



Oregon

Theodore R. Kulongoski, Governor

RA
Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301-1271
503-986-0900
FAX 503-986-0904

INTEROFFICE MEMO

FORWARD TO:

Kelly Starnes
FIELD PROCESSOR WORKING ON THIS TRANSFER

DATE: 12-13-06

FROM:

~~WATERMASTER, DISTRICT #~~
~~GROUNDWATER SECTION~~

(SIGNATURE) *ALC WJ* date signed May 15, 2007
signed by injury reviewer

SUBJECT: **WATER RIGHT TRANSFER #** 10275

A change in: **POU** **POD** **APOA** **USE** of water.

In the name(s) of Baker West Inc.

In my opinion (assuming the right is valid), the proposed change

MAY BE MADE WITHOUT INJURY WOULD RESULT IN INJURY* to an existing water right.

See attached memo and recommended condition.

*The approval of this transfer application would result in injury to other water rights because

The existing right may not be valid because

Headgate notices HAVE HAVE NOT Been issued for diversion from the source(s) which serve(s) this right.

If for change in point of diversion, is there any intervening point(s) for diversion between the authorized and proposed points of diversion? (Yes or No) Yes MARI 574 on GR-1998 on the same property.

In my opinion, the order approving the subject transfer application should include the following in regard to the appropriator installing suitable measuring devices in the diversion works:

- (1) PRIOR to the diverting of water at the new point of diversion . . . *"Large" water-use reporting condition.*
- (2) WHEN IN the judgement of the watermaster it becomes necessary . . .

The enclosed copy of the transfer application and map(s) is for your records.

Date: May 15, 2007
To: Kelly Starnes - Water Right Transfer Section
From: Karl Wozniak - Ground Water / Hydrology Section
Subject: Review of Transfer 10275, Baker West, Inc.
04S/01W-17, 18, 19

Water Right Summary:

Application: G-3679 Permit: G-3485 Certificate: 42108
Use: Irrigation of 194.8 acres
Limits: Maximum rate of 1.69 cfs, 2.5 acre-feet/acre, use during irrigation season.

Findings

The proposed addition of three POAs to certificate 42108 can probably be made without injury as long as water use is limited to the terms of the current certificate.

Recommendations

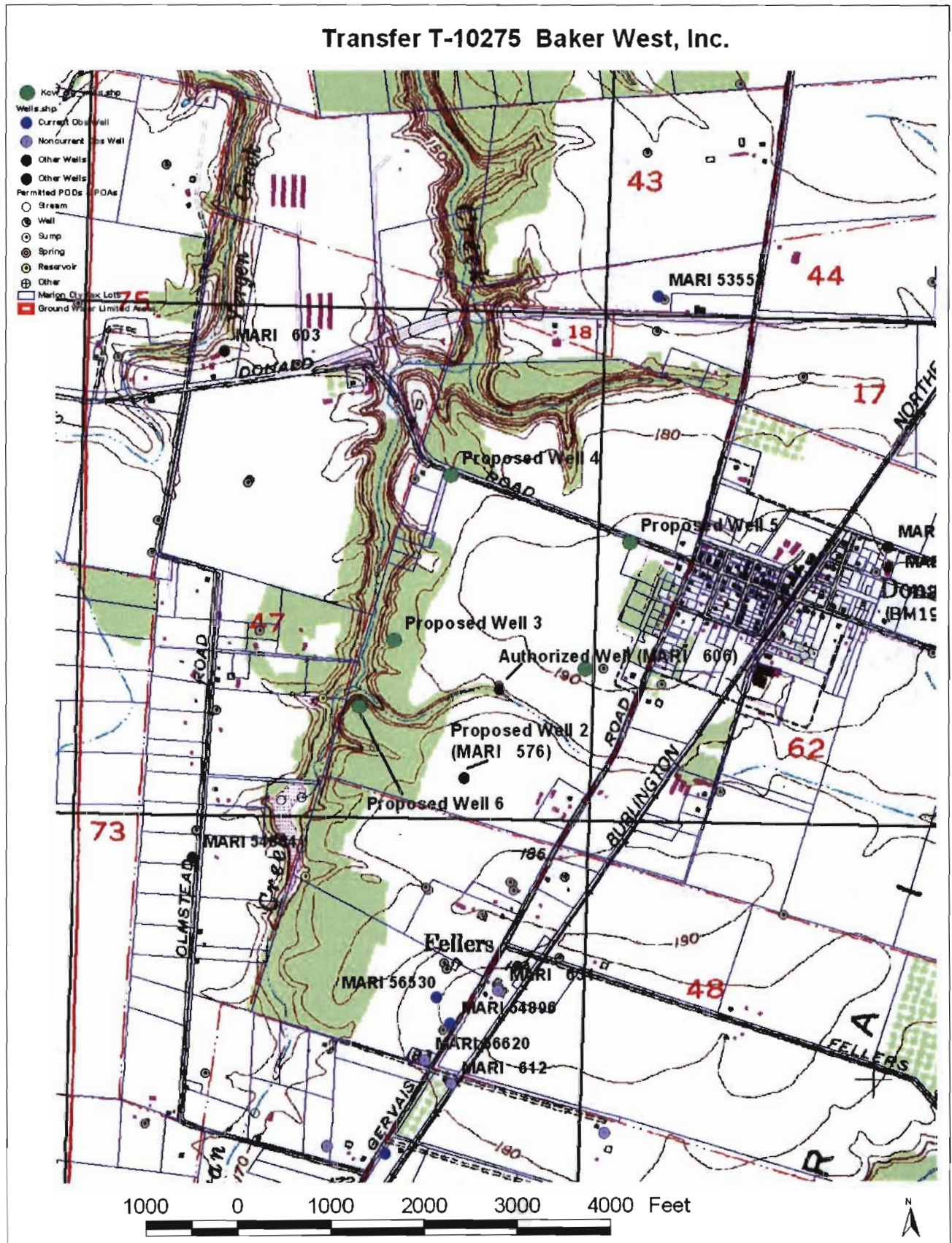
1. Because of water-supply concerns in the area, the special order that implements this transfer should include the "large" water-use reporting condition (annual reports of monthly water use for each well). The original permit specifies that "The permittee shall install and maintain a weir, meter, or other suitable measuring device, and shall keep a complete record of the amount of ground water withdrawn." Although the permit does not require water-use reporting, ground-water-supply concerns (see discussion below) in the area indicate a need for reporting to ensure that water use falls within the limits of the current certificate.
2. The Water Right Transfer map (received December 4, 2006) shows a different location for Proposed Well 3 than is specified in the table on page 5 of the Application for Water Right Transfer. This discrepancy should be resolved prior to approving this transfer. This review presumes that the mapped location is correct.

Discussion:

The subject property is underlain by several hundred feet of fine-grained sediments with sparse interbeds of sand and gravel. The water table occurs at shallow depths (5-20 feet). Although some productive sands are found in the upper 100 feet (the Willamette Silt hydrogeologic unit of Gannet and Caldwell, 1998, USGS Professional Paper 1424-A), most wells produce ground water from thin sand and gravel beds found below this depth. The occurrence of sand and gravel beds below 100 feet is quite variable and the cumulative thickness of productive beds is generally less than 30 feet. Because the productive beds are confined and generally thin, pumping effects can spread rapidly to great distances. Development of the ground-water resource over time has led to summer water-level drawdowns that now approach 70 feet in the area (see the attached hydrograph for nearby well MARI 54896; pre-development drawdowns were probably on the order of 15 feet). This has already led to some

interference complaints and water-use regulation in the area. If summer drawdowns continue to increase over time, shallow wells will likely have to be deepened to enable continued production in the summer months (most domestic wells in the area, for example, are less than 140 feet deep). However, some deepenings may be ineffective because of the sparse occurrence of sand and gravel beds at depth. These factors suggest that the local alluvial aquifer system is currently near its capacity to provide year-round water to all users in the area. Because of this, the Department has been reluctant to approve new ground-water permits in the area. Aerial photos (see Google Earth) suggest that at least $\frac{1}{4}$ of the irrigated lands on the subject certificate are now planted in nursery stock rather than traditional field crops. This raises the concern that water use associated with this certificate may have increased over time and may continue to increase if additional lands are converted to nursery stock. Therefore, to ensure that water use stays within the limits of the right, it is recommended that a water-use reporting condition be added to the special order that implements this transfer.

The authorized well is near the center of the irrigated lands on this certificate but the proposed wells are located around the margins adjacent to neighboring properties. The distribution of new wells around the periphery of the property will likely cause some increased interference with wells on adjacent properties but the degree of interference is difficult to predict as it will depend upon the pumping rates of the individual wells and the cumulative thickness of water-bearing sands and gravels at each of the proposed well locations. Water-use reports would help to resolve the cause of interference (and injury, if it occurs) if water supply problems develop after the new wells are put into production.



Well Location	4.00S1.00W19ACD
Oregon Water Resources Department Well Log ID	MARI 54896
Oregon Water Resources Department State Observation Well Number	----
Well depth, in feet below land surface	350
Land surface elevation, in feet above mean sea level	190
Primary use of well	IRRIGATION

