

**Water Right Conditions
Tracking Slip**

Groundwater/Hydrology Section

FILE ## G-17508

ROUTED TO: Water Rights - Michele

TOWNSHIP/

RANGE-SECTION: 15/38E-36 66

CONDITIONS ATTACHED? ☒ yes ☐ no

REMARKS OR FURTHER INSTRUCTIONS:

Reviewer: Mike Zwart

[illegible]

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date December 8, 2011

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

SUBJECT: Application G- 17508 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 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: Todd Arnoldus County: Union

A1. Applicant(s) seek(s) 1.33 cfs from one well(s) in the Grande Ronde Basin,
_____ subbasin Quad Map: Summerville

A2. Proposed use: Irrigation, 80 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	UNIO 173	1	CRB	1.33	1S/38E-36 NW-NW	1320' S, 1290' E fr NW cor S 36
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	2750	100	-55.5	3/14/11	1394	0-18	0-1394	None	1294-1394	1700		F
						340-362						
						1097-1286*						

Use data from application for proposed wells.

A4. Comments: *Lower sealed interval calculated on the basis of 200 sacks cement pumped into annular space between 10" casing and estimated 18" borehole. Borehole diameter is reported as 26", but it is very likely to be 18" or less below the 18" surface casing. I doubt if an underreamer was used, given the small diameter of the lower casing installed (see well log).

A5. ☒ Provisions of the Grande Ronde 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: _____

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

- 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 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 Ground Water Section.

- Blank lined paper with horizontal ruling lines.

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	Basalt of the Columbia River Basalt Group	☒	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: The well is flowing artesian.**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	Grande Ronde River	2824±	2674	13500	☐	☒	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: It is not known to what degree, if any, that ground water in the deep basalt aquifers contributes to surface water flows in the basin.Water Availability Basin the well(s) are located within: Grande Ronde Riv. > Snake Riv. Ab Willow Cr. (30810407).**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													
(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.

[illegible]

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) 7J;

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

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]

D. WELL CONSTRUCTION, OAR 690-200D1. Well #: 1 Logid: UNIO 173D2. **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).**



Oregon Water Resources Department Hydrograph for State Well UNIO 156, State Observation Well # 868

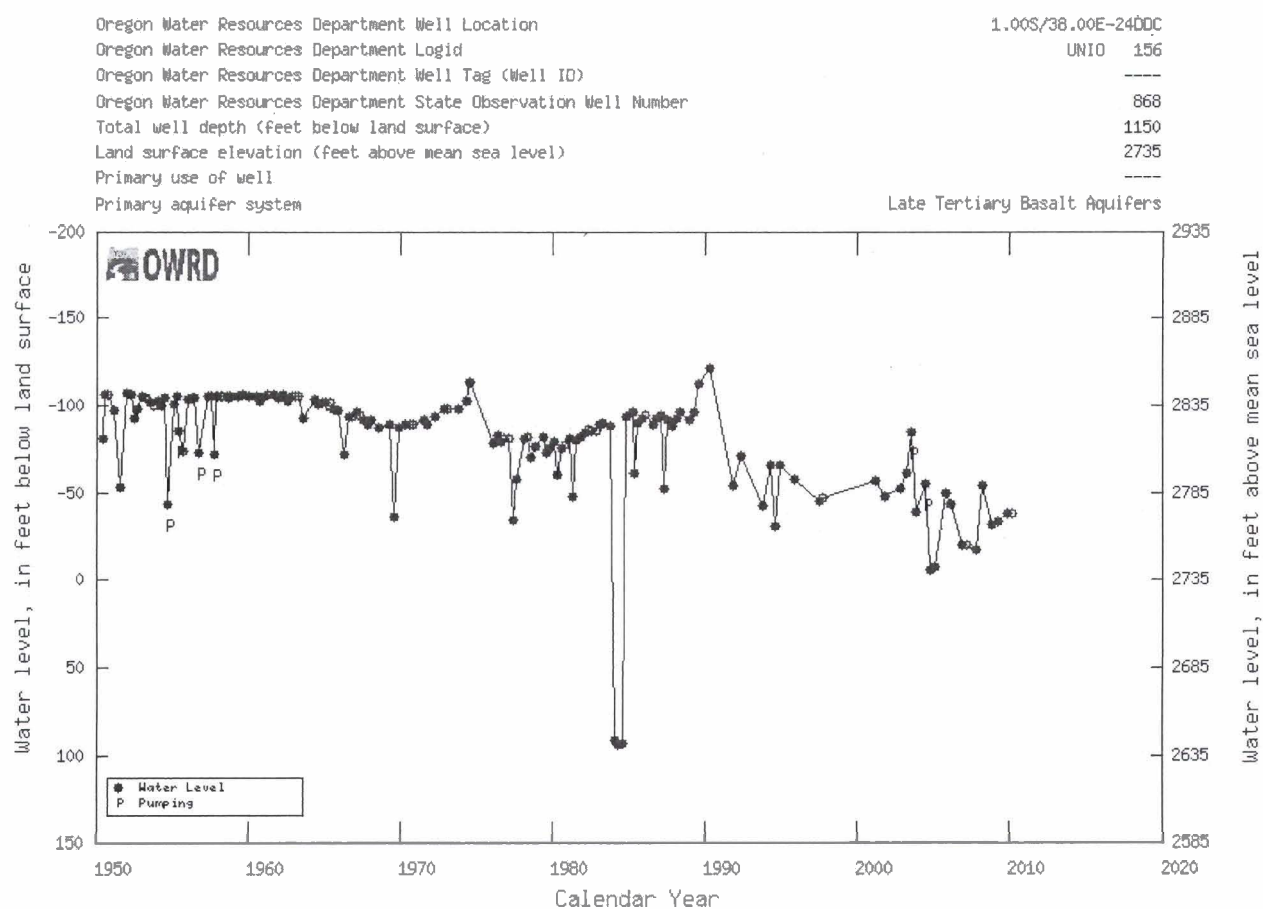
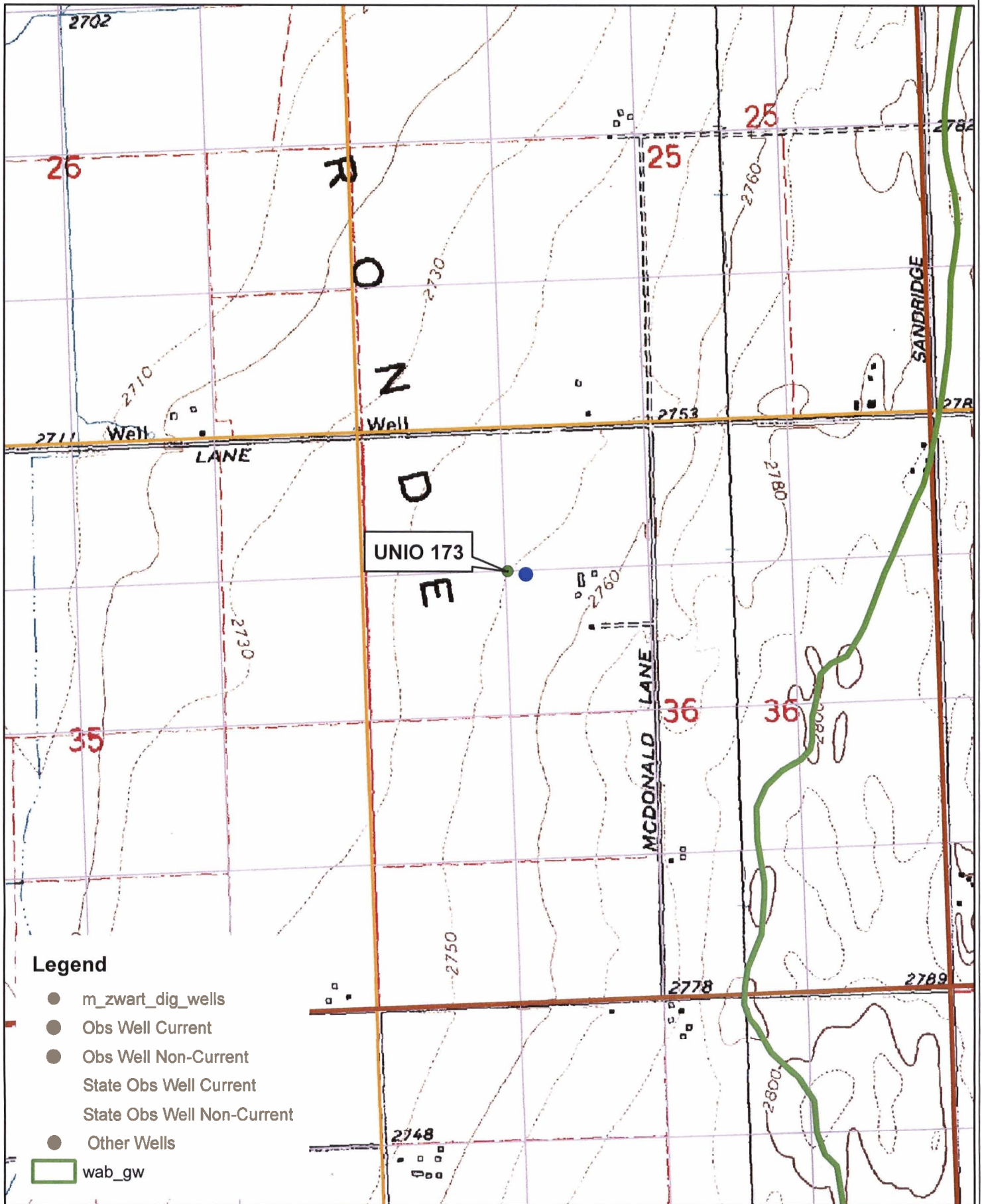


Table showing water-level data for State Well UNIO 156, State Observation Well # 868

3/11/2010 - 38.34

Application G-17508, Todd Arnoldus



0

0.5

1

Miles

Application for a Permit to Use Ground Water



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

SECTION 1: APPLICANT INFORMATION AND SIGNATURE

Applicant Information

NAME <u>Todd Amoschus</u>		PHONE (HM) <u>541-534-2266</u>	
PHONE (WK) <u>541-534-2266</u>	CELL <u>541-805-8912</u>	FAX	
ADDRESS <u>990 CRESCENT RD.</u>			
CITY <u>Imbler</u>	STATE <u>OR</u>	ZIP <u>97841</u>	E-MAIL <u>Tamamouse@verizon.net</u>

Organization Information

NAME		PHONE		FAX
ADDRESS		CELL		
CITY	STATE	ZIP	E-MAIL	

Agent Information – The agent is authorized to represent the applicant in all matters relating to this application.

AGENT / BUSINESS NAME		PHONE		FAX
ADDRESS		CELL		
CITY	STATE	ZIP	E-MAIL	

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Note: Attach multiple copies as needed

By my signature below I confirm that I understand:

- I am asking to use water specifically as described in this application.
- Evaluation of this application will be based on information provided in the application.
- I cannot use water legally until the Water Resources Department issues a permit.
- Oregon law requires that a permit be issued before beginning construction of any proposed well, unless the use is exempt. Acceptance of this application does not guarantee a permit will be issued.
- If I get a permit, I must not waste water.
- If development of the water use is not according to the terms of the permit, the permit can be cancelled.
- The water use must be compatible with local comprehensive land-use plans.
- Even if the Department issues a permit, I may have to stop using water to allow senior water-right holders to get water to which they are entitled.

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WATER RESOURCES DEPT
SALEM, OREGON

I (we) affirm that the information contained in this application is true and accurate.

Todd Amoschus
Applicant Signature

Todd Amoschus
Print Name and title if applicable

11-15-2011
Date

Applicant Signature

Print Name and title if applicable

Date

For Department Use		
App. No. <u>G-17509</u>	Permit No. _____	Date _____

SECTION 2: PROPERTY OWNERSHIP

Please indicate if you own all the lands associated with the project from which the water is to be diverted, conveyed, and used.

☒ Yes

☐ There are no encumbrances.

☒ This land is encumbered by easements, rights of way, roads or other encumbrances.

☐ No

☐ I have a recorded easement or written authorization permitting access.

☐ I do not currently have written authorization or easement permitting access.

☐ Written authorization or an easement is not necessary, because the only affected lands I do not own are state-owned submersible lands, and this application is for irrigation and/or domestic use only (ORS 274.040).

☐ Water is to be diverted, conveyed, and/or used only on federal lands.

List the names and mailing addresses of all affected landowners (*attach additional sheets if necessary*).

N/A

SECTION 3: WELL DEVELOPMENT

WELL NO.	NAME OF NEAREST SURFACE WATER	IF LESS THAN 1 MILE:	
		DISTANCE TO NEAREST SURFACE WATER	ELEVATION CHANGE BETWEEN NEAREST SURFACE WATER AND WELL HEAD
1	Tributaries of Willow Creek	4500 Ft	2755 / 2710 = 45 Feet

Please provide any information for your existing or proposed well(s) that you believe may be helpful in evaluating your application. For existing wells, describe any previous alteration(s) or repair(s) not documented in the attached well log or other materials (*attach additional sheets if necessary*).

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SALEM, OREGON

G-17508

SECTION 3: WELL DEVELOPMENT, CONTINUED

Source (aquifer), if known: Basalt

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Total maximum rate requested: 1.33 CFS (each well will be evaluated at the maximum rate unless you indicate well-specific rates and annual volumes in the table below).

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SALEM, OREGON

Complete the table below. If this is an existing well, the following information may be found on the applicable well log. (If a well log is available, please submit it in addition to completing the table.) If this is a proposed well, or well-modification, consider consulting with a licensed well driller, geologist, or certified water right examiner.

OWNER'S WELL NAME OR NO.	PROPOSED	EXISTING	WELL ID (WELL TAG) NO.* OR WELL LOG ID**	FLOWING ARTESIAN	CASING DIAMETER	CASING INTERVALS (IN FEET)	PERFORATED OR SCREENED INTERVALS (IN FEET)	SEAL INTERVALS (IN FEET)	MOST RECENT STATIC WATER LEVEL & DATE (IN FEET)	PROPOSED USE			
										SOURCE AQUIFER***	TOTAL WELL DEPTH	WELL- SPECIFIC RATE (GPM)	ANNUAL VOLUME (ACRE-FEET)
	☐	☒	UN10173	☒	18"	+ 1/2" 202	NONE	0-18 FT	Softest low surface	Basalt	1394	1700 597	240 Acre Feet
	☐	☐		☐	12 1/4"	0	NONE	10-26 FT					
	☐	☐		☐	10"	1024/1594	1294/1594	?/1200					
	☐	☐		☐									
	☐	☐		☐									
	☐	☐		☐									
	☐	☐		☐									
	☐	☐		☐									

6-17-08

- * Licensed drillers are required to attach a Department-supplied Well Tag, with a unique Well ID or Well Tag Number to all new or newly altered wells. Landowners can request a Well ID for existing wells that do not have one. The Well ID is intended to serve as a unique identification number for each well.
- ** A well log ID (e.g. MARI 1234) is assigned by the Department to each log in the agency's well log database. A separate well log is required for each subsequent alteration of the well.
- *** Source aquifer examples: Troutdale Formation, gravel and sand, alluvium, basalt, bedrock, etc.

SECTION 4: WATER USE

USE	PERIOD OF USE	ANNUAL VOLUME (ACRE-FEET)
Irrigation	March 1 st - Oct. 31 st	240 Acre feet

Exempt Uses: Please note that 15,000 gallons per day for single or group domestic purposes and 5,000 gallons per day for a single industrial or commercial purpose are exempt from permitting requirements.

For irrigation use only:

Please indicate the number of primary and supplemental acres to be irrigated (*must match map*).

Primary: 80 Acres Supplemental: 0 Acres

List the Permit or Certificate number of the underlying primary water right(s): N/A

Indicate the maximum total number of acre-feet you expect to use in an irrigation season: 240 acre-ft.

If the use is municipal or quasi-municipal, attach Form M

- If the use is domestic, indicate the number of households: N/A

If the use is mining, describe what is being mined and the method(s) of extraction: N/A

SECTION 5: WATER MANAGEMENT

A. Diversion and Conveyance

What equipment will you use to pump water from your well(s)?

☒ Pump (give horsepower and type): 25 Hp. Turbine

☐ Other means (describe): _____

Provide a description of the proposed means of diversion, construction, and operation of the diversion works and conveyance of water. Existing

B. Application Method

What equipment and method of application will be used? (e.g., drip, wheel line, high-pressure sprinkler)

~~X~~ Enclosed system.

C. Conservation

Please describe why the amount of water requested is needed and measures you propose to: prevent waste; measure the amount of water diverted; prevent damage to aquatic life and riparian habitat; prevent the discharge of contaminated water to a surface stream; prevent adverse impact to public uses of affected surface waters.

SECTION 6: STORAGE OF GROUND WATER IN A RESERVOIR

If you would like to store ground water in a reservoir, complete this section (*if more than one reservoir, reproduce this section for each reservoir*).

Reservoir name: _____ Acreage inundated by reservoir: _____

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Use(s): N/A

Volume of Reservoir (acre-feet): N/A Dam height (feet, if excavated, write "zero"): N/A

Note: If the dam height is greater than or equal to 10.0' above land surface AND the reservoir will store 9.2 acre feet or more, engineered plans and specifications must be approved prior to storage of water.

SECTION 7: USE OF STORED GROUND WATER FROM THE RESERVOIR

If you would like to use stored ground water from the reservoir, complete this section (if more than one reservoir, reproduce this section for each reservoir).

Annual volume (acre-feet): N/A

USE OF STORED GROUND WATER	PERIOD OF USE
<u>N/A</u>	

SECTION 8: PROJECT SCHEDULE

Date construction will begin: MAY 1st 2012

Date construction will be completed: MAY 15th 2012

Date beneficial water use will begin: June 1st 2012

SECTION 9: REMARKS

Use this space to clarify any information you have provided in the application (attach additional sheets if necessary).

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WATER RESOURCES DEPT
SALEM, OREGON

G-17500

Land Use Information Form



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

Applicant: Clinton T. Amorus
First Last
Mailing Address: 990 Crescent RD.
Imbler OR 97841 Daytime Phone: 541-534-2266
City State Zip

A. Land and Location

Please include the following information for all tax lots where water will be diverted (taken from its source), conveyed (transported), and/or used or developed. Applicants for municipal use, or irrigation uses within irrigation districts may substitute existing and proposed service-area boundaries for the tax-lot information requested below.

Township	Range	Section	¼ ¼	Tax Lot #	Plan Designation (e.g., Rural Residential/RR-5)	Water to be:			Proposed Land Use:
T15	38E	36				☐ Diverted	☒ Conveyed	☒ Used	Irr. Crop land
						☐ Diverted	☐ Conveyed	☐ Used	
						☐ Diverted	☐ Conveyed	☐ Used	
						☐ Diverted	☐ Conveyed	☐ Used	

List all counties and cities where water is proposed to be diverted, conveyed, and/or used or developed:

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B. Description of Proposed Use

Type of application to be filed with the Water Resources Department:

- ☒ Permit to Use or Store Water ☐ Water Right Transfer ☐ Permit Amendment or Ground Water Registration Modification
☐ Limited Water Use License ☐ Allocation of Conserved Water ☐ Exchange of Water

Source of water: ☐ Reservoir/Pond ☒ Ground Water ☐ Surface Water (name) _____

Estimated quantity of water needed: _____ ☐ cubic feet per second ☐ gallons per minute ☐ acre-feet

Intended use of water: ☒ Irrigation ☐ Commercial ☐ Industrial ☐ Domestic for _____ household(s)
☐ Municipal ☐ Quasi-Municipal ☐ Instream ☐ Other _____

Briefly describe:

To irrigate crops in the Spring and fall of the year using either a center pivot or wheel lines.

Note to applicant: If the Land Use Information Form cannot be completed while you wait, please have a local government representative sign the receipt at the bottom of the next page and include it with the application filed with the Water Resources Department.

G1-17500

See bottom of Page 3. →

NOTICE TO WATER WELL CONTRACTOR

The original and first copy
of this report are to be
filed with the

STATE ENGINEER, SALEM, OREGON 97310
within 30 days from the date
of well completion.

WATER WELL REPORT

STATE OF OREGON

(Please type or print)

(Do not write above this line)

Page 1

State Well No.

15/38 E-36b

State Permit No.

(1) OWNER:

Name **B. L. Davis**Address **Adams, Oregon 97810**

(2) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

 Rotary ☒ Driven ☐
 Cable ☐ Jetted ☐
 Dug ☐ Bored ☐

(4) PROPOSED USE (check):

 Domestic ☐ Industrial ☐ Municipal ☐
 Irrigation ☒ Test Well ☐ Other ☐

CASING INSTALLED:

Threaded ☐ Welded ☒
 8" Diam. from +1 ft. to 362 ft. Gage .250
 12" Diam. from 0 ft. to 1026 ft. Gage .250
 10" Diam. from 1026 ft. to 1394 ft. Gage .250

PERFORATIONS:

Perforated? ☒ Yes ☐ No.

Type of perforator used

Machine

 Size of perforations 1/4 in. by 2 in.
 4800 perforations from 1294 ft. to 1394 ft.
 perforations from ft. to ft.
 perforations from ft. to ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name

Type Model No.

Diam. Slot size Set from ft. to ft.

Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

" " " "

" " " "

Bailer test gal./min. with ft. drawdown after hrs.

Artesian flow 1700 g.p.m.

Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION:

*SEE ATTACHMENT.

Well seal—Material used Neat cement

Well sealed from land surface to 18 ft.

Diameter of well bore to bottom of seal 26 in.

Diameter of well bore below seal 26 in.

Number of sacks of cement used in well seal 45 sacks

Number of sacks of bentonite used in well seal sacks

Brand name of bentonite

Number of pounds of bentonite per 100 gallons

of water lbs./100 gals.

Was a drive shoe used? ☐ Yes ☒ No Plugs Size: location ft.Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? depth of strata

Method of sealing strata off

Was well gravel packed? ☒ Yes ☐ No Size of gravel: 3/8-

Gravel placed from 18 ft. to 355 ft.

(10) LOCATION OF

County **Union** Driller's well number

1/4 NW 1/4 Section 36 T. 15, R. 38 E. W.M.

Bearing and distance from section or subdivision corner

Center of

(11) WATER LEVEL: Completed well.

Depth at which water was first found 100 ft.

Static level ft. below land surface. Date

Artesian pressure 32 lbs. per square inch. Date 12/11/78

(12) WELL LOG:

Cased to bottom. Diameter of well below casing

Depth drilled 1394 ft. Depth of completed well 1394 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top soil	0	3	
Clay brown	3	73	
Clay soft brown	73	100	
Clay and sand	100	105	
Clay and sandstone	105	112	
Clay blue	112	160	
Clay and sand	160	168	
Sand and clay	168	176	
Clay blue and sandstone	176	183	
Clay and sand	183	193	
Clay blue	193	206	
Sand	206	210	
Clay and sand	210	213	
Sand	213	223	
Clay blue and sand	223	228	
Clay brown	228	257	
Sand	257	270	
Clay and sand	270	284	
Sand and gravel	284	300	

Work started 12/1 1977 Completed 12/11 1978

Date well drilling machine moved off of well 12/11 1978

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] *Steve Moon* Date 6/11, 1979

(Drilling Machine Operator)

Drilling Machine Operator's License No. 755

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name **Steve Moore**

(Person, firm or corporation)

(Type or print)

Address **P. O. Drawer P, Moses Lake, Wa. 98837**[Signed] *Steve Moon*

(Water Well Contractor)

Contractor's License No. 628 Date 6/11 1979

WATER WELL REPORT

STATE OF OREGON

(Please type or print)

(Do not write above this line)

JUN 1 1973

State Well No. 15/SE-366

State Permit No.

SALEM, OREGON

UNW 173

OWNER:

Name **B. L. Davis**
Address **Adams, Oregon 97810**

(2) TYPE OF WORK (check):

New Well ☐ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary ☐ Driven ☐
Cable ☐ Jetted ☐
Dug ☐ Bored ☐

(4) PROPOSED USE (check):

Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

CASING INSTALLED:

Threaded ☐ Welded ☐

" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

PERFORATIONS:

Perforated? ☐ Yes ☐ No.

Type of perforator used

Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☐ No

Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is
lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.
" " " " " "

Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m.

perature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used
Well sealed from land surface to ft.
Diameter of well bore to bottom of seal in.
Diameter of well bore below seal in.
Number of sacks of cement used in well seal sacks
Number of sacks of bentonite used in well seal sacks
Brand name of bentonite
Number of pounds of bentonite per 100 gallons
of water lbs./100 gals.
Was a drive shoe used? ☐ Yes ☐ No Plugs Size: location ft.
Did any strata contain unusable water? ☐ Yes ☐ No
Type of water depth of strata
Method of sealing strata off
Was well gravel packed? ☐ Yes ☐ No Size of gravel:
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Driller's well number
1/4 1/4 Section T. R. W.M.
Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found ft.
Static level ft. below land surface. Date
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing

Depth drilled ft. Depth of completed well ft.

Formation: Describe color, texture, grain size and structure of materials;
and show thickness and nature of each stratum and aquifer penetrated,
with at least one entry for each change of formation. Report each change in
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Clay tan	300	305	
Sand, gravel and clay	305	310	
Sand and clay	310	318	
Sand coarse & fine gravel	318	323	
Sand and clay	323	325	
Clay blue	325	335	
Basalt	335	362	
Basalt Brn Brken w/gr clay	362	370	
Basalt Blk w/ gr. clay soft	370	400	
Basalt Blk w/brn & grn clay	400	418	
Basalt blk 2/grn & brn clay	418	460	
Basalt Blk & brn with clay	460	490	
Basalt Gry hard brkn w/clay	490	507	
Basalt Blk soft w/grn clay	507	572	
Basalt gray hard & broken	572	594	
Basalt red	594	597	
Clay grn w/some basalt blk	597	603	
Basalt gray hard	603	632	
Basalt gray hard & broken	632	666	

Work started 19 Completed 19
Date well drilling machine moved off of well 19

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.
Materials used and information reported above are true to my
best knowledge and belief.

[Signed] Date 19.....
(Drilling Machine Operator)

Drilling Machine Operator's License No.

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is
true to the best of my knowledge and belief.

Name (Person, firm or corporation) (Type or print)

Address

[Signed] (Water Well Contractor)

Contractor's License No. Date 19.....

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report
are to be filed with the

WATER RESOURCES DEPARTMENT,
SALEM, OREGON 97310
within 30 days from the date
of well completion.

WATER WELL REPORT

STATE OF OREGON

(Please type or print)

(Do not write above this line)

Page 4

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JUN 1 1979

State Well No. 13/38E-366

State Permit No.

11A970173

(1) OWNER:

Name B. L. Davis
Address Adams, Oregon

(2) TYPE OF WORK (check):

New Well ☐ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary ☐ Driven ☐
Cable ☐ Jetted ☐
Dug ☐ Bored ☐

(4) PROPOSED USE (check):

Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

CASING INSTALLED:

Threaded ☐ Welded ☐

" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

PERFORATIONS:

Perforated? ☐ Yes ☐ No.

Type of perforator used

Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☐ No

Manufacturer's Name

Type Model No.

Diam. Slot size Set from ft. to ft.

Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is
lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

" " " "

" " " "

Bailer test gal./min. with ft. drawdown after hrs.

Artesian flow g.p.m.

Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used

Well sealed from land surface to ft.

Diameter of well bore to bottom of seal in.

Diameter of well bore below seal in.

Number of sacks of cement used in well seal sacks

How was cement grout placed?

" " " "

" " " "

Was a drive shoe used? ☐ Yes ☐ No Plugs Size: location ft.

Did any strata contain unusable water? ☐ Yes ☐ No

Type of water? depth of strata

Method of sealing strata off

Was well gravel packed? ☐ Yes ☐ No Size of gravel:

Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Driller's well number

1/4 1/4 Section T. R. W.M.

Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found ft.

Static level ft. below land surface. Date

Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing

Depth drilled ft. Depth of completed well ft.

Formation: Describe color, texture, grain size and structure of materials;
and show thickness and nature of each stratum and aquifer penetrated,
with at least one entry for each change of formation. Report each change in
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Clay gray soft	973	984	
Clay gray & red w/blk basalt	984	986	
Clay grn & red w/blk basalt	986	991	
Clay w/ black basalt	991	1028	
Basalt blk w/ green clay	1028	1107	
Basalt blk w/green clay	1107	1123	
Basalt black and red clay	1123	1133	
Basalt black & grn clay	1133	1161	
Basalt black & red clay	1161	1164	
Clay gray & brn w/blk basalt	1164	1168	
Clay red w/black basalt	1168	1182	
Clay red and green hard	1182	1186	
Basalt black and red clay	1186	1210	
Basalt blk hard & brkn w/clay	1210	1216	
Basalt blk broken w/ clay	1216	1222	
Basalt blk w/clay	1222	1224	
Basalt blk w/clay	1224	1241	
Basalt blk and clay	1241	1273	
Basalt gray hard	1273	1360	
Basalt gray hard & broken	1360	1394	

Work started 19 Completed 19
Date well drilling machine moved off of well 19

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.
Materials used and information reported above are true to my
best knowledge and belief.

[Signed] Date 19.....
(Drilling Machine Operator)

Drilling Machine Operator's License No.

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is
true to the best of my knowledge and belief.

Name (Person, firm or corporation) (Type or print)

Address

[Signed] (Water Well Contractor)

Contractor's License No. Date 19.....

15/380 - 36

Attachment to B. L. Davis well:

Set 18" casing to 362'

18' surface seal and neat cement from 340' to 362'

Casing Set - 1026' of 12"
368' of 10"

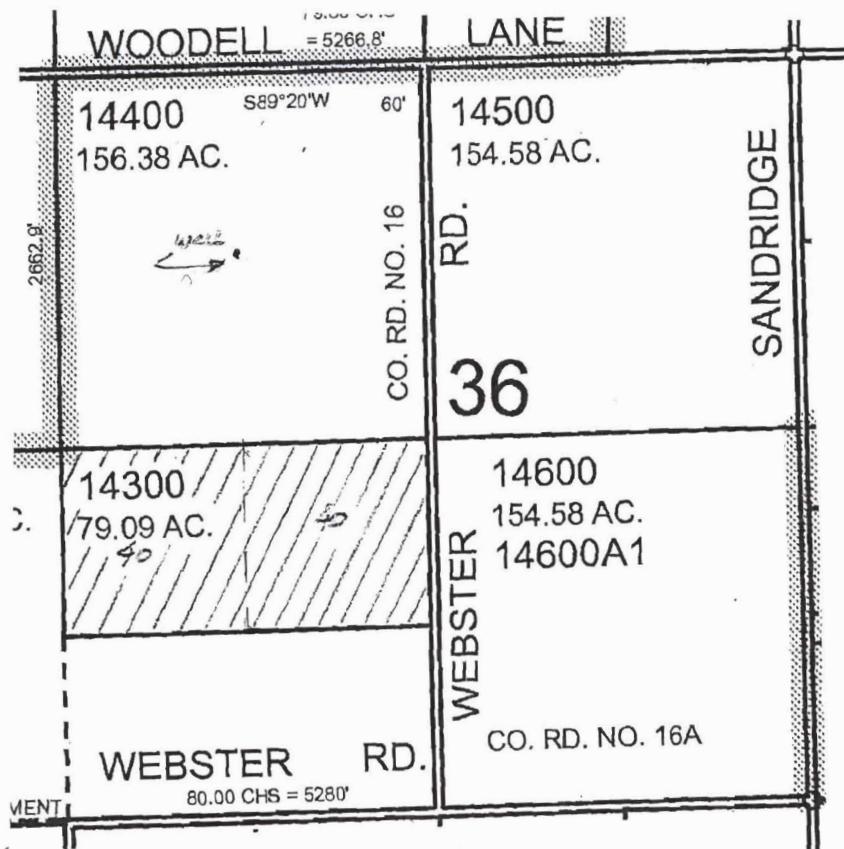
A B & W float collar was welded in at 1284' with a cement basket at 1286' on the outside of the casing.

200 sacks of cement mixed with 5 gals. of water to the sack was pumped out through the float collar.

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JUN 11 1979
VALLEY RESOURCES CO.
SELEM, OREGON

Arnoldus Groundwater Application Map

Township 1 South, Range 38 East, W.M.



WELL LOCATED 1320' S & 1290' E FROM COR SEC 36 T1S, R38E

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NOV 30 2011

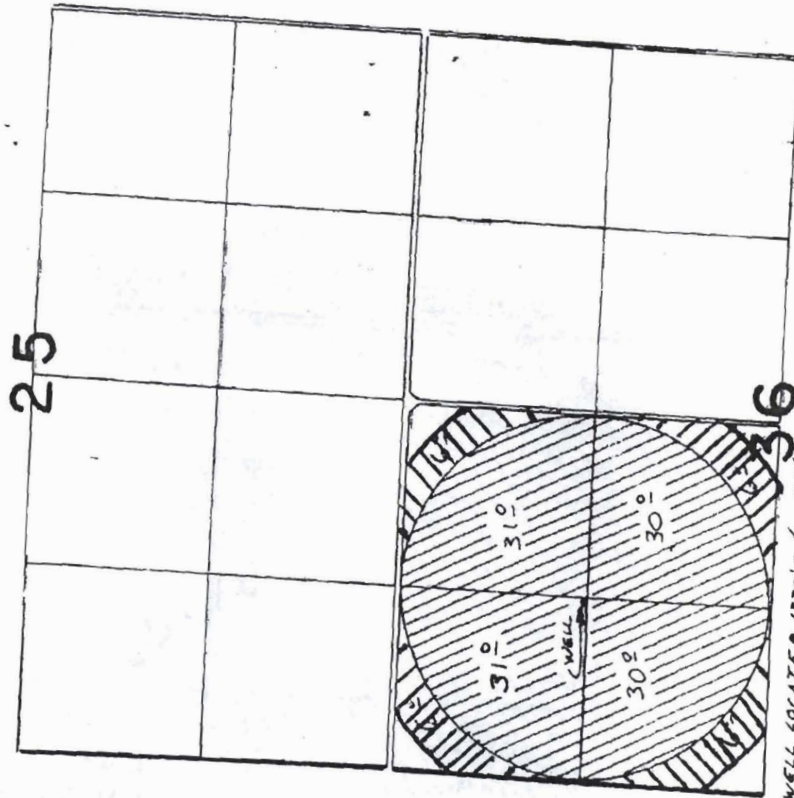
WATER RESOURCES DEPT
SALEM, OREGON

G-17500



Scale 1 inch = 1320 feet

T. 1S., R. 38E., W. M.



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Scale 1" = 132'

App No G-13981
Permit No G15644

G-17508

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SALEM, OREGON