

Water Right Conditions  
Tracking Slip

Groundwater/Hydrology Section

FILE ## G-17365  
ROUTED TO: Kerry Kavanagh  
TOWNSHIP/  
RANGE-SECTION: 22S/33E-30

CONDITIONS ATTACHED? yes no

REMARKS OR FURTHER INSTRUCTIONS:

Review of two  
additional wells

Reviewer: Mike Zwart

**PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS**

TO: Water Rights Section Date March 9, 2012

FROM: Ground Water/Hydrology Section Michael Zwart

Reviewer's Name

SUBJECT: Application G- 17365 Supersedes review of May 7, 2010

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: Andy Root County: Harney

A1. Applicant(s) seek(s) 1.40 cfs from two well(s) in the Malheur Lake Basin,  
 \_\_\_\_\_ subbasin Quad Map: Buchanan

A2. Proposed use: Irrigation, 113.2 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 51275	15*	Volcanic seds.	0.8913	22S/33E-30 NW-SW	2508' N, 780' E fr SW cor S 30
2	HARN 51475	14	Volcanic seds.	0.5236	22S/33E-30 SW-SW	1254' N, 1240' E fr SW cor S 30**
3	HARN 51823	16	Volcanic seds.	1.40?	22S/33E-30 NW-SW	1610' N, 780' E fr SW cor S 30
4	HARN 206	17	Volcanic seds.	1.40?	22S/33E-30 NW-SW	1500' N, 50' E fr SW cor S 30
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
15	4147	97	16	6/1/08	260	0-48	0-58	None	None	400		Air
14	4135	124	65	7/23/08	400	0-35	0-118	None	None	300		Air
16	4140	35	18	12/14/11	310	0-21	0-80	None	None	400		Air
17	4138	?	6	1/23/66	345	0-20	0-71	None	None	341	51	Pmp

Use data from application for proposed wells.

A4. **Comments:** Applicant proposes to cancel Permit G-13602 if a permit is issued for this application, which is for the same acreage. A proposed permit amendment to add these newer wells to the existing permit was not possible. \*Note that this well was called well #10 in the original application. \*\*Note that this well was originally located at 1310' N, 1280' E fr SW cor S 30. There was no indication of a well-specific rate being requested for the proposed additional wells.

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: \_\_\_\_\_



**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
All	Tuffaceous sedimentary rocks and sediments (Tvs of GW Report 16)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

**Basis for aquifer confinement evaluation:** Locally, the aquifer may be semiconfined to confined, but regionally it is unconfined and discharges to Malheur Lake. The wells appear to develop a confined aquifer below a thick clay or claystone.

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

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
15	1	Jones Canyon	4131	4150	1350	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	2	Rock Creek	4131	4145	10000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	3	Cow Creek	4131	4145	5000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	1	Jones Canyon	4070	4150	1750	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	2	Rock Creek	4070	4144	9400	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	3	Cow Creek	4070	4145	5300	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	1	Jones Canyon	4105	4150	1700	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	3	Cow Creek	4105	4145	4750	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17	1	Jones Canyon	4132	4150	2400	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17	3	Cow Creek	4132	4145	4000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Basis for aquifer hydraulic connection evaluation:** These creeks are intermittent and likely contain water only in very wet years. Ground water likely provides negligible baseflow to these creeks.

**Water Availability Basin the well(s) are located within:** Malheur Sl. > Malheur Lake ab Ninemile Sl. (31200107).

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

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

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

SW #	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

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													
(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:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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** \_\_\_\_\_  
\_\_\_\_\_  
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**References Used:** Local well logs; local recent reviews; GW Report 16, by Leonard, 1970; Greene, Walker, and Corcoran, 1972, Geologic Map of the Burns Quadrangle, Oregon, USGS Miscellaneous Geologic Investigations Map I-680; Memo by Ivan Gall, 1/15, 2008: Stream Assessment for Division 9 Review in the Malheur Lakes Basin.

**D. WELL CONSTRUCTION, OAR 690-200**

D1. Well #: 17 Logid: HARN 206

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:** No deficiency is noted, but the well is quite old.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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: \_\_\_\_\_

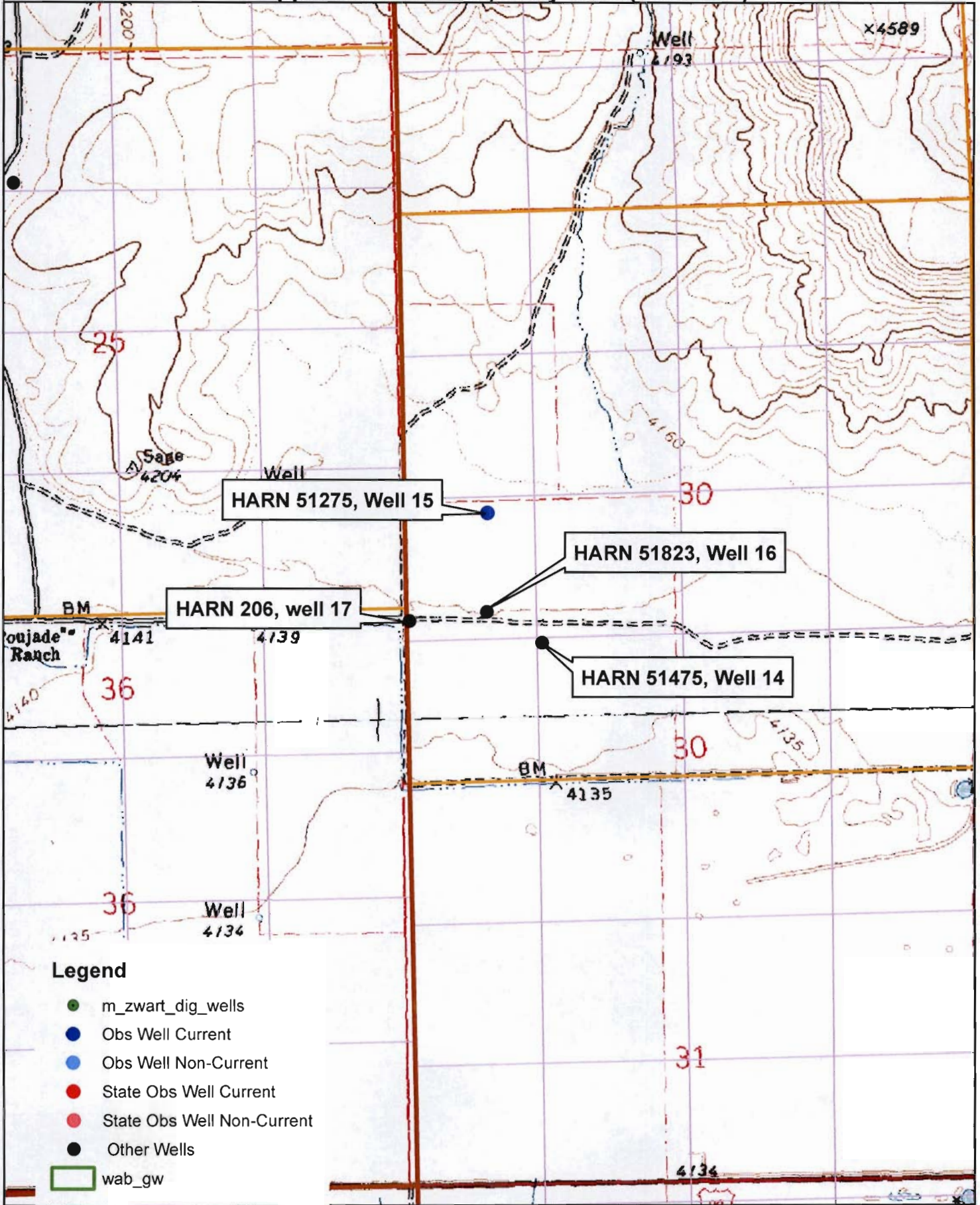
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_, 200\_\_\_\_\_  
(Enforcement Section Signature)

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

\_\_\_\_\_

# Application G-17365, Andy Root (Rereview)



## Legend

- m\_zwart\_dig\_wells
- Obs Well Current
- Obs Well Non-Current
- State Obs Well Current
- State Obs Well Non-Current
- Other Wells
- ▭ wab\_gw



## INTEROFFICE MEMORANDUM

Water Rights Section

TO: Ivan Gall  
FROM: Kerry Kavanagh  
DATE: March 2, 2012  
RE: G-17365 Andy Root  
SUBJECT: Amendment - add two wells - gw re-review

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On May 7, 2010, Mike Zwart completed a public interest review of Well 10 (HARN 51275) and Well 14 (HARN 51475).

On February 1, 2012, the Department received an amendment to Application G-17365 to add two additional wells, being Well 16 (HARN 51823) and Well 17 (HARN 206). On February 13, 2012, the Department received additional examination fees (\$250 for each additional well).

Please evaluate the two additional wells, Well 16 (HARN 51823) and Well 17 (HARN 206), and determine if Mike's May 7, 2010 review will change in any way. Please route the file to me when finished.

Thanks.



All Points Engineering and Surveying, Inc.

P.O. Box 767 (CRR)  
Terrebonne, OR 97760  
(541) 548-5833 PH  
(541) 585-4602 FX  
Scott@APEandS.com

RECEIVED

FEB 01 2012

WATER RESOURCES DEPT  
SALEM, OREGON

ATTN: Kerry Kavanaugh  
Oregon Water Resources Dept  
725 Summer St, Suite A  
Salem, OR 97301-1266

RE: Permit G-16578 & Permit Application G-17365

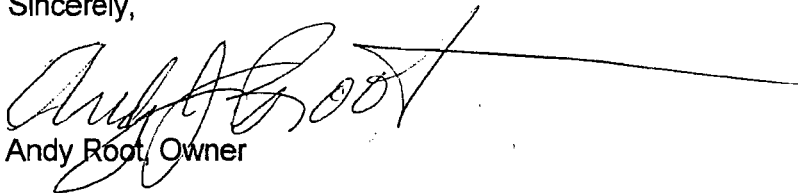
Dear Ms. Kavanaugh:

I am writing this letter to you in order to convey my intentions to add a well to both an existing permit (G-16578) and a permit application (G-17365).

I have included with this letter a map showing the location of the new well along with a check for \$250.00 to re-review the permit application and the well log. I will send the permit amendment application separately to Kelly Starnes for his review, as well.

Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink that reads 'Andy Root'. The signature is written in a cursive style and is followed by a long horizontal line extending to the right.

Andy Root, Owner

# PERMIT AMENDMENT MAP

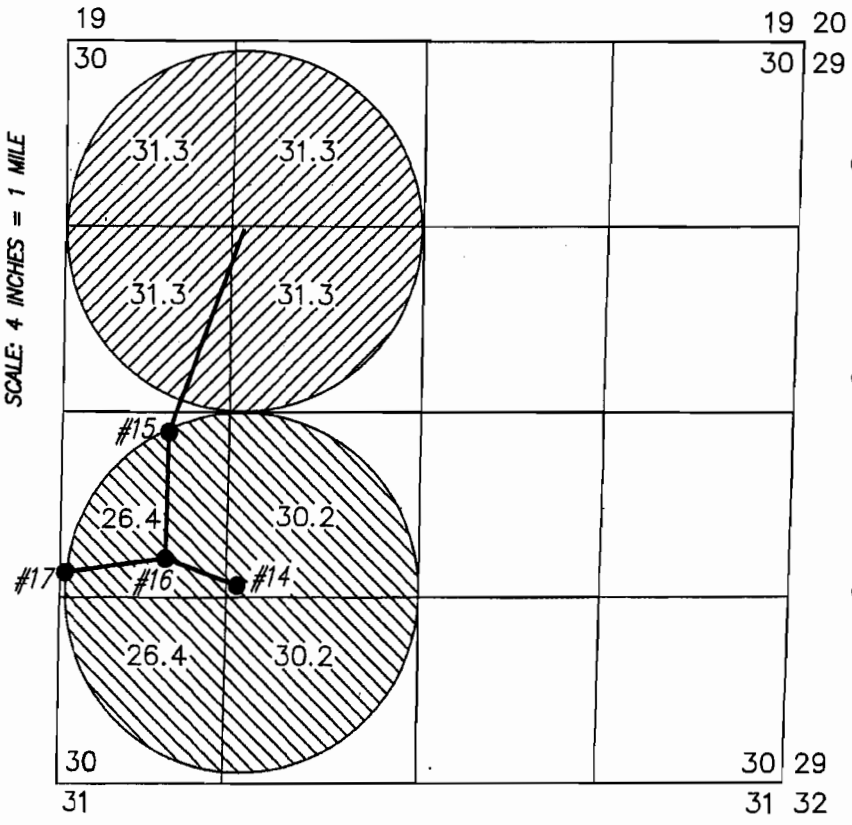
FOR GROUND WATER PERMIT  
 APPLICATIONS G-17107 & G-17365  
 ANDY ROOT

TOWNSHIP 22 SOUTH, RANGE 33 EAST, SECTION 30, W.M.  
 TAX LOTS: 303 & 1800

**RECEIVED**

FEB 01 2012

WATER RESOURCES DEPT  
 SALEM, OREGON



 113.2 ACRES PRIMARY IRRIGATION TO  
 REMAIN FROM APP. G-17365, AS SHOWN

 125.2 ACRES PRIMARY IRRIGATION TO  
 REMAIN FROM APP. G-17107, AS SHOWN

- WELL 14 (HARN 51475)  
 EXISTING WELL IN THE NW 1/4 OF THE SW 1/4 OF SECTION 30 LOCATED 1254 FEET NORTH AND 1240 FEET EAST FROM THE SW CORNER OF SECTION 30, TOWNSHIP 22 SOUTH, RANGE 33 EAST, W.M., HARNEY COUNTY, OREGON
- WELL 15 (HARN 51275)  
 EXISTING WELL IN THE NW 1/4 OF THE SW 1/4 OF SECTION 30 LOCATED 2508 FEET NORTH AND 780 FEET EAST FROM THE SW CORNER OF SECTION 30, TOWNSHIP 22 SOUTH, RANGE 33 EAST, W.M., HARNEY COUNTY, OREGON
- WELL 16 (HARN 51823)  
 NEW WELL IN THE NW 1/4 OF THE SW 1/4 OF SECTION 30 LOCATED 1610 FEET NORTH AND 780 FEET EAST FROM THE SW CORNER OF SECTION 30, TOWNSHIP 22 SOUTH, RANGE 33 EAST, W.M., HARNEY COUNTY, OREGON
- WELL 17 (HARN 206)  
 PROPOSED WELL IN THE NW 1/4 OF THE SW 1/4 OF SECTION 30 LOCATED 1500 FEET NORTH AND 50 FEET EAST FROM THE SW CORNER OF SECTION 30, TOWNSHIP 22 SOUTH, RANGE 33 EAST, W.M., HARNEY COUNTY, OREGON



RENEWAL DATE: 12/31/2012

THIS MAP IS FOR THE PURPOSE OF DESIGNING AN IRRIGATION SYSTEM PLAN AND HAS NO INTENT TO PROVIDE LEGAL DIMENSIONS OR THE LOCATION OF PROPERTY LINES

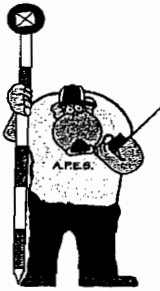
PREPARED FOR:

ANDY ROOT  
 524 HWY 20 N  
 HINES, OR 97738

PREPARED BY:



ALL POINTS ENGINEERING AND SURVEYING, INC.  
 P.O. BOX 767 (CRR) TERREBONNE, OR 97760  
 (541) 548-5833  
 www.APEandS.com



**ALL POINTS**  
**ENGINEERING & SURVEYING, INC.**  
P.O. Box 767 (CRR)  
Terrebonne, Oregon 97760

**RECEIVED**

FEB 01 2012  
WATER RESOURCES DEPT  
SALEM, OREGON

**TRANSMITTAL**

To:  
Oregon Water Resources Department  
725 Summer St. NE, Suit A  
Salem, OR 97301-1266

Date: 1/30/2012 Job: 11-040  
Attention: Kelly Starnes & Kerry  
Kavanagh  
Re: Permit Amendment Application

Prints  Plans  Plat  Specifications  Change order  Other

Copies	No.	Description
1	1	Permit Amendment Application – Parts 1-4 (7 sheets letter bond)
1	2	Application Map (1 sheet letter bond)
1	3	Well Reports (4 sheet letter bond)
1	4	Letter from owner to add wells to App. G-17365 (1 sheet letter bond)
1	5	Checks for OWRD fees of \$1200 and \$250

Remarks:  
Hello Kelly,

I prepared the application and map for Mr. Root's well permit and application. Kerry Kavanagh is the case worker for App G-17365. Jeana Eastman was the case worker for App G-17107.

Thanks and if you have questions please don't hesitate to call (541) 548-5833.

Signed: 

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

**HARN 51475**

PAGE 1

WELL 14

WELL LABEL # L 93564

START CARD # 199640

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

(1) **LAND OWNER** Owner Well I.D. \_\_\_\_\_  
 First Name \_\_\_\_\_ Last Name \_\_\_\_\_  
 Company RATTLESNAKE LANDY CATTLE CO.  
 Address 524 N. HWY 20  
 City HINES State OR Zip 97738

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

(3) **DRILL METHOD**  
 Rotary Air  Rotary Mud  Cable  Auger  Cable Mud  
 Reverse Rotary  Other \_\_\_\_\_

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

(5) **BORE HOLE CONSTRUCTION** Special Standard:  Yes (attach copy)  
 Depth of Completed Well 400 ft.

BORE HOLE			SEAL				
Dia	From	To	Material	From	To	Amount	Scks/lbs
13"	0	35	BENT.	0	35	74	Scks
18"	35	118					
8"	118	400					

How was seal placed: Method  A  B  C  D  E  
 Other POURED DRY

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_

Filter pack from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Size \_\_\_\_\_

Explosives used:  Yes Type \_\_\_\_\_ Amount \_\_\_\_\_

(6) **CASING/LINER**

Casing	Linr	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
✓		8"	+	2	118	.250	✓			✓

Shoe  Inside  Outside  Other Location of shoe(s) 118'

Temporary casing  Yes Diameter \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_

(7) **PERFORATIONS/SCREENS**

Perforations Method \_\_\_\_\_  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

Perf	Scrn	Casing	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  Bailer  Air  Flowing Artesian  
 Yield gal/min 300 Drawdown \_\_\_\_\_ Drill stem/Pump depth 390' Duration (hr) 2h

Temperature 56 °F Lab analysis  Yes  No  
 Water quality concerns  Yes  No

From	To	Description	Amount	Units
		<u>AUG 14 2008 JUL 25 2008</u>		

(9) **LOCATION OF WELL (legal description)**  
 County HARNEY Twp 22 N of 33 Range 33 or W W.M.  
 Sec 30 SW 1/4 of the SW 1/4 Tax Lot 1800  
 Tax Map Number \_\_\_\_\_ Lot \_\_\_\_\_  
 Lat \_\_\_\_\_ " or \_\_\_\_\_ DMS or DD  
 Long \_\_\_\_\_ " or \_\_\_\_\_ DMS or DD  
 Street Address of Well (or nearest address) COW CREEK RD.

(10) **STATIC WATER LEVEL**

Existing Well/Preddeepening	Date	SWL (psi)	+	SWL (ft)
Completed Well	<u>7-23-08</u>	<u>65</u>		

Flowing Artesian?  Yes Dry Hole?  Yes  
**WATER BEARING ZONES** Depth water was first found 12'

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
<u>7-21-08</u>	<u>12</u>	<u>23</u>	<u>500</u>	<u>5</u>		<u>5</u>
<u>7-23-08</u>	<u>124</u>	<u>400</u>	<u>300+</u>			<u>65</u>

(11) **WELL LOG**

Ground Elevation 4150

Material	From	To
GRAVELLY BRN. CLAY	0	4
SANDY BRN. CLAY - GRAVEL	4	23
SANDY BROWN CLAY	23	124
GRAVEL - CLAY	124	129
LIGHT GRAY PUMICE	129	135
SOFT BROWN ROCK - CLAY	135	184
BROWN ROCK	184	188
BROWN CLAY	188	190
LIGHT BROWN ROCK	190	196
DARK BRN SANDSTONE	196	238
LIGHT GRAY PUMICE	238	270
BROWN PUMICE	270	277
SANDY CLAY	277	295
PUMICE - SANDY	295	317
SOFT BLACK LAVA ROCK	317	321
GRAY PUMICE	321	335

Date Started 7-21-08 Completed 7-23-08

(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 FEB 01 2012

Signed \_\_\_\_\_  
 WATER RESOURCES DEPT  
 SALEM, OREGON

(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 1855 Date 7-24-08

Signed Arthur J. Jay  
 Contact Info. (optional) \_\_\_\_\_

RECEIVED  
 AUG 14 2008 JUL 25 2008  
 WATER RESOURCES DEPT  
 ORIGINAL OREGON WATER RESOURCES DEPARTMENT



# PERMIT AMENDMENT MAP

FOR GROUND WATER PERMIT  
APPLICATIONS G-17107 & G-17365  
ANDY ROOT

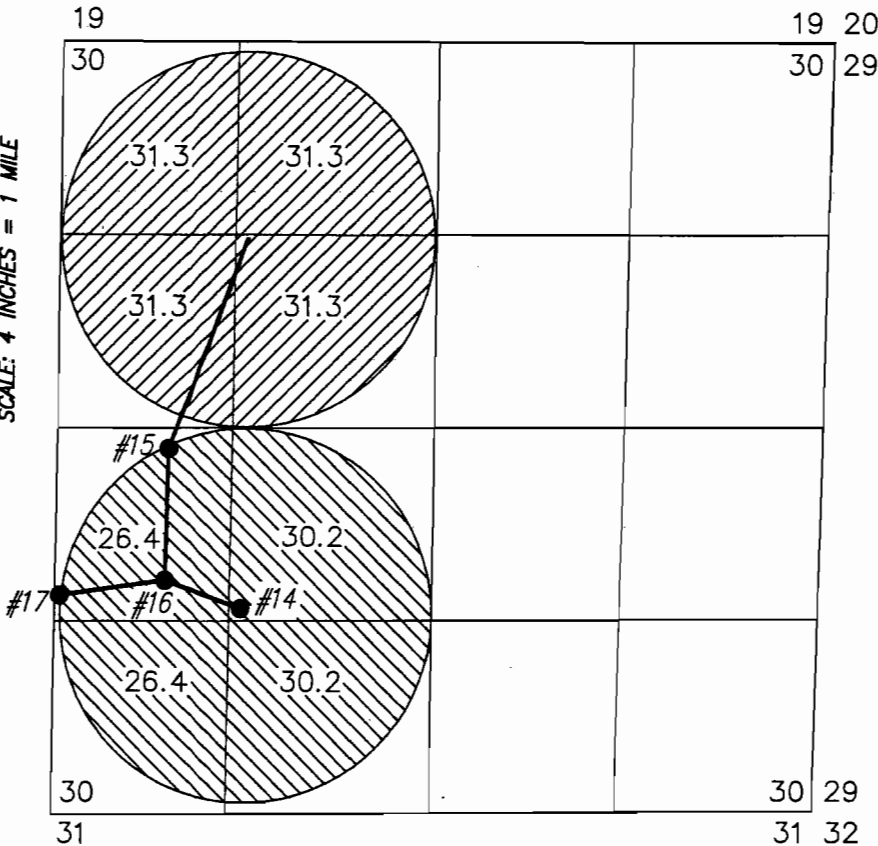
RECEIVED

FEB 01 2012

TOWNSHIP 22 SOUTH, RANGE 33 EAST, SECTION 30, W.M.  
TAX LOTS: 303 & 1800

WATER RESOURCES DEPT  
SALEM, OREGON

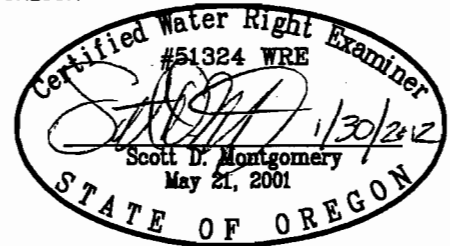
SCALE: 4 INCHES = 1 MILE



 113.2 ACRES PRIMARY IRRIGATION TO  
REMAIN FROM APP. G-17365, AS SHOWN

 125.2 ACRES PRIMARY IRRIGATION TO  
REMAIN FROM APP. G-17107, AS SHOWN

- WELL 14 (HARN 51475)  
EXISTING WELL IN THE NW 1/4 OF THE SW 1/4 OF SECTION 30 LOCATED 1254 FEET NORTH AND 1240 FEET EAST FROM THE SW CORNER OF SECTION 30, TOWNSHIP 22 SOUTH, RANGE 33 EAST, W.M., HARNEY COUNTY, OREGON
- WELL 15 (HARN 51275)  
EXISTING WELL IN THE NW 1/4 OF THE SW 1/4 OF SECTION 30 LOCATED 2508 FEET NORTH AND 780 FEET EAST FROM THE SW CORNER OF SECTION 30, TOWNSHIP 22 SOUTH, RANGE 33 EAST, W.M., HARNEY COUNTY, OREGON
- WELL 16 (HARN 51823)  
NEW WELL IN THE NW 1/4 OF THE SW 1/4 OF SECTION 30 LOCATED 1610 FEET NORTH AND 780 FEET EAST FROM THE SW CORNER OF SECTION 30, TOWNSHIP 22 SOUTH, RANGE 33 EAST, W.M., HARNEY COUNTY, OREGON
- WELL 17 (HARN 206)  
PROPOSED WELL IN THE NW 1/4 OF THE SW 1/4 OF SECTION 30 LOCATED 1500 FEET NORTH AND 50 FEET EAST FROM THE SW CORNER OF SECTION 30, TOWNSHIP 22 SOUTH, RANGE 33 EAST, W.M., HARNEY COUNTY, OREGON



RENEWAL DATE: 12/31/2012

THIS MAP IS FOR THE PURPOSE OF DESIGNING AN  
IRRIGATION SYSTEM PLAN AND HAS NO INTENT TO PROVIDE  
LEGAL DIMENSIONS OR THE LOCATION OF PROPERTY LINES

PREPARED FOR:

ANDY ROOT  
524 HWY 20 N  
HINES, OR 97738

PREPARED BY:



ALL POINTS ENGINEERING AND SURVEYING, INC.  
P.O. BOX 767 (CRR) TERREBONNE, OR 97760  
(541) 548-5833 www.APEandS.com

G-16578  
ARR-G-17365?

HARN 51823

HOMEPLACE  
PLOT 14 (#13?)

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

12-14-2011

WELL 16

WELL LABEL # L 107662

START CARD # 1015574

(1) LAND OWNER Owner Well I.D. \_\_\_\_\_

First Name \_\_\_\_\_ Last Name \_\_\_\_\_  
Company ACW  
Address PO Box 3  
City Burns State Or Zip 97720

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

(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 310.00 ft

BORE HOLE			SEAL			sacks/ Amt lbs	
Dia	From	To	Material	From	To		
14	0	21	Bentonite Chips	0	21	30	S
10	21	310					

How was seal placed: Method  A  B  C  D  E

Other poured & tamped

Backfill placed from \_\_\_\_\_ ft to \_\_\_\_\_ ft. Material \_\_\_\_\_

Filter pack from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Size \_\_\_\_\_

Explosives used:  Yes Type \_\_\_\_\_ Amount \_\_\_\_\_

(6) CASING/LINER

Casing Liner	Dia	From	To	Gauge	Stl	Pisto	Wld	Thrd
<input checked="" type="checkbox"/>	10	2	80	250	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Shoe  Inside  Outside  Other Location of shoe(s) \_\_\_\_\_

Temp casing  Yes Dia \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_

(7) PERFORATIONS/SCREENS

Perforations Method \_\_\_\_\_

Screens Type \_\_\_\_\_ Material \_\_\_\_\_

Perforations	Casing/Screen	Liner Dia	From	To	Screw/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)
400		310	1

Temperature 64 °F Lab analysis  Yes By \_\_\_\_\_

Water quality concerns?  Yes (describe below)

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County Harney Twp 22.00 S N/S Range 33.00 E E/W WM  
Sec 30 NW 1/4 of the SW 1/4 Tax Lot 300  
Tax Map Number \_\_\_\_\_ Lot \_\_\_\_\_  
Lat \_\_\_\_\_ or \_\_\_\_\_ DMS or DD  
Long \_\_\_\_\_ or \_\_\_\_\_ DMS or DD  
 Street address of well  Nearest address

72987 Cowcreek Road  
Burns, Or 97720

(10) STATIC WATER LEVEL

Exiting Well / Predeepening	Date	SWL (psi)	+ SWL (ft)
Completed Well	12-14-2011		18

Flowing Artesian?  Dry Hole?

WATER BEARING ZONES Depth water was first found 35

SWL Date	From	To	Est Flow	SWL (psi)	+ SWL (ft)
12-14-2011	35	310	400		18

(11) WELL LOG

Material	From	To
Topsoil clay loam	0	1
Clay brown	1	5
sand medium brown	5	14
Clay grey	14	35
Gravel sand	35	65
Clay green	65	120
Cinder black	120	130
Pumice pink	130	140
Cinders black	140	160
Claystone green	160	180
Pumice pink	180	190
Pumice grey	190	222
Sandstone blue green	222	310

RECEIVED

FEB 0 1 2012

WATER RESOURCES DEPT  
SALEM, OREGON

Date Started 12-12-2011 Completed 12-14-2011

(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 \_\_\_\_\_

Electronically Filed

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 1424 Date 12-14-2011

Electronically Filed

Signed TIMOTHY K RILEY (E-Filed)

Contact info (optional)



