan Family Trust (Rereview)



UNIO 51932

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

Unio 51932

WELL I.D. # L 93928

START CARD # 197281

Instructions for completing this report are on the last page of this form.

(1) LAND OWNER Well Number
Name Chris & Dana Heffernan
Address 63609 View point LN.
City North Powder State OR. Zip 97867

(2) TYPE OF WORK ☒ New Well
☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment ☐ Conversion

(3) DRILL METHOD
☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud
☐ Other

(4) PROPOSED USE
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☒ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION Special Construction: ☐ Yes ☐ No
Depth of Completed Well 60 ft.
Explosives used: ☐ Yes ☐ No Type Amount

BORE HOLE Diameter	From	To	SEAL Material	From	To	Sacks or Pounds
10	0	18	Bent.	0	18	12
6	18	140				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☒ Other 3/8 poured dry Bentonite
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+2	58	.250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Drive Shoe used ☒ Inside ☐ Outside ☐ None
Final location of shoe(s) 58'

(7) PERFORATIONS/SCREENS
☐ Perforations Method N/A.
☐ Screens Type Material

From	To	Slot Size	Number	Diameter	Tele/pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
200+	136.5	140	2hr.

Temperature of water 50° Depth Artesian flow found
Was a water analysis done? ☐ Yes By whom
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other
Depth of strata:

RECEIVED
FEB 13 2008
WATER RESOURCES DEPT
SALEM, OREGON

(9) LOCATION OF WELL (legal description)
County Union
Tax Lot 4100 Lot
Township 5 N or S Range 39 E or W WM
Section 28 SE 1/4 NE 1/4
Lat ° ' " or . (degrees or decimal)
Long ° ' " or . (degrees or decimal)
Street Address of Well (or nearest address) 1/2 mile north of intersection of Olsen Rd. and Bagwell Rd.

(10) STATIC WATER LEVEL
3.5 ft. below land surface. Date 11-9-07
ft. below land surface. Date
Artesian pressure lb. per square inch Date

(11) WATER BEARING ZONES
Depth at which water was first found 6

From	To	Estimated Flow Rate	SWL
6	7	5	5
63	80	10	3.5
80	100	100+	
100	120	200+	
120	140	200+	

(12) WELL LOG Ground Elevation

Material	From	To	SWL
Top Soil	0	3	
Brown Clay	3	6	
Blue Clay Sand	6	7	5
Blue Clay	7	63	
Coarse Yellow Sand W/ Fine Sand Gravel	63	75	3.5
Coarse Black Sand W/ quartz and small gravels			
Bottom 80 Caved Below casing still Blowing 100+ W/ drill Stem at 60'			

RECEIVED
NOV 19 2007
WATER RESOURCES DEPT
SALEM, OREGON

Date Started 11-8-07 Completed 11-9-07

(unbonded) Water Well Constructor Certification
I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number Date

Signed

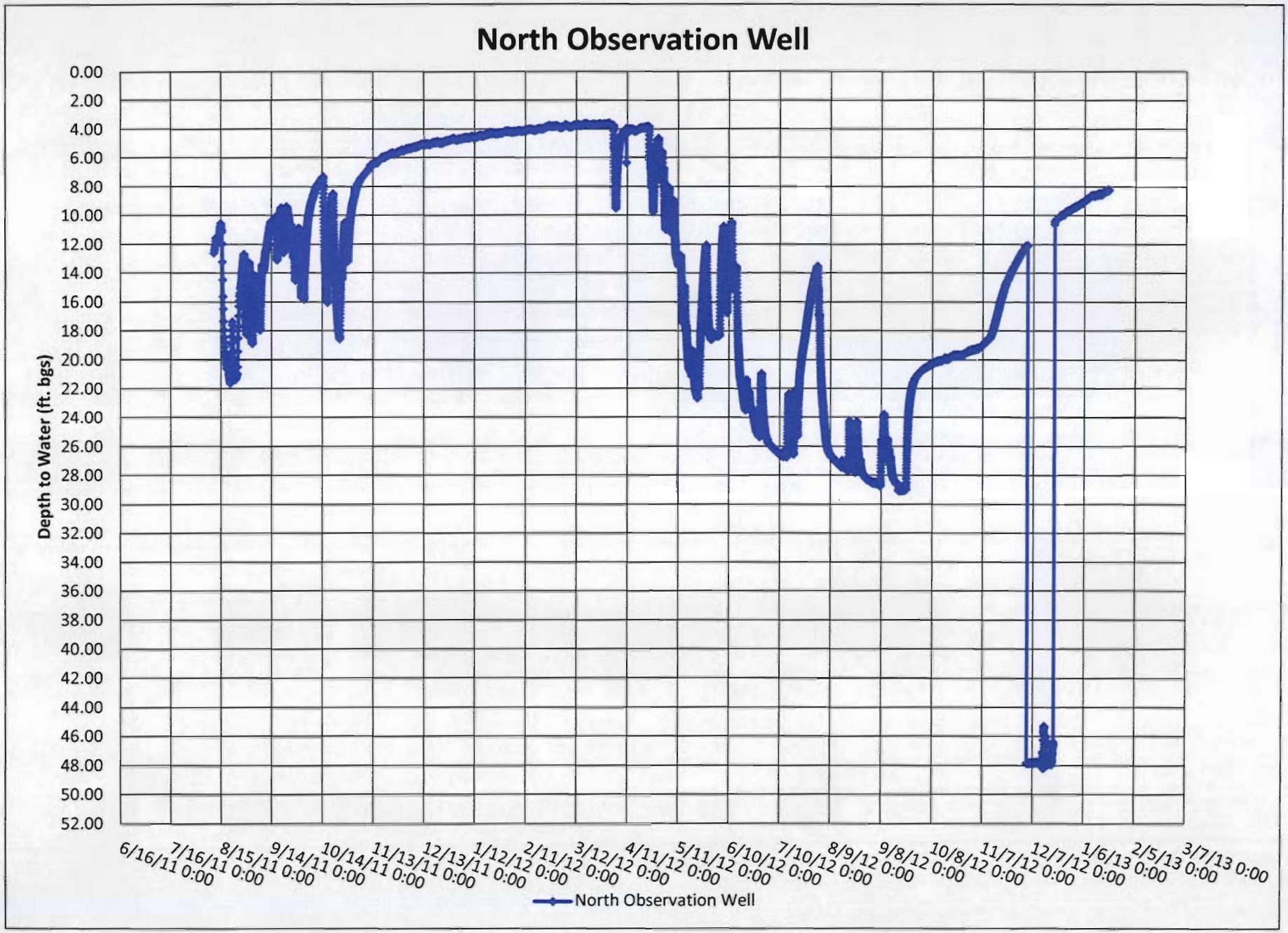
(bonded) Water Well Constructor Certification
I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1616 Date 11-10-07

Signed

ORIGINAL – WATER RESOURCES DEPARTMENT FIRST COPY – CONSTRUCTOR SECOND COPY – CUSTOMER 06/16/2004

HEFF D UNIO 51932



UNIO 51931

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

WELL I.D. # L 93927

START CARD # 175050

Instructions for completing this report are on the last page of this form.

(1) LAND OWNER Well Number
Name Chris & Donna Heffernan
Address 63600 Viewpoint Ln.
City North Powder State OR. Zip 97867

(2) TYPE OF WORK ☒ New Well
☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment ☐ Conversion

(3) DRILL METHOD
☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud
☐ Other

(4) PROPOSED USE
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☒ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION Special Construction: ☐ Yes ☐ No
Depth of Completed Well 80 ft.
Explosives used: ☐ Yes ☐ No Type Amount

BORE HOLE Diameter	From	To	SEAL Material	From	To	Sacks or Pounds
10	0	18	Bent.	0	18	10
6	18	140				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☒ Other 3/4 poured dry
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+2	78	.250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Drive Shoe used ☒ Inside ☐ Outside ☐ None
Final location of shoe(s) 78'

(7) PERFORATIONS/SCREENS
☐ Perforations Method N/A.
☐ Screens Type Material

From	To	Slot Size	Number	Diameter	Tele/pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
200+	134	140	2 hr.

Temperature of water 50° Depth Artesian Flow Found
Was a water analysis done? ☐ Yes By whom
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other
Depth of strata:

RECEIVED
NOV 19 2007
WATER RESOURCES DEPT
SALEM, OREGON

(9) LOCATION OF WELL (legal description)
County Union
Tax Lot 4100 Lot
Township 5 N or S Range 39 E or W WM
Section 34 SW 1/4 NW 1/4
Lat ° ' " or (degrees or decimal)
Long ° ' " or (degrees or decimal)
Street Address of Well (or nearest address) 1/2 mile S. of Olsen Rd. on Bagwell Rd. Left side of Rd.

(10) STATIC WATER LEVEL
6 ft. below land surface. Date 11-4-07
ft. below land surface. Date
Artesian pressure lb. per square inch Date

(11) WATER BEARING ZONES
Depth at which water was first found 10

From	To	Estimated Flow Rate	SWL
10	11	3	8
40	60	60	6
60	80	100+	
80	140	200+	

(12) WELL LOG Ground Elevation

Material	From	To	SWL
Top Soil	0	3	
Brown Clay	3	10	
Light Brown Clay W/B	10	11	8
Dark Brown Clay	11	40	
Coarse Brown Sand W/ Fine sand and small Gravels W/B	40	80	6
Coarse Black Sand W/ quartz and small Gravels	80	140	
Bottom 60' caved Below casing Still Blowing 100+ W/ drill stem at 75'			

Date Started 10-26-07 Completed 11-4-07

(unbonded) Water Well Constructor Certification
I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number Date

Signed

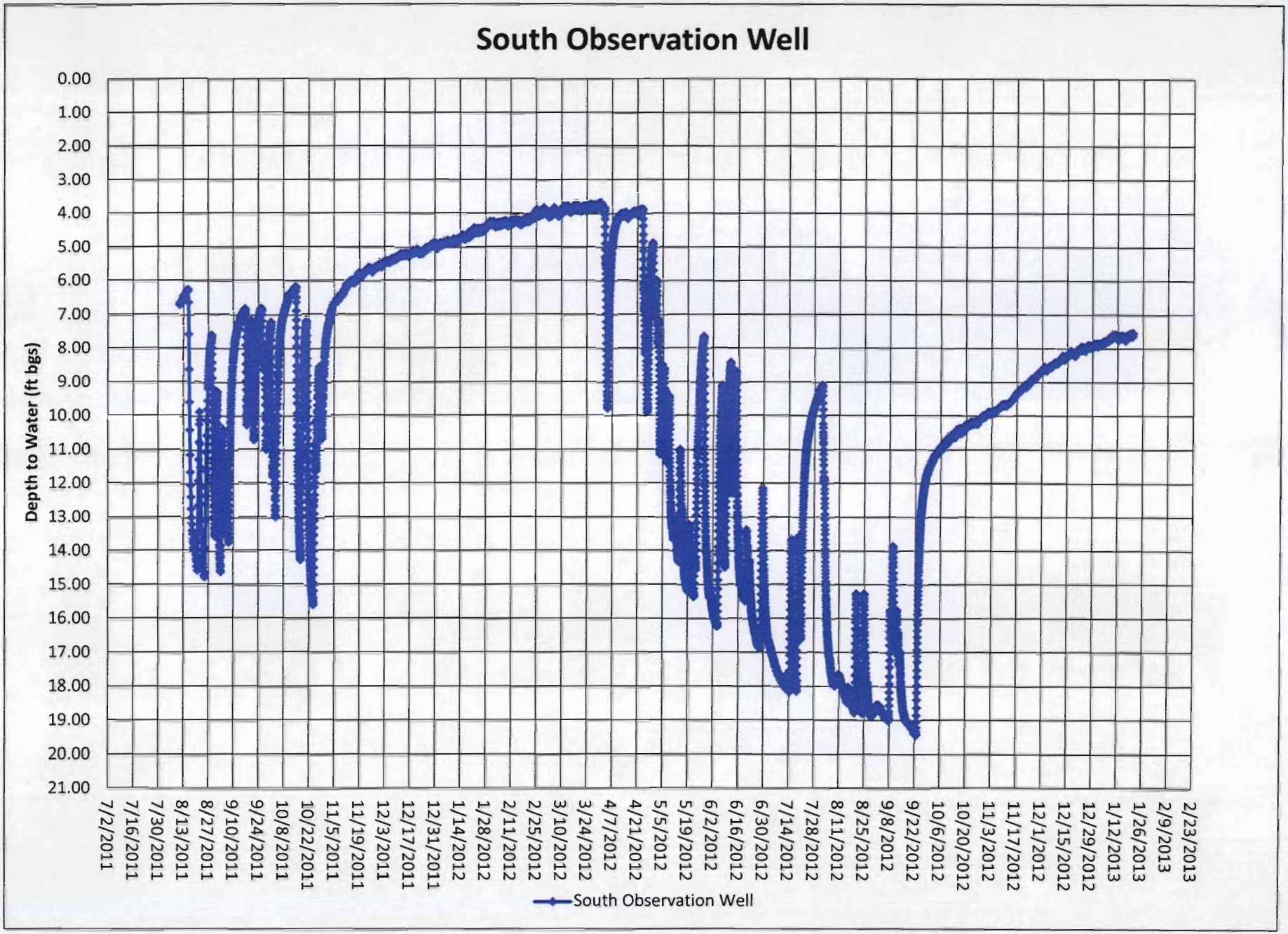
(bonded) Water Well Constructor Certification
I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1816 Date 11-5-07

Signed

ORIGINAL – WATER RESOURCES DEPARTMENT FIRST COPY – CONSTRUCTOR SECOND COPY – CUSTOMER 06/16/2004

HEFFA UNIO 51931



UNIO 52017

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765 & OAR 690-205-0210)

WELL LABEL # L 85275

START CARD # 193731

(1) LAND OWNER

Owner Well I.D. _____

First Name CHRIS & DONNA Last Name HEFFERNAN

Company _____

Address 63600 VEIWPOINT LANE

City NORTH POWDER State OR Zip 97867

(2) TYPE OF WORK

☒ New Well ☐ Deepening ☐ Conversion ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud ☒ Reverse Rotary ☐ Other _____

(4) PROPOSED USE

☐ Domestic ☒ Irrigation ☐ Community ☐ Industrial/ Commericial ☐ Livestock ☐ Dewatering ☐ Thermal ☐ Injection ☐ Other _____

(5) BORE HOLE CONSTRUCTION

Special Standard ☐ Attach copy

Depth of Completed Well 405 ft.

BORE HOLE

Dia	From	To
26	0	409
17	409	412
12	412	424

SEAL

Material	From	To	Amt	sacks/ lbs
Bentonite	0	12	4,000	P
Cement GROUT	12	100	8	YDS
Cement GROUT	205	210	.75	YDS

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E

☒ Other DRY POUR BENTONITE

Backfill placed from _____ ft. to _____ ft. Material _____

Filter pack from 100 ft. to 205 ft. Material GRAVEL Size pea gravel

Explosives used: ☐ Yes Type _____ Amount _____

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
◉	○	18	☒	2	124	.375	◉	○	☒	☐
◉	○	18	☐	164	241	.375	◉	○	☒	☐
◉	○	18	☐	261	315	.375	◉	○	☒	☐
◉	○	18	☐	325	405	.375	◉	○	☒	☐
○	○		☐				○	○	☐	☐

Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s) _____

Temp casing ☐ Yes Dia _____ From _____ To _____

(7) PERFORATIONS/SCREENS

Perforations Method _____

Screens Type JOHNSON WIRE Material M.S.

Perf/ Screen	Casing/ Liner	Screen Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/ pipe size
Screen	Casing	18	124	164		.04		
Screen	Casing	18	241	261		.04		
Screen	Casing	18	315	325		.04		
Perf	Casing	18	385	405	.125	4		

(8) WELL TESTS: Minimum testing time is 1 hour

◉ Pump ○ Bailer ○ Air ○ Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)
1,000	84	250	72

Temperature 59 °F Lab analysis ☐ Yes By _____

Water quality concerns? ☐ Yes (describe below)

From	To	Description	Amount	Units

RECEIVED
2008
WATER RESOURCES DEPARTMENT
SALEM, OREGON

(9) LOCATION OF WELL (legal description)

County UNION Twp 5 S N/S Range 39 E E/W WM

Sec 34 NW 1/4 of the NW 1/4 Tax Lot 4100

Tax Map Number _____ Lot _____

Lat ° ' " or _____ DMS or DD

Long ° ' " or _____ DMS or DD

○ Street address of well ◉ Nearest address

OLSEN ROAD & BAGWELL ROAD

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening			☐	
Completed Well	04-03-2008		☒	1

Flowing Artesian? ☒ Dry Hole? ☐

WATER BEARING ZONES Depth water was first found 10

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
03-19-2008	6	10			☐	
03-19-2008	14	22			☐	
03-19-2008	67	72			☐	
03-19-2008	114	116			☐	
03-20-2008	122	132			☐	

(11) WELL LOG

Ground Elevation _____

Material	From	To
DARK TOP SOIL	0	2
SILTY BROWN CLAY	2	6
BROWN COARSE SAND	6	10
BROWN BURNT CLAY	10	14
SAND & SMALL GRAVEL	14	22
BROWN CLAY	22	32
BROWN SLITY CLAY	32	50
BROWN CLAY W/SM SAND STREAKS	50	67
FINE BRN SAND	67	72
GREY STICKY CLAY	72	85
GREY STICKY CLAY,SOFT SANDSTONE,FINE	85	92
STICKY BLUE CLAY	92	105
GREEN SANDY CLAY	105	108
BROWN CLAY	108	114
FINE SAND, SOFT SANDSTONE	114	116
GREY CLAY	116	122
COARSE GREY SAND	122	132
TAN STICKY CLAY	132	134
BROWN COARSE SAND W/SM CLAY LAYER	134	165

Date Started 03-20-2008 Completed 05-05-2008

(unbonded) Water Well Constructor Certification

I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

License Number 1764 Date 05-07-2008

Password : (if filing electronically) _____

Signed _____

(bonded) Water Well Constructor Certification

I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

License Number 1505 Date 05-07-2008

Password : (if filing electronically) _____

Signed _____

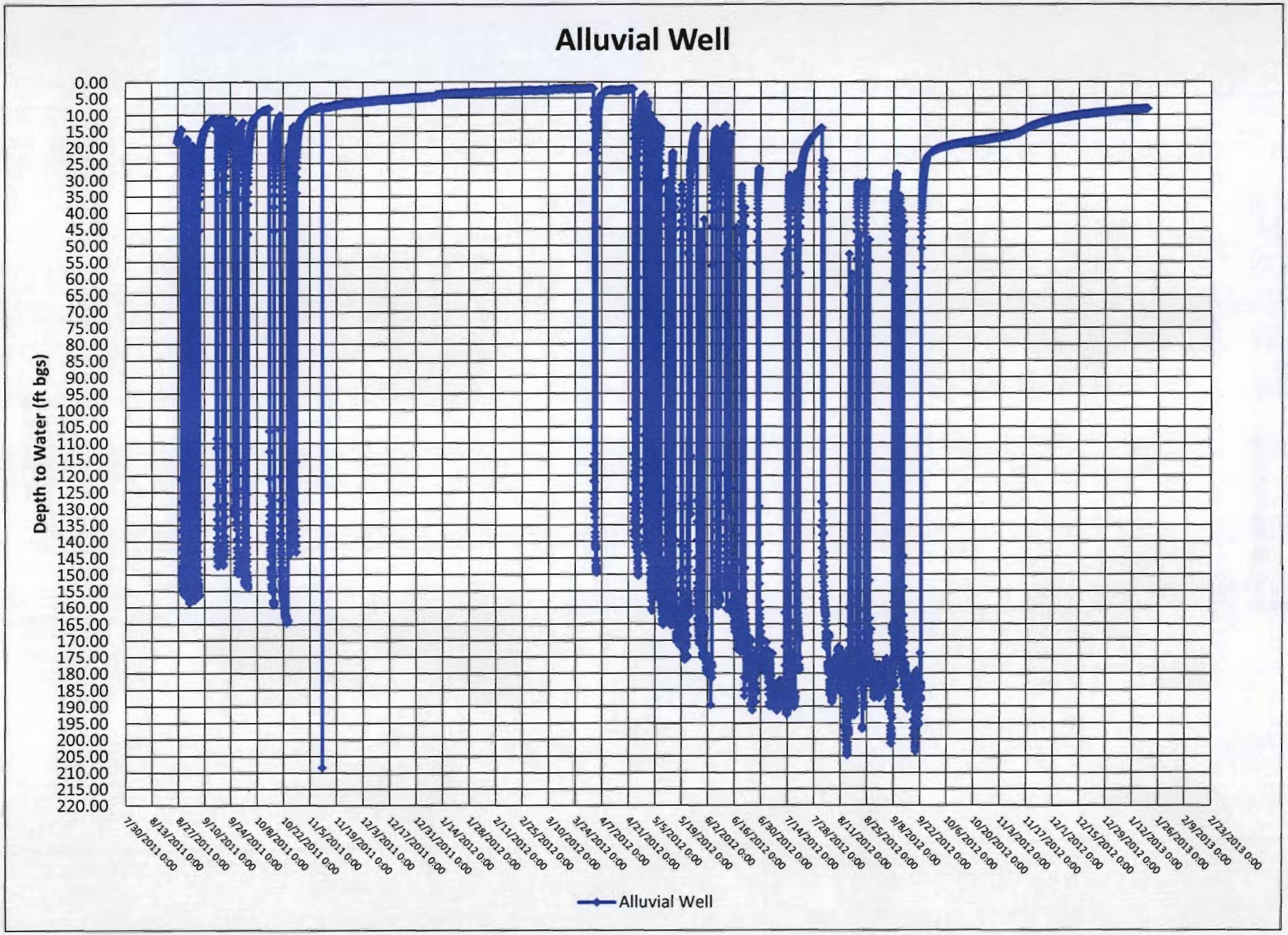
Contact Info (optional) _____

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version: 0.88

UNID 52017


Alluvial Well
Depth to Water (ft bgs)
0.00
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
50.00
55.00
60.00
65.00
70.00
75.00
80.00
85.00
90.00
95.00
100.00
105.00
110.00
115.00
120.00
125.00
130.00
135.00
140.00
145.00
150.00
155.00
160.00
165.00
170.00
175.00
180.00
185.00
190.00
195.00
200.00
205.00
210.00
215.00
220.00
7/30/2011 0:00
8/13/2011 0:00
8/27/2011 0:00
9/10/2011 0:00
9/24/2011 0:00
10/8/2011 0:00
10/22/2011 0:00
11/5/2011 0:00
11/19/2011 0:00
12/3/2011 0:00
12/17/2011 0:00
12/31/2011 0:00
1/14/2012 0:00
1/28/2012 0:00
2/11/2012 0:00
2/25/2012 0:00
3/10/2012 0:00
3/24/2012 0:00
4/7/2012 0:00
4/21/2012 0:00
5/5/2012 0:00
5/19/2012 0:00
6/2/2012 0:00
6/16/2012 0:00
6/30/2012 0:00
7/14/2012 0:00
7/28/2012 0:00
8/11/2012 0:00
8/25/2012 0:00
9/8/2012 0:00
9/22/2012 0:00
10/6/2012 0:00
10/20/2012 0:00
11/3/2012 0:00
11/17/2012 0:00
12/1/2012 0:00
12/15/2012 0:00
12/29/2012 0:00
1/12/2013 0:00
1/26/2013 0:00
2/9/2013 0:00
2/23/2013 0:00
Alluvial Well