Water Right Conditions Tracking Slip

Groundwater/Hydrology Section

FILE ## G-17527

ROUTED TO: Jana

TOWNSHIP/
RANGE-SECTION: 25S/33E-36

CONDITIONS ATTACHED? [ ]yes [ ]no

REMARKS OR FURTHER INSTRUCTIONS:
Re-review

Reviewer: Mike Zwart

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date **March 14, 2012**

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

SUBJECT: Application G- **17527** Supersedes review of **February 14, 2012** (Date of Review(s))

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

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

A. GENERAL INFORMATION: Applicant's Name: **Justin and Stephanie Bowen** County: **Harney**

A1. Applicant(s) seek(s) **3.34** cfs from **one** well(s) in the **Malheur Lake** Basin, **Harney Valley** subbasin Quad Map: **New Princeton**

A2. Proposed use: **Irrigation, 135 acres** Seasonality: **March 1 to October 31**

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

Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	**HARN 1867**	**W2**	**Basin Fill Seds.**	**3.34**	**25S/33E-36 SW-SE**	**1156' N, 3566' W fr NE cor S 1***
2	**Proposed**	**W7**	**Basin Fill Seds.**	**3.34**	**25S/33E-36 NE-SW**	**1330' N, 5280' W fr NE cor S 1**
3						
4						
5						

* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	**4122**	**24**	**30**	**3/17/91**	**175**	**0-20**	**0-135**	**None**	**None**	**800**	**70**	**P**
2	**4112**				**300**	**0-20**						

Use data from application for proposed wells.

A4. **Comments: *Unusual metes & bounds: Note that NE corner Sec. 1 is offset from the SE corner Sec. 36. Well 2 (W7) is proposed as an alternative to using Well 1 solely if proposed deepening of it does not result in sufficient water.**

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

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

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

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

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

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

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

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

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

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

c. ☐ **Condition** to allow ground water production only from the _____ ground water reservoir between approximately_____ ft. and_____ ft. below land surface;

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

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

B3. **Ground water availability remarks: There is some local concern about the potential for overdevelopment of the groundwater resource in the area near Crane, approximately five miles to the north. Region Manager Ivan Gall recommends use of Condition 7N for permits in this basin.**

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

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

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1, 2	**Interbedded sand, gravel and clay, likely Qal**	☐	☒
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: **The static water level for most wells in this area is similar to the depth that groundwater was first encountered in the borehole.**

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

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected? YES	NO	ASSUMED	Potential for Subst. Interfer. Assumed? YES	NO
1	**1**	**Malheur Lake**	**4092**	**4095±**	**8000***	☒	☐	☐	☐	☒
2	**1**	**Malheur Lake**	**4092**	**4095±**	**6500**	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
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						☐	☐	☐	☐	☐
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						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: ***Both the surface water elevation and distance to the well will vary as the lake level changes. It is likely that the aquifer penetrated ultimately discharges to Malheur Lake.**

Water Availability Basin the well(s) are located within: **No WAB data in this area.**

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

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

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

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

Comments: **This section does not apply.**

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

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

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

Basis for impact evaluation: This section applies, but the Hunt/Wozniak analytical model is not suited for calculation of potential interference with lakes. Also, there is no WAB data available for this area.

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

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

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

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

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

References Used: GW Report #16, by A. R. Leonard, 1970; USGS WSP #841, by A. M. Piper, et al, 1939; local well logs; nearby reviews

D. WELL CONSTRUCTION, OAR 690-200

D1. **Well #:** 1 **Logid:** HARN 1867

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

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

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

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

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

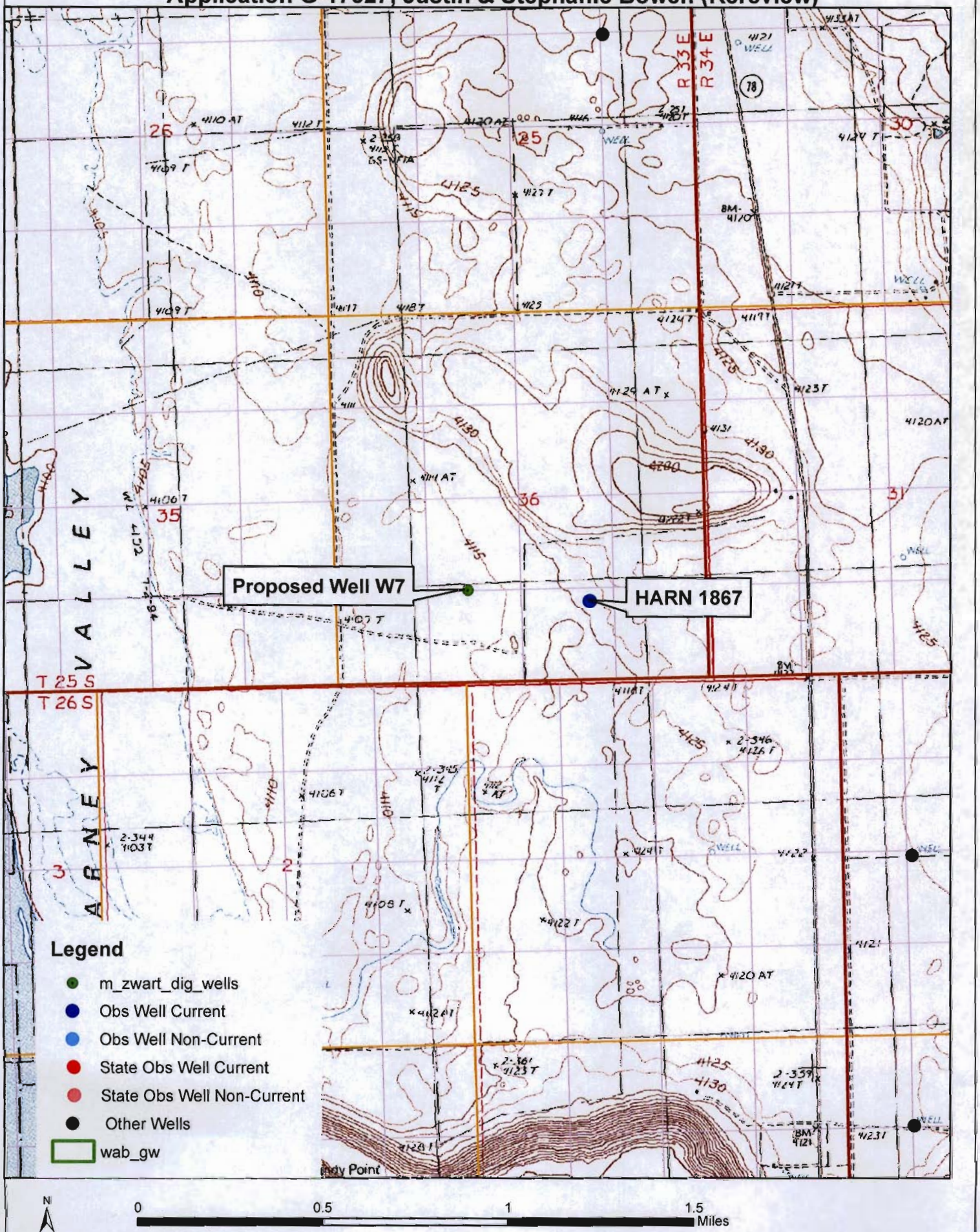
THIS SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL

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

_____ _____, 200____.
(Enforcement Section Signature)

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

Application G-17527, Justin & Stephanie Bowen (Rereview)



INTEROFFICE MEMORANDUM

TO: Ivan Gall

FROM: Jeana Eastman, Water Rights Section

DATE: 3/13/12

RE: G-17527, Bowen - application revised - added Well 7 - please review

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On 3/12/12 the applicant added an additional well, Well 7, to the application and paid $250 for the add'l POA. Please complete a Div 9 review for Well 7.

Mike Zwart completed the first Div 9 review.

Thanks.

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SALEM, OREGON

SECTION 3: WELL DEVELOPMENT, CONTINUED

Source (aquifer), if known: ______

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

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

G-17325

OWNER'S WELL NAME OR NO	PROPOSED	EXISTING	WELL ID (WELL TAG) NO* OR WELL LOG ID**	FLOWING ARTESIAN	CASING DIAMETER	CASING INTERVALS (IN FEET)	PERFORATED OR SCREENED INTERVALS (IN FEET)	SEAL INTERVALS (IN FEET)	MOST RECENT STATIC WATER LEVEL & DATE (IN FEET)	PROPOSED USE: SOURCE AQUIFER***	TOTAL WELL DEPTH	WELL-SPECIFIC RATE (GPM)	ANNUAL VOLUME (ACRE-FEET)
Harn 1867 W2	☐	☑	Harn 1867	☐	12"	20'	Ø	20'	31' 4/11/11	gravel/Bedrock	350'	Max or 1500	3AF
W7	☑	☐		☐	12"	20'	Ø	20'		gravel/Bedrock	300'	Max or 1100	3AF
	☐	☐		☐									
	☐	☐		☐									
	☐	☐		☐									
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* Licensed drillers are required to attach a Department-supplied Well Tag, with a unique Well ID or Well Tag Number to all new or newly altered wells. Landowners can request a Well ID for existing wells that do not have one. The Well ID is intended to serve as a unique identification number for each well.
** A well log ID (e.g. MARI 1234) is assigned by the Department to each log in the agency's well log database. A separate well log is required for each subsequent alteration of the well.
*** Source aquifer examples: Troutdale Formation, gravel and sand, alluvium, basalt, bedrock, etc.

T 25 S, R 33 E; T 25 S, R 34 E; T 26 S, R 33 E; WM

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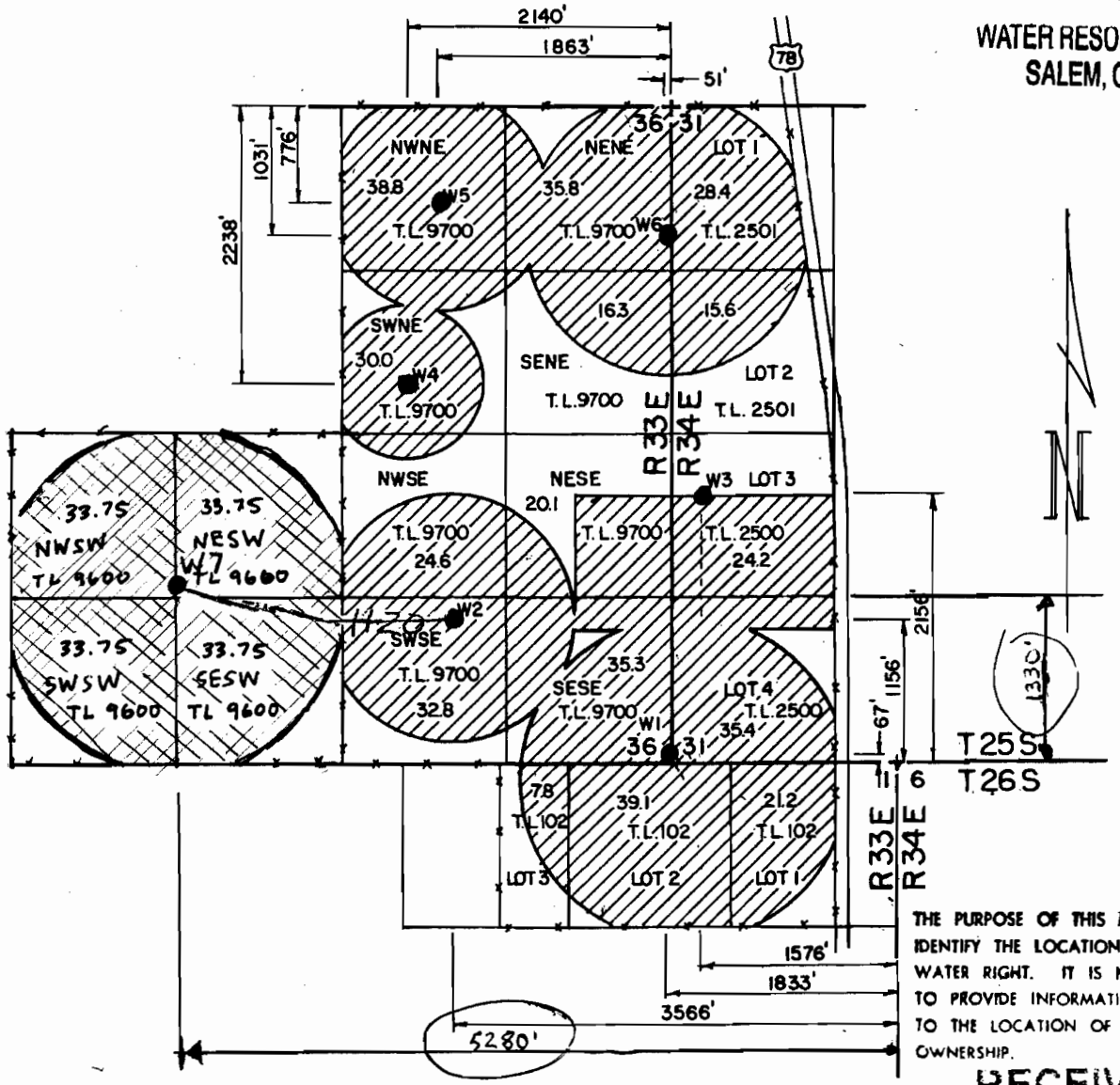
SALEM, OREGON



THE PURPOSE OF THIS MAP IS TO IDENTIFY THE LOCATION OF THE WATER RIGHT. IT IS NOT INTENDED TO PROVIDE INFORMATION RELATIVE TO THE LOCATION OF PROPERTY OWNERSHIP.

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SALEM, OREGON

G-16207 app no.

ROBERT CARGILL, SR.

WATER RIGHT APPLICATION MAP

Scale: 4" = 1 MILE | Date: 02-06-2002 | Job: 1997-02

Dsn:

Dm: CHRIS

Ckd:

M.A. PALMER & SONS, INC.
ENGINEERING & SURVEYING
711 Ponderosa Village • Box 61
Burns, Oregon 97720

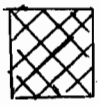
Sht. No. 1 of 1

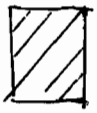
#100
Chris T. Palmer
Dec. 19, 1997
STATE OF OREGON

RENEW 1-1-2003

Key

~~H20~~

 Proposed Water Rights

 Existing Water Rights

● W7 Proposed Well Site

(number) New Distance Measurements

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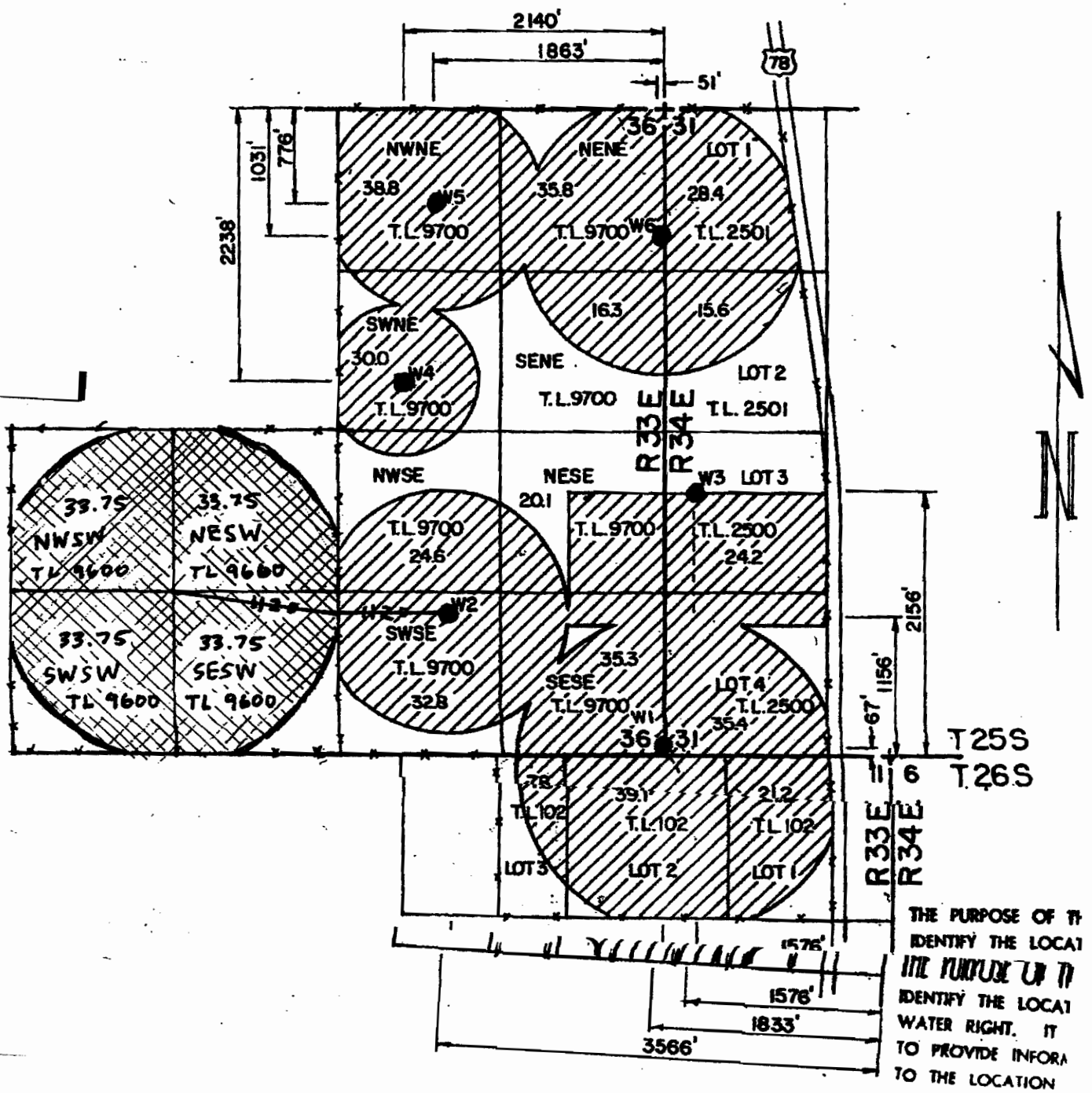
We would like to have the option of having a second well (well 7 W7) as an alternative to deepening W1 if sufficient water is needed. Enclosed is $250 for another point of appropriation (W7). If more information is needed please feel free to call (541) 219.1756 or email excelsiorhay@gmail.com

Thank you!

Justin Bowen

Clarification: We do not intend to irrigate the ground using both wells. We will choose between the two plans in the upcoming months.

25 S, R 33 E; T 25 S, R 34 E; T 26 S, R 33 E; WM



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TO THE LOCATION