

STATE OF OREGON
WATER SUPPLY WELL REPORT
 (as required by ORS 537.765)
 Instructions for completing this report are on the last page of this form

DESC 55853
 Desc
 55853

WELL ID # 64895
 (START CARD) # 150744

(1) OWNER: Well Number: #6
 Name City of Redmond
 Address 875 S.E. Sisters, Ave.
 City Redmond State OR Zip 97756

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

(3) DRILL METHOD:
 Rotary Air Rotary Mud Cable Auger
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other

(5) BORE HOLE CONSTRUCTION:
 Special Construction approval Yes No Depth of Completed Well 855 ft.
 Explosives used Yes No Type Amount

HOLE			SEAL			Amount
Diameter	From	To	Material	From	To	sacks or pounds
26in	0	867	Cement Grout	374	399	88 sacks
			Cement	0	98	12 Cu. Yds.

How was seal placed: Method A B C D E
 Other
 Backfill placed from 99 ft. to 399 ft. Material Bentonite 31cyd
 Gravel placed from 399 ft. to 855 ft. Size of gravel 6x12 RMC

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	16in	+2	550	.375	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	16in	850	855	.375	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

Perforations Method Factory
 Screens Type Slotted Material SS316L

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
550	850	.070		16in	pipe	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour
 Pump Bailer Air Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
2700	6	400	24 hr.

Temperature of Water 54 Depth Artesian Flow found
 Was a water analysis done? Yes By whom
 Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other
 Depth of strata:

(9) LOCATION OF WELL by legal description:
 County Deschutes Latitude Longitude
 Township 15S N or S. Range 13E E or W. of WM.
 Section 21(D) NW 1/4 SE 1/4
 Tax lot 400 Lot Block Subdivision
 Street Address of Well (or nearest address) 2551 S.W. 6th St.,
 Redmond, OR

(10) STATIC WATER LEVEL:
 336 ft. below land surface. Date 12/22/03
 Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:
 Depth at which water was first found

From	To	Estimated Flow Rate	SWL
342	697	1500	336
697	811	1000	336
811	867	4000+	336

(12) WELL LOG:
 Ground elevation

Material	From	To	SWL
See attached lithology prepared by Mr. Dale Bugenig. Hole sloughed back prior to casing installation in bottom. 857-867.			
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JAN 28 2004			
WESTERN WATER DEVELOPMENT P.O. Box 1670 Redmond, OR 97756			
Date started 4/2/03		Completed 12/31/03	

(unbonded) Water Well Constructor Certification:
 I certify that the work I performed on the construction, 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 my best knowledge and belief.
 Signed _____ WWC Number _____ Date _____

(bonded) Water Well Constructor Certification:
 I accept responsibility for the construction, 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.
 Signed Robert Buckner WWC Number 1385 Date 1/27/04

DESC 55853

DRILLERS' LOG OF BOREHOLE

BOREHOLE REDMOND WELL #6

PAGE 1 OF 6

LOC. OR COORDS. SE 1/4 Sec. 21, T. 15S., R. 13 E. (Williamette MA)

GROUND ELEV. _____

TOTAL DEPTH _____

BOREHOLE DIAM. 2.6"

DRILLER WESTERN WATER DEVELOPMENT

RIG BUCKEYS-BRIE 36L

BIT(S) 2.6" Spur

FLUID Not Applicable

START DATE 4/02/03 FINISH DATE 10/31/03

TIME 08:30 16:00

GEOPHYS. LOG YES NO

HOW LEFT See Cost-log

LOCATION 121° 10' 42.8" W 44° 15' 33.4" N
 LOGGED BY GALE ABERNATHY & BOB BUCKNER
 PROJECT CITY OF REDMOND, OR
 WELL #6

DEPTH	PEN. RATE	CIRC. RET. LOSS	AIR LIFT Q (GPM)	MATERIAL	SYMBOL	DESCRIPTION AND COMMENTS
	1.047	6.6	7/2		0-1 Brown sand 1-2 Broken brown & grey lava	
10		6.5	4/3	Lava Flow		2-14' Grey vesicular lava
		6.0	4/4			
		2.5	4/3			
20		3.5	4/8			14-24' Hard grey lava
		6	4/8	Rubble Zone		24-28.5' Brown lava / red cinders
30		4	4/10			
		1	4/8			31-32 Hard grey lava 32-33 Brown lava
		2	4/11			33-35 Dark brown & grey lava rock, broken or caving
		3	4/10			35-38 Brown & grey lava, broken, caving
40		3	4/10			38-40 Hard grey lava
		3	7/10			40-43 Hard grey lava
		2	4/10			43-45 Hard grey rock
		2	4/10			45-47 Hard grey rock
50		3	4/13			47-50 Grey lava rock
		5	4/13			Hard grey lava
		4	4/14	Lava Flow		55-59 Hard grey lava
60		2.5	4/15			Med grey lava
		6	4/18			61-66 medium grey lava
70		5	4/18			66-71 Medium grey lava
		6	4/30			71-77 Medium grey lava
80		8	5/1			Med. grey lava
		4	5/2			Med. hard grey lava
90		6	5/3	Inter Flow Zone		86-88 Med Hard grey lava 88-91 Red & Brown Conglomerate
		3	5/10			91-92 Harder grey & brown lava
		6	5/7			92-95 Hard dark grey lava
100		5	5/8			95-101 Black, grey & brown lava
		4	5/9	Cinders sandstone?		107.5-108.5 Red Cinder conglomerate
110		3	5/10			110-113
		2	5/11			113-115 Brown & Grey Lava
		4	5/12			115-119 Brown & Grey Lava
120		3	5/13			119-122 Hard grey lava
		5	5/14	Lava Flow		122-127 Grey lava
130		4	5/15			127-131 Med. grey lava
		3	5/16			131-134 Hard grey lava
		2	5/17			134-136 Hard Grey lava
140		6	5/17			136-142 Med grey lava
		4	5/10			142-146 Med grey lava
		9	5/21	Sandstone		146-147 Med. grey lava 147-150 Red & brown sandstone

Added cement to stabilize borehole

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DESC
55853

DRILLERS'
LOG OF BOREHOLE

BOREHOLE REDMOND WELL #6

PAGE 2 OF 6

LOC. OR COORDS. SE 1/4 SEC. 21
T. 15S, R. 13E. (Willems He Meridian)
GROUND ELEV. _____
TOTAL DEPTH 872 FT
BOREHOLE DIAM. 26"

DRILLER WESTERN WATER
DEVELOPMENT
RIG BURBUS-ERIE 36L
BIT(S) 26" STAR
FLUID Not Applicable

START FINISH
DATE 4/02/03 12/30/03
TIME 08:30 16:00
GEOPHYS. LOG YES NO
HOW LEFT See Constr Log

LOCATION 121° 10.428' W 44° 15.173' N
LOGGED BY GAIL ABERNATHY & BOB BICKELMAN
PROJECT CITY OF REDMOND, OR
WELL # 6

DEPTH	PEN. RATE	CIRC RET. LOSS	AIR LIFT Q(GPM)	MATERIAL	SYM-BOL	DESCRIPTION AND COMMENTS
160	9 5/15	7 5/22			150-151 Red & brown sandstone	RECEIVED JAN 28 2004
					155-162 Medium brown sandstone	
170	6 5/24	8 5/28		Sandstone	170-172 Brown & green sandstone 172-176 Brown & grey - Broken	MISSING reports Water loss 174'
180	5 5/29	3 5/23			177-179 Brown & black sandstone	
190	4 6/2	2.5 6/3			187-189 Brown & black sandstone 189-192 Grey & black sandstone 192-196 Grey & brown lava 196-198.5 Broken brown & grey lava	
200	3 6/5	5 6/6		Basalt Lava Flow	198.5-203 Hard grey basalt, broken 203-206 Hard grey basalt, broken	
210	2 6/7	3 6/9			206-211 Hard grey basalt, broken	
220	4 6/10	4 6/11			211-213 Grey basalt 213-216 Grey basalt 216-220 Hard grey basalt 220-224 Hard grey basalt	
230	4 6/12	2 6/13		Basalt Lava Flow	224-228 Hard grey basalt. Loss zone @ 224.5' Broken 224'-226' Hammer 226-228'	Loss zone @ 224.5' Run 2nd Plumbness Test
240	7 6/14	5 6/15			228-230 Broken grey lava 230-235 Broken black & brown lava 235-238 Hard dark grey-black lava - Caving ? 238-242 Black & Brown lava - Sloughing + 2226'	
250	4 6/13	5 6/14		Basalt Lava Flow	242-247 Black & brown lava, softer & broken 247-253 Black & brown lava	
260	8 6/20	8 6/26		Volcanic Conglomerate	253-257 Hard grey basalt 257-260 Hard grey basalt 260-262 Broken grey lava 262-264 Broken grey	
270	8 6/26	11 6/27			264-270 Brown volcanic conglomerate 270-278 Brown volcanic conglomerate	
280	3 6/25	7 7/6			278-292 Brown volcanic conglomerate	
290	3 6/25				292-295 Brown volcanic conglomerate	Rig down for repairs thru 3/10
300	7 7/6				293-300 Dark grey volcanic conglomerate	

DRILLERS' LOG OF BOREHOLE

BOREHOLE Redmond Well 6

PAGE 3 OF 6

LOC. OR COORDS. SE 1/4 Sec 21

DRILLER WESTERN WATER

START

FINISH

T.15N, R.13E. (Willamette Meadows)

DEVELOPMENT

DATE 4/02/03

10/30/03

GROUND ELEV. _____

TIME 08:30

16:00

TOTAL DEPTH 372 FT

RIG BUCKHORN ERB 36L

GEOPHYS. LOG XYES NO

BOREHOLE DIAM. 2 1/2"

BIT(S) 2 1/2" STAR

HOW LEFT See Contn. Log

FLUID M/A

LOCATION 121° 10' 42" W 44° 14' 17" N
LOGGED BY E. FERENCZY & B.B. BUCKHORN

PROJECT CITY OF REDMOND, OR
WELL #6

DEPTH	PEN. RATE	CIRC.		AIR LIFT Q(GPM)	MATERIAL	SYM-BOL	DESCRIPTION AND COMMENTS
		RET.	LOSS				
		7	7/8		volcanic conglom-erate		300-307
310		5	7/9				307-312 Dark grey volcanic conglomerate
		6	7/10				312-316 Dark grey volcanic conglomerate
320					Sandstone		316-318 Brown hard sandstone
		7	7/11				318-325 Brown sandstone
		7	7/11				325-327 Brown sandstone
330		7	7/11				327-332 Brown sandstone
		6	7/15	swl 335-340'			332-336 Dark grey sandstone
340					Sandstone w/ gravel		336-338 Brown sandstone
		9	7/16				338-347 Brown sandstone w/ gravel
350		11	7/17				347-358 Brown sandstone w/ gravel & silt
360		12	7/18				358-370 Brown sandstone w/ gravel
370					Sandstone		
		10	7/21				370-380 Grey sandstone
380		7	7/25				Note: problems with casing, lost 9' 7/25, drilled 380 to 371'
		10	7/21				380-381 gravelly sandstone
390							381-391 Light grey sandstone
		10	7/25				391-397 grey sandstone
400		8	7/28				397-405 Brown & grey sandstone
410		15	7/29				405-418 Brown sandstone
420		10	7/30				418-428 Brown & grey sandstone
430		10	7/31				428-438 Brown & grey sandstone
440		8	8/1				438-448 Brown & grey sandstone
450		6	8/4				448-451 Red-brown sandstone - Planimeter alignment test per form on 2/4/01

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WATER RESOURCES DEPT
RENO, NV

DRILLERS' LOG OF BOREHOLE

BOREHOLE Redmond Well 6

PAGE 4 OF 6

LOC. OR COORDS. SE 1/4 Sec 21, T.15S, R.13E. (Williamette) DRILLER WESTERN WATER DEVELOPMENT

GROUND ELEV. _____

TOTAL DEPTH 872 ft RIG Bucyrus Erie 36L

BOREHOLE DIAM. 26" BIT(S) 26" steel

FLUID N/A

START FINISH

DATE 4/02/03 10/30/03

TIME 08:50 16:00

GEOPHYS. LOG YES NO

HOW LEFT See Condu Log

LOCATION 12° 10' 42.8" N 124° 44' 15.73" W
LOGGED BY GALE ABERNATHY & BOB BUCKNER

PROJECT CITY OF REDMOND
WELL #6

DEPTH	PEN. RATE	CIRC. REC. LOSS	AIR LIFT (GPM)	MATERIAL	SYM-BOL	DESCRIPTION AND COMMENTS
460	11	8/5		sandstone	457-462	Red brown sandstone
470	14	8/6			462-470	Brown-tan sandstone
480	11	8/7			470-477	Grey sandstone
490	8	8/8			477-487	Grey sandstone
500	13	8/11			487-492	Grey sandstone - possibly broken. Add 1 sack cement
510	12	8/12			492-500	Brown & grey sandstone
520	10	8/13			500-508	Grey sandstone, softer
530	12	8/14		sandstone w/ gravel	508-520	Grey sandstone w/ black sand streaks
540	12	8/15			520-530	Brown & grey sandstone
550	13	8/18			530-542	Brown sandstone w/ pea gravel
560	10	8/19			542-557	Dark grey sandstone w/ gravel
570	13	8/20			557-567	Dark grey sandstone w/ gravels
580	15	9/20			567-577	Dark grey sandstone w/ gravels possibly sloughing
590					577-590	Dark grey sandstone w/ gravel
600					590-597	Dark grey sandstone w/ gravels
					597-599	Tan-brown sandstone w/ gravels

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LOG OF BOREHOLE

DRILLERS'

BOREHOLE Redmond well 6

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LOC. OR COORDS. SE 1/4 Sec 21 T.15S R.13E (Williamette)
 GROUND ELEV. _____
 TOTAL DEPTH 872 FT
 BOREHOLE DIAM. 26"

DRILLER WESTERN
WATER DEVELOPMENT
 RIG Buck Rig-EZIE 366
 BIT(S) 26" STAR
 FLUID N/A

START FINISH
 DATE 4/02/03 10/30/03
 TIME 08:30 16:00
 GEOPHYS. LOG YES NO
 HOW LEFT See Constr. Log

LOCATION 121° 10' 42" W 44° 15' 17.5" N
 LOGGED BY SALE ABERNATHY & BOB BUCKNER

PROJECT CITY OF REDMOND
 WELL # 6

DEPTH	PEN. RATE	RISE Per 100 feet	AIR LIFT Q(GPM)	MATERIAL	SYM- BOL	DESCRIPTION AND COMMENTS
610	15	8/11		sandstone w/ gravel		577-605 Tan-brown sandstone w/ gravels
620	12	8/22				605-618 BROWN sandstone w/ gravel
630	14	8/15				618-632 Brown sandstone w/ gravel
640	10	8/12				632-650 Dark brown sandstone w/ cinders & gravels
650						
660	9	8/23				650-670 Dark brown sandstone w/ gravels
670						
680	16	8/28				670-686 Dark brown sandstone w/ gravels
690						
700	12 1/2	8/29				686-697 Dark brown sandstone w/ gravels & cinders 697-699 Hard gray lava 699-703 Hard gray lava
710	5 3 1.5	9/2 9/13 4/4		Basalt lava flow		703-706 Hard gray basalt 706-708.5 Hard gray basalt 708.5-712.5
720	4 1.5 3.5	9/5 9/8 7/7 9/10				712-715 Hard gray basalt 715-716.5 Hard gray basalt
730	4 4	9/11 9/12 9/15				720-724.5 Hard lt gray basalt 724.5-729 Hard gray basalt 729-733 Hard gray basalt
740	8	9/16		sandstone w/ gravel		733-735.5 Hard gray basalt 735.5-741 Brown sandstone w/ small gravel
750	12	7/7				741-746 Brown sandstone w/ gravel 746-753 gray sandstone w/ gravel

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DRILLERS' LOG OF BOREHOLE

BOREHOLE Redmond Well 6

PAGE 6 OF 6

LOC. OR COORDS. SE 1/4 Sec 21
T.15S. R.13E (Williamette)
 GROUND ELEV. _____
 TOTAL DEPTH 872 ft
 BOREHOLE DIAM. 2.6"

DRILLER WESTER
WATER DEVELOPMENT
 RIG BUCYRUS-FOJES 36L
 BIT(S) 2.6" STA2
 FLUID NONE

START FINISH
 DATE 4/02/03 10/30/03
 TIME 08:30 18:00
 GEOPHYS. LOG X YES NO
 HOW LEFT SLC Constr.
Log

LOCATION 121°10.428'W 44°01.173'N
 LOGGED BY GEO ARSENATHY & BOB BUCKNER
 PROJECT CITY OF REDMOND
 WELL # WELL #

DEPTH	PEN. RATE	TIME		AIR LIFT Q(GPM)	MATERIAL	SYM-BOL	DESCRIPTION AND COMMENTS
		START	FINISH				
740	12	9/13			Sandstone	736-753	grey sandstone w/ gravel
	4	9/18			Basalt	753-757	Hard grey vesicular lava
	3	9/19		757-760		Hard grey basalt	
	3	9/22			760-763	Hard grey basalt	
770	4	11/23			Flow boundary?	763-765	Hard grey basalt
	4	11/23		765-767		Dark grey lava (soften)	
780	7	7/24				767-774	Dark grey lava
	6	7/25				774-780	Grey vesicular lava
790	4	9/26				780-784	Grey Vesicular Basalt, Harder
	4	7/27				784-788	
	4	9/30				788-792	Hard grey basalt
	2	10/1				792-797	Hard grey basalt
800	3	10/1			Flow boundary?	797-799	Hard grey basalt
	7	10/1				799-803	Grey vesicular lava (broken?)
	2					803-806	Hard grey basalt
810	5	10/8				806-807	Hard grey basalt
	5	10/9				807-811	Dark grey vesicular lava Note: Driller remarked the water in the bailer was clean.
820	1	10/10			Flow boundary?	811-816	Dark grey Vesicular Lava
	5	10/10				816-817	Grey vesicular lava
820	3	10/14			NO CUTTINGS	817-822	Grey Vesicular Lava? NO SAMPLE AFTER 818 FT "LIVE WATER" OBS
	5	10/14				822-825	Grey Vesicular Lava? NO SAMPLE COLLECTED IN BAILER
820	5	10/14				825-830	Fractured lava? NO SAMPLE
	5	10/16				830-835	Fractured lava? NO SAMPLE
840	7	10/20				835-842	Fractured lava? NO SAMPLE
	3	10/21				842-845	Fractured lava? Harder. Cuttings returned 843'
850	2	10/22				845-848	Dark grey basalt
	3	10/23				848-850	Hard grey basalt. Gaining (from 800s)
860	4	10/24			NO CUTTINGS	850-854	Hard grey lava
	12	10/27				854-860	Broken grey lava? No cuttings
870	5	10/28			Cinders, sand & gravel	860-866	Dark red-brown cinders with sand & small gravel "Good hole"
	1	10/28				866-868	Brown red cinders & gravels, NO 1/4" of fine the start of shaft. Cylinders
880						868-871	Brown & grey vesicular lava.
						871-872	[Terminate drilling on 10/29 due to formation instability. Bail the hole on 10/30 E-Logged 11/2/03 - slotted in to 862'

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