

Groundwater Transfer Review Summary Form

Transfer/PA # T- 13337

GW Reviewer Gerald H. Grondin

Date Review Completed: 21 April 2020

Summary of Enlargement (Same Source) Review:

☐ The proposed transfer fails to keep the original place of use from receiving water from the same source.

Summary of Injury Review:

☐ The proposed transfer will result in another, existing water right not receiving previously available water to which it is legally entitled or result in significant interference with a surface water source.

Summary of Similarity Review:

☐ The proposed SW-GW transfer doesn't meet the definition of "similarly" as per OAR 690-380-2130.

☒ None of the Above

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations.



**Oregon Water Resources
Department**
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Ground Water Review Form:

- ☐ **Water Right Transfer**
- ☒ **Permit Amendment**
- ☐ **GR Modification**
- ☐ **Other**

Application: **T-13337**

Applicant Name: **Thomas A. MacDonald**

Proposed Changes: ☒ POA ☒ APOA ☐ SW→GW ☐ RA
 ☐ USE ☒ POU ☐ OTHER

Reviewer(s): **Gerald H. Grondin**

Date of Review: **21 April 2020**

Date Reviewed by GW Mgr. and Returned to WRSD: **JTI 4/30/2020**

The information provided in the application is insufficient to evaluate whether the proposed transfer may be approved because:

- ☐ The water well reports provided with the application do not correspond to the water rights affected by the transfer.
- ☐ The application does not include water well reports or a description of the well construction details sufficient to establish the ground water body developed or proposed to be developed.
- ☐ Other _____

1. Basic description of the changes proposed in this transfer: _____

1987 & 1990: Original Application (G-11640) in 1987 and subsequent Permit (G-11024) signed in 1990: authorized 4 wells (Wells #1, #2, #3, #4) not yet drilled (see Map 1a, 1b, & 1c and Table 1) allowing a maximum instantaneous total discharge of 17.8 cfs for fish culture and irrigation (50.10 primary POU acres and 569.60 supplemental POU acres).

The permit included the following condition to protect senior water rights related to Ana Springs / Ana River:

“At any time when the flow of Ana Springs is insufficient to furnish the amount of water required to satisfy existing rights with priority earlier than this permit, all ground water derived under this permit shall be delivered by the permittee into Ana River to the extent necessary to restore Ana River to its historic flow.

The permittee shall construct and maintain the necessary pipelines or ditches and install and maintain the necessary measuring devices so the provisions of the permit may be enforced by the proper state officer.”

This language was / is a modification of what was proposed by the reviewing hydrogeologist who in February 1990 recommended a special permit condition similar to Order volume 10, pages 125 to 135 dated July 1959 related to nearby permit G-1388 (file G-72, Withers) (see attached Documents #1, #2, and #3):

“If at any time in the Director's judgement, the flow of Ana Springs is insufficient to furnish the amount of water required to satisfy existing rights with priority earlier than the priority of the permit herein authorized, use and/or flow from the wells shall cease. Alternatively, the permittee shall operate the wells and construct works to deliver one-fourth of the total water withdrawn into the Ana Springs Reservoir or into the main canal of the Summer Lake Irrigation District. The quantity of water so delivered shall not be charged against the water allowed for the uses authorized from these wells.

In my view, some interference with the current supply at Ana Reservoir appears certain from the proposed use.”

2008: Permit Amendment Application (T-10716) in 2008 and subsequent Amended Permit (amended G-11024) signed in 2008: identified the original authorized 4 POA wells (Wells #1, #2, #3, #4) that had been drilled, amended their locations, and authorized 4 more POA wells (Wells #5, #6, #7, #8) not yet drilled (see Map 2a, 2b, & 2c and Table 1). It continues allowing a maximum instantaneous total discharge of 17.8 cfs for fish culture and irrigation (50.10 primary POU acres and 569.60 supplemental POU acres).

2014, 2016, 2017: Permit Amendment Application (T-11749) in 2014 and subsequent Permit (G-17282) signed in 2016 superseded by a subsequent Permit (G-17749) signed in 2017 that makes corrections to Permit G-17282: amended the locations of POA Wells #5, #6, #7, and #8 previously authorized in 2008, identifies POA Wells #6, #7, #8, changed (“replace”) POA Well #5 due to original POA Well #5 not producing sufficient quantity (new POA Well #5 reportedly not yet drilled...however, subsequent 2019 & 2020 application T-13337 identifies POA Well #5 as a well reportedly drilled in 2010), and authorized an Additional POA Well (Well #9) not yet drilled (see Map 3a, 3b, & 3c and Table 1). It continues allowing a maximum instantaneous total discharge of 17.8 cfs for fish culture and irrigation (50.10 primary POU acres and 569.60 supplemental POU acres).

Both permits (G-17282 and superseding G-17749) repeated the 1990 permit condition of permit G-11024 to protect senior water rights related to Ana Springs / Ana River (see quote above).

Additionally, both permits (G-17282 and superseding G-17749) included the following well construction condition:

“The Additional Point of Appropriation Well #9 and the new Point of Appropriation Well #5 shall obtain groundwater from the predominately volcanic/basalt unit below the predominately basinfill unit and both wells shall have continuous casing and continuous seal from land surface through the basin-fill unit into the predominantly volcanic/basalt unit.”

2019 & 2020: Permit Amendment Application (T-13337) received in December 2019 and subsequently updated and received in February 2020: proposes adding an additional fish raceway to the permitted place of use (POU), identifies POA Well #5, amends the locations of POA Wells #1, #2, #3, #4, #5, #6, #7, and #8 to more accurately document their actual location, proposes two Additional POA Wells (Wells #10 & #11) not yet drilled to replace failing POA Wells #1, #2, #3, and #4, and claims POA Well #9 is not yet drilled (water well reports LAKE 53062 & LAKE 53078 received 13 February 2020 and 6 April 2020 respectively are likely Well #9 according to OWRD well inspector) (see Map 4a, 4b, & 4c and Table 1). Application T-13337 proposes continuing allowing a maximum instantaneous total discharge of 17.8 cfs for fish culture and irrigation (50.10 primary POU acres and 569.60 supplemental POU acres).

Possible discrepancies and/or well construction issues identified:

POA Well #5: 2014 permit amendment application (T11749) says the well was not drilled. The 2019 & 2020 application (T-13337) identifies the well as LAKE 52367 which was apparently completed in 2010. Additionally, the geologic material description on water well report suggests the well was completed in the basin fill rather than obtaining groundwater from the predominately volcanic/basalt unit below the predominately basinfill unit and suggests further that the well does not have continuous casing and continuous seal from land surface through the basin-fill unit into the predominantly volcanic/basalt unit as required by permit G-17282 signed in 2016 and superseding permit G-17749 signed in 2017.

POA Well #9: If POA Well #9 is LAKE 53062 and LAKE 53078, the geologic material description on water well report suggests the well was completed in the basin fill rather than obtaining groundwater from the predominately volcanic/basalt unit below the predominately basinfill unit as required by permit G-17282 and superseding permit G-17749. Construction of well #9 was problematic (see well inspector notes in Document #4).

Brown (1957) Report: The following were derived directly or indirectly from the report and used for this review:

The dam creating Ana Reservoir was constructed 1922-1923
 The original outlet pipe was at river grade, but became damaged
 The replacement outlet pipe was installed 7.4 feet below the dam spillway level
 The reservoir is filled to spillway level from May to September (irrigation season)
 The reservoir is lowered to outlet pipe level from October to April to ease dam stress & seepage

Historic Ana Reservoir discharge rate (Q_{RES}) to Ana River & to diversion flow is 80 to 100 cfs
 Based on 1931 to 1935 and 1951 to 1955 daily average of gaged flow
 This historic flow rate also noted in OWRD Order volume 10, page 125 to 135 (see page 127)

Hydraulic properties of the volcanic deposits below the basinfill are:

Transmissivity (T_V) = 1.95×10^6 gpd/ft = 260,677 ft²/day

Storage coefficient (S_V) = 0.00029

Ana Spring discharge rate (Q_{AS}) to Ana Reservoir relationship to the height of the groundwater level above the reservoir pool level (H_{GW}):

As found in Brown (1957): $Q_{AS1} / Q_{AS2} = H_{GW1} / H_{GW2}$

Rewriting the Brown (1957) relationship equation into a Darcy's Law equation:

$$Q_{AS} = C (H_{GW} - H_{RES}) \quad \text{or} \quad \text{Change in } Q_{AS} = C [(H_{GW1} - H_{RES1}) - (H_{GW2} - H_{RES2})]$$

where: Q_{AS} = Ana Spring discharge rate in cfs (ft^3/s) to Ana Reservoir

H_{GW} = groundwater elevation (ft amsl)

H_{RES} = reservoir pool elevation (ft amsl)

C = proportionality constant = $1.63 \text{ ft}^2/\text{s} = 140,832 \text{ ft}^2/\text{d}$

The value for C was derived from the Brown (1957) observation that a 2.7-foot change in ($H_{GW} - H_{RES}$) resulted in a $4.4 \text{ ft}^3/\text{s}$ change in Q_{AS}

LAKE 1477 (state observation well SOW 372): Groundwater levels measured at well LAKE 1477 indicate groundwater levels in the vicinity of Ana Reservoir (see Map 5a & 5 b and Figure 1) have experienced a total annual decline of about 10 feet from 1980 to 2020. Consequently, the Ana Spring discharge rate (Q_{AS}) to Ana Reservoir has likely decreased from historic rates 15 cfs (ft^3/s) or more over that 40 year period using the Darcy's Law equation above. Attached Table 2 shows the groundwater rights in the vicinity of Ana Reservoir found by this review.

Calculated T-13337 groundwater use interference with Ana Springs / Ana River: Attached Table 3 compares the calculated groundwater use interference with Ana Springs / Ana River for the original groundwater permit (G-11024) well configuration scenario to the current permit amendment application T-13337 well configuration scenario using the maximum authorized rate of 17.80 cfs (ft^3/s) total. For both scenarios, the interference with Ana Springs / Ana River is similar. Additionally, Figure 2 graphically shows the calculated groundwater use interference with Ana Springs / Ana River as a percent of the groundwater use rate versus time under the current permit amendment application T-13337 well configuration scenario (Note: the groundwater use interference with Ana Springs / Ana River as a percent of the groundwater use rate versus time is independent of the groundwater use rate...different groundwater use rates will yield the same graph). The calculation results indicate the following groundwater use interference with Ana Springs / Ana River:

Elapsed Time (days)	T-13337 GW interference with Ana Springs / Ana River
1	19.6% of T-13337 GW use rate
4	25.6% of T-13337 GW use rate
12	30.3% of T-13337 GW use rate
36	35.0% of T-13337 GW use rate
115	40.0% of T-13337 GW use rate
365	45.0% of T-13337 GW use rate

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☒ No Comments: _____

Both yes and no. The geologic deposits in the vicinity of Ana Reservoir and the vicinity of the T-13337 permit amendment application authorized and proposed wells generally consists of lower permeability basin-fill of varying thickness overlying higher permeability volcanic rocks and sediments. Existing authorized wells are open to receive groundwater from the basin-fill and/or the volcanic rocks and sediments. Groundwater in the volcanic rocks and sediments is generally under high pressure with historic static groundwater levels well above land surface. Ideally, all the POA wells should receive groundwater only from the higher permeability, higher yielding volcanic rocks and sediments below the lower permeability, lower yield basin fill with the casing and seal extending continuously from at least land surface, completely through the basin fill and extending into the predominantly volcanic rocks and sediment below the basin fill.

Owner/POA Well #1 (LAKE 3030): well is open to receive groundwater from both the basin-fill and the underlying volcanic rocks and sediments. Current permit amendment application T-13337 notes this well is failing and proposes to replace it with proposed APOA well #10 (not yet drilled) and/or proposed APOA well #11 (not yet drilled) to be constructed to receive groundwater from the volcanic rocks and sediments below the basin fill.

Owner/POA Well #2 (LAKE 1507): well is open to receive groundwater from both the basin-fill and the underlying volcanic rocks and sediments. Current permit amendment application T-13337 notes this well is failing and proposes to replace it with proposed APOA well #10 (not yet drilled) and/or proposed APOA well #11 (not yet drilled) to be constructed to receive groundwater from the volcanic rocks and sediments below the basin fill.

Owner/POA Well #3 (LAKE 4444): well is open to receive groundwater from both the basin-fill and the underlying volcanic rocks and sediments. Current permit amendment application T-13337 notes this well is failing and proposes to replace it with proposed APOA well #10 (not yet drilled) and/or proposed APOA well #11 (not yet drilled) to be constructed to receive groundwater from the volcanic rocks and sediments below the basin fill.

Owner/POA Well #4 (LAKE 3029): well is open to receive groundwater from both the basin-fill and the underlying volcanic rocks and sediments. Current permit amendment application T-13337 notes this well is failing and proposes to replace it with proposed APOA well #10 (not yet drilled) and/or proposed APOA well #11 (not yet drilled) to be constructed to receive groundwater from the volcanic rocks and sediments below the basin fill.

Owner/POA Well #5 (LAKE 52367): well is open to receive groundwater from the basin-fill only. Current existing permit condition requires this well to be constructed to receive groundwater solely from the volcanic rocks and sediments below the basin fill.

Owner/POA Well #6 (LAKE 52368): well is open to receive groundwater solely from the volcanic rocks and sediments below the basin fill.

Owner/POA Well #7 (LAKE 52369): well is open to receive groundwater solely from the volcanic rocks and sediments below the basin fill. However, the casing and seal stops at the base of the basin fill rather than extend into the volcanic rocks and sediments below the basin fill.

Owner/POA Well #8 (LAKE 52487): well is open to receive groundwater solely from the volcanic rocks and sediments below the basin fill.

Owner/POA Well #9 (likely LAKE 53062 & LAKE 53078): the geologic materials described in the water well report LAKE 53062 indicates the well is open to receive groundwater from the basin-fill only. The 10-foot thick volcanic deposit noted on the water well report appears to be an interbed "stringer" within the basin fill. **Current existing permit condition requires this well to be constructed to receive groundwater solely from the volcanic rocks and sediments below the basin fill.**

Owner/POA Well #10 (not yet drilled): permit amendment should require this well to receive groundwater solely from the volcanic rocks and sediments below the basin fill.

Owner/POA Well #11 (not yet drilled): permit amendment should require this well to receive groundwater solely from the volcanic rocks and sediments below the basin fill.

3. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?

☒ Yes ☒ No

Both yes and no. The 9 existing authorized wells are open to receive groundwater from the basin-fill and/or the volcanic rocks and sediments. See section 2 above.

b) If yes, estimate the portion of the right supplied by each of the sources and describe any limitations that will need to be placed on the proposed change (rate, duty, etc.):

Not estimated. Likely more than 90 percent of the groundwater discharge is from the volcanic rocks and sediments below the basin fill based on review of the water well reports for the 9 authorized wells.

4. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another ground water right**?

☒ Yes ☐ No Comments:

Assuming all the groundwater discharge is from the volcanic rocks and sediments below the basin fill, the increased seasonal drawdown at the nearest water right POA well for the T-13337 well configuration is calculated to be less than 0.40 feet (see Table 4). The change will be the same or less at other water right POA wells that are at the same or greater distance. These nearby water right POA wells should be able to easily accommodate the increased seasonal drawdown.

b) If yes, would this proposed change, at its maximum allowed rate of use, likely result in another groundwater right not receiving the water to which it is legally entitled?

☐ Yes ☒ No If yes, explain:

See part 4a above.

5. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another surface water source**?

☒ Yes ☐ No Comments: _____

The T-13337 well configuration creates the potential for pumping groundwater closer to Ana Springs / Ana Reservoir resulting in a potential increase interference with the Ana Springs / Ana Reservoir. The maximum potential increase interference with the Ana Springs / Ana Reservoir was calculated to be about 0.17 cfs (76 gpm), which is potentially a 2.17 percent increase in interference.

- b) If yes, at its maximum allowed rate of use, what is the expected change in degree of interference with any **surface water sources** resulting from the proposed change?

Stream: **Ana Springs / Ana Reservoir** ☒ Minimal ☐ Significant

Stream: _____ ☐ Minimal ☐ Significant

Provide context for minimal/significant impact: _____

See part 5a above.

6. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly to the authorized point of diversion specified in the water use subject to transfer?

☐ Yes ☐ No Comments: _____

Not Applicable. T-13337 is not a SW-GW transfer.

7. What conditions or other changes in the application are necessary to address any potential issues identified above: _____

The following are technical groundwater review recommendations. It is recognized that one or more technically recommended conditions may or may not be allowed under the permit amendment process rules and statutes. This technical groundwater review relies on other appropriate and authorized Department staff to make that determination.

“Large” flow meter condition for all POA wells. Require the flow meter for each well to be properly installed and maintained. Each meter shall be either within 50 feet of the well head with a clearly visible monument adjacent to the meter or a surveyed location shall be provided and a clearly visible monument adjacent to the meter shall be installed for each meter more than 50 feet from the well head.

Condition 7P (well tag condition) for all the POA wells.

Condition 7T (modified) for all POA wells: “All POA wells shall be configured to allow a strictly clean water (no oil) static water level measurements with an electric-tape. That can include measurement access via an unobstructed vertical discharge pipe that allows the groundwater level to fluctuate freely within the discharge pipe (no valves, etc.). Otherwise, a dedicated measuring tube must be installed prior to use. The tube must be unobstructed, have a diameter of $\frac{3}{4}$ inch (0.75 inch) or greater, and pursuant to figure 200-5 in OAR 690-200.”

Condition to protect senior water rights related to Ana Springs / Ana River (modification of the existing condition to make it enforceable...this reviewer was told the current condition can not be practicably enforced): “At any time when the flow of Ana Springs is insufficient to furnish the amount of water required to satisfy existing rights with priority earlier than this permit, all groundwater derived under this permit shall be shut-off to the extent necessary to restore the total Ana Reservoir outflow to its total minimum historic flow of 80 cfs as measured within the vicinity of the two historic gaging sites near the Ana Reservoir dam. The permittee shall install, construct, and maintain the necessary measuring devices so the provisions of the permit may be enforced by the proper state officer.”

Condition for the abandonment of POA well #1 (LAKE 3030), POA well #2 (LAKE 1507), POA well #3 (LAKE 4444), and POA well #4 (LAKE 3029): “When well construction is completed, a sustainable well discharge rate exceeding 500 gpm is demonstrated, and plumbing is installed at replacement POA well #10 and at replacement POA well #11, existing POA well #1 (LAKE 3030), POA well #2 (LAKE 1507), POA well #3 (LAKE 4444), and POA well #4 (LAKE 3029) shall be properly abandoned consistent with Oregon statutes and rules, such as OAR 690-220. It shall be particularly consistent with the abandonment of artesian wells and the timing for abandonment of an existing water well after replacement.”

Condition for the construction or reconstruction of existing POA well #5 (LAKE 52367), POA well #6 (LAKE 52368), POA well #7 (LAKE 52369), POA well #8 (LAKE 52487), and POA well #9 (LAKE 53062 original well & LAKE 53078 well conversion) and proposed POA well #10, POA well #11, and all future POA wells: “Existing POA well #5 (LAKE 52367), existing POA well #6 (LAKE 52368), existing POA well #7 (LAKE 52369), existing POA well #8 (LAKE 52487), and existing POA well #9 (LAKE 53062 original well & LAKE 53078 well conversion), proposed POA well #10, proposed POA well #11, and all future POA wells shall be constructed consistent with Oregon statutes and rules, such as OAR 690-210, to obtain groundwater solely from the predominately volcanic rock and sediment unit below the predominately basin-fill unit. The wells shall at minimum have continuous casing and continuous seal from land surface through the basin-fill unit into the predominantly volcanic rock and sediment unit below the basin-fill.”

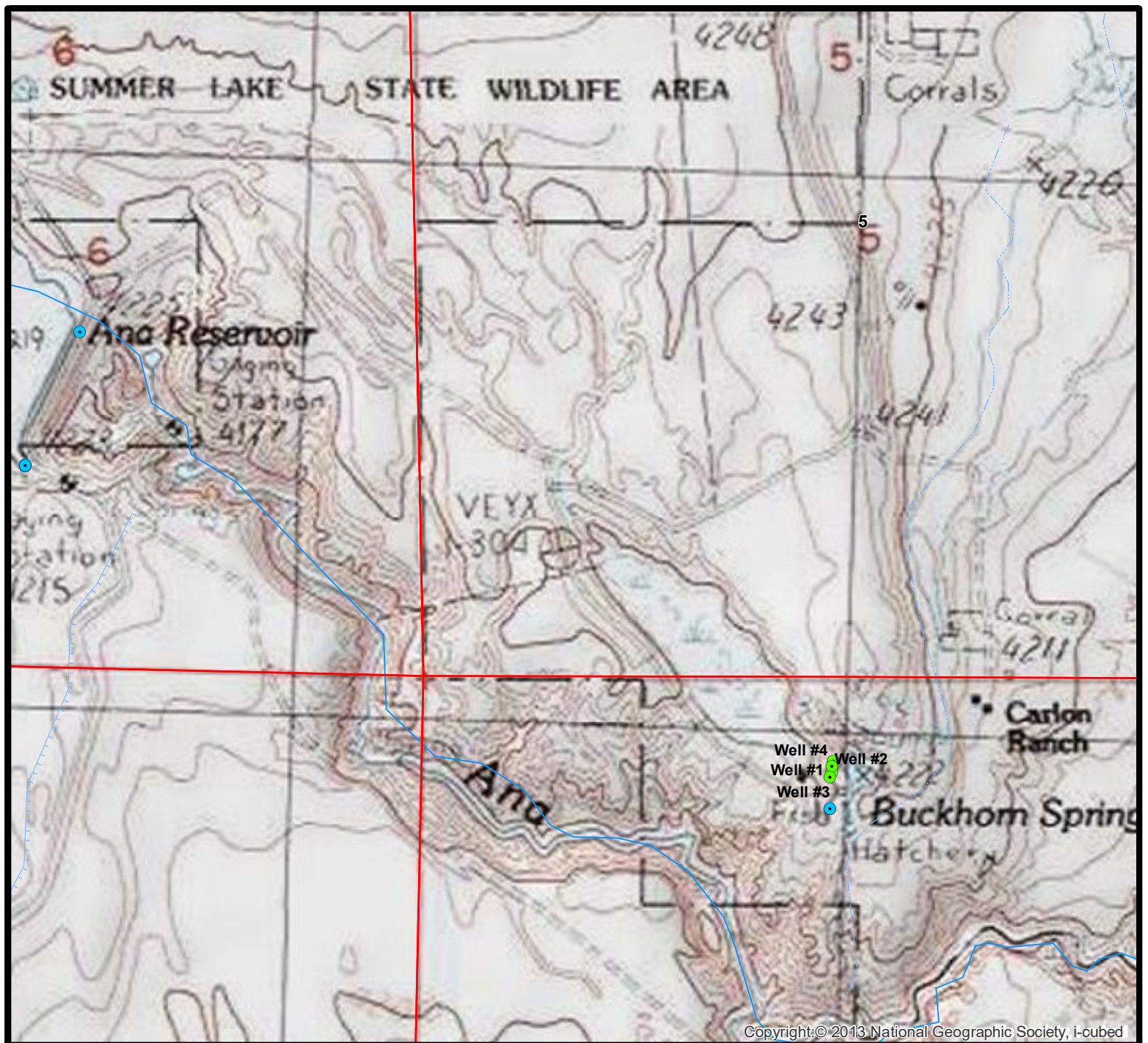
8. Any additional comments: _____

No additional comments.

Reference:

Brown, S.G. 1957. Occurrence of ground water near Ana Springs, Summer Lake Basin, Lake County, Oregon. U.S. Geological Survey Open-File Report 57-17, 26 p., 11 plates, 3 tables.

Map 1a
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald

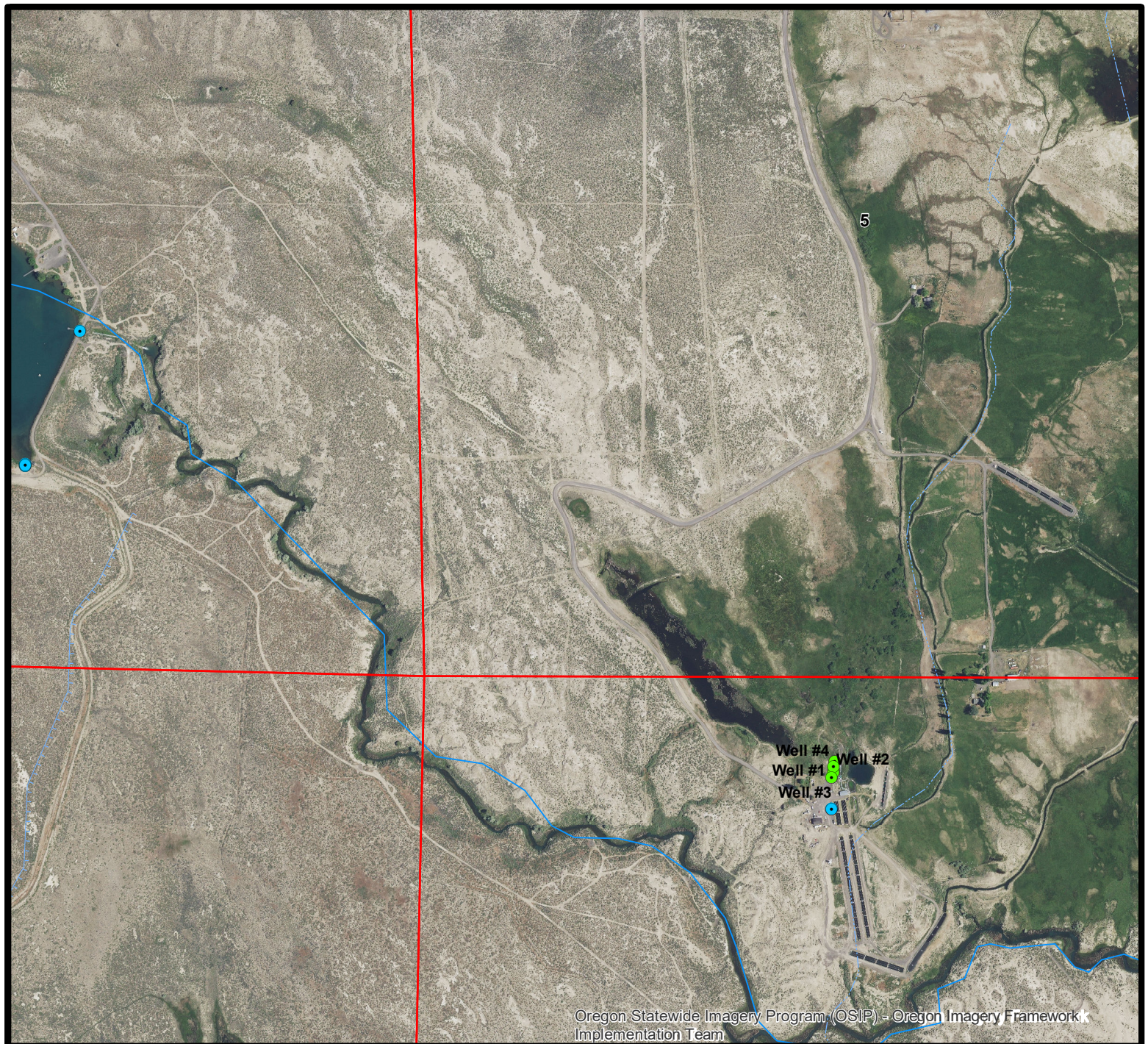


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Feet

Green = Application Wells (1990 Permit)
Red = Groundwater PODs & Obs Well
Blue = Surface Water PODs



Map 1b
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald

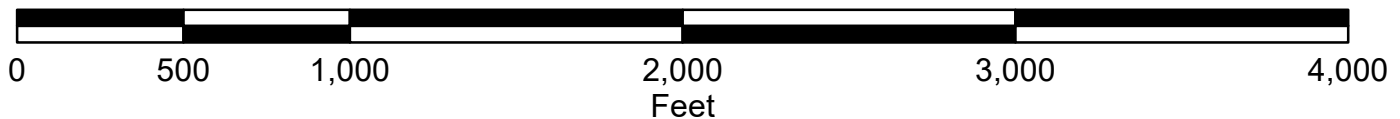
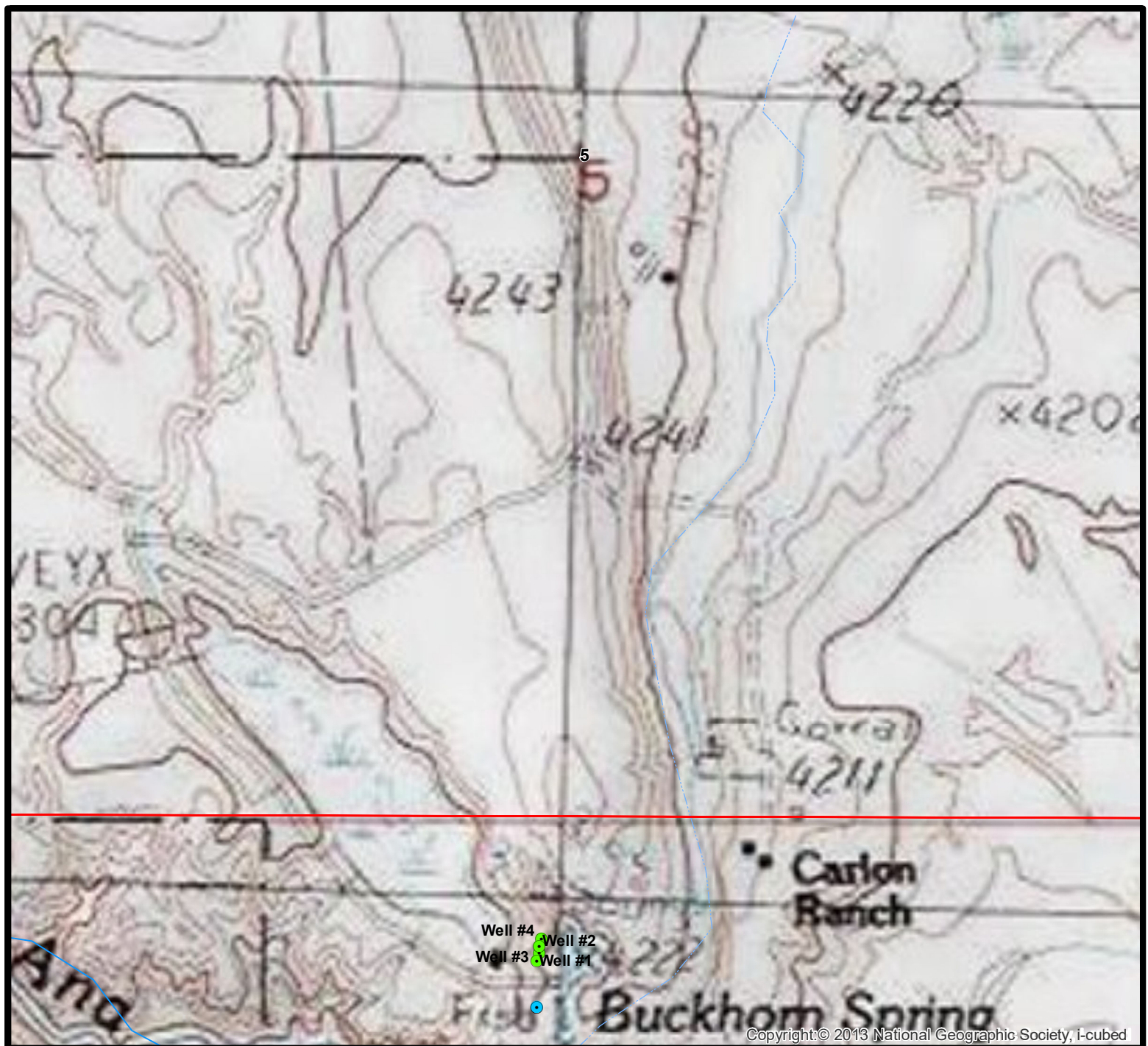


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Feet

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Blue = Surface Water PODs



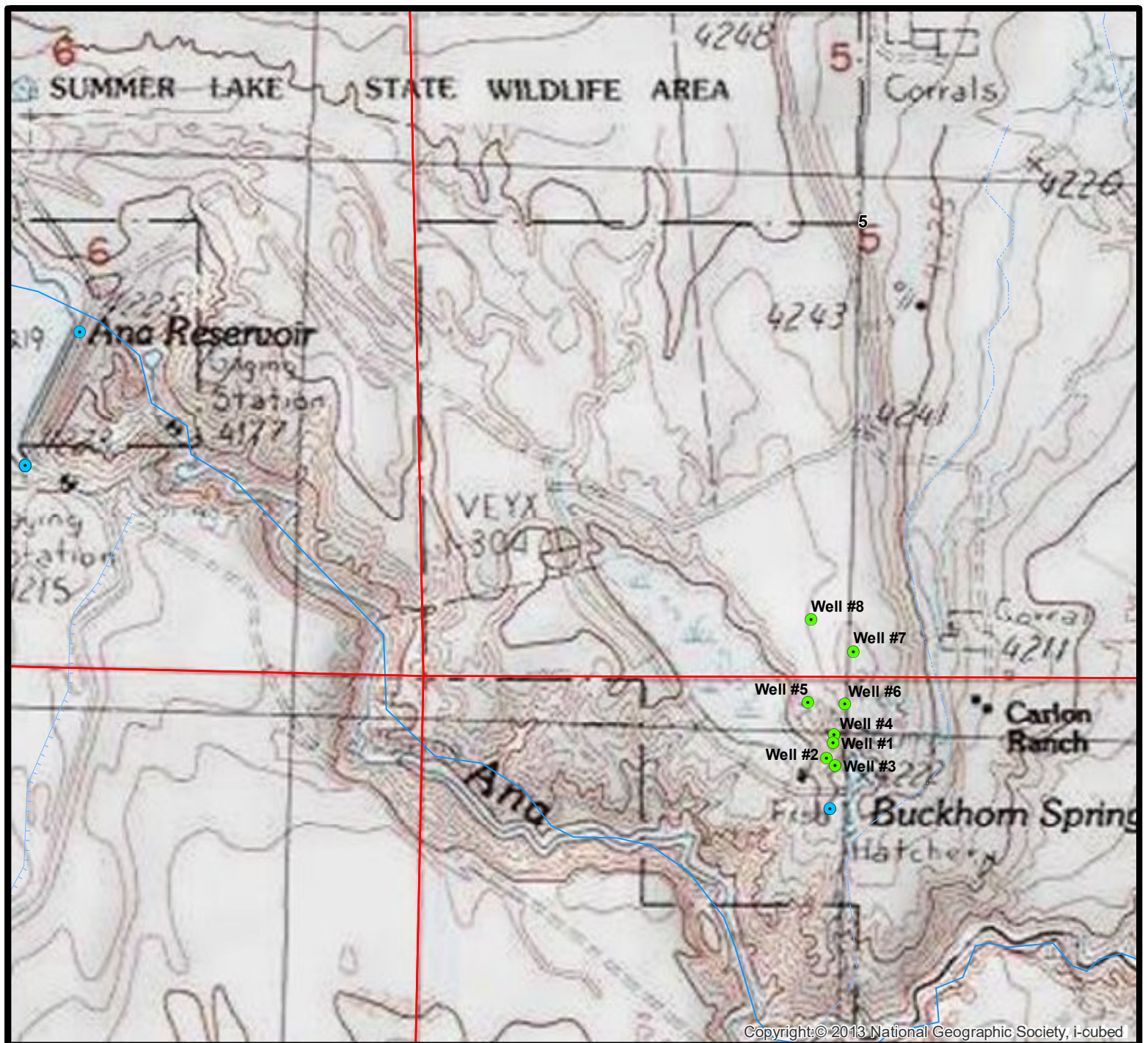
Map 1c
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald



Green = Application Wells (1990 Permit)
Red = Groundwater PODs & Obs Well
Blue = Surface Water PODs



Map 2a
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald

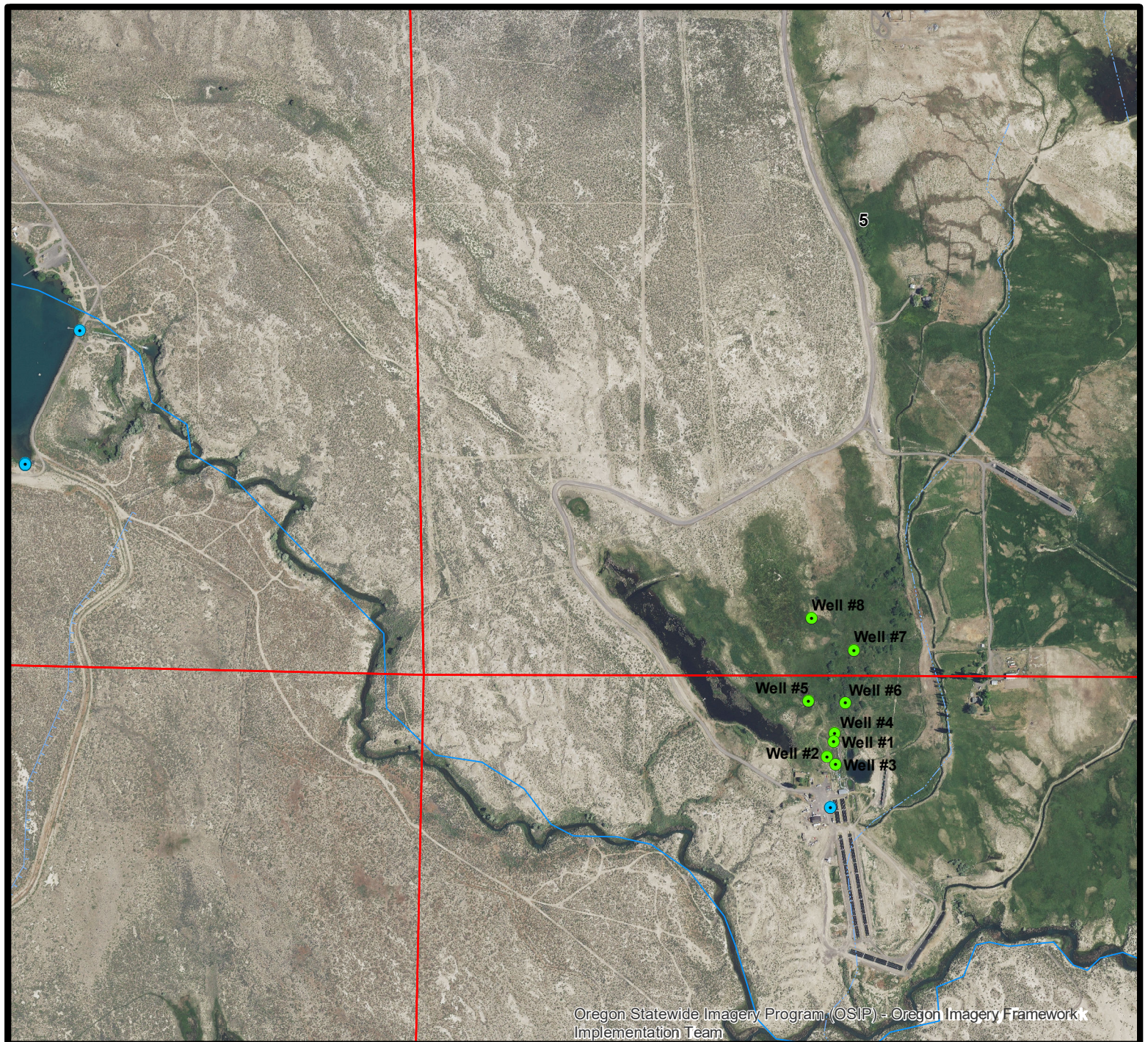


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Feet

Green = Application Wells (2008 Permit)
Red = Groundwater PODs & Obs Well
Blue = Surface Water PODs



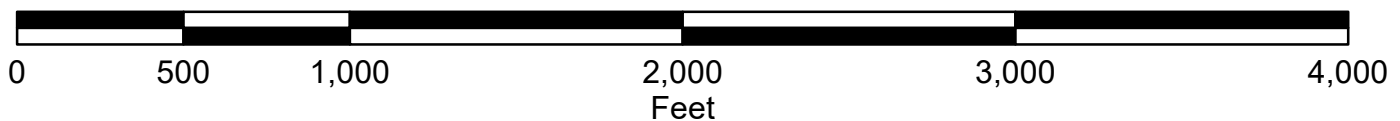
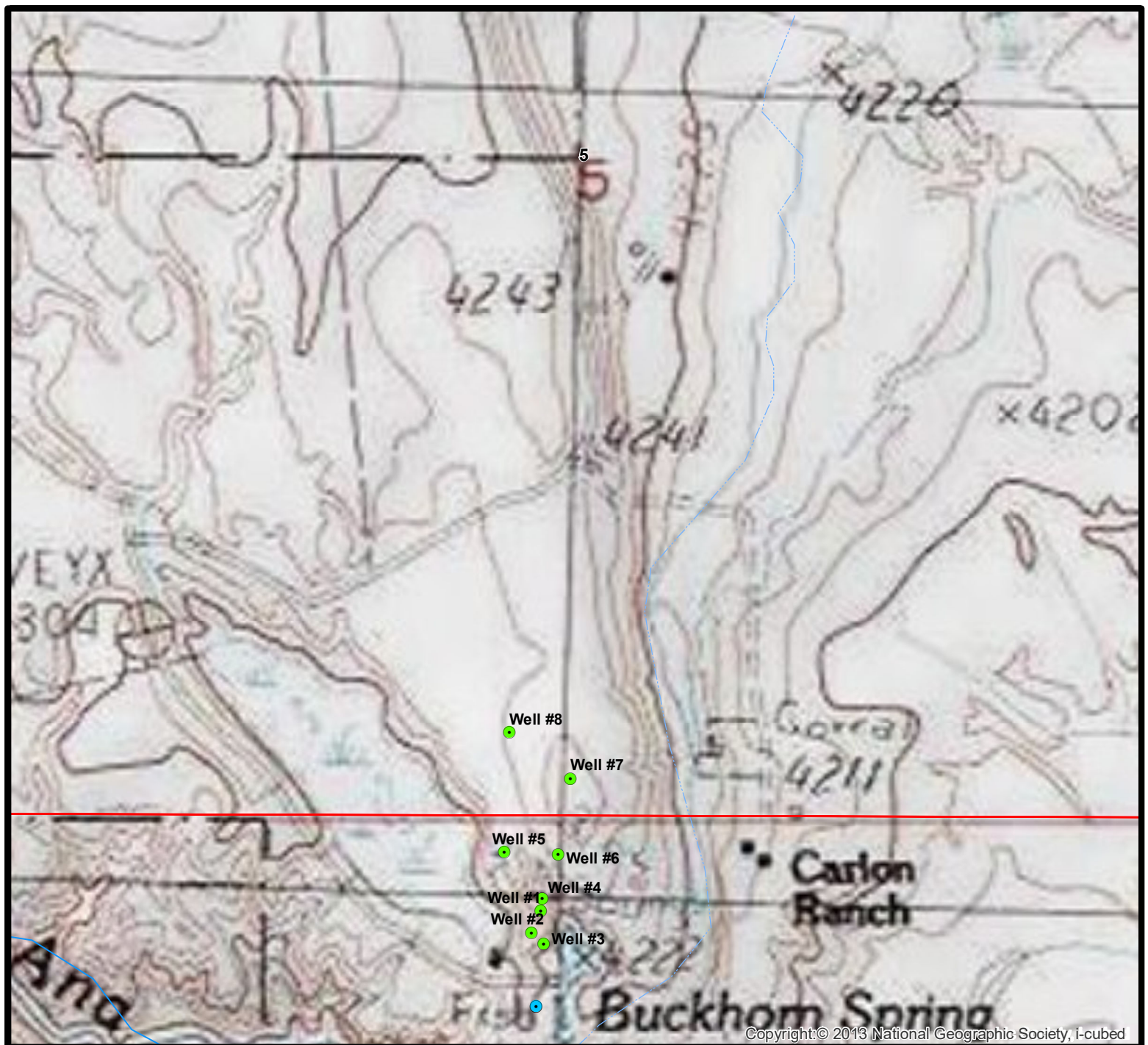
Map 2b
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald



Green = Application Wells (2008 Permit)
Red = Groundwater PODs & Obs Well
Blue = Surface Water PODs



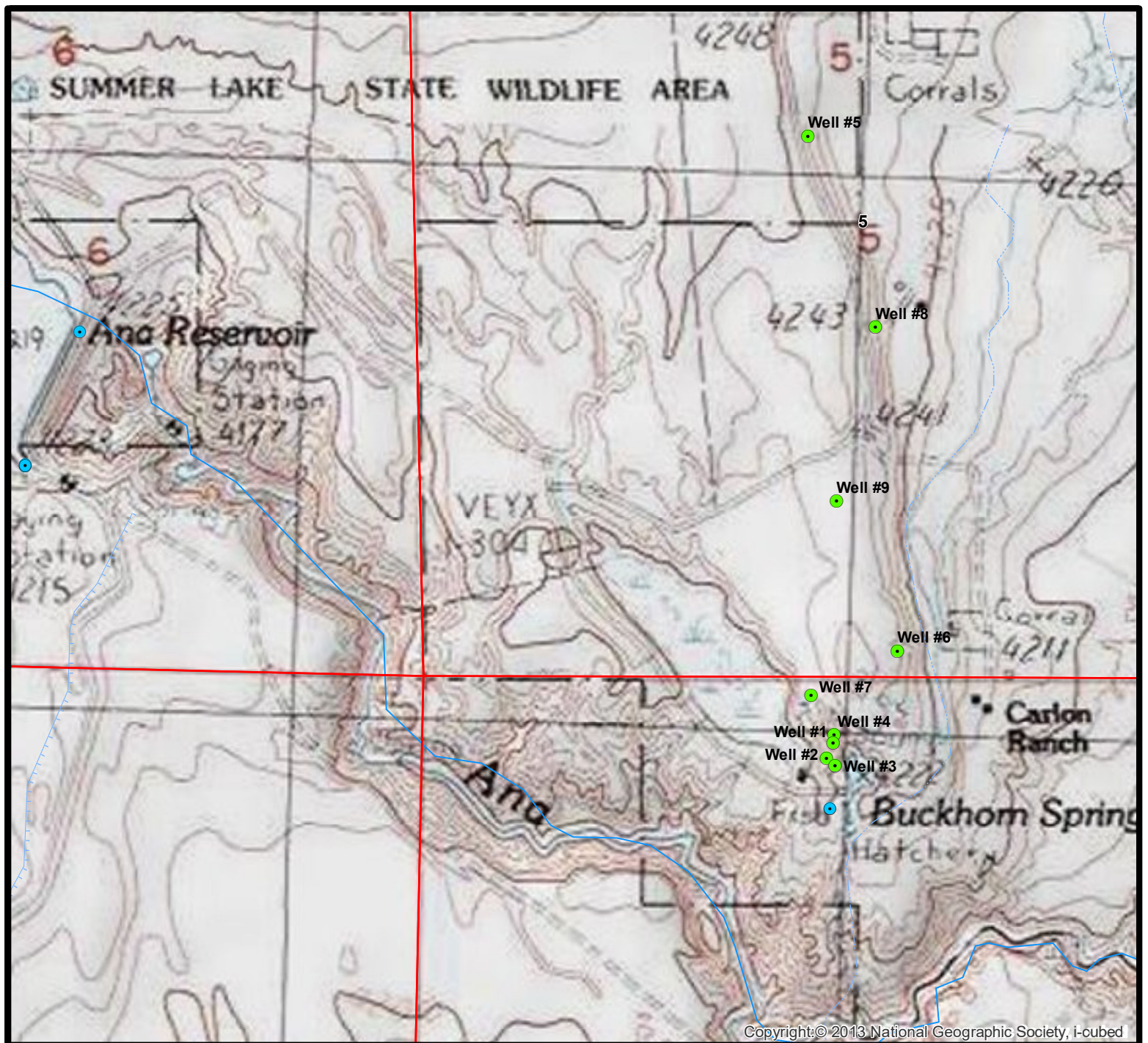
Map 2c
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald



Green = Application Wells (2008 Permit)
Red = Groundwater PODs & Obs Well
Blue = Surface Water PODs



Map 3a
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald

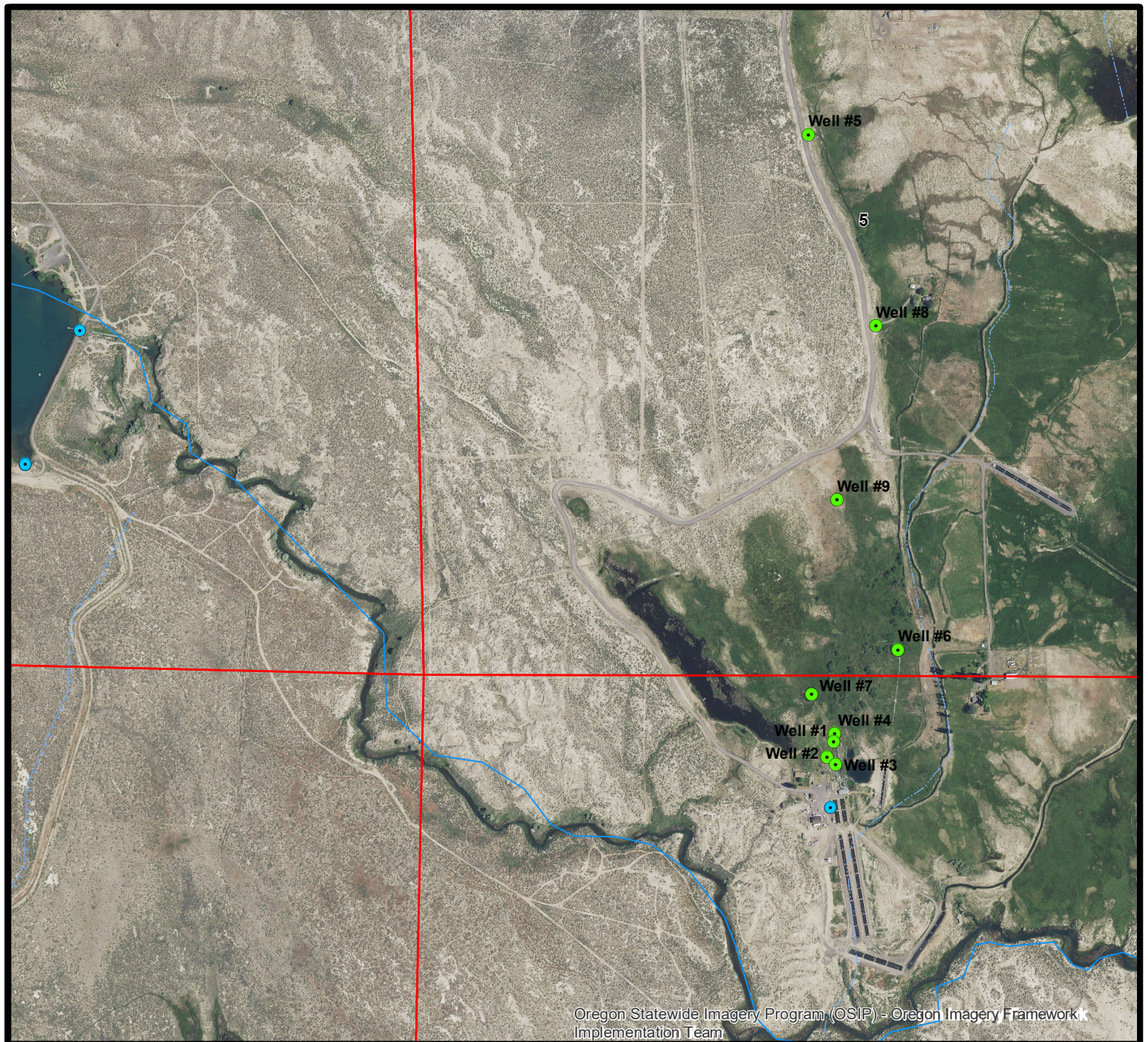


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Feet

Green = Application Wells (2017 Permit)
Red = Groundwater PODs & Obs Well
Blue = Surface Water PODs



Map 3b
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald

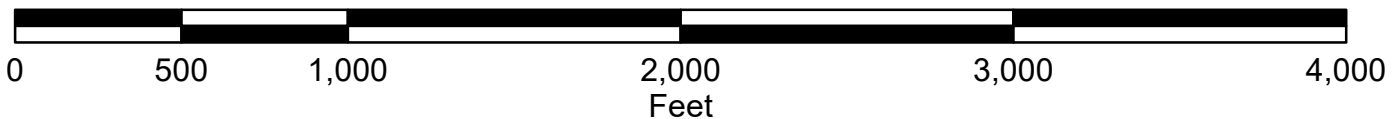
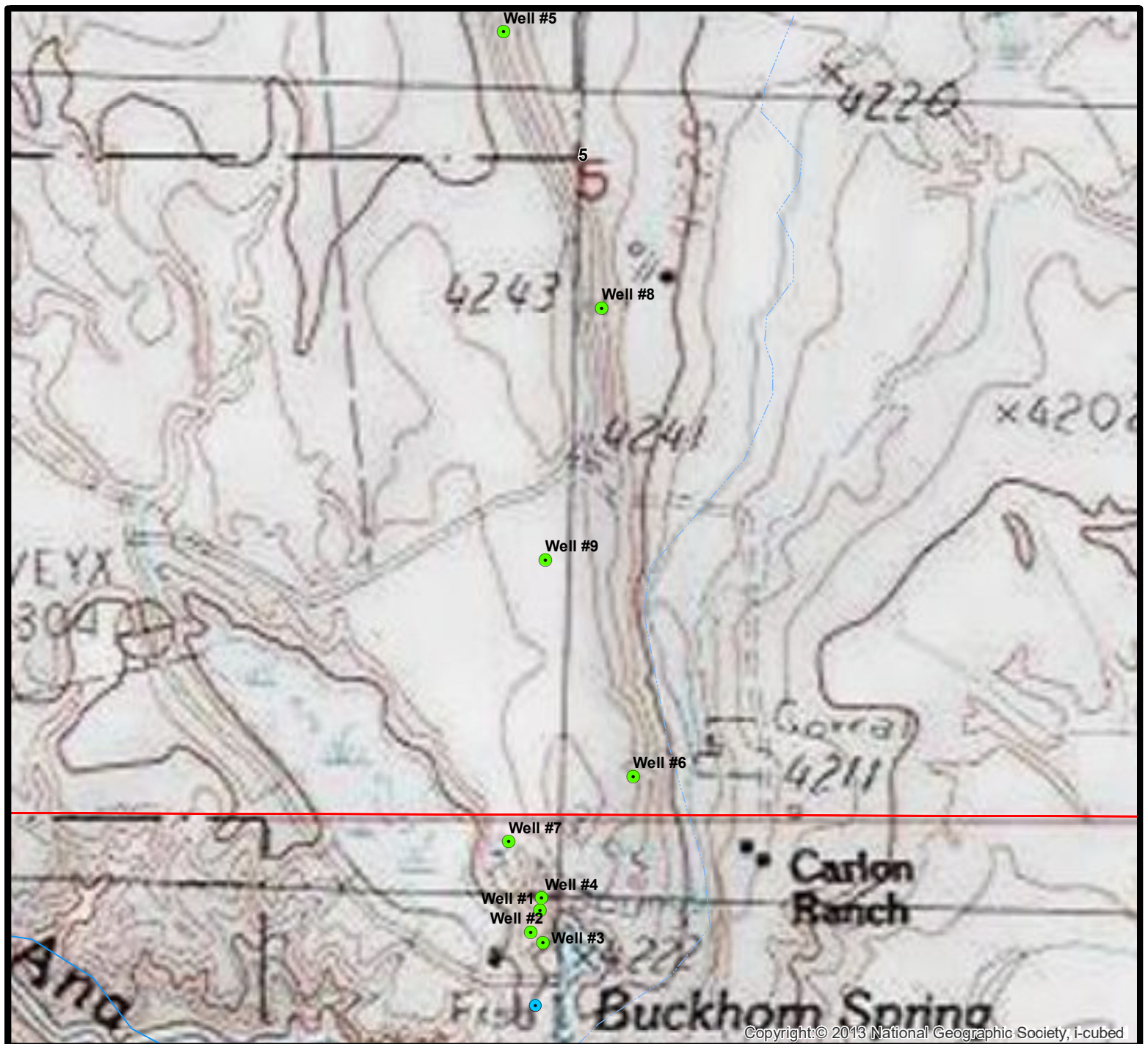


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Feet

Green = Application Wells (2017 Permit)
Red = Groundwater PODs & Obs Well
Blue = Surface Water PODs



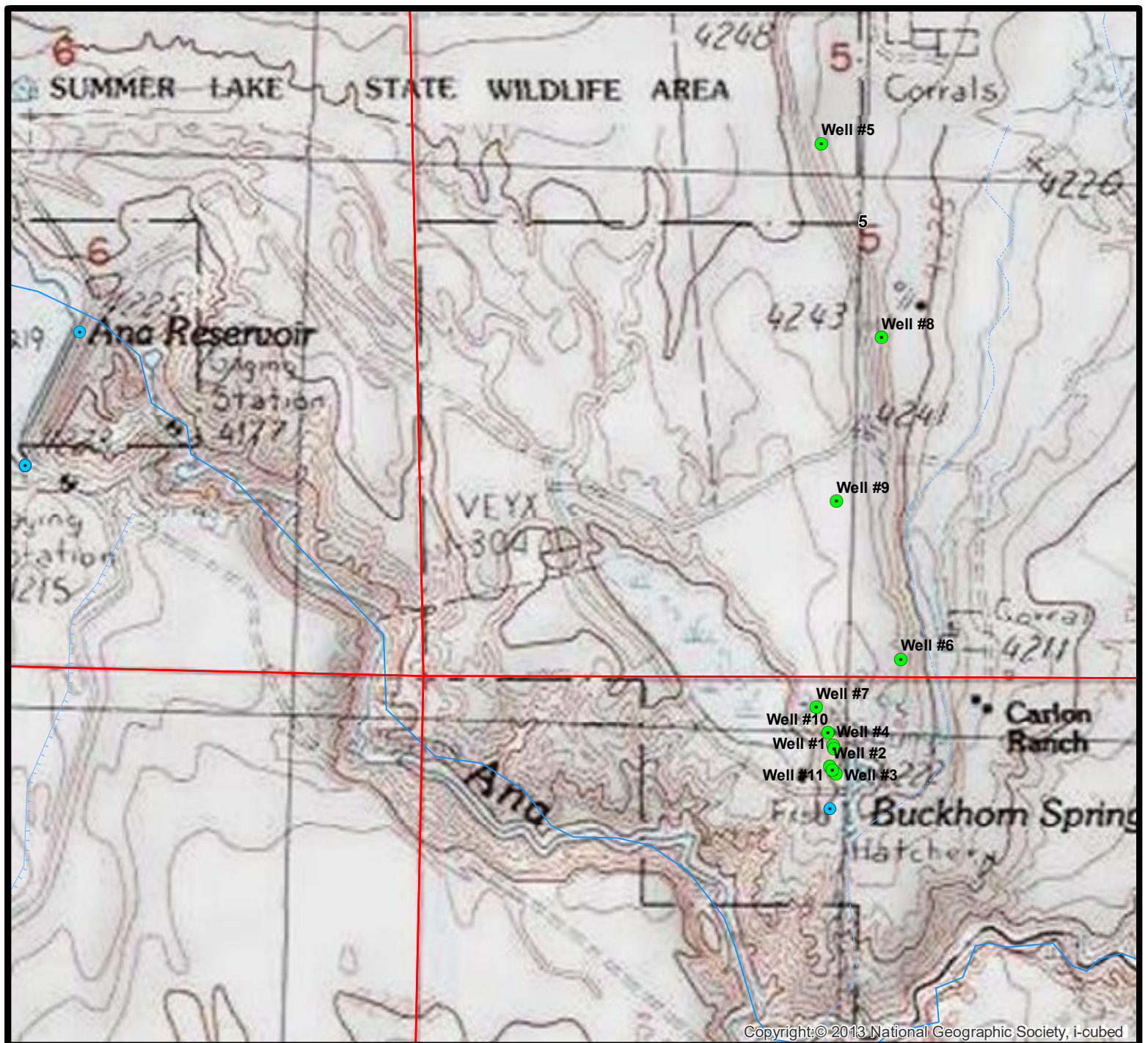
Map 3c
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald



Green = Application Wells (2017 Permit)
Red = Groundwater PODs & Obs Well
Blue = Surface Water PODs



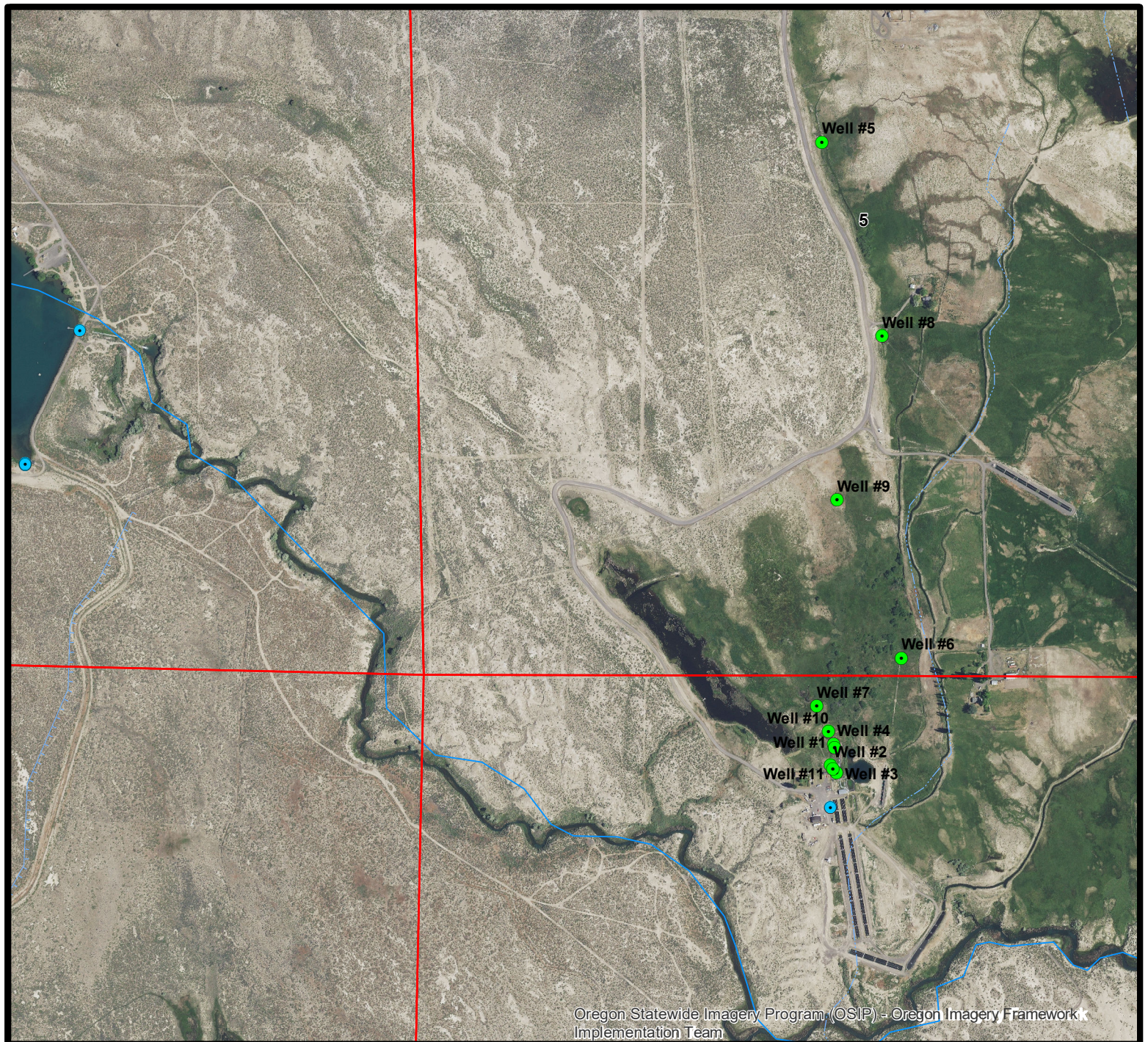
Map 4a
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald



Green = Application Wells (2020 Permit)
Red = Groundwater PODs & Obs Well
Blue = Surface Water PODs



Map 4b
Groundwater Permit Amendment Application T-13337
Thomas A. MacDonald

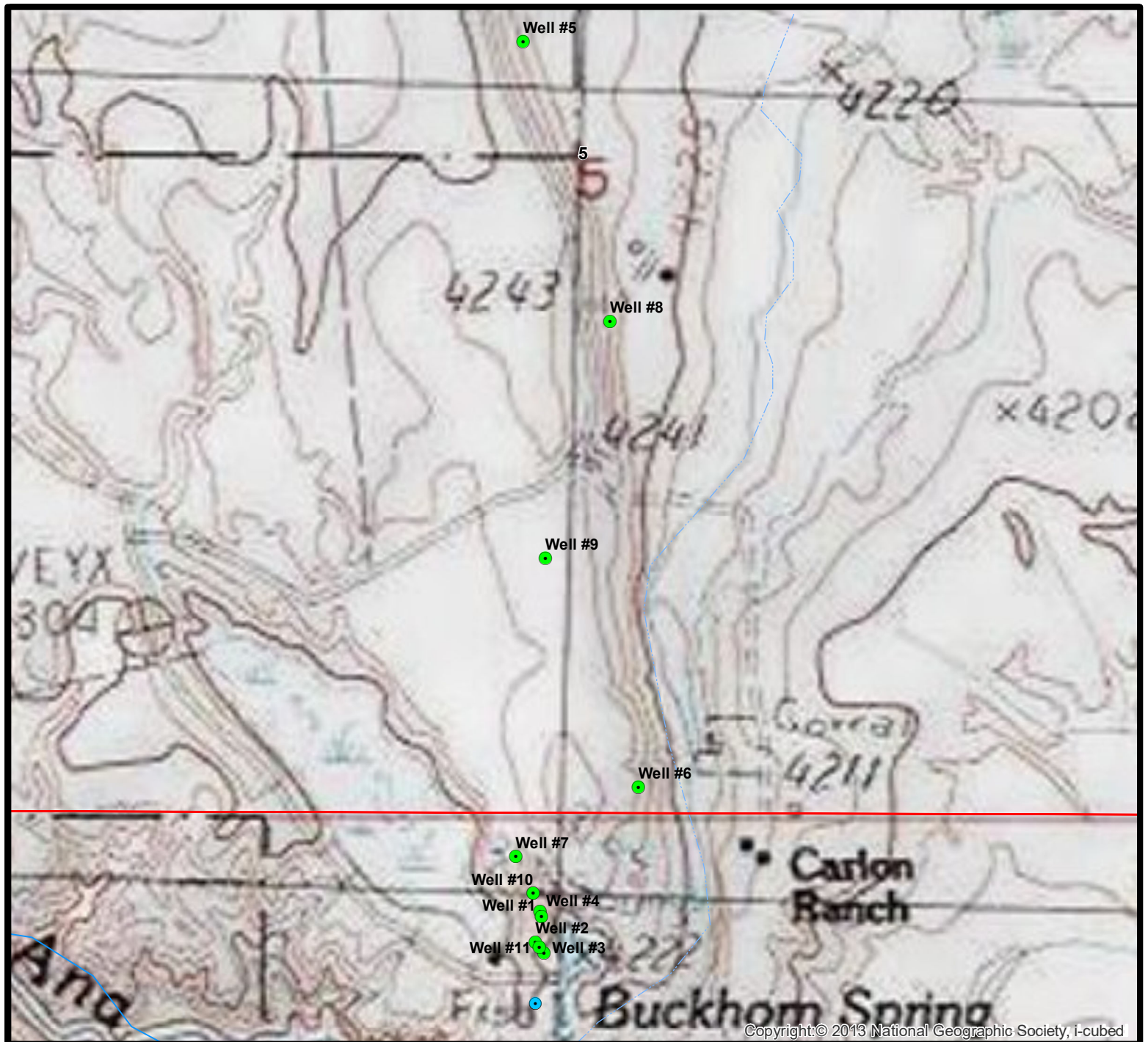


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Feet

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Map 4c
Groundwater Permit Amendment Application T-13337
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0 500 1,000 2,000 3,000 4,000
Feet

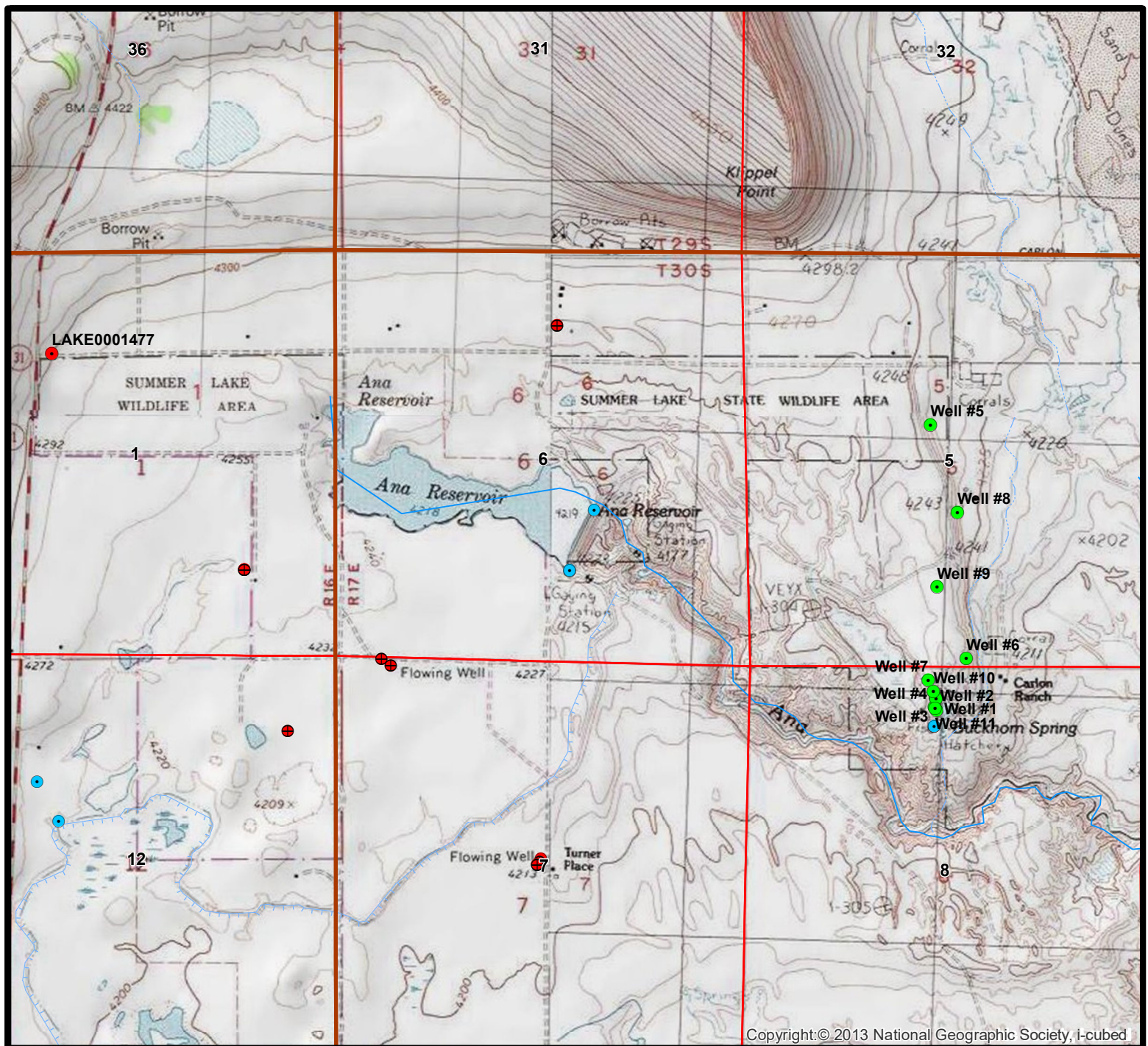
Green = Application Wells (2020 Permit)
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Map 5a

Groundwater Permit Amendment Application T-13337

Thomas A. MacDonald



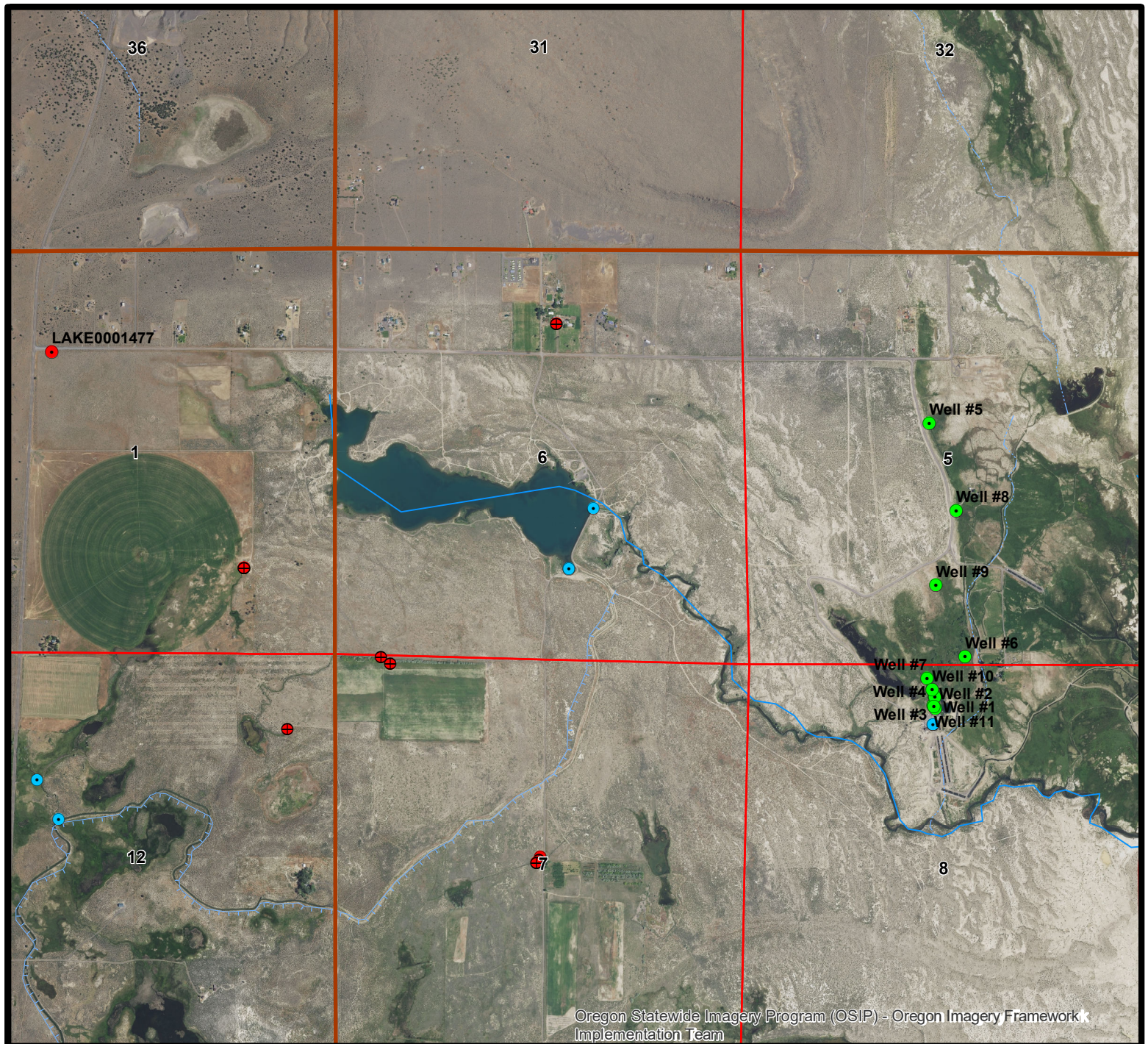
Green = Application Wells (2020)
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Blue = Surface Water PODs



Map 5b

Groundwater Permit Amendment Application T-13337

Thomas A. MacDonald



Green = Application Wells (2020)
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Observation Well Data

LAKE 1477

Figure 1

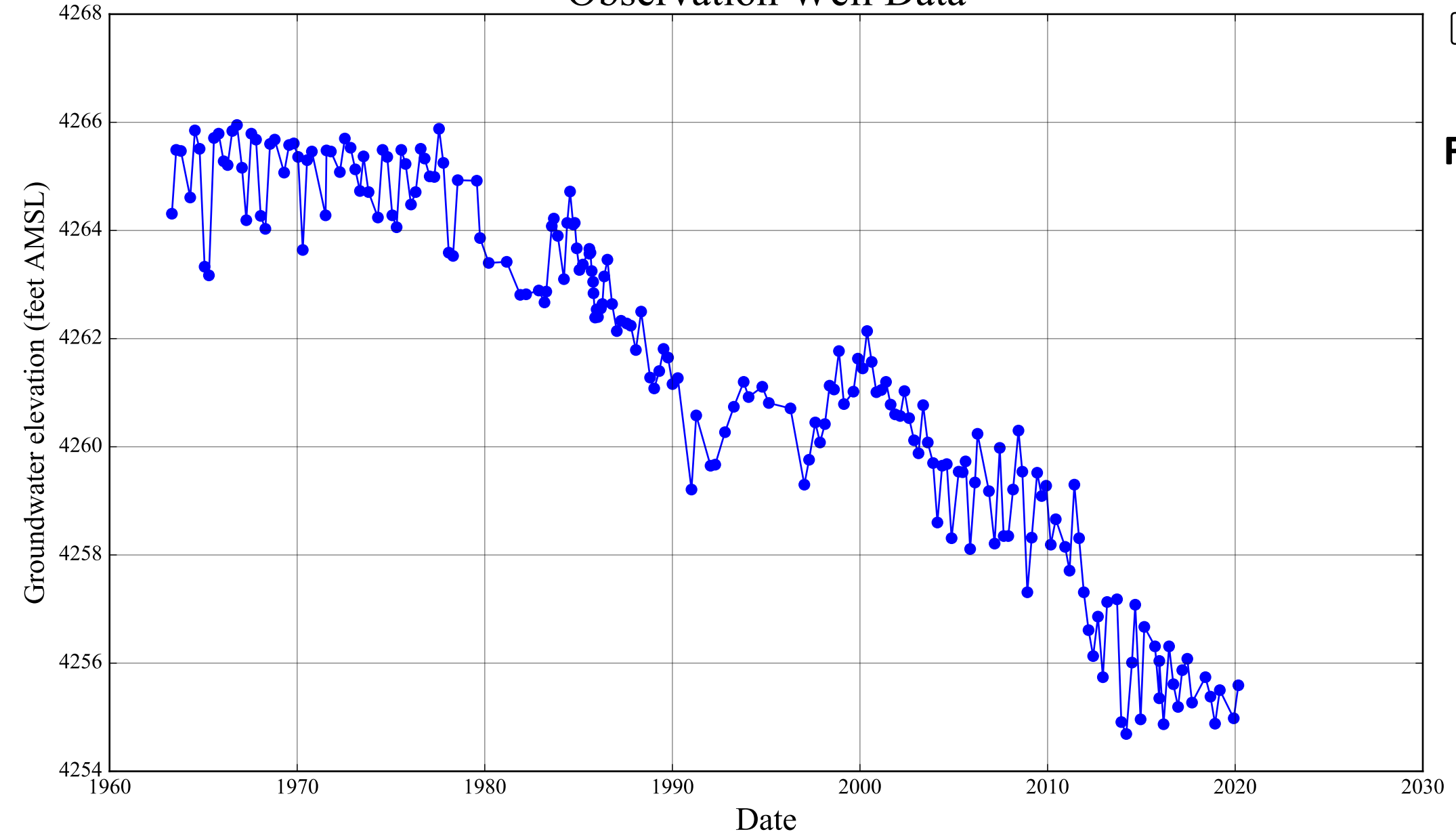


Figure 2

T-13337 (MacDonald)
Groundwater Pumping Interference with Ana River at Ana Springs
Interference Calculation Based on Brown (1957) Data & Analyses

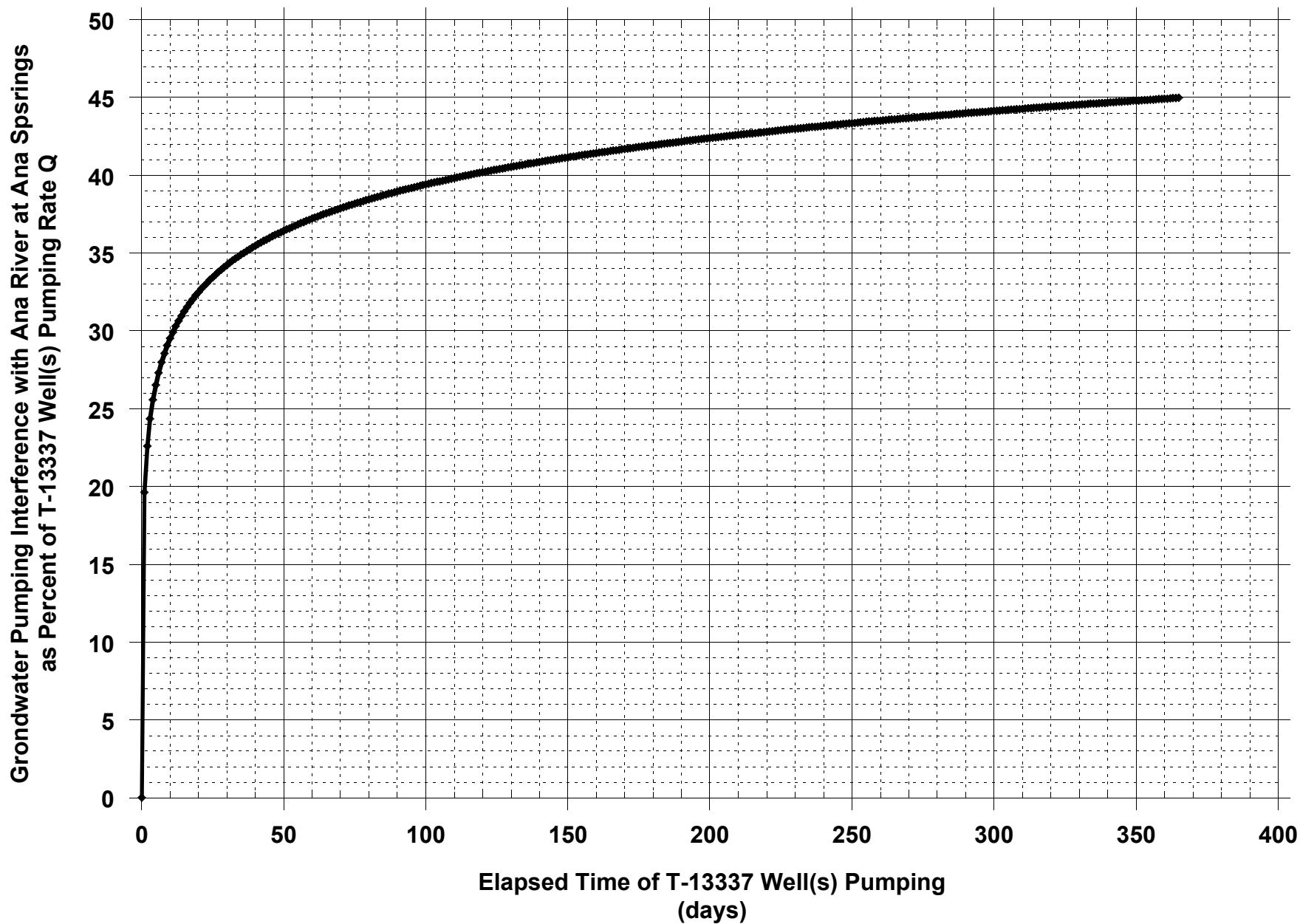


Table 1

Permit Amendment Application T-13337
Owner = Thomas MacDonald
Chronology of Well POAs & APOAs ID and Location from Original Permit (1990), Subsequent Permit Amendments (2008, 2016, 2017), and Current Permit Amendment Application (2019, 2020)

Well Log ID and Water Right File Well Location from the North Quarter Corner of T30S/R17E-sec 08													Well Information from Water Well Reports						Comment	
Owner Well-ID	OWRD Log-ID	Application G-11640 04/07/1987	Permit G-11024 04/30/1990	OWRD Log_ID	Application T-10716 09/30/2008	Amended Permit G-11024 12/10/2008	OWRD Log_ID	Application T-11749 03/05/2014	Permit G-17282 10/24/2016	Superseding Permit G-17749 03/17/2017	OWRD Log_ID	Original Application T-13337 12/26/2019	Updated Application T-13337 02/28/2020	Well Completion Date	Total Depth (ft. blsd)	Casing Interval (ft. blsd)	Seal Interval (ft. blsd)	Basin Fill (ft. blsd)		Volcanic Deposits (ft. blsd)
#1	Not Drilled	530 ft. S, 160 ft. W		LAKE 3030	390 ft. S, 150 ft. W		LAKE 3030	390 ft. S, 150 ft. W			LAKE 3030	390 ft. S, 150 ft. W	425 ft. S, 145 ft. W	06/30/1985	296	+1.5 - 60	0 - 60	0 - 241	241 - 296	open to basin fill & volcanic deposits
#2	Not Drilled	560 ft. S, 160 ft. W		LAKE 1507	480 ft. S, 190 ft. W		LAKE 1507	480 ft. S, 190 ft. W			LAKE 1507	480 ft. S, 190 ft. W	530 ft. S, 170 ft. W	06/30/1985	296	+1 - 60	0 - 55	0 - 241	241 - 296	open to basin fill & volcanic deposits
#3	Not Drilled	590 ft. S, 170 ft. W		LAKE 4444	525 ft. S, 140 ft. W		LAKE 4444	525 ft. S, 140 ft. W			LAKE 4444	525 ft. S, 140 ft. W	575 ft. S, 135 ft. W	10/20/1987	262	0 - 160	0-120	0 - 245	245 - 262	open to basin fill & volcanic deposits
#4	Not Drilled	500 ft. S, 150 ft. W		LAKE 3029	340 ft. S, 145 ft. W		LAKE 3029	340 ft. S, 145 ft. W			LAKE 3029	340 ft. S, 145 ft. W	405 ft. S, 150 ft. W	04/15/1988	310	0 - 160	0-120	0 - 245	245 - 310	open to basin fill & volcanic deposits
#5	N.A.	N.A.		Not Drilled	150 ft. S, 300 ft. W		Not Drilled says 2014 application	3200 ft. N, 300 ft. W			LAKE 52367	3155 ft. N, 220 ft. W	3155 ft. N, 220 ft. W	09/25/2010 says well log	420	+1 - 219	0 - 219	0 - 420	none	open to basin fill only Permit condition requires open to volcanic deposits only with continuous casing and seal through the basin fill
#6	N.A.	N.A.		Not Drilled	160 ft. S, 80 ft. W		LAKE 52368	155 ft. N, 230 ft. E			LAKE 52368	105 ft. N, 250 ft. E	105 ft. N, 250 ft. E	10/28/2010	260	+1 - 220	0 - 210	0 - 180	180 - 260	open to volcanic deposits only
#7	N.A.	N.A.		Not Drilled	150 ft. N, 30 ft. W		LAKE 52369	110 ft. S, 280 ft. W			LAKE 52369	180 ft. S, 250 ft. W	180 ft. S, 250 ft. W	03/05/2011	370	+1 - 220	0 - 220	0 - 220	220 - 370	open to volcanic deposits only Casing & seal to base of basin fill only, not into volcanic deposits
#8	N.A.	N.A.		Not Drilled	340 ft. N, 280 ft. W		LAKE 52487	2070 ft. N, 100 ft. E			LAKE 52487	2010 ft. N, 135 ft. E	2010 ft. N, 135 ft. E	09/01/2013	260	+1 - 155	0 - 155	0 - 150	150 - 260	open to volcanic deposits only
#9	N.A.	N.A.		N.A.	N.A.		Not Drilled says 2014 application	1040 ft. N, 130 ft. W			Not Drilled says 2020 application update	835 ft. N, 125 ft. W	1040 ft. N, 130 ft. W	?	80???	+1 - 75	'0 - 18 55 - 75	0 - 80	none	Possibly LAKE 53062 & LAKE 53078 open to basin fill only with volcanic "stringer" interbed. Permit condition requires open to volcanic deposits only with continuous casing and seal through the basin fill
#10	N.A.	N.A.		N.A.	N.A.		N.A.	N.A.			Not Drilled	N.A.	330 ft. S, 180 ft. W	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Needed to replace Wells #1, #2, #3, #4
#11	N.A.	N.A.		N.A.	N.A.		N.A.	N.A.			Not Drilled	N.A.	550 ft. S, 155 ft. W	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Needed to replace Wells #1, #2, #3, #4
Notes: Yellow = discrepancies or issues																				

Table 2

Permit G-11024 (1990)

Owner = Thomas MacDonald

Summary Chronology of Groundwater Rights in Vicinity of T-13337 & Ana Springs / Reservoir

File	Permit	Certificate	Transfer/PA	Owner	Priority	Permitted Rate	Cumulative Rate
U188	U174	31170		ODFW	12/20/1945	1.59	1.59
G68	G1441	31169		ODFW	05/04/1955	0.39	1.98
G72	G1388	51863	T5412	VANCIL A WITHERS	05/24/1955	0.70	2.68
G72	G1388	56503	T5412	WITHERS RANCH INC.	05/24/1955	0.09	2.77
G1987	G1851	33369		WITHERS RANCH INC.	04/14/1961	0.88	3.65
G9267	G8707	90178	T11911	RUNNIN' W RANCH	06/06/1979	0.41	4.06
G10831	G10092	82689		ODFW	11/01/1982	2.00	6.06
G10830	G10091	82282		ODFW	11/01/1982	0.05	6.11
G10414	G10433	82765		ODFW	11/08/1982	1.20	7.31
G11199	G10293	56553		WITHERS RANCH INC.	11/02/1983	0.18	7.49
G11558	G10687	82286		ODFW	07/15/1986	2.23	9.72
G11640	G17749		T13337	THOMAS MACDONALD	04/07/1987	17.80	27.52

Table 3

Drawdown Calculations Using Theis Equation														Groundwater Interference with Ana Spring		Groundwater Interference with Ana Spring as Percent of Well Pumping Rate	
Theis Equation: $s = [Q/(4 \cdot T \cdot \pi)] [W(u)]$ $u = (r^2 S)/(4 \cdot T \cdot t)$ $W(u) = (-\ln u) - (0.5772157) + (u/1 \cdot 1!) - (u^2/2 \cdot 2!) + (u^3/3 \cdot 3!) - (u^4/4 \cdot 4!) + \dots$ s = drawdown (L) T = transmissivity (L²/T) S = storage coefficient (dimensionless) pi = 3.141592654 r = radial distance (L) t = time (T) u = dimensionless W(u) = well function														Delta Q = C x Delta h Delta Q = spring discharge change Delta h = s = drawdown at spring C = constant relating Delta Q & Delta h C = 1.63 ft2/day derived from Brown (1957)			
Transmissivity T (gpd/ft)	Transmissivity T (ft2/day)	Storage Coefficient S	Pumping Rate Q (gal/min)	Pumping Rate Q (ft3/sec)	Time t (days)	Distance r (feet)	pi	u	W(u)	Drawdown s (feet)	Drawdown Change s (feet)	Well	Comments	Ana Spring		Delta Q (spring) / Q (well)	
														Delta Q (spring) (cfs)	Delta Q (spring) (gpm)	percent of cfs	percent of gpm
								Note : W(u) calculation valid when u < 7.1									
								7.0000	1.1545E-04				W(u) calculation test				
1990 Permit POA well locations to Ana Reservoir (Transmissivity and Storage Coefficient from Brown (1957))																	
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	1.00	5,130.00	3.14	0.0073	4.3473	2.0410		Closest	Continuous Pumping at Full Rate	3.3268	1,493.19	18.69%	18.69%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	1.00	5,160.00	3.14	0.0074	4.3358	2.0356		Furthest	Continuous Pumping at Full Rate	3.3180	1,489.21	18.64%	18.64%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	30.00	5,130.00	3.14	0.0002	7.7415	3.6345		Closest	Continuous Pumping at Full Rate	5.9242	2,658.98	33.28%	33.28%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	30.00	5,160.00	3.14	0.0002	7.7298	3.6290		Furthest	Continuous Pumping at Full Rate	5.9153	2,654.98	33.23%	33.23%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	245.00	5,130.00	3.14	0.0000	9.8413	4.6203		Closest	Continuous Pumping at Full Rate	7.5312	3,380.22	42.31%	42.31%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	245.00	5,160.00	3.14	0.0000	9.8297	4.6149		Furthest	Continuous Pumping at Full Rate	7.5222	3,376.21	42.26%	42.26%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	365.00	5,130.00	3.14	0.0000	10.2399	4.8075		Closest	Continuous Pumping at Full Rate	7.8362	3,517.14	44.02%	44.02%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	365.00	5,160.00	3.14	0.0000	10.2283	4.8020		Furthest	Continuous Pumping at Full Rate	7.8273	3,513.13	43.97%	43.97%
2020 Permit Amendment Application POA well locations to Ana Reservoir (Transmissivity and Storage Coefficient from Brown (1957))																	
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	1.00	4,590.00	3.14	0.0059	4.5683	2.1448	0.1038	Closest	Continuous Pumping at Full Rate	3.4960	1,569.09	19.64%	19.64%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	1.00	5,230.00	3.14	0.0076	4.3090	2.0230	-0.0126	Furthest	Continuous Pumping at Full Rate	3.2975	1,480.02	18.53%	18.53%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	30.00	4,590.00	3.14	0.0002	7.9639	3.7389	0.1044	Closest	Continuous Pumping at Full Rate	6.0944	2,735.37	34.24%	34.24%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	30.00	5,230.00	3.14	0.0003	7.7029	3.6164	-0.0126	Furthest	Continuous Pumping at Full Rate	5.8947	2,645.72	33.12%	33.12%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	245.00	4,590.00	3.14	0.0000	10.0638	4.7248	0.1044	Closest	Continuous Pumping at Full Rate	7.7014	3,456.62	43.27%	43.27%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	245.00	5,230.00	3.14	0.0000	9.8027	4.6022	-0.0127	Furthest	Continuous Pumping at Full Rate	7.5016	3,366.96	42.14%	42.14%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	365.00	4,590.00	3.14	0.0000	10.4624	4.9119	0.1044	Closest	Continuous Pumping at Full Rate	8.0064	3,593.54	44.98%	44.98%
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	365.00	5,230.00	3.14	0.0000	10.2013	4.7894	-0.0127	Furthest	Continuous Pumping at Full Rate	7.8067	3,503.88	43.86%	43.86%

Table 4												
Drawdown Calculations Using Theis Equation												
Theis Equation: $s = [Q/(4 \cdot T \cdot \pi)] [W(u)]$ $u = (r^2 \cdot S)/(4 \cdot T \cdot t)$ $W(u) = (-\ln u) - (0.5772157) + (u/1 \cdot 1!) - (u^2/2 \cdot 2!) + (u^3/3 \cdot 3!) - (u^4/4 \cdot 4!) + \dots$ s = drawdown (L) T = transmissivity (L²/T) S = storage coefficient (dimensionless) pi = 3.141592654 r = radial distance (L) t = time (T) u = dimensionless W(u) = well function												
Transmissivity T (gpd/ft)	Transmissivity T (ft ² /day)	Storage Coefficient S	Pumping Rate Q (gal/min)	Pumping Rate Q (ft ³ /sec)	Time t (days)	Distance r (feet)	pi	u	W(u)	Drawdown s (feet)	Drawdown Change s (feet)	Comments
								Note : W(u) calculation valid when u < 7.1				
								7.0000	1.1545E-04			W(u) calculation test
1990 Permit proposed POA well #4 location to certificate 90178 well (LAKE 1503) (Transmissivity and Storage Coefficient from Brown (1957))												
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	1.00	7,000.00	3.14	0.0136	3.7320	1.7521		Continuous Pumping at Full Rate
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	30.00	7,000.00	3.14	0.0005	7.1201	3.3428		Continuous Pumping at Full Rate
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	245.00	7,000.00	3.14	0.0001	9.2197	4.3285		Continuous Pumping at Full Rate
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	365.00	7,000.00	3.14	0.0000	9.6183	4.5157		Continuous Pumping at Full Rate
2020 Permit Amendment Application POA well #5 (LAKE 52367) location to certificate 90178 well (LAKE 1503) (Transmissivity and Storage Coefficient from Brown (1957))												
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	1.00	5,030.00	3.14	0.0070	4.3864	2.0594	0.3072	Continuous Pumping at Full Rate
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	30.00	5,030.00	3.14	0.0002	7.7808	3.6530	0.3102	Continuous Pumping at Full Rate
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	245.00	5,030.00	3.14	0.0000	9.8807	4.6388	0.3103	Continuous Pumping at Full Rate
1,950,000.00	260,677.07	0.00029	7,989.20	17.80	365.00	5,030.00	3.14	0.0000	10.2793	4.8260	0.3103	Continuous Pumping at Full Rate



STATE OF OREGON

INTEROFFICE MEMO

TO: File G-11640

DATE: 4/10/89

FROM: Donn Miller

SUBJECT: Comments for Application Processing

I spoke to Dennis Glendon, WM Dist 12, about this application. We recommend:

- 1) Alerting Sumner Lake I.D. of application
- 2) using special permit conditions as found in a similar permit in the area (see Permit G-1388 & order V10, p. 125 special conditions)
- 3) Alerting/requiring the applicant to install shut off valves.

These wells are strongly flowing

LAKE COUNTY

In The Matter of the Ap-
 plications in the name
 of F. R. Williams and
 Vancil A. Withers for the
 Construction of Wells and
 The Appropriation of
Ground Water for Irrigation)

FINDINGS OF FACTCONCLUSIONS AND ORDER

FINDINGS OF FACT

1. On May 4, 1955, F. R. Williams of Summer Lake, Oregon filed an application in the office of the State Engineer for the construction of a well in the NW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 7, T. 30 S., R. 17 E., W. M. Lake County Oregon and the appropriation of 4 cubic feet per second of water to irrigate 173 acres. This application was given file Number U-821, which was changed to G-68 subsequent to Oregon's Ground Water Act of 1955. This application will be referred to as G-68 in these findings.

2. On May 24, 1955, Vancil A. Withers of Paisley, Oregon filed an application for the construction of two wells in the SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 1, T. 30 S., R. 16 E., W. M. Lake County Oregon and the appropriation of 4 cubic feet per second of water to irrigate 150 acres. This application was given file Number U-835, which was changed to G-72 subsequent to Oregon's Ground Water Act of 1955. This application will be referred to as G-72 in these findings.

3. On June 28, 1955, the Summer Lake Irrigation District of Summer Lake, Oregon filed protests to the granting of permits under applications numbered G-68 and G-72. The protest states that the Summer Lake Irrigation District contains 2,530 acres of irrigable and irrigated land; that the sole source of its water supply is Ana Springs and that it is its belief that the operation of the wells as set forth in these applications would diminish the flow of Ana Springs to such an extent that it would be of great injury to the land owners within the District.

4. On August 1, 1955, the Oregon State Game Commission filed protests to the granting of permits under applications numbered G-68 and G-72. The protest states that all the waters of Ana River are being applied to beneficial use by the Summer Lake Irrigation District, William Kittredge, and the Oregon State Game Commission; that the source of Ana River is Ana Springs, and that it is its belief that the appropriation of ground water through the wells described in applications numbered G-68 and G-72 will diminish the flow of Ana Springs and result in injury and damage to the fishery resources in Summer Lake and Ana River.

5. On August 19, 1955, William Kittredge of Summer Lake, Oregon filed protests to the granting of permits under applications numbered G-68 and G-72. Mr. Kittredge claims ownership of a vested right to the irrigation of 1,100 acres from water obtained from Ana River. His protest alleges that the appropriation of ground water through the wells described in applications numbered G-68 and G-72 will diminish the flow of Ana River and thereby cause him injury.

6. A hearing on the matter of applications numbered G-68 and G-72 was held at the Ana River Public School, Summer Lake, Oregon on August 30, 1955. At this hearing, Messrs. F. R. Williams and Vancil A. Withers, applicants, were represented by Mr. Robert L. Welch, Attorney, Lakeview, Oregon. The Summer Lake Irrigation District, protestant, was represented by Mr. H. H. DeArmond, Attorney, Bend, Oregon. The Oregon State Game Commission, protestant, was represented by Mr. Arthur G. Higgs, Assistant Attorney General and Mr. William Kittredge was represented by Mr. Theodore R. Conn, Attorney, Lakeview, Oregon. Testimony was given by H. C. Harris, a director of the Summer Lake Irrigation District, Phil Smith, Watermaster of Lake County; A. V. Meyers, Federal Aid Coordinator, Oregon State Game Commission; Hugo Leyve, Manager Summer Lake Waterfowl Area; R. C. Newcomb, District Geologist, Ground Water Branch, U. S. Geological Survey; Carl Williams, Well Driller and Geologist; Frank R. Williams, applicant; and Vancil A. Withers, applicant.

7. Ana Springs, which are the chief source of Ana River (Buckhorn Spring also contributes to the flow of Ana River), are located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$, and the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 1, T. 30 S., R. 16 E., W. M. and the SW $\frac{1}{4}$ NW $\frac{1}{4}$ and NW $\frac{1}{4}$ SW $\frac{1}{4}$, Section 6, T. 30 S., R. 17 E., W. M. Since 1951, the discharge of Ana Springs has ranged from about 80 to 100 cubic feet per second. The spring orifices are now submerged in a small reservoir formed by impounding Ana River behind an earth dam. Water is diverted from this reservoir to supply the needs of the Summer Lake Irrigation District. Ana River flows a few miles from the reservoir area and discharges into Summer Lake.

8. The records of the State Engineer show the following water rights and applications for permits to appropriate water from Ana River:

Applic- ation No.	Permit No.	Certifi- cate No.	Priority Date	Permittee	Point of Diversion	Extent of Right
14427	10447	-----	1915	Summer Lake Irrigation District	NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 6 T 30 S R 17 E	Appropriation of 90 c.f.s. for the irrigation of 6941.2 acres.
4660	3479	3496	1915	William Kittredge	SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 17 T 30 S R 17 E	Appropriation not to exceed 4.3 c.f.s. for the irrigation of 345 acres.
9704	6437	8865	1924	L. H. Williams	SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 24 T 30 S R 16 E	Appropriation not to exceed 2.14 c.f.s. for the irrigation of 170.26 acres.
12723	9015	9783	1929	Carl Williams	NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 16 or NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 17 T 30 S R 17 E	Appropriation not to exceed 4 c.f.s. for the irrigation of 320 acres.
13689	10981	11241	1930	J. C. Williams	NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 17 T 30 S R 17 E	Appropriation not to exceed 3.82 c.f.s. for the irrigation of 307.05 acres.
13918	10982	11242	1931	F. R. Williams	NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 17 T 30 S R 17 E	Appropriation not to exceed 4 c.f.s. for the irrigation of 320 acres.

Applica- tion No.	Permit No.	Certifi- cate No.	Priority date	Permittee	Point of Diversion	Extent of Right
15510	11407	11974	1934	Imogene Turner	NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 17 or NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 16 T 30 S R 17 E and Williams Ditch NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 28 T 30 S R 17 E	Appropriation not to exceed 3.85 c.f.s. for the irrigation of 317.42 acres.
19057	14657	-----	1940	James Drury	NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 16 T 30 S R 17 E	Appropriation of not to exceed 4.0 c.f.s. for the irrigation of 320 acres.
22463	-----	-----	1947	Oregon State Game Commission	SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 6 T 30 S R 17 E	Application for 45.0 c.f.s. for trout hatchery.
24326	19131	22005	1949	Oregon State Game Commission	SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 24 T 30 S R 16 E and SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 17 T 30 S R 17 E	Appropriation of 60.0 c.f.s. for restoration of marshland for wildlife propagation.
32692	-----	-----	1958	Oregon State Game Commission	SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 6 T 30 S R 17 E	Application for 60.0 c.f.s. for fish propagation.

9. Vested rights to the use of water from Ana River established by the appropriation and beneficial use of water prior to 1909 have not yet been determined. Mr. William Kittredge has stated in his protest that he claims a vested right for the irrigation of 1,100 acres from Ana River.

10. The Ground Water Branch of the U. S. Geological Survey was requested at the close of the hearing on August 30, 1955 to make an investigation of the effect of the Williams and Withers wells on the flow of Ana Springs. Their investigation was made during the fall of 1955 and their report "Occurrence of Ground Water near Ana Springs, Summer Lake Basin, Lake County, Oregon" by S. G. Brown, was released in

September 1957. Plate 1B of this report "Map showing location of Ana Springs Reservoir, nearby wells, and contours on the piezometric surface" is made a part of these findings.

11. The well shown as R1 on Plate 1B is the Vancil A. Withers Well No. 1 and the well shown as R2 is the Vancil A. Withers Well No. 2. Application No. G-72 is for the appropriation of 1.5 cubic feet per second from well R1 and 2.5 cubic feet per second from well R2 for irrigation of 150 acres. Well D1 on the map is the F. R. Williams well. Application No. G-68 is for the appropriation of 4 cubic feet per second of water from this well to irrigate 173 acres. Wells 7F1 and A1 are also irrigation wells. Well 7F1 has been authorized by Permit No. U-174. No application has been filed for well A1, which is unfinished.

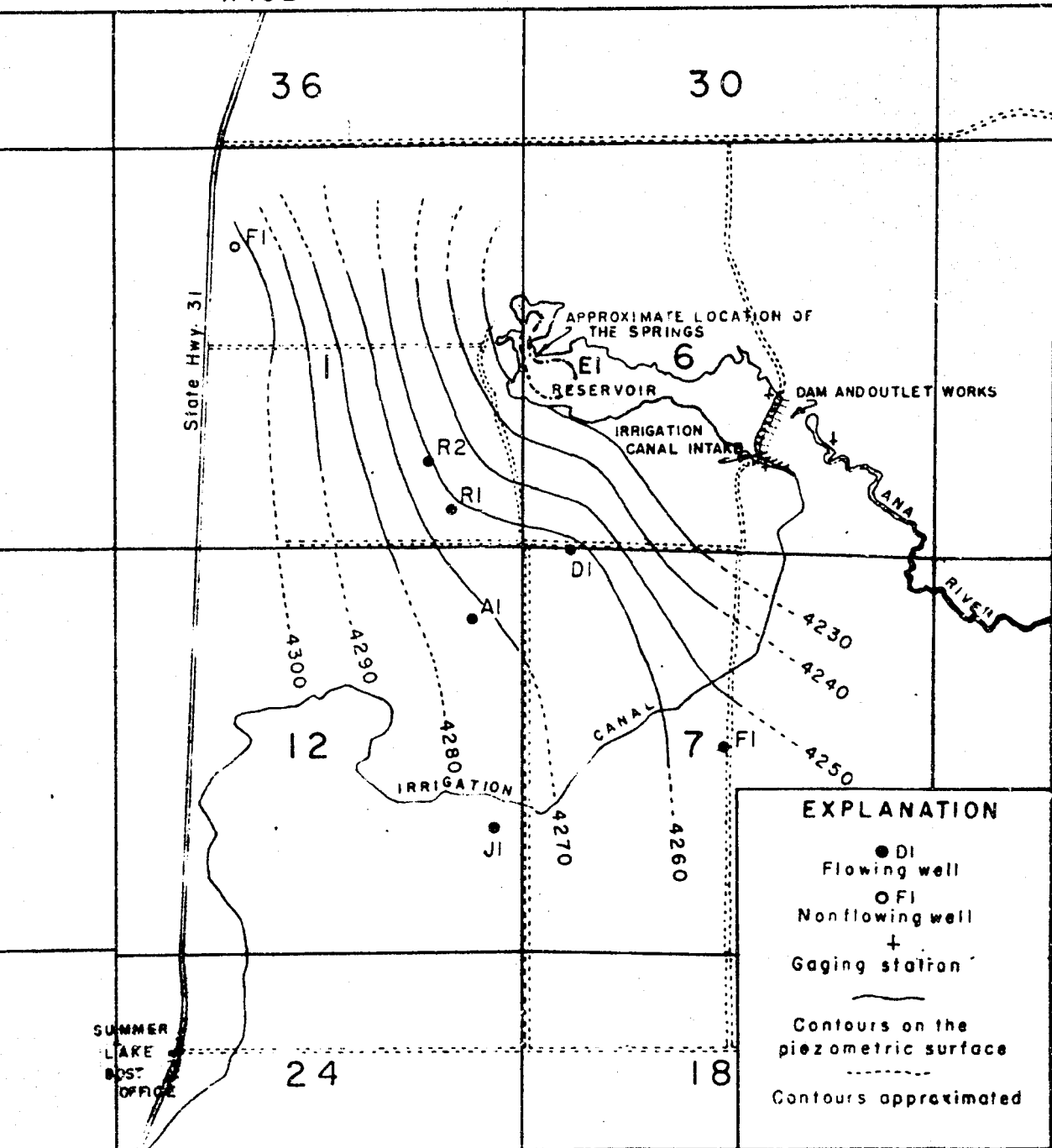
12. The Vancil A. Withers well No. 1 (R1) was drilled about 1953. It is a 209 foot well, cased with 8-inch casing to a depth of 182 feet. The drillers log of this well is as follows:

Materials	Thickness	Depth
Clay, gray.....	40	40
Not reported.....	90	130
Clay, black.....	40	170
Sand, black.....	10	180
Cinders, red and black.....	29	209

It is an artesian well with a static water surface 22 feet above land surface (October 1955). This well has a natural flow of about 800 g.p.m.

13. The Vancil A. Withers well No. 2 (R2) was also drilled about 1953. It is a 222 foot well, cased with 8-inch casing to a depth of 140 feet. The drillers log of this well is as follows:

Materials	Thickness	Depth
Clay, Gray.....	30	30
Clay, black.....	52	82
Unreported.....	30	112
Rock, broken and sand.....	26	138
Rock, red.....	47	185
Rock, hard, black.....	37	222



MAP SHOWING LOCATION OF ANA SPRINGS RESERVOIR, NEARBY WELLS, AND CONTOURS ON THE PIEZOMETRIC SURFACE.

It is an artesian well with a static water surface 16 feet above land surface (October 1955). This well has a natural flow of about 1,200 g.p.m.

14. The F. R. Williams well (D1) was drilled about 1954. It is a 253 foot well, cased with 8-inch casing to a depth of 210 feet. A log of this well is not available. Water was reported to have been encountered in "lava rock" from 205 to 253 feet. This well is artesian with a static water surface 24 feet above land surface. It has a natural flow of about 1,300 g.p.m.

15. The procedure followed by the U. S. Geological Survey in their investigation is as follows:

- A. Level traverses were run to each of the wells to determine the elevation of the well with respect to the water surface in Ana Reservoir.
- B. Each well was equipped with a pressure gage and a standpipe was erected at the Withers No. 2 well (R2). An automatic water level recorder was installed in this well so that a continuous record of the water level in this well could be obtained.
- C. Each well was then allowed to flow individually at a constant rate of discharge and its effect on each of the other wells was obtained by readings on the pressure gages and the water stage recorder. The surface of Ana Reservoir was maintained at a constant elevation during these tests.
- D. After the above tests were completed, the outlet control works on Ana Reservoir were opened and the reservoir surface was lowered seven feet. The effect of this lowering on the artesian wells was determined by pressure readings and was also recorded on the water stage recorder.

16. Data obtained in the flow test of the artesian wells showed that wells R1, R2 (Withers Nos. 1 and 2), D1 (F. R. Williams well), and well 7F1 are all hydraulically connected and obtain water from the same ground water reservoir. Well A1 was found to be hydraulically separated from the other artesian wells. The flow test also furnished data that permitted a calculation of the hydraulic properties of the ground water reservoir. The lowering of the reservoir surface caused a lowering of water levels in the wells which indicates a hydraulic connection between the ground water reservoir being developed by wells R1, R2, D1, F and F1, and Ana Springs. The lowering of the reservoir surface also resulted in an increase in the flow of Ana Springs which was on the order of 1 c.f.s. for every foot of head removed. The construction and filling of Ana Reservoir has placed some 30 to 35 feet of head on the spring orifices. This added head is believed to have caused a reduction of the flow of Ana Springs by some 30 c.f.s.

17. The quantity of water required for irrigation of lands in the Summer Lake basin is not to exceed one-eightieth ($1/80$) cubic foot per second, or its equivalent, for each acre actually irrigated, and the total volume required does not exceed three acre-feet per acre during the irrigation season.

18. From the hydraulic properties of the ground water reservoir obtained from the tests, the effect of the operations of the wells has been calculated. The following table shows the calculated reduction of head at Ana Springs produced by the operation of the three wells described in applications numbered G-68 and G-72.

Well No.	Distance from Ana Springs (feet)	*Withdrawal rate (g.p.m.)	**Days of Operation	Calculated reduction of head at Ana Springs (feet)
R.1 (Withers No. 1)	2300	300	120	0.2
R.2 (Withers No. 2)	1800	550	120	0.3
D.1 (F.R.Williams)	2700	970	120	<u>0.6</u>

Total 1.1 feet.

* For a duty of water of 1/80 c.f.s. per acre

** To obtain 3 acre-feet per acre.

19. A reduction of one foot of head at Ana Springs would have the same effect on the flow of the springs as raising the water surface in the reservoir by 1 foot. This reduction of head would result in a reduction in discharge of Ana Springs by about 1 c.f.s. Such a reduction would not be discernible in the discharge records of Ana River as these records are only considered accurate to plus or minus 10 per cent.

CONCLUSIONS

There is unappropriated ground water available in the ground water reservoir from which the wells described in Applications Nos. G-68 and G-72 will draw their supply. Although a withdrawal from these wells of 4.00 cubic feet per second (1796 gallons per minute) will reduce the flow of Ana Springs by 1 cubic foot per second (449 gallons per minute) and thus reduce the amount of water available to supply existing and prior surface water rights by that quantity, these wells may still be operated without injury to existing rights. This can be accomplished by a provision in the permits issued for the wells that at any time when the well operations result in a depletion of flow of Ana Springs to the injury of existing rights, a part of the well yield, equivalent to the reduction in flow of Ana Springs, shall be delivered into the Summer Lake Irrigation District Canal or into Ana Reservoir. Any such deliveries should be made when and in the amounts directed by the Watermaster and the deliveries from each well should be proportionate to the depletion of flow of Ana Springs assignable to that well. For the purpose of carrying out such deliveries it is logical and reasonably accurate to require that one-

fourth of the withdrawal from each well shall be returned to the reservoir or to the Summer Lake Irrigation District Canal when necessary to deliver to the holders of prior rights the quantities to which they are entitled. The quantity of water so delivered should not be charged against appropriations from the wells of the quantities herein allowed for irrigation.

There can be no finding, on the basis of evidence presented at the hearing on August 30, 1955 or the subsequent investigation and tests made by the United States Geological Survey, that the withdrawal of water from the wells described in Applications Nos. G-68 and G-72 will result in depletion of the flow of Ana River downstream from the reservoir except for that caused by the reduction of the flow of Ana Springs. Therefore, if one-fourth the withdrawal from these wells is returned to the Summer Lake Irrigation District Canal or to Ana Reservoir, the operation of these wells cannot interfere with the rights of Protestant William Kittredge or Protestant Oregon State Game Commission.

ORDER

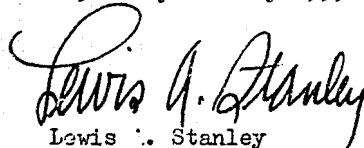
It is ORDERED that Application No. G-68 in the name of F. R. Williams be approved to authorize appropriation of not to exceed 2.16 cubic feet per second of ground water for irrigation of 173 acres, the rate of flow not to exceed $1/80$ of one cubic foot per second for each acre irrigated and the total withdrawal during any irrigation season not to exceed 3 acre-feet per acre for each acre irrigated during that season, and subject to all conditions of this order.

It is FURTHER ORDERED that Application No. G-72 in the name of Vancil A. Withers be approved to authorize appropriation of not to exceed 1.87 cubic feet per second of ground water for irrigation of 150 acres the rate of flow not to exceed $1/80$ of one cubic foot per second for each acre irrigated and the total withdrawal from both wells during any irrigation season not to exceed 3 acre-feet for each acre irrigated during that season, and subject to all conditions of this order.

It is FURTHER ORDERED that at any time when the flow of Ana Springs is insufficient to furnish the amount of water required to satisfy existing rights with priority earlier than the priority of the permits herein authorized, each of the wells shall be so operated that one-fourth of the total water withdrawn shall be delivered by the permittee or permittees into Ana Springs Reservoir or into the main canal of the Summer Lake Irrigation District. The quantity of water so delivered shall not be charged against the water allowed for the lands to be irrigated from these wells.

It is FURTHER ORDERED that before any water is withdrawn from the wells of F. R. Williams and Vancil A. Withers under authority of the permits herein ordered, the permittees shall each construct the necessary pipe lines or ditches and install the necessary measuring devices so that the provisions of this order may be enforced by the watermaster.

Dated at Salem, Oregon this 3rd day of July 1959.


Lewis A. Stanley
State Engineer



STATE OF OREGON

INTEROFFICE MEMO

TO: File G-11640
Donn Miller ^{DM}

FROM: Possible Permit Conditions

DATE: 2/16/90

SUBJECT: My memo of 4/10/89 to the file suggests the use of conditions similar to those elsewhere in the area (Permit G-1388 & Order v. 10, p.125 of special order book). Those conditions speak to a 1/4 Q delivery by the permittee to the Summer Lake Irrigation District in the event of deficiency at Ana Reservoir. That serves as a replacement to mitigate interference effects. In addition, the permittee is required to construct diversion works to supply that replacement water prior to withdrawal of any water.

In the earlier permits, the special diversion works were more practical than for this application. They were closer to the Reservoir and slightly uphill. This application seeks water from wells which are approximately one mile from the Reservoir. The costs associated with such a pipeline might be prohibitive. Perhaps, this application may call for a different condition.

I propose that water be distributed as if it were from Ana Reservoir itself. In the event of shortage at Ana Reservoir, the permittee's use of the wells would be regulated and/or stopped. This condition would allow swift regulation and avoid the impractical diversion works for replacement water. If the permittee wished to construct the works at the time of need that would appear to be a reasonable option too.

Here is some possible condition language:

If at any time in the Director's judgement, the flow of Ana Springs is insufficient to furnish the amount of water required to satisfy existing rights with priority earlier than the priority of the permit herein authorized, use and/or flow from the wells shall cease. Alternatively, the permittee shall operate the wells and construct works to deliver one-fourth of the total water withdrawn into the Ana Springs Reservoir or into the main canal of the Summer Lake Irrigation District. The quantity of water so delivered shall not be charged against the water allowed for the uses authorized from these wells.

In my view, some interference with the current supply at Ana Reservoir appears certain from the proposed use.

SC# 212531

Note to File – Search Drill Rig Accident

9/30/2016 – WDN received a call from Brian Mayer regarding an accident out on a drill site in Summer Lake.

10/3/2016 – WDN called Brian Mayer to get info regarding the Drilling accident. Brian didn't know much, but gave WDN Tom McDonald's contact info and asked WDN to visit the site and take photos.

10/4/2016 – WDN visited the accident site in Summer Lake. While on site, Tom McDonald's son stopped by and let me into the fence to take video of the drill rig. The rig was upright and the tower was removed and lying on the ground, approximately where it fell.

The rig was the same green rig that was observed on the hole associated with SC#212521 in July 2016. There were still no identifying markings on the rig (Lic#, Drillers name, etc. – see violations noted for SC#212521 inspection). The rig appeared to have fallen over on the driver's side, based on the cab damage.

Several pieces of casing were observed lying on the ground in the vicinity of the damaged rig.

Disturbed ground was observed at the back of the rig, where the borehole was attempted. Rounded rocks, varying in size between 14 and 24 inches, were observed at the ground surface. A long trench, with desiccated fine-grained sediments extended from the back of the rig, downslope approximately 50 feet. There was no evidence of water or uncontrolled springs in the vicinity of the borehole site at the time of WDN's visit.

Evidence of hydrocarbon liquids were observed on the ground surface in at least three locations at the drill site – possibly from spills related to the accident.

During the visit, Mr. Tom McDonald, owner of Desert Springs Fish Hatchery, visited the site. Mr. McDonald did not see the accident, however he indicated that he arrived shortly afterwards. Mr. McDonald indicated that Tom Search was NOT onsite during the accident and that his sons(s?) were drilling at the time of the accident.

WDN asked Mr. McDonald how the accident happened. Mr. McDonald stated that while advancing the hole, artesian water rose out of the borehole between the temporary casing and the formation. Water flow at the ground surface was directed into a trench dug with a backhoe. Continued flow of water from the well began to erode the margins of the borehole and the hole expanded in area. Enlargement of the hole continued due to the inability to shut off the artesian flow. Eventually, the expansion of the hole encompassed the right rear outrigger causing the rig to tip over onto the support truck and support trailer.

Once the rig was on it's side, Mr. McDonald was able to gain access to the eroding borehole with a 10 yard dump truck and dump approximately 12 cubic yards of 14- to 24-inch-diameter rounded rock into the hole. That seemed to stop the flow of water according to Mr. McDonald.

Mr. McDonald provided photos of the accident on hard copy. The date of the email in which these photos were transmitted is 9/27/2016. WDN is unsure how long the drill was drilling on that hole prior to the accident. The Startcard for that hole was submitted to OWRD on 9/30/2016 (See Attachment) and Mr. Search indicated that drilling was to commence on 9/8/2016.

WDN asked Mr. McDonald how long it had been since Mr. Search finished the hole drilled under SC# 212521 and Mr. McDonald indicated that it had been approximately 6 weeks. There is no Well Log on file in the OWRD database as of 10/6/2016.

LAKE 3030

May 15th, 2014

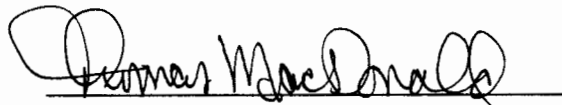
Oregon Water Resources Department
Attn: Buffy Gillis
725 Summer Street NE, Suite A
Salem, OR 97301

Dear Ms. Gillis,

Below is a list of the correct locations of the wells therein identified. Well driller Tom Search sent your office the corrected well logs for LAKE 1507 and LAKE 52487. Schroeder Law Offices sent your office the corrected well logs for the remaining wells.

Well #	Well Log #	Township, Range, Section, Quarter-Quarter
Well 1	LAKE 3030	30 South, 17 East, Sec. 8 NE NW
Well 2	LAKE 1507	30 South, 17 East, Sec. 8 NE NW
Well 3	LAKE 4444	30 South, 17 East, Sec. 8 NE NW
Well 4	LAKE 3029	30 South, 17 East, Sec. 8 NE NW
Well 6	LAKE 52368	30 South, 17 East, Sec. 5 SW SE
Well 7	LAKE 52369	30 South, 17 East, Sec. 8 NE NW
Well 8	LAKE 52487	30 South, 17 East, Sec. 5 NW SE

Sincerely,



Thomas MacDonald
Desert Springs Trout Farm

RECEIVED BY OWRD

MAY 19 2014

SALEM, OR

LAKE 3030

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem Oregon 97301
(503) 986-0900
www.oregon.gov/owrd

Application for Well ID Number

RECEIVED

NOV 26 2019

Do not complete if the well already has a Well Identification Number.

I. OWNER INFORMATION

Current Owner Name (please print): Summer Lake Trout Farm Attn: Ethan Negus **OWRD**
Mailing Address: PO Box 40
City, State, Zip: Summer Lake, OR 97640
Mail Well ID to: ☒ SAME AS ABOVE ☐ In Care Of (C/O)
Name & Address: _____
City, State, Zip: _____

II. WELL LOCATION INFORMATION (Please fill out as completely as possible)

Township: 30 (North / ~~South~~) Range: 17 (~~East~~ / West) Section: 8 NE 1/4 of the NW 1/4
Tax Lot (usually last 3-5 numbers of Tax Map #): 601 County Lake County
GPS Coordinates: 42 59' 22.99" N 120 43' 55.70" W
Street Address of Well, City: 48320 Desert Springs Rd Summer Lake
If the property had a different street address in the past: _____

III. GENERAL WELL INFORMATION (Please fill out as completely as possible, AND attach copy of Well Report, if available)

Use of Well (domestic, irrigation, commercial, industrial, monitoring): Fish culture & Irrigation
Date Well Constructed (or property built): 6-30-85 Total Well Depth: 296' Casing Diameter: 12"
Owner at time the well was constructed (if known): Robert Olson Well Report # (if known): LAKE 3030
Other Information: _____

SUBMITTED BY (please print): Ethan Negus
PHONE: (541) 943-3192 EMAIL &/or FAX: ethan.negus@desertspringstroutfarm.com

Send application to: Oregon Water Resources Department 725 Summer St NE, Suite A, Salem, Oregon 97301; or fax to (503) 986-0902.
Applications are processed in the order they are received, and Well ID Numbers are mailed within 4-5 business days.

For Official Use Only by the Oregon Water Resources Department:

Received Date:

11-26-19

Well Report Number:

LAKE 3030

Well Identification #:

L-137013

LAKE 1507

May 15th, 2014

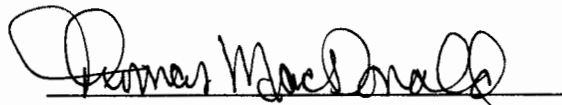
Oregon Water Resources Department
Attn: Buffy Gillis
725 Summer Street NE, Suite A
Salem, OR 97301

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Well 7	LAKE 52369	30 South, 17 East, Sec. 8 NE NW
Well 8	LAKE 52487	30 South, 17 East, Sec. 5 NW SE

Sincerely,



Thomas MacDonald
Desert Springs Trout Farm

RECEIVED BY OWRD

MAY 19 2014

SALEM, OR

LAKE 1507

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem Oregon 97301
(503) 986-0900
www.oregon.gov/owrd

Application for Well ID Number

RECEIVED

NOV 26 2019

Do not complete if the well already has a Well Identification Number.

OWRD

I. OWNER INFORMATION

Current Owner Name (please print): Summer Lake Trout Farm Attn: Ethan Negus
Mailing Address: PO Box 40
City, State, Zip: Summer Lake, OR 97640
Mail Well ID to: ☒ SAME AS ABOVE ☐ In Care Of (C/O)
Name & Address: _____
City, State, Zip: _____

II. WELL LOCATION INFORMATION (Please fill out as completely as possible)

Township: 30 (North ~~South~~) Range: 17 (East ~~West~~) Section: 8 NE 1/4 of the NW 1/4
Tax Lot (usually last 3-5 numbers of Tax Map #): 601 County Lake County
GPS Coordinates: 42 59' 21.51" N 120 43' 55.81" W
Street Address of Well, City: 48320 Desert Springs Rd Summer Lake
If the property had a different street address in the past: _____

III. GENERAL WELL INFORMATION (Please fill out as completely as possible, AND attach copy of Well Report, if available)

Use of Well (domestic, irrigation, commercial, industrial, monitoring): Fish culture & Irrigation
Date Well Constructed (or property built): 7-15-85 Total Well Depth: 296' Casing Diameter: 12"
Owner at time the well was constructed (if known): Robert Olson Well Report # (if known): LAKE 1507
Other Information: _____

SUBMITTED BY (please print): Ethan Negus
PHONE: (541) 943-3192 EMAIL &/or FAX: ethan.negus@desertspringstroutfarm.com

Send application to: Oregon Water Resources Department 725 Summer St NE, Suite A, Salem, Oregon 97301; or fax to (503) 986-0902.
Applications are processed in the order they are received, and Well ID Numbers are mailed within 4-5 business days.

For Official Use Only by the Oregon Water Resources Department:

Received Date:

11-26-19

Well Report Number:

LAKE 1507

Well Identification #:

L-137012

LAKE 4444

May 15th, 2014

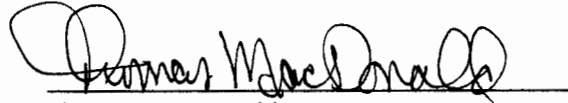
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Attn: Buffy Gillis
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Salem, OR 97301

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Well 7	LAKE 52369	30 South, 17 East, Sec. 8 NE NW
Well 8	LAKE 52487	30 South, 17 East, Sec. 5 NW SE

Sincerely,



Thomas MacDonald
Desert Springs Trout Farm

RECEIVED BY OWRD

MAY 19 2014

SALEM, OR

LAKE 4444

Oregon Water Resources Department
 725 Summer Street NE, Suite A
 Salem Oregon 97301
 (503) 986-0900
 www.oregon.gov/owrd

Application for Well ID Number RECEIVED

NOV 26 2019

Do not complete if the well already has a Well Identification Number.

OWRD**I. OWNER INFORMATION**

Current Owner Name (please print): Summer Lake Trout Farm Attn: Ethan Negus
 Mailing Address: PO Box 40
 City, State, Zip: Summer Lake, OR 97640
 Mail Well ID to: ☒ SAME AS ABOVE ☐ In Care Of (C/O)
 Name & Address: _____
 City, State, Zip: _____

II. WELL LOCATION INFORMATION (Please fill out as completely as possible)

Township: 30 (North / ~~South~~) Range: 17 (East / ~~West~~) Section: 8 NE 1/4 of the NW 1/4
 Tax Lot (usually last 3-5 numbers of Tax Map #): 601 County Lake County
 GPS Coordinates: 42 59' 21.53" N 120 43' 55.60" W
 Street Address of Well, City: 48320 Desert Springs Rd Summer Lake
 If the property had a different street address in the past: _____

III. GENERAL WELL INFORMATION (Please fill out as completely as possible, AND attach copy of Well Report, if available)

Use of Well (domestic, irrigation, commercial, industrial, monitoring): Fish culture & Irrigation
 Date Well Constructed (or property built): 10-20-87 Total Well Depth: 262' Casing Diameter: 12"
 Owner at time the well was constructed (if known): Robert Olson Well Report # (if known): LAKE 4444
 Other Information: _____

SUBMITTED BY (please print): Ethan Negus
 PHONE: (541) 943-3192 EMAIL &/or FAX: ethan.negus@desertspringstroutfarm.com

Send application to: Oregon Water Resources Department 725 Summer St NE, Suite A, Salem, Oregon 97301; or fax to (503) 986-0902.
 Applications are processed in the order they are received, and Well ID Numbers are mailed within 4-5 business days.

For Official Use Only by the Oregon Water Resources Department:

Received Date:

11-26-19

Well Report Number:

LAKE 4444

Well Identification #:

L-137011

(9) LOCATION OF WELL by legal description:

Name ROBERT OLSON
Address P/O Box 40
City SUMMER LAKE State OR Zip 97640

(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 **FISH HATCH**

(F) BORE HOLE CONSTRUCTION:

Final Construction approval Yes ☒ No ☐ Depth of Completed Well 310 ft.

Explosives used Yes ☐ No ☒ Type _____ Amount _____

HOLE			SEAL			Amount
Diameter	From	To	Material	From	To	sacks or pounds
16"	0	120	CEMENT GROUT	0	120	210 SACK
2"	120	245				
8"	245	510				

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

☐ Other

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:	12"	0	160	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s)

) PERFORATIONS/SCREENS:

☐ Perforations Method _____

☐ Screens Type _____ Material _____

[illegible]

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

☐ Pump	☐ Bailer	☐ Air	☒ Flowing Artesian
Yield gal/min	Drawdown	Drill stem at	Time

2100			1 hr.

Temperature of water 60 Depth Artesian Flow Found 245

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: 7'

(10) STATIC WATER LEVEL:

County LAKE Latitude _____ Longitude _____
Township 30 N of S Range 16 E of W, WM.
Section 8 NE $\frac{1}{4}$ NE $\frac{1}{4}$
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) SUMMER LAKE

(11) WATER BEARING ZONES:

Depth at which water was first found 7 FT

From	To	Estimated Flow Rate	SWL
1'	8'		3'
245	310	2100	12

(12) WELL LOG:

Ground elevation

[illegible]

Date started 11-10-87 Completed 4-15-88

(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.

Signed _____ WWC Number _____
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.

belief. Florida State WWC Number 1362
Signed Florida State Date 6-24-88

LAKE 3029

May 15th, 2014

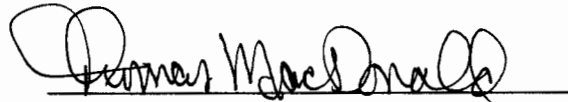
Oregon Water Resources Department
Attn: Buffy Gillis
725 Summer Street NE, Suite A
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Sincerely,



Thomas MacDonald
Desert Springs Trout Farm

RECEIVED BY OWRD

MAY 19 2014

SALEM, OR

LAKE 3029

Oregon Water Resources Department
 725 Summer Street NE, Suite A
 Salem, Oregon 97301
 (503) 986-0900
 www.oregon.gov/owrd

Application for Well ID Number

RECEIVED

NOV 26 2019

OWRD

Do not complete if the well already has a Well Identification Number.

I. OWNER INFORMATION

Current Owner Name (please print): Summer Lake Trout Farm Attn: Ethan Negus
 Mailing Address: PO Box 40
 City, State, Zip: Summer Lake, OR 97640
 Mail Well ID to: ☒ SAME AS ABOVE ☐ In Care Of (C/O)
 Name & Address: _____
 City, State, Zip: _____

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 Street Address of Well, City: 48320 Desert Springs Rd Summer Lake
 If the property had a different street address in the past: _____

III. GENERAL WELL INFORMATION (Please fill out as completely as possible, AND attach copy of Well Report, if available)

Use of Well (domestic, irrigation, commercial, industrial, monitoring): Fish culture & Irrigation
 Date Well Constructed (or property built): 4-15-88 Total Well Depth: 310' Casing Diameter: 12"
 Owner at time the well was constructed (if known): Robert Olson Well Report # (if known): LAKE 3029
 Other Information: _____

SUBMITTED BY (please print): Ethan Negus
 PHONE: (541) 943-3192 EMAIL &/or FAX: ethan.negus@desertspringstroutfarm.com

Send application to: Oregon Water Resources Department 725 Summer St NE, Suite A, Salem, Oregon 97301; or fax to (503) 986-0902.
 Applications are processed in the order they are received, and Well ID Numbers are mailed within 4-5 business days.

For Official Use Only by the Oregon Water Resources Department:

Received Date:

11-26-19

Well Report Number:

LAKE 3029

Well Identification #:

L-137014

Last Update: 5/15/18

Well I.D. Number/2

WCC

Received Time Nov. 26. 2019 11:53AM No. 0785

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

LAKE 52367 #1
Well #5

WELL LABEL # L 103896
START CARD # 206438
ORIGINAL LOG #

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

(1) LANDOWNER
First Name Thomas Last Name David
Company _____
Address PO Box 97
City Summers Lake State OR Zip 97640

(2) TYPE OF WORK ☒ New ☐ Conversion ☐ Deepening
☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION: Well Depth _____ ft.
Seal Material _____
Casing Type: ☐ Steel ☐ Plastic ☐ Other _____
Casing Gauge _____ Casing Diameter _____

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

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

(5) BORE HOLE CONSTRUCTION
Depth of Completed Well 420 ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE				SEAL			
Dia	From	To	Material	From	To	Amount	Scks/lbs
20"	0	219	Cement	0	219	200	SK
12"	219	420					

How was seal placed. Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other _____

Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:
Calculated Amount Proposed to be Used: _____ sacks/lbs
Actual Amount Used: _____ sacks/lbs

(6) CASING/LINER									
Casing	Linr	Dia	+	From	To	Gauge	Steel	Plastic	Welded
X		12"	1	219	420	.750	X		X

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

(7) PERFORATIONS/SCREENS
Perforations Method _____
Screens Type _____ Material _____

Perf	Screen	Casing	Linr	Screen	From	To	Screen/ slot width	Slot length	# of slots	Tele/ pipe size

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailor ☒ Air ☐ Flowing Artesian
Yield gal/min 1000 gal Drawdown 710 Drill stem/Pump depth _____ Duration (hr) _____

Temperature 51 °F Lab analysis ☐ Yes By _____
Water quality concerns? ☐ Yes (describe below) TDS _____ ppm
From _____ To _____ Description _____ Amount _____ Units _____

(9) LOCATION OF WELL (legal description)
County Lake Twp 30 N or S Range 17 E or W W.M.
Sec 5 SE 1/4 of the LN 1/4 Tax Lot 600
Tax Map Number _____ Lot _____
Lat _____ " or _____ DMS or DD
Long _____ " or _____ DMS or DD

Street Address of Well (or nearest address) 48412 Dessert Springs Rd Summers Lake OR 97640

(10) STATIC WATER LEVEL
Date 9-25-10 SWL (psi) _____ + SWL (ft) Land
Existing Well/Pre-Alteration _____ Completed Well Surf

WATER BEARING ZONES					
Depth water was first found <u>60</u>					
SWL Date	From	To	Est Flow	SWL (psi)	SWL (ft)
	225	250	1000 gpm		

(11) WELL LOG			Ground Elevation	
Material	From	To		
TOP SOIL	0	2		
Black clay	2	100		
Blue clay	100	120		
Clay clay	120	165		
Black clay	165	195		
Blue clay	195	225		
Sand gravel v.d	225	250		
Clay clay	250	290		
Blue clay	290	300		
Clay clay	300	350		
Black clay	350	395		
Blue clay	395	420		

Date Started 8-31-10 Completed 9-25-10
(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 _____ 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.

License Number 1654 Date 10-10-11
Signed [Signature]
Contact info. (optional)

Search drilling INC
TOM Search
541-576-2189

ORIGINAL - WATER RESOURCES DEPARTMENT ONE COPY FOR CONSTRUCTOR ONE COPY FOR CLERK
SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

LAKE 52368

Well #6

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

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

(1) LANDOWNER Owner Well I.D.
First Name Thomas Last Name McDaniel
Company
Address PO Box 87
City Summer Lake State OR Zip 97640

(2) TYPE OF WORK ☒ New ☐ Conversion ☐ Deepening
☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION: Well Depth _____ ft.
Seal Material _____

Casing Type: ☐ Steel ☐ Plastic ☐ Other _____
Casing Gauge _____ Casing Diameter _____

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

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

(5) BORE HOLE CONSTRUCTION
Depth of Completed Well 260 ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE				SEAL			
Dia	From	To	Material	From	To	Amount	Scks/lbs
24"	0	39	Cement	0	39	80	SCK
18"	39	210	Cement	210	210	750	SCK
12"	210	260					

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

Backfill placed from _____ ft to _____ ft Material _____
Filter pack from _____ ft to _____ ft Material _____ Size _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:
Calculated Amount Proposed to be Used: _____ sacks/lbs
Actual Amount Used: _____ sacks/lbs

Casing	Line	Dia	From	To	Gauge	Steel	Plastic	Welded	Thrd
X		18"	0	39	.250	X		X	
X		12"	3	210	.750	X		X	

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

(7) PERFORATIONS/SCREENS
Perforations Method _____
Screens Type _____ Material _____

Perf	Screen	Casing	Line	Screen Dia	From	To	Screen/slot width	Slot length	# of slots	Tele/pipe size

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☒ Air ☒ Flowing Artesian
Yield gal/min _____ Drawdown _____ Drill stem/Pump depth _____ Duration (hr) _____
Temperature 60 °F Lab analysis ☐ Yes By _____
Water quality concerns? ☐ Yes (describe below) TDS _____ ppm
From _____ To _____ Description _____ Amount _____ Units _____

Well #6

L 137024

WELL LABEL # L 10-3847 TAG LOST!
START CARD # 206439
ORIGINAL LOG # _____

(9) LOCATION OF WELL (legal description)
County LAKE Twp 30 N or S Range 17 E or W W.M.
Sec 5 1/4 of the _____ 1/4 Tax Lot 600
Tax Map Number _____ Lot _____
Lat _____ " or _____ DMS or DD
Long _____ " or _____ DMS or DD
Street Address of Well (or nearest address) 48413 Dessert Spring Rd Summer Lake OR 97640

(10) STATIC WATER LEVEL						
	Date	SWL (psi)	+	SWL (ft)		
Existing Well/Pre-Alteration	10-24-10	2.75				
Completed Well						
Flowing Artesian? ☐ Yes Dry Hole? ☐ Yes						
WATER BEARING ZONES Depth water was first found 23'						
SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
	20	25	259			

(11) WELL LOG		Ground Elevation	
Material	From	To	
TOP SOIL	0	6	
Black Clay	6	10	
Gray Clay	10	120	
Blue Clay	120	180	
Gray Basalt	180	225	
Red Cider	225	260	
RECEIVED RECEIVED BY OWRD			
MAR 13 2012 JUL 12 2012			
WATER RESOURCES DEPT SALEM, OREGON SALEM, OR			

Date Started 9-28-10 Completed 10-28-10

(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 _____ 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.

License Number 1654 Date 10-12-11

Signed John S

Contact Info (optional)

Search Drilling INC
70M Search 501-576-2189

ORIGINAL - WATER RESOURCES DEPARTMENT ONE COPY FOR CONSTRUCTOR ONE COPY FOR **RECEIVED BY OWRD**
SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK 01/02/2009

APR 24 2014

SALEM, OR

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

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

LAKE 52368
well #12
LAKE 52368
Am Tule

L 137024
WELL LABEL # L 103897 TAG LOST!
START CARD # 206439
ORIGINAL LOG #

DRAFT

(1) LANDOWNER Owner Well I.D.
First Name Thomas Last Name McDaniel
Company _____
Address PO Box 87
City Schumacher Lake State OR Zip 97640

(2) TYPE OF WORK ☒ New ☐ Conversion ☐ Deepening
☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION: Well Depth _____ ft.
Seal Material _____
Casing Type: ☐ Steel ☐ Plastic ☐ Other _____
Casing Gauge _____ Casing Diameter _____

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

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

(5) BORE HOLE CONSTRUCTION
Depth of Completed Well 260 ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE				SEAL			
Dia	From	To	Material	From	To	Amount	Scks/lbs
24"	0	39	Cement	0	39	80	SKK
18"	39	210	Cement	40	210	150	SKK
12"	210	260					

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other _____
Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:
Calculated Amount Proposed to be Used: _____ sacks/lbs
Actual Amount Used: _____ sacks/lbs

(6) CASING/LINER									
Casing/Liner	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
X	16"	+	1	39	.250	X		X	
X	12"	-	3	220	.250	X		X	

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

(7) PERFORATIONS/SCREENS
Perforations Method _____
Screens Type _____ Material _____

Perf	Scrn	Casing	Liner	Screen Dia	From	To	Screen/slot width	Slot length	# of slots	Tele/pipe size

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☒ Air ☒ Flowing Artesian
Yield gal/min 1000. Drawdown 260 Drill stem/Pump depth _____ Duration (hr) _____
Temperature 60 °F Lab analysis ☐ Yes By _____
Water quality concerns? ☐ Yes (describe below) TDS _____ ppm
From _____ To _____ Description _____ Amount _____ Units _____

(9) LOCATION OF WELL (legal description)
County Lake Twp 30 N or S Range 17 E or W W.M.
Sec 5 NW NW 1/4 of the _____ 1/4 Tax Lot 600
Tax Map Number _____ Lot _____
Lat _____ " or _____ DMS or DD
Long _____ " or _____ DMS or DD

Street Address of Well (or nearest address) 48413 Dessert Spring Rd Schumacher Lake OR 97640

(10) STATIC WATER LEVEL	Date	SWL(psi)	+	SWL (ft)
Existing Well/Pre-Alteration	<u>10-28-10</u>	<u>2 PSI</u>		
Completed Well				

Flowing Artesian? ☐ Yes Dry Hole? ☐ Yes
WATER BEARING ZONES Depth water was first found 23'

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
	<u>20</u>	<u>25</u>	<u>25 gal</u>			

(11) WELL LOG	Ground Elevation	
Material	From	To
TOP SOIL	0	2
Black clay	2	60
Gray clay	60	120
Blue clay	120	180
Gr-y Basalt	180	225
Red ciner	225	260

RECEIVED RECEIVED BY OWRD
MAR 13 2012 JUL 12 2012
WATER RESOURCES DEPT
SALEM, OREGON SALEM, OR
Date Started 9-28-10 Completed 10-28-10

(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 _____ 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.

License Number 1654 Date 10-12-11
Signed Th S
Contact Info. (optional)
Search drilling INC
70m Search 501-576-2189

STATE OF OREGON
WATER SUPPLY WELL REPORT

(ORS 537.765 & OAR 690-205-0210)

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

WELL #12
LAKE 52368

L 137024
WELL LABEL # L 103897 TAG LOST!
START CARD # 206439
ORIGINAL LOG #

DRAFT

(1) LANDOWNER
First Name Thomas Owner Well I.D.
Last Name Search
Company
Address PO Box 87
City Summer Lake State OR Zip 97640

(2) TYPE OF WORK ☒ New ☐ Conversion ☐ Deepening
☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION: Well Depth _____ ft.

Seal Material _____

Casing Type: ☐ Steel ☐ Plastic ☐ Other _____

Casing Gauge _____ Casing Diameter _____

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

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

(5) BORE HOLE CONSTRUCTION

Depth of Completed Well _____ ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE			SEAL			Amount	Scks/lbs
Dia	From	To	Material	From	To		
24"	0	39	Cement	0	39	80	SEK
18"	39	210	Cement	210	210	150	SEK
12"	210	260					

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

☐ Other _____

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

filter pack from _____ ft. to _____ ft. Material _____ Size _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:

Calculated Amount Proposed to be Used: _____ sacks/lbs

Actual Amount Used: _____ sacks/lbs

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
X		18"	+	1	39	.250	X			
X		12"	+	3	210	.250	X			

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

Temporary casing ☐ Yes Diameter _____ From _____ To _____

(7) PERFORATIONS/SCREENS

Perforations Method _____
Screens Type _____ Material _____

Perf	Screen	Casing	Liner	Screen Dia	From	To	Screen/ slot width	Slot length	# of slots	Tele/ pipe size

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

☐ Pump ☐ Bailer ☐ Air ☒ Flowing Artesian

Yield gal/min _____ Drawdown _____ Drill stem/Pump depth _____ Duration (hr) _____

1000.

Temperature 60° °F Lab analysis ☐ Yes By _____

Water quality concerns? ☐ Yes (describe below) TDS _____ ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County Lake Twp 30 N or S Range 17 E or W W.M.

Sec 5 1/4 of the _____ 1/4 Tax Lot 600

Tax Map Number _____ Lot _____

Lat _____ " or _____ DMS or DD

Long _____ " or _____ DMS or DD

Street Address of Well (or nearest address) 48413 Dessert
Spring Rd Summer Lake OR 97640

(10) STATIC WATER LEVEL

	Date	SWL (psi)	+	SWL (ft)
Existing Well/Pre-Alteration	10-24-10	2 PSI		
Completed Well				

Flowing Artesian? ☐ Yes Dry Hole? ☐ Yes

WATER BEARING ZONES Depth water was first found _____

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
	20	25	25 gpm			

(11) WELL LOG

Ground Elevation _____

Material	From	To
TOP SOIL	0	2
Black clay	2	60
Gray clay	60	120
Blue clay	120	180
Gray Basalt	180	225
Red clack	225	260

RECEIVED

MAR 1 2 2012

WATER RESOURCES DEPT
SALEM, OREGON

Date Started 9-29-10 Completed 10-29-10

(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 _____ 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.

License Number 1654 Date 10-12-11

Signed [Signature]

Contact info, (optional)

Search drilling INC
70M Search 501-576-2189

ORIGINAL - WATER RESOURCES DEPARTMENT ONE COPY FOR CONSTRUCTOR ONE COPY FOR CUSTOMER
SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

01/02/2009

LAKE 52368

May 15th, 2014

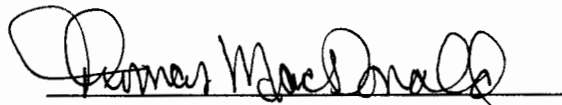
Oregon Water Resources Department
Attn: Buffy Gillis
725 Summer Street NE, Suite A
Salem, OR 97301

Dear Ms. Gillis,

Below is a list of the correct locations of the wells therein identified. Well driller Tom Search sent your office the corrected well logs for LAKE 1507 and LAKE 52487. Schroeder Law Offices sent your office the corrected well logs for the remaining wells.

Well #	Well Log #	Township, Range, Section, Quarter-Quarter
Well 1	LAKE 3030	30 South, 17 East, Sec. 8 NE NW
Well 2	LAKE 1507	30 South, 17 East, Sec. 8 NE NW
Well 3	LAKE 4444	30 South, 17 East, Sec. 8 NE NW
Well 4	LAKE 3029	30 South, 17 East, Sec. 8 NE NW
Well 6	LAKE 52368	30 South, 17 East, Sec. 5 SW SE
Well 7	LAKE 52369	30 South, 17 East, Sec. 8 NE NW
Well 8	LAKE 52487	30 South, 17 East, Sec. 5 NW SE

Sincerely,



Thomas MacDonald
Desert Springs Trout Farm

RECEIVED BY OWRD

MAY 19 2014

SALEM, OR

LAKE 52368



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem Oregon 97301
(503) 986-0900
www.oregon.gov/owrd

Application for Well ID Number

DEC 10 2019

Do not complete if the well already has a Well Identification Number.

OWRD

I. OWNER INFORMATION

Current Owner Name (please print): Western Development Group, LP - Attention: Bernie Burkholder

Mailing Address: PO Box 40

City, State, Zip: Summer Lake, OR 97640

Mail Well ID to: ☒ SAME AS ABOVE ☐ In Care Of (C/O)

Name & Address: _____

City, State, Zip: _____

II. WELL LOCATION INFORMATION (Please fill out as completely as possible)

Township: 30 S (North / ~~South~~) Range: 17 E (East / West) Section: 5 SW 1/4 of the SE 1/4

Tax Lot (usually last 3-5 numbers of Tax Map #): 600 County Lake

GPS Coordinates: 42 59' 28.27" N 120 43' 50.53" W

Street Address of Well, City: 48413 Desert Springs Rd Summer Lake

If the property had a different street address in the past: _____

III. GENERAL WELL INFORMATION (Please fill out as completely as possible, AND attach copy of Well Report, if available)

Use of Well (domestic, irrigation, commercial, industrial, monitoring): Fish culture and Irrigation

Date Well Constructed (or property built): 10-28-10 Total Well Depth: 260' Casing Diameter: 12"

Owner at time the well was constructed (if known): _____ Well Report # (if known): Lake 52368

Other Information: Previously assigned Well I.D. Label # L103897 has been lost

SUBMITTED BY (please print): Ethan Negus

PHONE: (541) 943-3192 EMAIL &/or FAX: ethan.negus@desertspringstroutfarm.com

Send application to: Oregon Water Resources Department 725 Summer St NE, Suite A, Salem, Oregon 97301; or fax to (503) 986-0902.
Applications are processed in the order they are received, and Well ID Numbers are mailed within 4-5 business days.

**Replacement tag!*

For Official Use Only by the Oregon Water Resources Department:

Received Date:

12-10-19

Well Report Number:

LAKE 52368

Well Identification #:

L-137024



Well #7

Amended
LAKE 52369
 Well #7

Well #7

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

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

WELL LABEL # 103998
 START CARD # 206440
 ORIGINAL LOC #

(1) LANDOWNER
 First Name Thomas Last Name Mac Donald
 Company
 Address PO Box 87
 City Summer Lake State OR Zip 97640

(2) TYPE OF WORK ☒ New ☐ Conversion ☐ Deepening
☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION: Well Depth _____ ft.

Seal Material
 Casing Type: ☐ Steel ☐ Plastic ☐ Other
 Casing Gauge _____ Casing Diameter _____

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

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

(5) BORE HOLE CONSTRUCTION
 Depth of Completed Well 300 ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE			SEAL			Amount	Scks/ft
Dia	From	To	Material	From	To		
20"	0	220	Concrete	0	220	300	50K
12"	220	300					

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

Backfill placed from _____ ft. to _____ ft. Material _____
 Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:
 Calculated Amount Proposed to be Used: _____ sacks/ft.
 Actual Amount Used: _____ sacks/ft.

(6) CASING/LINER		Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
Casing	Liner									
X		14"	+	1	220	.250	X		X	

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

(7) PERFORATIONS/SCREENS

Perforations Method
 Screens Type _____ Material _____

Perf	Screen	Casing	Liner	Screen	Dia	From	To	Screen/ slot width	Slot length	# of slots	Total pipe size

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

☐ Pump ☐ Baker ☐ Air ☒ Flowing Artesian

Yield gal/min _____ Drawdown _____ Drift stone/Pump depth _____ Duration (hr) _____

Temperature 60 °F Lab analysis ☐ Yes By _____

Water quality concerns? ☐ Yes (describe below) TDS _____ ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (Legal description)
 County Lake Twp 30 N or S Range 17 E or W W.M.
 Sec 5 1/4 of the _____ 1/4 Tax Lot 600
 Tax Map Number _____ Lot _____
 Lat _____ " or _____ DMS or DD
 Long _____ " or _____ DMS or DD

Street Address of Well (or nearest address) 48413 Dr 554T
Spring Rd Summer Lake OR 97640

(10) STATIC WATER LEVEL
 Existing Well/Alteration Date 2-5-11 SWL (psi) 4 PSI + SWL (ft) _____
 Completed Well _____
 Flowing Artesian? ☐ Yes Dry Hole? ☐ Yes

WATER BEARING ZONES Depth water was first found 60

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
	190	200	500 gal			1'

(11) WELL LOG		Ground Elevation	
Material	From	To	
TOP SOIL	0	2	
Clay	2	10	
BLACK CLAY WITH	10	35	
Remica	35	65	
Green Clay	65	105	
Gray Clay	105	210	
Lava Rock	210	240	
Red Basalt	240	270	
Black Lava Rock	270	300	
Red Clod	300	310	

Date Started 10-30-10 Completed 3-5-11

(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 _____ 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.

License Number 1654 Date 10-12-11

Signed Thomas Mac Donald

Contact Info. (optional)
Search drilling INC
Tom Search
541 576 2189

ORIGINAL - WATER RESOURCES DEPARTMENT ONE COPY FOR CONSTRUCTOR ONE COPY FOR CUSTOMER
 SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

P.1/3

TO: 15039360904

5415762189

FROM: TOM

APR 24 2014

SALEM, OR

STATE OF OREGON
WATER SUPPLY WELL REPORT

(OR 537.765 & OAR 690-205-0210)

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

DRAFT

(1) Owner Well I.D.
First Name Thomas Last Name Mac Donald
Company _____
Address PO Box 87
City Summer Lake State OR Zip 97640

(2) TYPE OF WORK ☒ New ☐ Conversion ☐ Deepening
☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION: Well Depth _____ ft.
Seal Material _____
Casing Type: ☐ Steel ☐ Plastic ☐ Other _____
Casing Gauge _____ Casing Diameter _____

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

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

(5) BORE HOLE CONSTRUCTION
Depth of Completed Well 370 ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE				SEAL			
Dia	From	To	Material	From	To	Amount	Scks/lbs
20"	0	220	Cement	0	220	300	50K
12"	220	370					

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other _____
Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:
Calculated Amount Proposed to be Used: _____ sacks/lbs
Actual Amount Used: _____ sacks/lbs

(6) CASING/LINER									
Csg/Linr	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
X	12"	+	1	220	.250	X		X	

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

(7) PERFORATIONS/SCREENS
Perforations Method _____
Screens Type _____ Material _____

Perf	Scrn	Csg/Linr	Screen Dia	From	To	Screen/slot width	Slot length	# of slots	Tele/pipe size

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailor ☒ Air ☒ Flowing Artesian
Yield gal/min _____ Drawdown _____ Drill stem/Pump depth _____ Duration (hr) _____
Temperature 60 °F Lab analysis ☐ Yes By _____
Water quality concerns? ☐ Yes (describe below) TDS _____ ppm
From _____ To _____ Description _____ Amount _____ Units _____

LAKE 52369
LAKE 52369

WELL LABEL # L 10 35 48
START CARD # 206440
ORIGINAL LOG # _____

(9) LOCATION OF WELL (legal description)
County Lake Twp 30 N or S Range 17 E or W W.M.
Sec 5 1/4 of the _____ 1/4 Tax Lot 600
Tax Map Number _____ Lot _____
Lat _____ " or _____ DMS or DD
Long _____ " or _____ DMS or DD

Street Address of Well (or nearest address) 48413 Dessert
Spring Rd Summer Lake OR 97640

(10) STATIC WATER LEVEL				
	Date	SWL (psi)	+	SWL (ft)
Existing Well/Pre-Alteration	<u>2-5-11</u>	<u>4 psi</u>		
Completed Well				

Flowing Artesian? ☐ Yes Dry Hole? ☐ Yes
WATER BEARING ZONES Depth water was first found 60

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
	<u>190</u>	<u>200</u>	<u>500 gal</u>			<u>1"</u>

(11) WELL LOG			Ground Elevation	
Material	From	To		
TOP SOIL	0	2		
Clay Clay	2	10		
Black clay with	10	35		
Amice	35	65		
Green clay	65	105		
Gray clay	105	220		
Lake Rock	220	240		
Red Basalt	240	260		
Black Lake Rock	260	300		
Red clod	300	370		

Date Started 10-30-10 Completed 3-5-11

(unbonded) Water Well Constructor Certification
I certify that 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.

JUN 12 2012 RECEIVED
License Number _____ Date _____
Signed _____ SALEM, OR MAR 13 2012

(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 1654 Date 10-12-11
Signed Tom Search
Contact Info. (optional) Search drilling INC
70M Search
541 576-2189

STATE OF
WATER SUPPLY**DRAFT**

(ORS 537.76 & OAR 690-205-0210)

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

(1) LANDOWNER

Owner Well I.D.

First Name Thomas Last Name Mac Donald
 Company _____
 Address PO BOX 87
 City Summer Lake State OR Zip 97640

(2) TYPE OF WORK

☒ New ☐ Conversion ☐ Deepening

☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION:

Well Depth _____ ft.

Seal Material _____

Casing Type: ☐ Steel ☐ Plastic ☐ Other _____

Casing Gauge _____ Casing Diameter _____

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Auger

☐ Cable ☐ Cable Mud ☐ Reverse Rotary ☐ Other _____

(4) PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Community

☐ Industrial/Commercial ☐ Livestock ☐ Dewatering ☐ Injection

☐ Thermal ☐ Other _____

(5) BORE HOLE CONSTRUCTION

Depth of Completed Well 340 ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE

SEAL

Dia	From	To	Material	From	To	Amount	Scks/lbs
20"	0	220	Cement	0	220	360	5ck
12"	220	340					

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

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

Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:

Calculated Amount Proposed to be Used: _____ sacks/lbs

Actual Amount Used: _____ sacks/lbs

(6) CASING/LINER

Casing Liner	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
X	14"	+	1	220	.250	X		X	

Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s) _____Temporary casing ☐ Yes Diameter _____ From _____ To _____

(7) PERFORATIONS/SCREENS

Perforations Method _____

Screens Type _____ Material _____

Perf	Screen	Casing Liner	Screen Dia	From	To	Screen/ slot width	Slot length	# of slots	Tele/ pipe size

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

☐ Pump ☐ Bailor ☐ Air ☒ Flowing Artesian

Yield gal/min _____ Drawdown _____ Drill stem/Pump depth _____ Duration (hr) _____

Temperature 60 °F Lab analysis ☐ Yes By _____Water quality concerns? ☐ Yes (describe below) TDS _____ ppm

From	To	Description	Amount	Units

WELL LABEL # L 103998START CARD # 206440

ORIGINAL LOC # _____

(9) LOCATION OF WELL (legal description)

County Lake Twp 30 N or S Range 17 E or W W.M.Sec 5 1/4 of the _____ 1/4 Tax Lot 600

Tax Map Number _____ Lot _____

Lat _____ " or _____ DMS or DD

Long _____ " or _____ DMS or DD

Street Address of Well (or nearest address) _____

48413 Dessert
Spring Rd Summer Lake OR 97640

(10) STATIC WATER LEVEL

	Date	SWL (psi)	+	SWL (ft)
Existing Well/Pre-Alteration	<u>2-5-11</u>	<u>4 PSI</u>		
Completed Well				

Flowing Artesian? ☐ Yes Dry Hole? ☐ Yes

WATER BEARING ZONES

Depth water was first found 60

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
	<u>190</u>	<u>200</u>	<u>500 gal</u>			<u>1"</u>

(11) WELL LOG

Ground Elevation _____

Material	From	To
TOP SOIL	0	2
Clay flat	2	10
Black clay with	10	35
Amica	35	65
Green clay	65	105
Gray clay	105	220
Lava Rock	220	240
Red Basalt	240	360
Black Lava Rock	360	380
Red clod	380	340

Date Started 10-30-10 Completed 3-5-11

(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 _____ 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.

License Number 1654 Date 10-12-11Signed Thomas Mac Donald

Contact Info. (optional)

Search drilling INCTom Search
541 576-2189WATER RESOURCES DEPT
SALEM, OREGON

MAR 1 2012

RECEIVED

ORIGINAL - WATER RESOURCES DEPARTMENT ONE COPY FOR CONSTRUCTOR ONE COPY FOR CUSTOMER
SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

LAKE 52369

May 15th, 2014

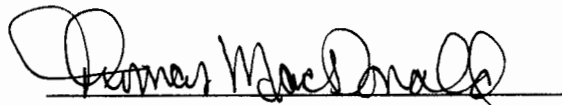
Oregon Water Resources Department
Attn: Buffy Gillis
725 Summer Street NE, Suite A
Salem, OR 97301

Dear Ms. Gillis,

Below is a list of the correct locations of the wells therein identified. Well driller Tom Search sent your office the corrected well logs for LAKE 1507 and LAKE 52487. Schroeder Law Offices sent your office the corrected well logs for the remaining wells.

Well #	Well Log #	Township, Range, Section, Quarter-Quarter
Well 1	LAKE 3030	30 South, 17 East, Sec. 8 NE NW
Well 2	LAKE 1507	30 South, 17 East, Sec. 8 NE NW
Well 3	LAKE 4444	30 South, 17 East, Sec. 8 NE NW
Well 4	LAKE 3029	30 South, 17 East, Sec. 8 NE NW
Well 6	LAKE 52368	30 South, 17 East, Sec. 5 SW SE
Well 7	LAKE 52369	30 South, 17 East, Sec. 8 NE NW
Well 8	LAKE 52487	30 South, 17 East, Sec. 5 NW SE

Sincerely,



Thomas MacDonald
Desert Springs Trout Farm

RECEIVED BY OWRD

MAY 19 2014

SALEM, OR

LAKE 52487

Well #8

Well #8

LAKE 52487

LAKE 52487

STATE OF OREGON

WATER SUPPLY WELL REPORT

(ORS 537.765 & OAR 690-205-0210)

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

WELL LABEL # L 104458

START CARD # 206041

ORIGINAL LOG #

(1) LANDOWNER

Owner Well ID

First Name Thomas Last Name MacDaid
 Company _____
 Address P.O. Box 5-1
 City Sumner Lake State OR Zip 97140

(2) TYPE OF WORK

☒ New ☐ Conversion ☐ Deepening

☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION:

Well Depth _____ ft.

Seal Material _____

Casing Type: ☐ Steel ☐ Plastic ☐ Other _____

Casing Gauge _____ Casing Diameter _____

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Auger

☐ Cable ☐ Cable Mud ☐ Reverse Rotary ☐ Other _____

(4) PROPOSED USE

☐ Domestic ☒ Irrigation ☐ Community

☐ Industrial/Commercial ☐ Livestock ☐ Dewatering ☐ Injection

☐ Thermal ☐ Other _____

(5) BORE HOLE CONSTRUCTION

Depth of Completed Well 260 ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE				SEAL			
Dia	From	To	Material	From	To	Amount	Scks/lbs
2 1/2"	0	90	Cement	0	90	100	50
1 1/2"	90	155	Cement	90	155	100	50
1 1/4"	155	200					
1 1/8"	200	260					

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

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

Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:

Calculated Amount Proposed to be Used: _____ sacks/lbs

Actual Amount Used: _____ sacks/lbs

(6) CASING/LINER

Casing/Liner	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
X	18"	+	1	90	.250	X		X	
X	14"	+	1	155	.250	X		X	

Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s) _____Temporary casing ☐ Yes Diameter _____ From _____ To _____

(7) PERFORATIONS/SCREENS

Perforations Method _____

Screens Type _____ Material _____

Perf	Screen	Casing/Liner	Screen Dia	From	To	Screen slot width	Slot length	# of slots	Tele/pipe size

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

☐ Pump ☐ Bailer ☐ Air ☒ Flowing Artesian

Yield gal/min 1500 Drawdown _____ Drill stem/Pump depth _____ Duration (hr) hr 1

Temperature 60 °F Lab analysis ☐ Yes By _____Water quality concerns? ☐ Yes (describe below) IDS _____ ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County Clatsop Twp 30 N or S, Range 17 E or W, W.M.Sec 5 ~~NE 1/4~~ of the ~~SW 1/4~~ Tax Lot 6002

Tax Map Number _____ Lot _____

Lat _____ " or _____ DMS or DD

Long _____ " or _____ DMS or DD

Street Address of Well (or nearest address) 48413 D-5500Spring rd Sumner Lake

(10) STATIC WATER LEVEL

	Date	SWL (psi)	+	SWL (ft)
Existing Well/Pre-Alteration	<u>7-1-13</u>	<u>4 psi</u>		
Completed Well				

Flowing Artesian? ☒ Yes Dry Hole? ☐ YesWATER BEARING ZONES Depth water was first found 260'

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
<u>7-1-13</u>	<u>270</u>	<u>260</u>	<u>1500</u>	<u>4 psi</u>		

(11) WELL LOG

Ground Elevation _____

Material	From	To
<u>Top Soil</u>	<u>0</u>	<u>2</u>
<u>Gravelly clay</u>	<u>2</u>	<u>150</u>
<u>Black lava rock</u>	<u>150</u>	<u>165</u>
<u>Red lava rock</u>	<u>165</u>	<u>220</u>
<u>Black lava rock</u>	<u>220</u>	<u>260</u>

RECEIVED BY OWRD

RECEIVED BY OWRD

NOV 18 2013

OCT 10 2013

SALEM, OR

SALEM, OR

Date Started 8-15-13 Completed 9-1-13

(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 _____ 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.

License Number 16541 Date 10-6-13Signed [Signature]

Contact Info (optional) _____

ORIGINAL - WATER RESOURCES DEPARTMENT ONE COPY FOR CONSTRUCTOR ONE COPY FOR CUSTOMER
 SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

01/02/2009

APR 24 2014

SALEM, OR

(1) LANDOWNER

Owner Well I.D. _____
First Name **Thomas** Last Name **MacDonald**
Company _____
Address **Po Box 81**
City **Summer Lake** State **OR** Zip **97640**

(2) TYPE OF WORK

☒ New ☐ Conversion ☐ Deepening
☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION:

Well Depth _____ ft.
Seal Material _____
Casing Type: ☐ Steel ☐ Plastic ☐ Other _____
Casing Gauge _____ Casing Diameter _____

(3) DRILL METHOD

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

(4) PROPOSED USE

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

(5) BORE HOLE CONSTRUCTION

Depth of Completed Well **260** ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE			SEAL			Amount	Scks/lbs
Dia	From	To	Material	From	To		
24"	0	90	Cement	0	90	100	50
18"	90	155	Cement	90	155	100	50
14"	155	200					
10"	200	260					

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

Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:

Calculated Amount Proposed to be Used: _____ sacks/lbs
Actual Amount Used: _____ sacks/lbs

(6) CASING/LINER

Casing/Liner	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
X	18"	+	1	90	.250	X		X	
X	14"	+	1	155	.250	X		X	

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

(7) PERFORATIONS/SCREENS

Perforations Method _____
Screens Type _____ Material _____

Perf	Scrn	Casing/Liner	Screen Dia	From	To	Screen/slot width	Slot length	# of slots	Tele/pipe size

(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 hr**
Temperature **60** °F Lab analysis ☐ Yes By _____
Water quality concerns? ☐ Yes (describe below) TDS _____ ppm
From _____ To _____ Description _____ Amount _____ Units _____

(9) LOCATION OF WELL (legal description)

County **Lake** Twp **30** N or S Range **17** E or W W.M.
Sec **35** SE 1/4 of the **12** 1/4 Tax Lot **600**
Tax Map Number _____ Lot _____
Lat _____ " or _____ DMS or DD
Long _____ " or _____ DMS or DD
Street Address of Well (or nearest address) **48413 D-55rd**
Spring rd Summer Lake

(10) STATIC WATER LEVEL

	Date	SWL (psi)	+	SWL (ft)
Existing Well/Pre-Alteration	9-1-13	4 psi		
Completed Well				

Flowing Artesian? ☒ Yes Dry Hole? ☐ Yes

WATER BEARING ZONES Depth water was first found **260'**

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
9-1-13	270	260	1500	4 psi		

(11) WELL LOG

Material	From	To
Top Soil	0	2
Brown clay	2	150
Black loam rock	150	165
Red loam rock	165	220
Broken lava rock	220	260

Date Started **8-15-13** Completed **9-1-13**

(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 _____ 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.

License Number **16541** Date **10-6-13**

Signed _____

Contact Info. (optional) _____

LAKE 52487

May 15th, 2014

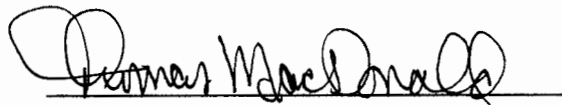
Oregon Water Resources Department
Attn: Buffy Gillis
725 Summer Street NE, Suite A
Salem, OR 97301

Dear Ms. Gillis,

Below is a list of the correct locations of the wells therein identified. Well driller Tom Search sent your office the corrected well logs for LAKE 1507 and LAKE 52487. Schroeder Law Offices sent your office the corrected well logs for the remaining wells.

Well #	Well Log #	Township, Range, Section, Quarter-Quarter
Well 1	LAKE 3030	30 South, 17 East, Sec. 8 NE NW
Well 2	LAKE 1507	30 South, 17 East, Sec. 8 NE NW
Well 3	LAKE 4444	30 South, 17 East, Sec. 8 NE NW
Well 4	LAKE 3029	30 South, 17 East, Sec. 8 NE NW
Well 6	LAKE 52368	30 South, 17 East, Sec. 5 SW SE
Well 7	LAKE 52369	30 South, 17 East, Sec. 8 NE NW
Well 8	LAKE 52487	30 South, 17 East, Sec. 5 NW SE

Sincerely,



Thomas MacDonald
Desert Springs Trout Farm

RECEIVED BY OWRD

MAY 19 2014

SALEM, OR

AMENDED 4/17/2020

STATE OF OREGON

WATER SUPPLY WELL REPORT

(as required by ORS 537.765 & OAR 690-205-0210)

Well #9
LAKE 53062

Revised

WELL I.D. LABEL# 131457

START CARD # 212531

ORIGINAL LOG #

(1) LAND OWNER

Owner Well I.D.

First Name Thomas Last Name McDonald

Company _____

Address PO Box 87City Summit Lake State OR Zip 97640

(2) TYPE OF WORK

☒ New Well ☐ Deepening ☐ Conversion☐ Alteration (complete 2a & 10) ☐ Abandonment (complete 5a)

(2a) PRE-ALTERATION

Dia + From To Gauge Std Plstc Wld Thrd

Casing: _____

Material From To Amt sacks/lbs

Seal: _____

(3) DRILL METHOD

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

(4) PROPOSED USE

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

(5) BORE HOLE CONSTRUCTION

Special Standard ☐ (Attach copy)Depth of Completed Well 80 ft.

BORE HOLE

Dia From To Material SEAL From To Amt lbs

20" 0 80 _____

Calculated _____

Calculated _____

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

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

Filter pack from _____ ft. to _____ ft. Material _____ Size _____

Explosives used: ☐ Yes Type _____ Amount _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE

Proposed Amount Pounds Actual Amount Pounds

(6) CASING/LINER

Casing Liner Dia + From To Gauge Std Plstc Wld Thrd

Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s) _____Temp casing ☐ Yes Dia _____ From _____ To _____

(7) PERFORATIONS/SCREENS

Perforations Method _____

Screens Type _____

Material _____

Perf/S Casing/ Screen

green Liner Dia From To width length # of slots Tele/ pipe size

(9) LOCATION OF WELL (legal description)

County Lake Twp 30 N/S Range 17 E/W WMSec 5 NW 1/4 of the NW 1/4 Tax Lot 600

Tax Map Number _____ Lot _____

Lat _____ " or _____ DMS or DD

Long _____ " or _____ DMS or DD

☐ Street address of well ☐ Nearest addressY8413 DESERT SPRING RD

(10) STATIC WATER LEVEL

Summit Lake

Existing Well / Pre-Alteration Date SWL(psi) + SWL(ft)

Completed Well _____

Flowing Artesian? ☐ Dry Hole? ☐

WATER BEARING ZONES

Depth water was first found 60

SWL Date From To Est Flow SWL(psi) + SWL(ft)

(11) WELL LOG

Ground Elevation _____

Material From To

TOP SOIL 0 5Black clay 5 45Blue clay 45 60Gravel 60 65Flow with gravel and 65 70Sand 70 80Black clay 70 80

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK Form Version: 0.95

WELL I.D. LABEL#	L133003
START CARD #	212531
ORIGINAL LOG #	

(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 1654 Date 2-7-2020

Signed [Signature]

Contact Info (optional)

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765 & OAR 690-265-0210)

Well #9

WELL ID LABEL# 131457
START CARD# 1046678
ORIGINAL LOG#

(1) LAND OWNER

Owner Well ID: _____
First Name: _____ Last Name: _____
Company: WESTERN Development WAIP
Address: 2012 Bayou La Porte DR
City: _____ State: _____ Zip: _____

(2) TYPE OF WORK

☐ New Well ☐ Deepening ☒ Conversion
☒ Alteration (complete 2a & 19) ☐ Abandonment (complete 2a)

(2a) PRE-ALTERATION

Casing: Dia. From To Gauge Str. Plate Wld Thrd
Material From To Amt sacks/ft
Seal: _____

(3) DRILL METHOD

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

(4) PROPOSED USE

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

(5) BORE HOLE CONSTRUCTION

Depth of Completed Well 80 ft. Special Standard ☐ (Attach copy)

BORE HOLE
Dia. From To Material SEAL From To Amt. sacks
36" 0 18 Concrete 0 18 8 yard
20" 18 75 Cement 55 75 15
Calculated 6

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

Backfill placed from 55 ft. to 18 ft. Material Concrete

Filter pack from _____ ft. to _____ ft. Material _____ Size _____

Explosives used: ☐ Yes Type _____ Amount _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE

Proposed Amount: _____ Pounds Actual Amount: _____ Pounds

(6) CASING/LINER

Casing/Liner Dia. From To Gauge Str. Plate Wld Thrd
☒ 20" 18 75 150 8 8 8
☒ 12" 75 180 8 8 8
Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s) _____
Temp casing ☐ Yes Dia. _____ From _____ To _____

(7) PERFORATIONS/SCREENS

Perforations Method _____

Screens Type _____ Material _____
Perf. Casing/Screen Screen Slot # of Toler-
screen Liner Dia. From To width length slots pipe size
20" 18 75 150 8 8 8

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

☐ Pump ☐ Baker ☒ Air ☐ Flowing Artesian

Yield gal/min Drawdown Doll stem Pump depth Duration (hr)
10 gal/min 80 30

Temperature 60 °F Lab analysis ☐ Yes By _____

Water quality concerns? ☐ Yes (describe below) TDS amount 396
From _____ To _____ Description _____ Amount _____ Units _____

(9) LOCATION OF WELL (legal description)

County Lake Twp 30 NS Range 17 E/W WM
Sec 5 NW 1/4 of the NW 1/4 Tbx Lot 600
Tax Map Number _____ Lot _____
Lat _____ " or _____ DMS or DD
Long _____ " or _____ DMS or DD
☐ Street address of well ☐ Nearest address

(10) STATIC WATER LEVEL

Existing Well / Pre-Alteration Date SWL (psi) + SWL (ft)
Completed Well 3-27-2020 7.6'
Flowing Artesian? ☐ Dry Hole? ☐

WATER BEARING ZONES

Depth water was first found 60
SWL Date From To Est Flow SWL (psi) + SWL (ft)
3-27-2020 60 5 gal 7.6'
3-30-2020 79 10 gal 7.6'

(11) WELL LOG

Ground Elevation _____

Material From To
5' PUT 20" casing
form 18-75 ft and
sealed well form
below seal face
Drilled 20" hole to
75' PUT 12" casing
to 75' and seal well

Date Started 3-19-2020 Completed 3-30-2020

(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 _____ 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.

License Number 1654 Date 3-31-2020

Signed [Signature]

Contact Info (optional) _____