

**Water Right Conditions
Tracking Slip**

Groundwater/Hydrology Section

FILE ## G-17524

ROUTED TO: Water Rights - Kerry

TOWNSHIP/

RANGE-SECTION: 27S/31E-25

CONDITIONS ATTACHED? ☒ yes ☐ no

REMARKS OR FURTHER INSTRUCTIONS:

Reviewer: Mike Zwart

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date January 31, 2012

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

SUBJECT: Application G- 17524 Supersedes review of _____
Date of Review(s) _____

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

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

A. GENERAL INFORMATION: Applicant's Name: Otley Brothers, Inc. County: Harney

A1. Applicant(s) seek(s) 5.41 cfs from three well(s) in the Malheur Lake Basin,
Donner und Blitzen subbasin Quad Map: Jackass Butte NE

A2. Proposed use: Irrigation, 324 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	Proposed	1	Basalt/cinders	5.41	27S/31E-25 NE-NW	820' S, 1395' E fr NW cor S 25
2	Proposed	2	Basalt/cinders	5.41	27S/31E-25 SW-NW	1926' S, 1091' E fr NW cor S 25
3	Proposed	3	Basalt/cinders	5.41	27S/31E-25 SE-SW	1316' N, 1426' E fr SW cor S 25
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	4132					0-18						
2	4126					0-18						
3	4135					0-18						

Use data from application for proposed wells.

A4. **Comments:** The application contains minimal proposed well construction information. Local well logs report that very high production rates are possible from relatively shallow wells. I am presuming that the proposed wells will all penetrate this shallow aquifer developed in cinders and/or basalt.

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	Quaternary basalt or cinders	☐	☒
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: It is anticipated that a shallow unconfined aquifer will be developed, based on the nearest high-production irrigation well logs on file.

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	Donner und Blitzen River	4100±	4108	10900	☒	☐	☐	☐	☒
2	1	Donner und Blitzen River	4100±	4108	10600	☒	☐	☐	☐	☒
3	1	Donner und Blitzen River	4100±	4108	11200	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: The shallow unconfined aquifer penetrated appears to extend to the river without interruption. The head relationship suggests that the river may be losing, but the heads are close in any case.

Water Availability Basin the well(s) are located within: Donner und Blitzen R > Malheur Lake at mouth (31200311).

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?
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

Basis for impact evaluation: Use of the Hunt 99 model at a nearby well (file G-16953) has disclosed that the potential interference with the Donner und Blitzen River will be less than 0.1 percent of natural flow. The wells on this application are similar in distance from the river, so there is no need to calculate interference; it will be much less than 1 percent of natural flow.

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**

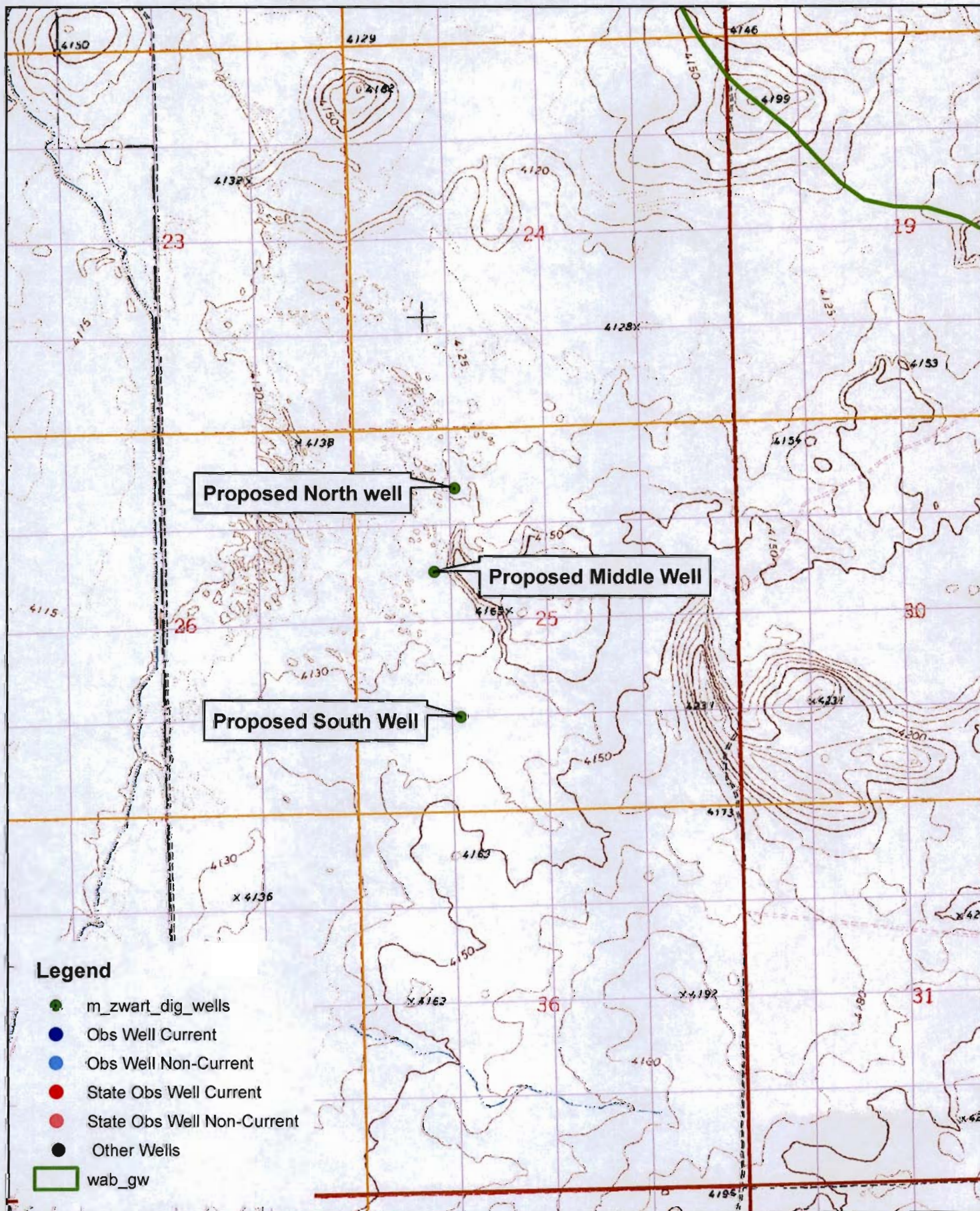
References Used: Recent application reviews, especially G-16953; local well logs; GW Report # 16; WSP #841; Geologic Map of the Burns Quadrangle, Oregon, by Greene, et al, 1972, USGS Miscellaneous Geologic Investigations Map I-680.

MEMO

January 31, 2002

[illegible]

Application G-17524, Otley Brothers, Inc.



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

0

0.5

1

1.5

1.5
Miles