

STATE OF OREGON MONITORING WELL REPORT

(as required by ORS 537.765 & OAR 690-240-0395)

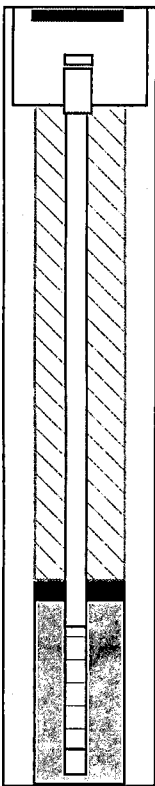
WELL LABEL # L L112727 START CARD # 1030648

(1) LAND OWNER Owner Well I.D. ASR-1 Piezos First Name Last Name Company City of Beaverton Address PO Box 4755 City Beaverton State OR Zip 97076

(2) TYPE OF WORK [X] Alteration (repair/recondition) [] Abandonment

(3) DRILL METHOD [X] Other None (Pump Rig)

(4) CONSTRUCTION (Nestled) Piezometer Well [X] Depth of Completed Well 440.3 ft. Special Standard [X]



MONUMENT/VAULT Below Ground From To BORE HOLE Diameter From To CASING Dia. From To Gauge Wld Thrd Material [] Steel [] Plastic [] [] LINER Dia. From To Gauge Wld Thrd Material [] Steel [] Plastic [] [] SEAL From To Material Amount Grout weight SCREEN Casing/Liner Material Diameter From To Slot Size FILTER From To Material Size of pack

(6) LOCATION OF WELL (legal description) County Washington Twp 1 south N/S Range 1 West E/W WM Sec 21 SE 1/4 of the SW 1/4 Tax Lot 200 Tax Map Number Lot Lat Long [X] Street address of well [] Nearest address

13520 SW Hanson Rd, Beaverton OR97008

(7) STATIC WATER LEVEL Table with columns: Existing Well / Predeepening, Date, SWL(psi), + SWL(ft)

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

(8) WELL LOG Table with columns: Material, From, To. Includes 'RECEIVED JUN 22 2018 OWRD' stamp.

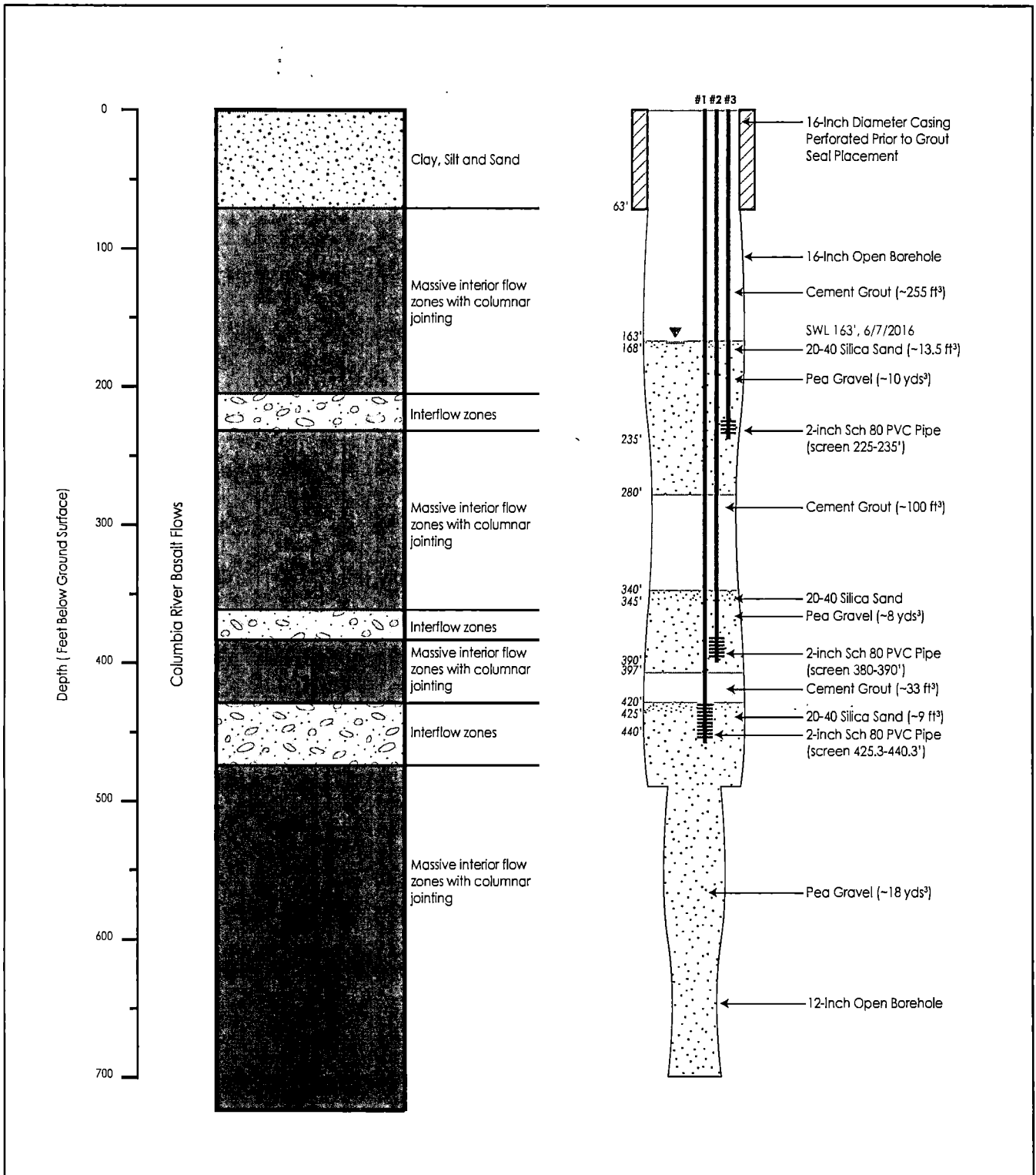
(5) WELL TESTS Table with columns: Pump, Bailer, Air, Flowing Artesian, Yield gal/min, Drawdown, Drill stem/Pump depth, Duration (hr)

Temperature °F Lab analysis [] Yes By Supervising Geologist/Engineer Water quality concerns? [] Yes (describe below) Table with columns: From, To, Description, Amount, Units

Date Started 6/7/2016 Completed 3/9/2017

(unbonded) Monitor 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 monitoring well construction standards. License Number 10452 Date 3/16/2017 Signed Jay Durbin

(bonded) Monitor Well Constructor Certification I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. License Number 10581 Date 3/16/2017 Signed [Signature]



Notes:

Well drilled in 1945
 Well Log ID = WASH 8988
 Well located in Township 1 South, Range 1 West, Section 21
 SWL = static water level

ASR 1
Nested Monitoring Well
As-Built
 Beaverton, Oregon

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Oregon

Kate Brown, Governor

Water Resources Department
North Mall Office Building
725 Summer St NE, Suite A
Salem, OR 97301
Phone (503) 986-0900
Fax (503) 986-0904
www.wrd.state.or.us

May 25, 2016

BRIAN OWENS MWC#10581
HOLT SERVICES INC
10621 TODD ROAD EAST
EDGEWOOD, WASHINGTON 98372

FINAL ORDER

Dear Mr. Owens:

The Special Standards Request Form you submitted for owner: City of Beaverton, Start Card number 1030648, is hereby approved for the following: You may convert this water supply well (WASH 8988) into a multi-completion piezometer well by installing three 2-inch casings in the existing well borehole. The three casings shall be screened and filter packed into the three distinct interflow zones as shown on the ASR1, Hanson Road Well schematic borehole drawing submitted with this Special Standards Request. The piezometer well casings shall be separated by at least two inches by the use of centralizers and each casing shall be spaced in the borehole at least two-inches away from the borehole wall to allow for an adequate cement grout seal. A condition of this Special Standards Request approval is that there shall be no comingling of the interflow zones and the placement of the cement grout seal between these interflow zones shall conform to the Departments rules and result in a seal that is free of voids or bridges. In addition, the existing 16 inch diameter casing shall be perforated prior to the grout seal placement as shown on the attached schematic borehole drawing. Mr. Barry Sanford, the well inspector for the Northwest Region shall be notified, at least three business days, prior to the cement grout seal placement so that he may be present. All other construction standards must be adhered to. A copy of your Special Standards Request form is attached.

The Well Construction Standards serve to protect ground water resources. By approving and issuing this special construction standard the Oregon Water Resources Department is not representing that a well constructed in accordance with this condition will maintain structural integrity or that it meets engineering standards. The well constructor/or landowner is responsible for ensuring that a well is constructed in a manner that protects ground water resources as required under Oregon Administrative Rules 690-200 through 690-240.

If you have any questions concerning this letter, I may be contacted at (503) 986-0852, or by e-mail at Joel.W.Jeffery@ wrd.state.or.us.

Sincerely,

Joel Jeffery, Coordinator
Well Construction Program
Well Construction and Compliance Program

enclosure

cc: Barry Sanford, NW Region Well Inspector
File

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This is a final order in other than contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080 you may either petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.

ASRT



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

Special Standards
Request Form

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before the request can be considered, this form must be completed. Requests shall be submitted to the Well Construction Program Coordinator, Water Resources Department, 725 Summer Street NE, Suite A, Salem OR 97301-1266. Requests may also be considered by the appropriate Regional Manager.

Date of request: 5/20/2016 Oral approval date (if applicable): Nov 2015

Bonded Well Constructor (name, license #, and mailing address): Brian Owens

License # 10581 10621 Todd RD East Edgewood, WA 98372

(1) Location of Well: SE 1/4 SW 1/4 Tax lot 200 Section 21
Township 1 S, Range 1 W, Washington County
Address at well site: Sorrento Well Field Site Entrance at Intersection of SW Hanson Rd and SW 135th Ave
Beaverton, OR 97008

(2) Start Card Number(s)(for work to be done): 1030648

(3) Name and Address of Land Owner: City of Beaverton 12725 SW Millikan Way, Beaverton, OR 97076

(4) Distance to the nearest septic tank, drainfield, closed sewage line (if water supply well)

(5) The unusual site conditions which necessitate this request: Existing water supply well
with multiple flow zones available for isolation and head water level measurements during ASR operation
of new replacement ASR well

(6) The proposed construction methods that the bonded well constructor believes will be adequate for this well: (attach additional pages if needed)

Install nested piezometers to isolate flow zones and allow isolated pressure transducer monitoring

See attached diagram that was previously discussed between Joel Jeffrey and Larry Eaton

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SALEM, OREGON

- (7) Diagram showing the pertinent features of the proposed well design and construction:
(attach additional pages if needed)

PLEASE NOTE:

- (1) The Well Construction Standards serve to protect ground water resources. By approving and issuing this special construction standard the Oregon Water Resources Department is not representing that a well constructed in accordance with this condition will maintain structural integrity or that it meets engineering standards. The well constructor/or landowner is responsible for ensuring that a well is constructed in a manner that protects ground water resources as required under Oregon Administrative Rules 690-200 through 690-240.
- (2) If it should be determined at some future date that the well, due to its construction, is allowing ground water contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior oral approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: _____

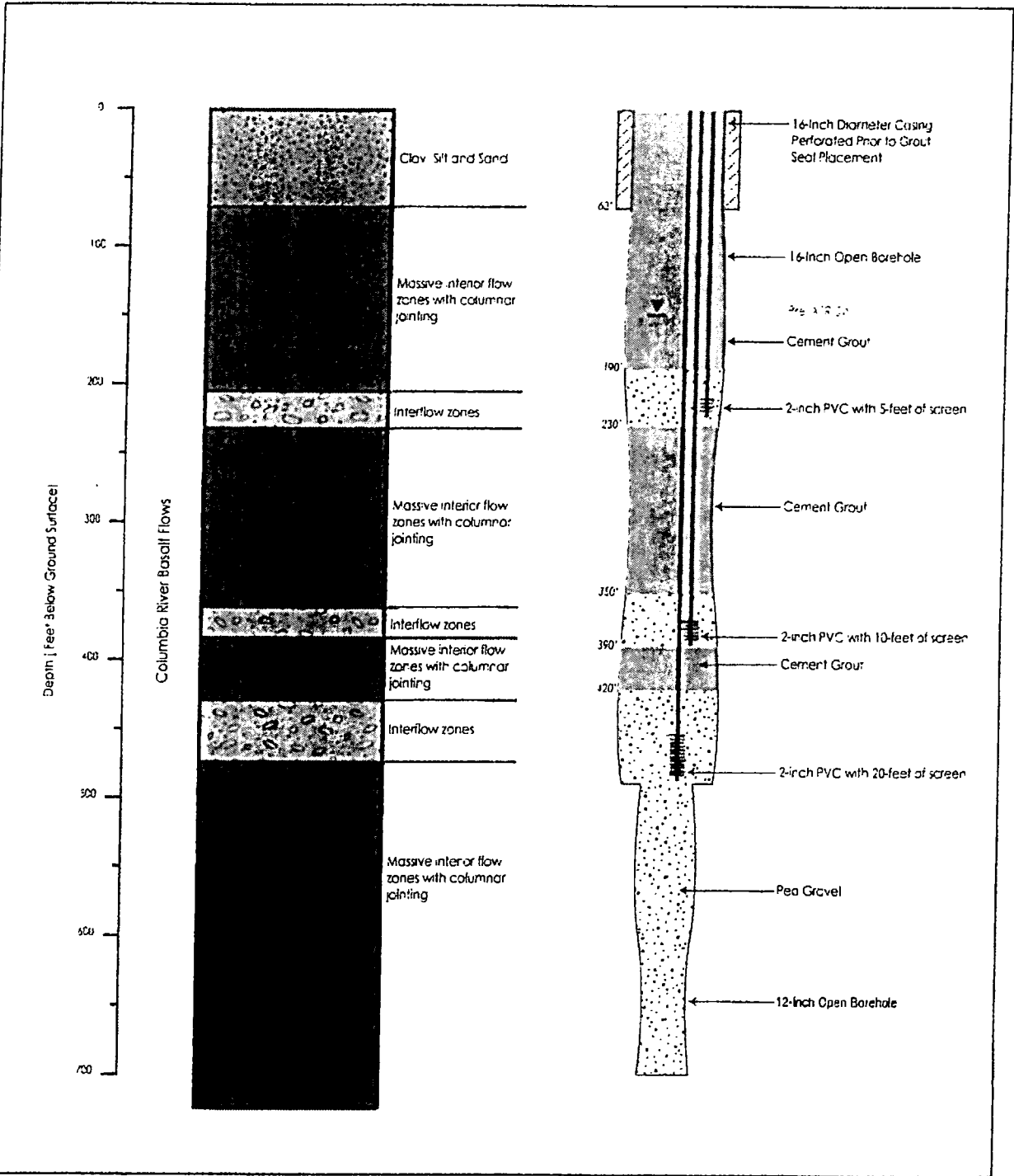
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Notes:

Well drilled in 1945
 Well Log ID = WASH 8988
 Well located in Township 1 South, Range 1 West, Section 21
 SWL = static water level

FIGURE 7

ASR 1, Hanson Road Well
 Conversion to Nested Monitoring Well
 Beaverton, Oregon

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Portland 100 - Beaverton-077 ASR 5 Figures

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STATE ENGINEER
Salem, Oregon

WASH Well Record

STATE WELL NO. 1114-21P0
COUNTY Washington
APPLICATION NO. GR-343

008988

OWNER: City of Beaverton

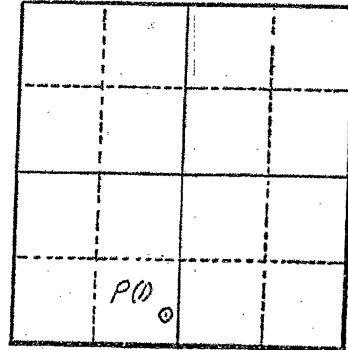
MAILING ADDRESS: City Hall

LOCATION OF WELL: Owner's No. #2

CITY AND STATE: Beaverton Oregon

SE 1/4 SW 1/4 Sec. 21 T. 1 S., R. 1 W., W.M.

Bearing and distance from section or subdivision corner 2500 feet east and 460 feet north from the SW corner of section 21,



Section 21

Altitude at well 350 feet Interpolated

TYPE OF WELL: Drilled Date Constructed 1945

Depth drilled 800 Depth cased 800

CASING RECORD:

- 16 — inch casing set from 0 to 63 feet,
- 15 — " " " " 63 to 450 feet,
- 12 — " " " " 450 to 800 feet,

FINISH:

none ?

AQUIFERS:

rock from 90 to 800 feet,

WATER LEVEL:

170 feet below land surface. Dec. 1945.

PUMPING EQUIPMENT: Type Fairbanks-Morse Turbine H.P. 60
Capacity 950 G.P.M.

WELL TESTS:

Drawdown 80 ft. after _____ hours pumping ? G.P.M.
Drawdown _____ ft. after _____ hours _____ G.P.M.

USE OF WATER Municipal 950 gpm ²⁰⁰⁰ Temp. _____ °F. _____ 19____

SOURCE OF INFORMATION Reg. Statement GR-343

DRILLER or DIGGER _____

ADDITIONAL DATA:

Log Yes Water Level Measurements _____ Chemical Analysis X Aquifer Test _____

REMARKS:

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STATE ENGINEER
Salem, Oregon

State Well No. 11W-21 P.O.
County Washington
Application No. GR-343

Well Log

Owner: City of Beaverton, Oregon Owner's No. #2

Driller: - Date Drilled 1945

CHARACTER OF MATERIAL	(Feet below land surface)		Thickness (feet)
	From	To	
soil & clay	0	34	34
rock, soft, gray	34	38	4
clay, yellow	38	54	16
Columbia River Lava (basalt)	54	196	142
rock, soft gray - water bearing at 90'-96'	54	96	42
rock, hard gray to blue	196	720	524
rock, hard blue with (seams)	720	735	15
rock, water bearing	736	736	0
rock, hard blue (with water)	736	800	64

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