



May 10, 2024

Claire Moore
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Solena Cellars, LLC
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Yamhill, OR 97148

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Portland, OR 97232
Phone: (971) 673-0405
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www.healthoregon.org/DWP

Letter sent via e-mail only

Re: **Solena Estate (PWS #[95738](#))
2013 Well #1 (L112357, [YAMH56573](#)), Tank, and Secondary Treatment
Conditional Approval ([PR #60-2024](#))**

Dear Ms. Moore:

Thank you for your plans for the new transient non-community water system, *Solena Estate*. The water system includes a single well drilled in 2013 (L112357, YAMH56573), a buried concrete cistern, pressure tank, secondary treatment (filters) and related facilities to serve two buildings and one rental house, year-round, with an average daily population of 60 users (10-12 employees with the remainder being guests from the public). The system description, well log, and sampling results (nitrate, arsenic, and coliform bacteria) were received on April 18, 2024, along with a plan review fee payment in the amount of \$825. A Land Use Compatibility Statement (LUCS) for Yamhill County was received May 7, 2024. Based on a maximum anticipated use of 3,000-gallons per day, Joel Plahn with the Oregon Water Resources Dept. indicated that the use meets the Exempt Use criteria, and no water right would be needed for the well at this time.

This project has been assigned plan review #60-2024 and can be tracked online at: <https://yourwater.oregon.gov/planreview.php?pwsno=95738>. As a new transient non-community water system, this system has been assigned Public Water System (PWS) ID# 95738 as viewable online at: <https://yourwater.oregon.gov/inventory.php?pwsno=95738>. All new systems must undergo a Capacity Assessment, which will be completed concurrently with this plan review process and will be addressed in more detail via email.

Under OAR 333-061-0060(1)(b), submittals must be prepared by a Professional Engineer registered in Oregon, unless exempted by DWS. An exemption was approved for this submittal. **Note that by utilizing this exemption, the water system takes full responsibility for the design of the project.**

Based upon the submitted information, the project is granted Conditional Approval, which means that for Final Approval, the following conditions will need to be met:

Note that the following conditions are required under our construction standards as indicated in the Oregon Administrative Rules (OAR) cited below and under [OAR 333-061-0050\(1\) - general requirements](#), [-0050\(2\)\(a\) - wells](#), [-0050\(4\) – treatment facilities](#), [-0050\(6\) – finished water storage](#), [-0050\(6\)\(b\) - pressure tanks](#), and [-0050\(8\) - distribution piping](#):

OAR 333-061-0050(1) – General:

1. **Materials (including the greensand filter media)** in contact with well water are designed for potable water service and **meet NSF Standard 61**.

OAR 333-061-0050(2)(a) – Wells:

2. **Public or private roadways may be allowed within 100 feet of a confined well, provided the well is protected against contamination** from surface runoff or hazardous liquids which may be spilled on the roadway and is protected from unauthorized access.
3. **The following sanitary hazards are not allowed within 100 feet of a well** which serves a public water system unless waived by the Authority: any existing or proposed pit privy, subsurface sewage disposal drain field; cesspool; solid waste disposal site; pressure sewer line; buried fuel storage tank; animal yard, feedlot or animal waste storage; untreated storm water or gray water disposal; chemical (including solvents, pesticides and fertilizers) storage, usage or application; fuel transfer or storage; mineral resource extraction, vehicle or machinery maintenance or long term storage; junk/auto/scrap yard; cemetery; unapproved well; well that has not been properly abandoned or of unknown or suspect construction; source of pathogenic organisms or any other similar public health hazards. No gravity sewer line or septic tank shall be permitted within 50 feet of a well which serves a public water system. Clearances greater than indicated above shall be provided when it is determined by the Authority that the aquifer sensitivity and degree of hazard require a greater degree of protection. Above-ground fuel storage tanks provided for emergency water pumping equipment may be exempted from this requirement by the Authority provided that a secondary containment system is in place that will accommodate 110 percent of the fuel tank storage.
4. A **raw water sampling tap** shall be provided on the pump discharge line, prior to treatment or storage tanks and as close to the wellhead as possible.

OAR 333-061-0050(4) – Treatment Facilities Other than Disinfection:

5. **Sampling taps shall be provided before and following the treatment** process and before the first user when any form of water treatment is used at a public water system.

OAR 333-061-0050(6) – Finished Water Storage (applicable to buried tank):

6. Concrete reservoirs shall be provided with **sufficient reinforcing** to prevent the formation of cracks, and waterstops and dowels shall be placed at construction joints. Poured-in-place wall castings shall be provided where pipes pass through the concrete.
7. Where ground-level reservoirs are located partially below ground, the **bottom shall be above the ground water table and footing drains** discharging to daylight shall be provided to carry away ground water which may accumulate around the perimeter of the structure.
8. Finished water storage facilities shall have a **watertight roof**.
9. An **access hatch** shall be provided to permit entry to the interior for cleaning and maintenance. When the access manhole is on the roof of the reservoir there shall be a curbing around the opening and a lockable watertight cover that overlaps the curbing.
10. An internal **ladder** of durable material, shall be provided where the only access manhole is located on the roof (a waiver may be granted to allow placement of a portable step ladder when cleaning based upon the relatively small size of the 3,000-gallon reservoir).
11. **Screened vents** shall be provided above the highest water level to permit circulation of air above the water.
12. A **drain** shall be provided at the lowest point in the bottom of the storage facility **and an overflow** of sufficient diameter to handle the maximum flow into the tank shall be provided at or near the top of the sidewall. **The outlet ends of the drain and overflow shall be fitted with angle-flap valves or equivalent protection** and shall discharge to a watercourse or storm drain capable of accommodating the flow **with a vertical separation between the bottom of the pipe and top of the receiving body or structure.**
13. A **silt stop** shall be provided at the outlet pipe (e.g., if the outlet is at the bottom, it should be about 6” off the floor to prevent sediment from getting into distribution.
14. **If interior surface is provided with a protective coating**, the coating shall meet the requirements of NSF Standard 61: Drinking Water System Components - Health Effects or equivalent.

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OAR 333-061-0050(6)(b) – Pressure Tanks:

15. The NSF-61 pressure tanks:


- a. Shall be provided with bypass piping around the pressure tank to permit operation of the system while the tank is being maintained or repaired; and
- b. Shall be provided with a drain, a pressure gauge, an air blow-off valve, a means for adding air and pressure switches for controlling the operation of the pump(s).

OAR 333-061-0050(8) – Waterlines:

16. Where the system facilities and the premises being served are both on the same parcel of property, requirements relating to pipe materials and pipe installation shall comply with the local and/or State **Plumbing Code**.

As provided under  [OAR 333-061-0055 \(end of page 26\)](#), Drinking Water Services may grant waivers from construction standards under some conditions. The construction standards waiver application is available as a  [fillable MS Word](#) or a  [PDF document](#).

Until documentation showing how these conditions have been met and Final Approval has been granted, the system is not approved for use.

To close out this project and request final approval, please fill out the Project Final Approval  [request form](#) and email it me at evan.e.hofeld@oha.oregon.gov along with any supplemental documentation showing how the above conditions have been met (be sure to reference Plan Review #60-2024 and public water system (PWS) ID #95738).

Information contained on subsequent pages of this letter includes the constructed **well evaluation results from our geologist**, a summary of **water quality test results**, and a system description.

Thank you for your patience in this plan review process and if you have any questions, please feel free to call me at 971-200-0288 or e-mail me at evan.e.hofeld@oha.oregon.gov.

Sincerely,



Evan Hofeld, PE

Oregon Health Authority – Drinking Water Services

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Solena Estate (PWS #95738) – 2013 Well #1 Conditional Approval LTR (PR #60-2024)

May 10, 2024

cc:

Tommy Laird - Oregon Water Resources Dept (OWRD), Well Construction Program Coordinator

Tommy.K.LAIRD@water.oregon.gov

Joel Plahn – OWRD, Water Master, Joel.M.PLAHN@water.oregon.gov

Sarah Schwab – Oregon Dept of Agriculture, Sarah.SCHWAB@oda.oregon.gov

Melissa Wong – Yamhill County Environmental Health, wongm@yamhillcounty.gov

Constructed Well Evaluation Results:

The well log ([YAMH56573](#)) was submitted to our geologist, Tom Pattee, for evaluation on April 23, 2024. Mr. Pattee completed his evaluation on May 8, 2024, shown in the evaluation excerpts below, the well is adequately constructed to draw water from a confined sedimentary bedrock aquifer. Mr. Pattee further determined that aquifer sensitivity results suggest that the:

“...well construction does not contribute to the overall sensitivity of this water source to nearby land use practices” [and] “...the aquifer is not highly sensitive to nearby land use practices.” [having a] “...low susceptibility to activities associated with the roadway that occurs within the 100 ft sanitary setback.”

As Built Well Construction Evaluation for Plan Review and/or Setback Waiver:

- Well/Spring meets current construction standards.
 - WRD special construction standards, see well log or Comments.
- Well/Spring construction does not meet construction standards.
 - Not sealed to appropriate depth. Recommended depth: _____
 - Not appropriate seal materials
 - Open to more than one aquifer
 - Seal info missing or unknown
 - Seal not constructed properly (Insufficient sealant volume Insufficient annular space)
- Susceptible construction, but grandfathered source. Consider for reconstruction if nitrate \geq 5mg/L or confirmed *E. coli* at source.
- Susceptible well construction, **not approved for use.**

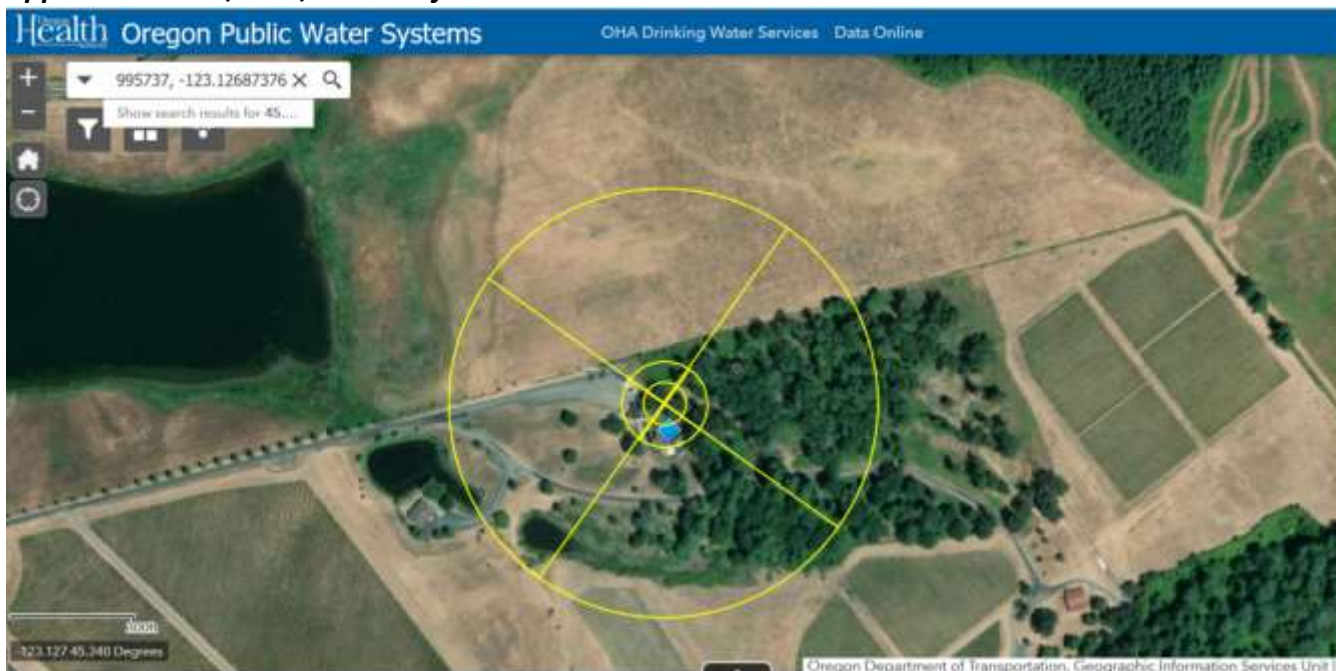
Comments: This well was drilled to a depth of 240 ft. The bottom 90 ft of the well caved in. The final reported well depth is 150 ft. The casing extends to a depth of 98.5 ft. The casing seal is completed to a depth of 21 ft, 8 ft into siltstone (claystone) bedrock that overlies the water-bearing zone. A narrow diameter perforated liner has been placed in the well from 70 to 150 ft below ground to help keep the borehole open below the casing. The well is gravel packed from 21 to 98 ft below ground level and therefore acts as an open hole as water can enter the well bore through the gravel pack. Sensitivity Analysis results suggest that well construction does not contribute to the overall sensitivity of this water source to nearby land use practices.

Nature of Aquifer Evaluation:

Aquifer Nature: Confined aquifer Semi-confined aquifer Unconfined aquifer

Comments: This well is designed to draw water from a confined sedimentary bedrock aquifer. The water-bearing zone is reported to occur between 61 and 97 ft below ground level and is overlain by 57 ft of siltstone (claystone) and silt (clay) of low permeability that act as a confining layer. Water within the aquifer is under pressure, rising 36 ft above the identified water-bearing zone to a final static water-level of 25 ft below ground. Sensitivity Analysis results suggest that the aquifer is not highly sensitive to nearby land use practices.

Approximate 50-, 100-, and 500-ft radii around the well:



Well Testing Water Quality Results:

The following test results taken 4/10/24 were received on 4/18/24 and demonstrate that additional treatment is not needed to address arsenic or coliform bacteria (both not detected) or nitrate detected at 0.308 mg/l, which is less than half the Maximum Contaminant Level (EPA MCL) of 10 mg/l:

Lab Number	Sample Name	Method	Result	Units	MRL	EPA MCL	Analysis Date/ Time
4101024-01	Front Spigot						
	Sampled: 4/10/24 10:50						
	Arsenic	A EPA 200.9	ND	mg/L	0.003	0.01	04/12/24 13:28
	Nitrate as N	A EPA 300.0	0.308	mg/L	0.100	10	04/10/24 16:38
Lab Number	Sample Name	Method	Result	Analysis Date/ Time			
4101024-01	Front Spigot						
	Sampled: 4/10/24 10:50						
	Total Coliforms	A SM 9223B (collert-18) 21st Ed.	Absent				4/10/24 15:58
	E. coli	A SM 9223B (collert-18) 21st Ed.	Absent				4/10/24 15:58
ND = None detected MRL = Minimum Reporting Limit MCL = Maximum Contamination Limit A = All procedures for this analysis are accredited in accordance with NELAP standards. Lab Accreditation No. OR-100013							

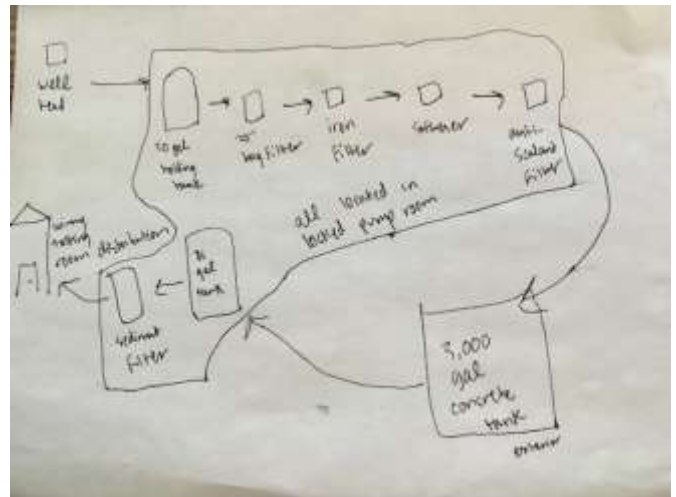
May 10, 2024

System description, Site map & photos showing the extent of the water system:

The water system has been licensed with ODA as a winery at this location since March of 2015. The well, drilled in 2013, has a pitless wellhead adapter that will have a sample spigot within 20 feet of the wellhead. There is an underground storage tank that is made from concrete and has a 3,000-gallon capacity. The storage tank is secured with a lid tightened with unique hex screws making it challenging to access unless you have the correct tool. The underground water storage tank also has a wireless water level alarm.

Water flows through the system in the following order:

1. Well, L112357 (1/2 HP, 7 GPM 230 Volt, 3-wire submersible well pump)
2. 20-gallon Flexcon steel diaphragm pressure tank (challenger pc662).
3. 20" bag filter housing used to remove gravel and sand debris.
4. 13" x 54" Air-Iron Filter with Greensand filtration media used to reduce iron and odors.
5. 13" x 54" Softener used to reduce hardness mineral.
6. 20" anti-scalant filter used as a polishing filter.
7. Treated water supplies a buried 3000-gallon concrete reservoir with a 2.0 GPM flow control.
8. Buried reservoir supplies distribution with a submersible well pump equipped with an 81-gallon Well-x-trol steel diaphragm pressure tank (model wx255).
9. 20" sediment filter housing is used as a polishing filter for water coming from buried reservoir and into distribution.
10. Distribution serves two buildings and one rental house, year-round, with an average daily population of 60 users, 10-12 of which will be employees, other users would be guests from the public.



Well Photos:





3,000-gallon Buried Tank Photos:



Treatment Photos in the Pump Room:

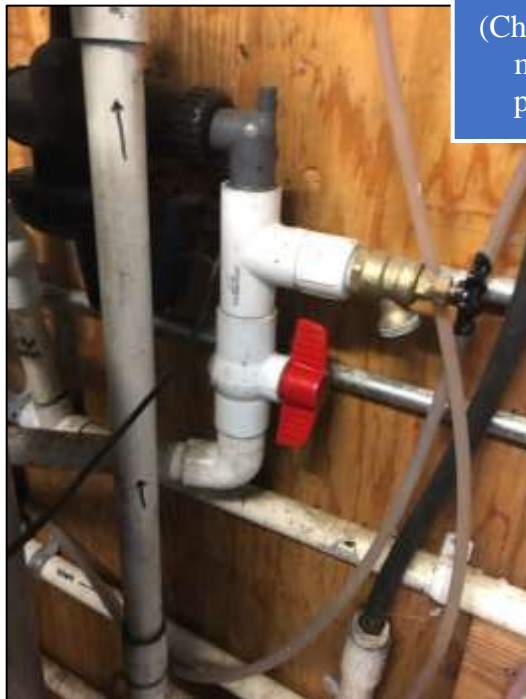


Water Softener

Greensand Filter

20-gallon steel diaphragm pressure tank (Challenger model pc66).

81-gallon steel diaphragm pressure tank (Well-X-Trol model wx255)





WELL-X-TROL®

Diaphragm Well Tanks: WX-100, 200 and 300 Series

150 PSIG Working Pressure

Construction

Shell	High Strength Steel
Diaphragm	Heavy Duty Butyl
Liner	Polypropylene
System Connection	Stainless Steel
Finish	Tuf-Kote™ HG Blue
Water Circulator	Turbulator™
Air Valve	Projection Welded
Factory Precharge	38 PSIG (2.6 bar)

Performance

Maximum Operating Temperature	200°F (93°C)
Maximum Working Pressure	150 PSIG (10.3 bar)
Maximum Relief Valve Setting	125 PSIG (8.6 bar)
Warranty	7 Year

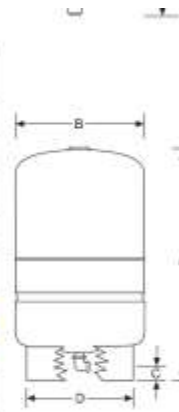
Application

- Controls pump cycling in residential well water systems.
- Can be installed indoors or outdoors.

Available in gray. Use suffix G.

Stand Models

Model Number	Tank Volume		Max. Accept. Factor	A Tank Height		B Tank Diameter		C Sys. Conn. Centerline		D Stand Diameter		System Conn. (NPTM)	Shipping Weight	
	Gal	Lit		In	mm	In	mm	In	mm	In	mm		Lbs	Kg
WX-201	14.0	53	0.81	25	635	15	381	1 1/4	40	12	304	1	25	11
WX-202	20.0	76	0.57	32	813	15	381	1 1/4	40	12	304	1	33	15
WX-202XL	26.0	98	0.44	39	991	15	381	1 1/4	40	12	304	1	36	16
WX-203	32.0	121	0.35	47	1194	15	381	1 1/4	40	12	304	1	43	20
WX-205	34.0	129	1.00	30	762	22	559	1 1/4	49	20 1/2	521	1 1/4	61	28
WX-250	44.0	167	0.77	36	914	22	559	1 1/4	49	20 1/2	521	1 1/4	69	31
WX-251	62.0	235	0.55	47	1194	22	559	1 1/4	49	20 1/2	521	1 1/4	92	42
WX-255	81.0	306	0.41	57	1448	22	559	1 1/4	49	20 1/2	521	1 1/4	103	47
WX-252*	86.0	326	0.39	62	1575	22	559	1 1/4	49	20 1/2	521	1 1/4	114	52
WX-302	86.0	326	0.54	47	1194	26	660	2 1/4	52	20 1/2	521	1 1/4	123	56
WX-350	119.0	450	0.39	62	1575	26	660	2 1/4	52	20 1/2	521	1 1/4	166	75



*WX-252: Maximum Working Pressure: 100 PSIG. Available in Blue only. Available in Tan and Gray. Use suffix T or G.
 All dimensions and weights are approximate.

Submittal Data Challenger Series Water System Tanks

Job Name: _____ Schedule #: _____
 Location: _____ Model #: _____
 Engineer: _____ Representative: _____
 Contractor: _____

Description

Challenger (PC) series tanks are diaphragm type, pre-charged hydro-pneumatic tanks designed for residential and commercial water well, pressure booster, and irrigation applications. Also available in almond (APC).



Materials of Construction

Shell: Drawn steel w/ epoxy finish
 Diaphragm: Butyl rubber w/ copolymer polypropylene lower water chamber

Connection: Steel FPT

Ratings

Max. Working Pressure: 125 PSI
 Max. Working Temp: 140 F
 Pre-Charge (adjustable): 38 PSI



Tank Specifications


Model	Diameter (inches)	Height (inches)	System Connection (inches)	Volume (gallons)	Drawdown (gallons)			Weight (lbs)
					20/40	30/50	40/60	
(A) PC 44	18	22	1	14	5.6	4.8	4.1	28
(A) PC 66	18	20	1	20	8.1	6.8	5.9	36
(A) PC88	16	34.5	1	26	10.5	8.9	7.7	41
(A) PC 111	21	27.75	1 1/4	32	12.9	10.9	9.4	54
(A) PC 122	16	40.75	1	33.4	13.3	11.3	9.7	49
(A) PC 144	21	36.25	1 1/4	44	17.7	15.0	13.0	67
(A) PC 211	21	48	1 1/4	62	25.0	21.1	18.3	82
(A) PC 244	21	62	1 1/4	81	32.6	27.6	23.9	99
(A) PC 266	26	44.5	1 1/4	65	34.3	29.0	25.1	121
(A) PC 366	26	69.75	1 1/4	119	48.0	40.6	35.1	153





300 Pond St • Randolph, MA 02368 • 800-527-0030 • 781-986-2029 FAX • www.flexconind.com


Water Rights Not Required for the Well:

RE: Solena Cellars Well Question

 **PLAHN Joel M * WRD** <Joel.M.PLAHN@water.oregon.gov>


To:  Claire Moore
Cc:  Hofeld Evan E

Tue 4/30/2024 10:39 AM

 You forwarded this message on 4/30/2024 12:47 PM.

Yes, that would be within exempt uses and no water right required. Thanks

Thanks, Joel Plahn
District 22 Watermaster
Cell 503-508-2394


Integrity | Service | Technical Excellence | Teamwork | Forward-Looking

From: Claire Moore <clmo@solenaestate.com>
Sent: Tuesday, April 30, 2024 10:29 AM
To: PLAHN Joel M * WRD <Joel.M.PLAHN@water.oregon.gov>
Cc: Hofeld Evan E <EVAN.E.HOFELD@solenaestate.com>
Subject: RE: Solena Cellars Well Question

You don't often get email from clmo@solenaestate.com. Learn why this is important.

Hi Joel,

The max water ever used in one day would be about 3,000 gallons. We are fairly small. So it sounds like we are exempt from the water permitting process?

I will look into the pond issue. Thank you!

Claire Moore
Business Manager

Well Log:

YAMH 56573

State of Oregon State Well ID L112357
 WATER WELL REPORT (as required by ORS 537.765) Page 1 of 1 Start Card # 1020677

<p>(1) OWNER: Well No. 2895 Name LAURENT MONTALIEU Address 17100 NE WOODLAND LOOP RD City YAMHILL St OR Zip 97148</p>	<p>(9) LOCATION OF WELL by legal description: County YAMHILL Lat. " " " Long. " " " Township 3 S Range 4 W NW Section 1 SE 1/4 SW 1/4 Tax lot 1000 Lot Block Subdivision Street Address of Well (or nearest Address): 17100 NE WOODLAND LP RD YAMHILL, OR</p>																																																								
<p>(2) TYPE OF WORK: NEW WELL</p>	<p>(10) STATIC WATER LEVEL: 25 ft. below land surface. Date 08/02/13 Artesian pressure _____ lb per square in. Date _____</p>																																																								
<p>(3) DRILL METHOD: ROTARY AIR</p>	<p>(11) WATER BEARING ZONES: Depth at which water was first found 61 <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">From</td> <td style="width: 20%;">To</td> <td style="width: 20%;">Set Flow Rate</td> <td style="width: 20%;">SWL</td> </tr> <tr> <td>61</td> <td>97</td> <td>5</td> <td>25</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </table> </p>	From	To	Set Flow Rate	SWL	61	97	5	25	_____	_____	_____	_____	_____	_____	_____	_____																																								
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<p>(4) PROPOSED USE: DOMESTIC</p>	<p>(12) WELL LOG: <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;"></td> <td style="width: 10%;">Material</td> <td style="width: 10%;">From</td> <td style="width: 10%;">To</td> <td style="width: 10%;">SWL</td> </tr> <tr> <td></td> <td>TOP SOIL</td> <td>0</td> <td>4</td> <td></td> </tr> <tr> <td></td> <td>CLAY, TAN</td> <td>4</td> <td>13</td> <td></td> </tr> <tr> <td></td> <td>CLAYSTONE, GRAY</td> <td>13</td> <td>61</td> <td></td> </tr> <tr> <td></td> <td>CLAYSTONE, GRAY W/OCC THIN LAYERS OF TAN LIMESTONE AND GRAY SANDSTONE</td> <td>61</td> <td>150</td> <td></td> </tr> <tr> <td></td> <td>CLAYSTONE W/CLAY LAYERS, VERY SUSCEPTIBLE AND CAVING. WILL NOT STAY OPEN</td> <td>150</td> <td>240</td> <td></td> </tr> </table> </p>		Material	From	To	SWL		TOP SOIL	0	4			CLAY, TAN	4	13			CLAYSTONE, GRAY	13	61			CLAYSTONE, GRAY W/OCC THIN LAYERS OF TAN LIMESTONE AND GRAY SANDSTONE	61	150			CLAYSTONE W/CLAY LAYERS, VERY SUSCEPTIBLE AND CAVING. WILL NOT STAY OPEN	150	240																											
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<p>(5) BORE HOLE CONSTRUCTION: Special Construction Approval NO Depth of Consp. Well 150 ft Explosives used NO Type _____ Amount _____ <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">HOLE</td> <td style="width: 10%;">SEAL</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>Diam.</td> <td>From</td> <td>To</td> <td>Material</td> <td>From</td> <td>To</td> <td>Amount</td> </tr> <tr> <td>10</td> <td>0</td> <td>98</td> <td>BENTONITE CHIP</td> <td>0</td> <td>21</td> <td>15 SAX</td> </tr> <tr> <td>6</td> <td>98</td> <td>240</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </table> Seal placement method FURRED/PROBED Backfill: from 150 ft to 240 ft Material CAVING SLOUGH Gravel: from 21 ft to 98 ft Size 3/8" FEA</p>		HOLE	SEAL					Diam.	From	To	Material	From	To	Amount	10	0	98	BENTONITE CHIP	0	21	15 SAX	6	98	240	_____	_____	_____	_____	<p>(6) CASING/LINER: <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">Diam.</td> <td style="width: 10%;">From</td> <td style="width: 10%;">To</td> <td style="width: 10%;">Gauge</td> <td style="width: 10%;">Material</td> <td style="width: 10%;">Connection</td> </tr> <tr> <td>Casing</td> <td>6</td> <td>-1.5</td> <td>98.5</td> <td>.25</td> <td>STEEL</td> <td>WELDED</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Liner</td> <td>4</td> <td>70</td> <td>150</td> <td>SCH40</td> <td>PLASTIC</td> <td>THREADED</td> </tr> </table> Final Location of shoe(s) 98.5 // SPLINE-LOC LINER</p>		Diam.	From	To	Gauge	Material	Connection	Casing	6	-1.5	98.5	.25	STEEL	WELDED	_____	_____	_____	_____	_____	_____	_____	Liner	4	70	150	SCH40	PLASTIC	THREADED
	HOLE	SEAL																																																							
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	Diam.	From	To	Gauge	Material	Connection																																																			
Casing	6	-1.5	98.5	.25	STEEL	WELDED																																																			
_____	_____	_____	_____	_____	_____	_____																																																			
Liner	4	70	150	SCH40	PLASTIC	THREADED																																																			
<p>(7) PERFORATIONS/SCREENS: <input checked="" type="checkbox"/> Perf. Method 6"TORCH/4"SAW <input type="checkbox"/> Screens Type _____ Material _____ <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">From</td> <td style="width: 10%;">To</td> <td style="width: 10%;">Slot Size</td> <td style="width: 10%;">Number</td> <td style="width: 10%;">Diam.</td> <td style="width: 10%;">Tele/pipe Size</td> <td style="width: 10%;">Casing/liner</td> </tr> <tr> <td></td> <td>22</td> <td>37</td> <td>.2X7"</td> <td>80</td> <td>_____</td> <td>_____</td> <td>CASING</td> </tr> <tr> <td></td> <td>111</td> <td>129</td> <td>.1X7"</td> <td>34</td> <td>_____</td> <td>_____</td> <td>LINER</td> </tr> <tr> <td></td> <td>140</td> <td>149</td> <td>.1X7"</td> <td>30</td> <td>_____</td> <td>_____</td> <td>LINER</td> </tr> </table> </p>		From	To	Slot Size	Number	Diam.	Tele/pipe Size	Casing/liner		22	37	.2X7"	80	_____	_____	CASING		111	129	.1X7"	34	_____	_____	LINER		140	149	.1X7"	30	_____	_____	LINER	<p>DAVE PAYSINGER, bluewaterdrilling.com (503) 868 7878 SALEM, OR Date started 08/01/13 Completed 08/02/13</p>																								
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<p>(8) WELL TESTS: Minimum testing time is 1 hour Test type AIR <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%;">Draw-down</td> <td style="width: 15%;">Drill stem</td> <td style="width: 15%;">Time</td> </tr> <tr> <td>Yield GPM</td> <td></td> <td>at</td> <td></td> </tr> <tr> <td>5</td> <td>_____</td> <td>150</td> <td>1 hr.</td> </tr> <tr> <td>5</td> <td>_____</td> <td>135</td> <td>3</td> </tr> </table> Temperature of water 54F Depth Artesian Flow Found _____ Max water analysis done? YES By whom BLUE H2O Reason for water not suitable for use _____ Depth of strata _____</p>		Draw-down	Drill stem	Time	Yield GPM		at		5	_____	150	1 hr.	5	_____	135	3	<p>(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 water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief. 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 water supply well construction standards. This report is true to the best of my knowledge and belief. Signed <i>Dave Paysinger</i> Date 08/02/13 MNC Number 1438</p>																																								
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