

Groundwater Application Review Summary Form

Application # G- 18896

GW Reviewer Karl Wozniak Date Review Completed: 1-21-2020

Summary of GW Availability and Injury Review:

Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

Summary of Potential for Substantial Interference Review:

There is the potential for substantial interference per Section C of the attached review form.

Summary of Well Construction Assessment:

The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date January 21, 2020
 FROM: Groundwater Section Karl Wozniak
 Reviewer's Name
 SUBJECT: Application G- 18896 Supersedes review of _____
 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 groundwater 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: Patchwork Holdings LLC County: _____

A1. Applicant(s) seek(s) 1.04 cfs from 1 well(s) in the Willamette Basin,
Santiam River subbasin

A2. Proposed use Irrigation Seasonality: March 1 – 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	Alluvium	1.04	10S/3W-15 NE/NW	405' S, 1270 W fr N1/4 cor S 15
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	215				50	0-18	TBD	TBD	TBD			

Use data from application for proposed wells.

A4. **Comments:** The applicant requests 1.04 cfs (467 gpm) from 1 proposed well for primary irrigation of 83.03 acres using an annual volume of 207.58 acre feet (2.5 acre feet/acre). The proposed well construction is shown in table A3.

A5. **Provisions of the** Willamette Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water **are,** or **are not,** activated by this application. (Not all basin rules contain such provisions.)
 Comments: The well is not within 1/4-mile of a surface water source so the pertinent rules (OAR 690-502-0240) do not apply.

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

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

B1. **Based upon available data**, I have determined that groundwater* 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 groundwater 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 groundwater 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 groundwater resource;** or
- d. **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater resource:
 - i. **The permit, if issued, should contain condition #(s) 7N, large water-use reporting** _____;
 - 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 groundwater production from no deeper than _____ ft. below land surface;
- b. **Condition** to allow groundwater production from no shallower than _____ ft. below land surface;
- c. **Condition** to allow groundwater production only from the alluvial aquifer system groundwater reservoir between approximately _____ ft. and _____ ft. below land surface;
- 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 Groundwater 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. **Groundwater availability remarks:**

There is insufficient data to determine if the groundwater resource is over appropriated as prescribed in OAR 690-310-130.

The applicant requests 1.04 cfs (467 gpm) from 1 proposed well for primary irrigation of 83.03 acres using an annual volume of 207.58 acre feet (2.5 acre feet/acre). The proposed well is located in the western portion of a narrow valley between Hale Butte and Scrael Hill about 1.75 miles southwest of the town of Jefferson. The local valley floor is underlain by about 50 feet of alluvial sediments which comprise the alluvial aquifer system. The upper 10-20 feet consists of the Willamette Silt which is generally described on local wells logs as clay, silty clay, or sandy clay. The underlying sediments are older alluvium which contains a few productive sand and gravel beds that generally have an aggregate thickness of less than 20 feet. The sediments are underlain by older sedimentary and volcanic rocks that form the low-yield bedrock aquifer system. The alluvial aquifer thins to a zero line about 650 feet north and 1850 feet south of the proposed well where older bedrock crops out at the surface on Hale Butte and Scrael Hill. The local water table resides in the Willamette Silt which provides some degree of confinement for the aquifer.

Water-well are sparse in the local area. Tax lots and aerial imagery indicate only a few domestic wells on tax lots about 500 feet south of the proposed well. LINN 61319, the only field-located domestic well, presumed to be representative, is a six-inch diameter domestic well with a reported air-test yield of 12 gpm that encountered bedrock at a depth of 29 feet. The only nearby irrigation well, LINN 4705, at about 1100 feet to the southeast, is a 12-inch diameter well with a reported bailer-test yield of 75 gpm with 10 feet of drawdown. A few other irrigation wells (LINN 4662, LINN 4665, & LINN 4666) that lie at

the eastern end of the valley have reported yields ranging from 300-600 gpm with only a few feet of drawdown. These higher production rates and smaller drawdowns are associated with younger sediments deposited in the modern floodplain of the Santiam River (Helm and Leonard, 1977).

The limited thickness of the productive sediments in the vicinity of the proposed well and the nearby northern and southern edge of the alluvial aquifer indicate a limited production potential, consistent with the relatively low yield (75 gpm) reported for LINN 4705. These facts indicate that groundwater for the proposed use will not likely be available within the capacity of the local groundwater resource at the requested rate of 1.04 cfs (467 gpm) from the proposed well. These same factors indicate a high probability of injurious interference, at the proposed rate, with nearby domestic wells which already fully penetrate the alluvial aquifer.

Groundwater-level data is sparse in the immediate area but limited data from nearby well LINN 4705 suggest that local water levels are probably stable, consistent with the very low density of wells in the area.

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

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

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Alluvial aquifer system	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Well logs of nearby wells indicate some degree of confinement as static water levels rise 10-15 feet above reported water-bearing sands and gravels.

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?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Santiam River	208-211	205-210	5880	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Porous media are continuous between the proposed well and the Santiam River. Groundwater elevations at the proposed well site (based on reported water levels for nearby wells LINN 4705 & LINN 61319) are essentially equivalent to the elevations of adjacent reaches of the river. These facts indicate that the alluvial aquifer is hydraulically connected to local streams.

Water Availability Basin the well(s) are located within: WAB 167, Santiam R > Willamette R – At Mouth

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?
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

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?
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: There are no perennial streams within 1 mile of the proposed wells so tables C3a and C3b are not pertinent.

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													
(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: Impacts to the Santiam River were not evaluated in table C4a because the proposed maximum rate is below 1% of the 80%-exceedence flow for all months of the year.

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 groundwater 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:

Gannett, M.W. and Caldwell, R., 1998, Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-A, 32 p.

Helm, D.C. and Leonard, A.R., 1977, Ground-water resources of the lower Santiam River basin, middle Willamette Valley, Oregon: Oregon Department of Water Resources Ground-Water Report no. 25, 75 p.

O'Connor, J.E., Sarna-Wojcicki, A., Wozniak, K.C., Polette, D.J., and Fleck, R.J., 2001: U.S. Geological Survey Professional Paper 1620.

Woodward, D.G., Gannett, M.W., and Vaccaro, J.J., 1998, Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B, 82p.

D. WELL CONSTRUCTION, OAR 690-200

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

D2. **THE WELL does not appear to 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 or other comment is described as follows:** _____

D4. **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Water Availability Tables

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

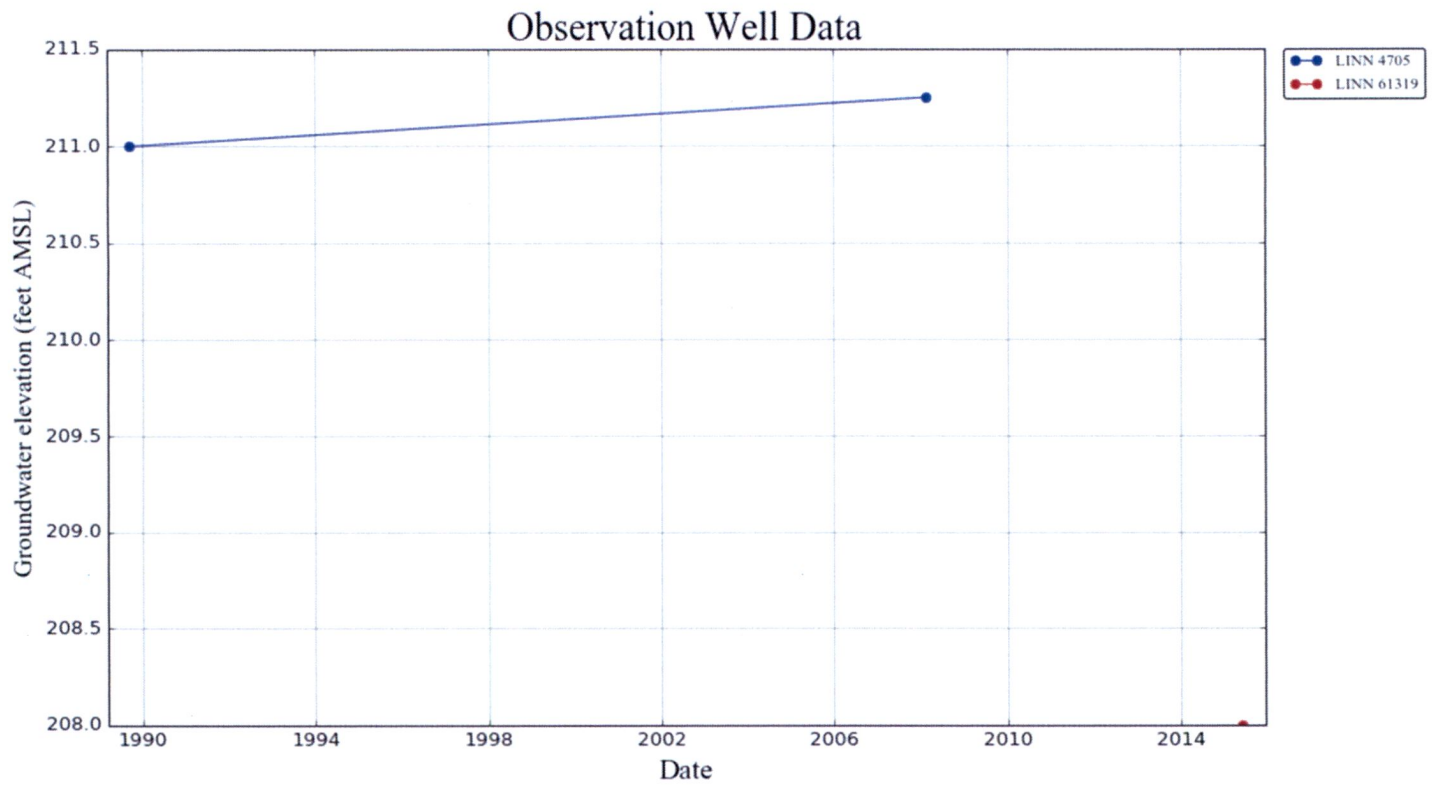
SANTIAM R > WILLAMETTE R - AT MOUTH
 Basin: WILLAMETTE

Watershed ID #: 167
 Time: 4:46 PM

Exceedance Level: 80
 Date: 01/17/2020

Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirements	Net Water Available
Monthly values are in cfs. Storage is the annual amount at 50% exceedance in ac-ft.						
JAN	5,860.00	1,060.00	4,800.00	0.00	320.00	4,480.00
FEB	6,590.00	3,330.00	3,260.00	0.00	320.00	2,940.00
MAR	5,870.00	2,900.00	2,970.00	0.00	320.00	2,650.00
APR	5,370.00	2,890.00	2,480.00	0.00	320.00	2,160.00
MAY	5,020.00	1,930.00	3,090.00	0.00	320.00	2,770.00
JUN	2,600.00	1,080.00	1,520.00	0.00	320.00	1,200.00
JUL	1,380.00	1,020.00	362.00	0.00	320.00	42.30
AUG	1,030.00	957.00	72.60	0.00	320.00	-247.00
SEP	923.00	847.00	75.60	0.00	320.00	-244.00
OCT	1,020.00	772.00	248.00	0.00	320.00	-71.90
NOV	2,820.00	726.00	2,090.00	0.00	320.00	1,770.00
DEC	5,940.00	719.00	5,220.00	0.00	320.00	4,900.00
ANN	4,380,000	1,090,000	3,280,000	0	232,000	3,060,000

Water Levels in Nearby Wells



Selected Well Logs

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

WATER RESOURCES DEPT.
SALEM, OREGON

(START CARD) # 10594

LINN
4705

OCT 12 1989

10s/3w/15ba

(1) OWNER:
Name Ray Wayne Smith Well Number:
Address Patton 1987
City Albany State ore Zip 97321

(2) TYPE OF WORK:
 New Well Deepen Recondition Abandon

(3) DRILL METHOD
 Rotary Air Rotary Mud Cable
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 57 ft.
Explosives used Type _____ Amount _____

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
14	0	18	cement	0	18	15 sacks
10	17	40	steel			
10	40	57	spindle			

How was seal placed: Method A B C D E
 Other
Backfill placed from 0 ft. to 18 ft. Material cement
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 10	17	40	.250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 40

(7) PERFORATIONS/SCREENS:

Perforations Method touch
 Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
27	37	1/4 x 5/8	80			<input checked="" type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour
 Pump Bailer Air Flowing Artesian
Yield gal/min 75 Drawdown 10 Drill stem at _____ Time 1 hr.

Temperature of water 52 Depth Artesian Flow Found _____
Was a water analysis done? Yes No By whom _____
Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Linn Latitude 44 38' 15" Longitude 123 03' 00"
Township 10S N or S, Range 3W E or W, WM.
Section 15 NE 1/4 NW 1/4
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) 34 003 7th Lane Albany ore 97321

(10) STATIC WATER LEVEL:
9 ft. below land surface. Date 9-19-89
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found 22

From	To	Estimated Flow Rate	SWL
22	37	100 +	9

(12) WELL LOG: Ground elevation 230

Material	From	To	SWL
Top Soil	0	2	
Clay Brown Sandy	2	22	
Light Brown Med Gravel	22	37	9
Clay Brown Sandy	37	43	
Clay Stone Very Hard	43	57	

Date started 9-14-89 Completed 9-19-89

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

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, 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 well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 610
Signed Bob Scheller Date 9-19-89

RECEIVED BY OWRD
LINN 61319

LINN 61319

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

JUL 03 2015

WELL LABEL # L 6111963

SALEM, OR

START CARD # 211598

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

(1) LAND OWNER
Owner Well I.D. OR-3131
First Name LINDA Last Name JOHNSON
Company _____
Address 38928 Hwy 99E
City ALBANY State ORE Zip 97322

(9) LOCATION OF WELL (legal description)
County LINN Twp 10 of 3 Range 3 or W.M.
Sec 15 NW 1/4 of the NW 1/4 Tax Lot 200
Tax Map Number _____ Lot _____
Lat _____ " or _____ DMS or DD
Long _____ " or _____ DMS or DD

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

Street Address of Well (or nearest address) SAME

(3) DRILL METHOD
 Rotary Air Rotary Mud Cable Auger Cable Mud
 Reverse Rotary Other _____

(10) STATIC WATER LEVEL

	Date	SWL (psi)	+	SWL (ft)
Existing Well/Predeepening				
Completed Well	<u>6-1-15</u>			<u>6'</u>

(4) PROPOSED USE Domestic Irrigation Community
 Industrial/Commercial Livestock Dewatering Injection
 Thermal Other _____

Flowing Artesian? Yes Dry Hole? Yes
WATER BEARING ZONES Depth water was first found 20'

(5) BORE HOLE CONSTRUCTION Special Standard: Yes (attach copy)
Depth of Completed Well 40 ft.

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
<u>6-1-15</u>	<u>20</u>	<u>26</u>	<u>12+ gpm</u>			<u>6'</u>

BORE HOLE			SEAL			Amount	Scks/lbs
Dia	From	To	Material	From	To		
<u>16"</u>	<u>0</u>	<u>18</u>	<u>Bentonite</u>	<u>0</u>	<u>18</u>	<u>8</u>	<u>SCKS</u>
<u>6"</u>	<u>18</u>	<u>40</u>	<u>calculated</u>			<u>8</u>	<u>SCKS</u>

How was seal placed: Method A B C D E
 Other Poured Dry
Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from _____ ft. to _____ ft. Material _____ Size _____
Explosives used: Yes Type _____ Amount _____

(11) WELL LOG Ground Elevation _____

Material	From	To
<u>TOP SOIL</u>	<u>0</u>	<u>2</u>
<u>CLAY-BROWN w/GRIT</u>	<u>2</u>	<u>16</u>
<u>GRAVEL w/CLAY-BROWN</u>	<u>16</u>	<u>19</u>
<u>SAND w/GRAVEL</u>	<u>19</u>	<u>26</u>
<u>CLAY-BROWN w/GRAVEL</u>	<u>26</u>	<u>29</u>
<u>CLAYSTONE-GRAY-SOFT</u>	<u>29</u>	<u>40</u>

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
<input checked="" type="checkbox"/>		<u>6"</u>	<u>+</u>	<u>1</u>	<u>29</u>	<u>.250</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

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JUL 06 2015
SALEM, OR

Shoe Inside Outside Other Location of shoe(s) 29'
Temporary casing Yes Diameter _____ From _____ To _____

Date Started 6-1-15 Completed 6-1-15

(7) PERFORATIONS/SCREENS
Perforations Method HOLTE
Screens Type SLOT Material STEEL

(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.

Perf	Sern	Casing	Liner	Screen Dia	From	To	Screen/ slot width	Slot length	# of slots	Tele/ pipe size
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<u>20</u>	<u>26</u>	<u>1/4"</u>	<u>1"</u>	<u>216</u>	

License Number _____ Date _____
Signed _____

(8) WELL TESTS: Minimum testing time is 1 hour
 Pump Bailer Air Flowing Artesian
Yield gal/min 12+ Drawdown 35' Drill stem/Pump depth 2 HRS

(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.

Temperature 54 °F Lab analysis Yes By TDS - 127
Water quality concerns? Yes (describe below)

License Number 6644 Date 6-1-15
Signed Charles D. August
Contact Info. (optional) _____

From	To	Description	Amount	Units