

Approved: 

# MEMO

**To:** Kristopher Byrd, Well Construction and Compliance Section Manager  
**From:** Travis Kelly, Well Construction Program Coordinator  
**Subject:** Review of Water Right Application G-18956  
**Date:** May 19, 2020

The attached application was forwarded to the Well Construction and Compliance Section by the Ground Water Section. Josh Hackett reviewed the application. Please see Josh's Groundwater Review, Interoffice Memo dated February 25, 2016 Subject: Well Video Log Review MORR 263, and the Well Reports.

Applicant's Well #1 (MORR 263(Original)/MORR 262(Deepening)/MORR 52331(Alteration)): Based on a review of the Well Reports and Memo, Applicant's Well #1 seems to protect the groundwater resource.

The construction of Applicant's Well #1 may not satisfy hydraulic connection issues.

*Interoffice Memorandum*

*February 25, 2016*

**To:** Kris Byrd, Well Construction Enforcement and Compliance  
**From:** Josh Hackett, Hydrogeologist, Groundwater Section  
**Subject:** Well Video Log Review MORR 263, Al Osmin

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**Background:**

MORR 263 was drilled to a depth of 226 feet below land surface (bls) in October 1977 and deepened to a depth of 500 feet in March 1979. The drilling contractor is waiting for guidance from the Department regarding the amount of casing and seal required to complete the well in a manner that meets Department Well Construction Standards. Staff from Zollman's Larry Burd Well Drilling conducted a downhole video survey of the well on January 29, 2016. This document presents my observations and interpretations from review of the video log and my recommendations for completing this well.

**Observations:**

MORR 263 penetrates several basalt flows of the Columbia River Basalt Group (CRBG) from land surface to its completed depth of 519 feet. The well is cased and sealed from land surface to a depth of 40 feet. The static water level during the video logging was approximately 85 feet bls. Rubbly and fractured basalt was encountered in the following intervals: 40-310 feet, 322-347 feet, and 450-519 feet. Solid, competent basalt was encountered from 310-322 feet and 347-450 feet.

Water-bearing zones typically occur in the vesicular and rubbly tops and bottoms of CRBG flows. Water-bearing zones could not be precisely identified from the video log alone. No evidence of where groundwater was entering or leaving the borehole was visible on the video log, however, correlating water-bearing zones identified on the driller's log to rubbly and vesicular flow tops and bottoms, suggests two major water-bearing zones are present. The shallow water-bearing zone occurs from approximately 90-310 feet and the deep water-bearing zone occurs from 450-519 feet.

Review of the video log did not find water movement between water-bearing zones in the borehole.

**Recommendations:**

Evidence from the video log suggests the well does not produce from multiple aquifers in the Columbia River Basalt Group. **Accordingly, the well's current casing and seal depth is sufficient to meet current minimum well construction standards.**

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

**RECEIVED**

**WATER WELL REPORT**

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

OCT 28 1977

STATE OF OREGON  
(Please type or print)

MORR 263

State Well No. 35/210E-12db

State Permit No. G-8933

WATER RESOURCES DEPT.  
SALEM, OREGON

**(1) OWNER:**

Name A. L. Osmin  
Address Rt 1  
Heppner, Oregon 97836

**(2) TYPE OF WORK (check):**

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:**

Rotary  Driven   
Cable  Jetted   
Dug  Bored

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

**(5) CASING INSTALLED:**

Threaded  Welded   
8" Diam. from 0 ft. to 4.0 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

**(6) PERFORATIONS:**

Perforated?  Yes  No.  
Type of perforator used  
Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

**(7) SCREENS:**

Well screen installed?  Yes  No  
Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

**(8) WELL TESTS:**

Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: gal./min. with ft. drawdown after hrs.  
" " " " "  
" " " " "  
Ball-test 350 gal./min. with 140 ft. drawdown after 1 hrs.  
Artesian flow g.p.m.  
Temperature of water Depth artesian flow encountered ft.

**(9) CONSTRUCTION:**

Well seal—Material used Cement  
Well sealed from land surface to 40 ft.  
Diameter of well bore to bottom of seal 11 in.  
Diameter of well bore below seal 8 in.  
Number of sacks of cement used in well seal 9 sacks  
How was cement grout placed?

Was a drive shoe used?  Yes  No Plugs Size: location ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? depth of strata  
Method of sealing strata off  
Was well gravel packed?  Yes  No Size of gravel:  
Gravel placed from ft. to ft.

**(10) LOCATION OF WELL:**

County Morrow Driller's well number  
NW 1/4 & E 1/4 Section 12 T. 38. R. 26 E. W.M.  
Bearing and distance from section or subdivision corner

**(11) WATER LEVEL: Completed well.**

Depth at which water was first found 90 ft.  
Static level 25 ft. below land surface. Date 10-19-77  
Artesian pressure lbs. per square inch. Date

**(12) WELL LOG:**

Diameter of well below casing 8"  
Depth drilled 226 ft. Depth of completed well 226 ft.

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

MATERIAL	From	To	SWL
Topsoil	0	21	
Claystone & gravel	21	25	
Basalt, black	25	90	
Rock, black & green claystone	90	226	W.B.

Work started 10-18 1977 Completed 10-19 1977  
Date well drilling machine moved off of well 10-19 1977

**Drilling Machine Operator's Certification:**

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] John Van Swell Date 10-20, 1977  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 1027

**Water Well Contractor's Certification:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name TROY GRIFFIN  
(Person, firm or corporation) (Type or print)  
Address 900 HERMISTON AVE, HERMISTON ORE  
[Signed] Troy Griffin  
(Water Well Contractor)  
Contractor's License No. 65 Date 10-20, 1977

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

**WATER WELL REPORT**

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

**RECEIVED**

STATE OF OREGON  
(Please type or print)

MORR 262

State Well No. 35/26E-12 d b  
State Permit No. \_\_\_\_\_

APR 9 1979

(Do not write above this line)

WATER RESOURCES DEPT

**(1) OWNER:** SALEM, OREGON

Name G. L. Osmin  
Address Rt 1  
Leppner, Oregon 97836

**(2) TYPE OF WORK (check):**

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:**

Rotary  Driven   
Cable  Jetted   
Dug  Bored

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

**(5) CASING INSTALLED:** Threaded  Welded

None " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

**PERFORATIONS:** Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_  
Size of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(7) SCREENS:** Well screen installed?  Yes  No

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

**(8) WELL TESTS:** Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
\_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
AIR TEST 500 " 444 " 1 "  
AIR test 300 gal./min. with 344 ft. drawdown after 1 hrs.  
\_\_\_\_\_ g.p.m.  
\_\_\_\_\_ ft.

**(9) CONSTRUCTION:**

Well seal—Material used Not disturbed  
Well sealed from land surface to \_\_\_\_\_ ft.  
Diameter of well bore to bottom of seal \_\_\_\_\_ in.  
Diameter of well bore below seal \_\_\_\_\_ in.  
Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
How was cement grout placed? \_\_\_\_\_

Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(10) LOCATION OF WELL:**

County Morrow Driller's well number \_\_\_\_\_  
NW 1/4 SE 1/4 Section 12 T. 32. R. 26E. W.M. \_\_\_\_\_  
Bearing and distance from section or subdivision corner \_\_\_\_\_

**(11) WATER LEVEL: Completed well.**

Depth at which water was first found \_\_\_\_\_ ft.  
Static level 56 ft. below land surface. Date 3-28-79  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

**(12) WELL LOG:** Diameter of well below casing 8"

Depth drilled 274 ft. Depth of completed well 500 ft.

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

MATERIAL	From	To	SWL
Basalt, black/green claystone	226	278	W.B.
Basalt, black	278	306	
Rock, brown, soft	306	316	
Basalt, black	316	428	
Basalt, gray	428	444	
Basalt, brown/green claystone	444	459	
Basalt, black	459	475	
Rock, red/green claystone	475	496	W.B.
Basalt, black	496	500	

Work started 3-26 1979 Completed 3-28 1979  
Date well drilling machine moved off of well 3-28 1979

**Drilling Machine Operator's Certification:**

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Ronald DeBorne Date 3-28, 1979  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 1210

**Water Well Contractor's Certification:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name TROY GRIFFIN  
(Person, firm or corporation) (Type or print)  
Address 900 HERMISTON AVE HERMISTON ORE  
[Signed] Troy Griffin  
(Water Well Contractor)  
Contractor's License No. 65 Date 3-28, 1979

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

MORR 52331

3/30/2016

WELL I.D. LABEL# L 116905
START CARD # 1029995
ORIGINAL LOG # MORROW 263

(1) LAND OWNER
Owner Well I.D.
First Name ALBERT Last Name OSMIN
Company
Address 60355 BALM FORK ROAD
City HEPPNER State OR Zip 97836-6253

(2) TYPE OF WORK
New Well Deepening Conversion
[X] Alteration (complete 2a & 10) Abandonment(complete 5a)

(2a) PRE-ALTERATION
Casing: Dia + From To Gauge Stl Plstc Wld Thrld
Seal: Material From To Amt sacks/lbs

(3) DRILL METHOD
[X] 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 518.00 ft.

Table with columns: Dia, From, To, Material, From, To, Amt, sacks/lbs. Includes rows for BORE HOLE and SEAL.

How was seal placed: Method A B C D E
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 Actual Amount

(6) CASING/LINER
Casing Liner Dia + From To Gauge Stl Plstc Wld Thrld
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 Scrn/slot Slot # of Tele/
Screen Liner Dia From To width length slots 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)

Table for Water quality concerns: From To Description Amount Units

(9) LOCATION OF WELL (legal description)
County MORROW Twp 3.00 S N/S Range 26.00 E E/W WM
Sec 12 NW 1/4 of the SE 1/4 Tax Lot 700
Tax Map Number Lot
Lat " or DMS or DD
Long " or DMS or DD
Street address of well Nearest address
60355 BALM FORK RD. HEPPNER APPLICATION G-17919

(10) STATIC WATER LEVEL
Date SWL(psi) + SWL(ft)
Existing Well / Pre-Alteration 3/23/2016 85
Completed Well 3/29/2016 55
Flowing Artesian? Dry Hole?

Table for WATER BEARING ZONES: SWL Date From To Est Flow SWL(psi) + SWL(ft)

(11) WELL LOG
Ground Elevation
Material From To
Soil 0 20
Cemented Gravels 20 26
Hard Black Basalt 26 39
Existing Hole 39 518

Date Started 3/23/2016 Completed 3/29/2016

(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 1963 Date 3/30/2016
Signed JOHN KLINE (E-filed)

(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 1881 Date 3/30/2016
Signed GARRY L ZOLLMAN (E-filed)
Contact Info (optional) Garry Zollman



# Groundwater Application Review Summary Form

Application # G- 18956

GW Reviewer J. Hackett Date Review Completed: May 12, 2020

## Summary of GW Availability and Injury Review:

Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

## Summary of Potential for Substantial Interference Review:

There is the potential for substantial interference per Section C of the attached review form.

## Summary of Well Construction Assessment:

The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

*This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).*

**WATER RESOURCES DEPARTMENT**

**MEMO**

May 12, 2020

**TO:** Application G- 18956

**FROM:** **GW:** J. Hackett  
(Reviewer's Name)

**SUBJECT: Scenic Waterway Interference Evaluation**

**YES** The source of appropriation is hydraulically connected to a State Scenic Waterway or its tributaries

**NO**

**YES** Use the Scenic Waterway Condition (Condition 7J)

**NO**

Per ORS 390.835, the Groundwater Section is **able** to calculate ground water interference with surface water that contributes to a Scenic Waterway. The calculated interference is distributed below

Per ORS 390.835, the Groundwater Section is **unable** to calculate ground water interference with surface water that contributes to a scenic waterway; **therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway**

**DISTRIBUTION OF INTERFERENCE**

*Calculate the percentage of consumptive use by month and fill in the table below. If interference cannot be calculated, per criteria in 390.835, do not fill in the table but check the "unable" option above, thus informing Water Rights that the Department is unable to make a Preponderance of Evidence finding.*

Exercise of this permit is calculated to reduce monthly flows in \_\_\_\_\_ Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec



**B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070**

B1. **Based upon available data**, I have determined that groundwater\* 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 groundwater 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 groundwater 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 groundwater resource; or
- d.  **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater 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 groundwater production from no deeper than \_\_\_\_\_ ft. below land surface;
- b.  **Condition** to allow groundwater production from no shallower than \_\_\_\_\_ ft. below land surface;
- c.  **Condition** to allow groundwater production only from the \_\_\_\_\_ groundwater 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 Groundwater 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. **Groundwater availability remarks:** The applicant’s well (MORR 263) is located in an area that contains lava flows of the Columbia River Basalt Group from near land surface to a depth of 1500 to 2000 feet. The well is 518 feet deep and is open to water-bearing zones between 90-278 and 476-500 feet below land surface. Water levels in nearby wells appear relatively stable (see attached hydrograph).

The applicant’s well is located within 5 miles of the city of Heppner’s Well #3 (MORR 189) and Well #5 (MORR 245) and is therefore subject to OAR 690-507-0090(3)(b)(C) which precludes new appropriation from the basalt aquifer utilized by the city of Heppner’s wells unless a hydrogeologic barrier separates the proposed well from the City’s wells. As shown on the well location map (see attached map), MORR 263 is located directly south of a northwest trending geologic fault. This fault acts as a barrier to groundwater flow between MORR 263 and the City’s Well #3 (MORR 189) which is located north of the fault. Evidence of the barrier is manifest in water levels in the wells (see attached hydrograph). The water level elevation in MORR 263 is 75 to 100 feet higher than the water level elevation in MORR 189. This difference in water level elevations indicates the wells produce from different aquifers. Water level trends also indicate that MORR 263 produces from a different aquifer than the City’s Well #5 (MORR 245). The water level in MORR 263 is approximately 150 feet higher than the water level elevation in MORR 245 (see attached hydrograph).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

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

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	CRB	<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:** The water level in the well rose above the elevation which it was encountered.

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

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Balm Fork	2238	2140-2390	100	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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"/>	<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"/>

**Basis for aquifer hydraulic connection evaluation:** Water-bearing zones in the applicant’s well are below the elevation of local stream reaches.

**Water Availability Basin the well(s) are located within:** \_\_\_\_\_

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 (SW) source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that SW source, 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"/>
		<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: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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.

<b>Non-Distributed Wells</b>													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
<b>Distributed Wells</b>													
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													
(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:** \_\_\_\_\_  
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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 groundwater 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:** Nearby application reviews; nearby well logs; local knowledge; GW Reports 30 and 35.

Madin, I.P., and Geitgy, R.P., 2007, Preliminary geologic map of the Umatilla basin, Morrow and Umatilla counties, Oregon, Oregon Department of Geology and Mineral Industries, Open-File Report O-07-15, 23p.  
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**D. WELL CONSTRUCTION, OAR 690-200**

D1. Well #: \_\_\_\_\_ Logid: \_\_\_\_\_

D2. **THE WELL does not appear to 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 or other comment is described as follows:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

D4.  **Route to the Well Construction and Compliance Section for a review of existing well construction.**

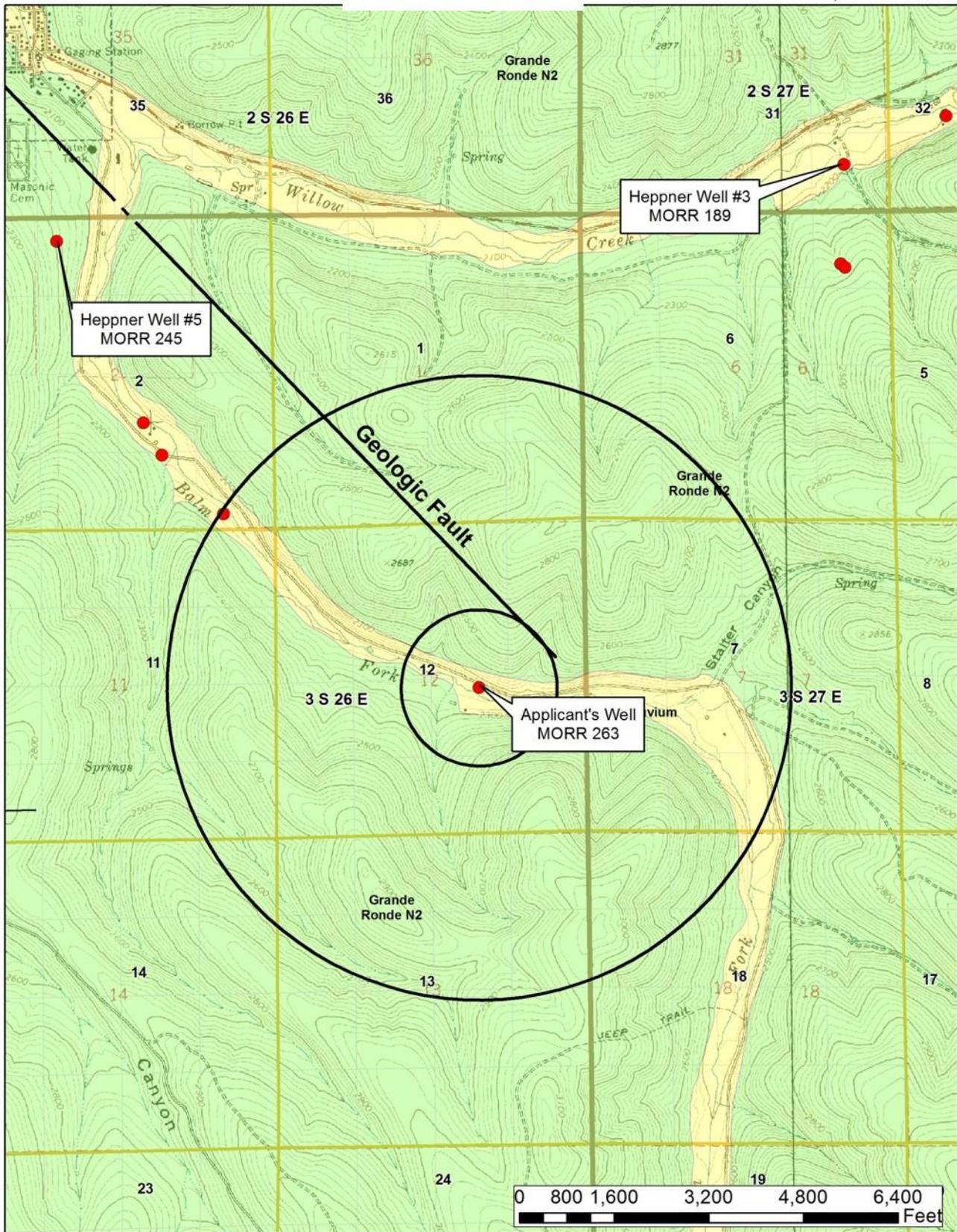
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Well Location Map

G-18956, Osmin

1:24,000 scale



### Water-Level Trends in Nearby Wells

