City of Redmond Well #1

G4981

H

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON 97310 within 30 days from date of well completion.

RECEIVED
AUG 13 1969
STATE ENGINEER
SALEM, OREGON

WATER WELL REPORT
STATE OF OREGON
(Please type or print) (Do not write above this line)

DESC 3853

State Well No. 15/13-9ab

State Permit No.

(1) OWNER:
Name CITY OF REDMOND ORE.
Address CITY HALL REDMOND ORE

(2) TYPE OF WORK (check):
New Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ]
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:
Rotary [ ] Driven [ ]
Cable [X] Jetted [ ]
Dug [ ] Bored [ ]

(4) PROPOSED USE (check):
Domestic [ ] Industrial [ ] Municipal [X]
Irrigation [ ] Test Well [ ] Other [ ]

CASING INSTALLED:
Threaded [ ] Welded [X]
16 OD" Diam. from 0 ft. to 19 ft. Gage 250
12 3/4" Diam. from 0 ft. to 300 ft. Gage 250
" Diam. from ft. to ft. Gage

PERFORATIONS:
Perforated? [X] Yes [ ] No
Type of perforator used FACTORY
Size of perforations 1/2 in. by 2 in.
3200 perforations from 200 ft. to 300 ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS:
Well screen installed? [ ] Yes [X] No
Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(8) WATER LEVEL: Completed well.
Static level 168 ft. below land surface Date 7-15-69
Artesian pressure lbs. per square inch Date

(9) WELL TESTS:
Drawdown is amount water level is lowered below static level
Was a pump test made? [X] Yes [ ] No If yes, by whom? GEO-BAKER
Yield: 500 gal./min. with NO ft. drawdown after 5 hrs.
1300 " 40 " 72 "
1400 " 73 " 2 "
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water 54 Was a chemical analysis made? [X] Yes [ ] No

(10) CONSTRUCTION:
Well seal—Material used CEMENT - GROUT
Depth of seal 29 ft.
Diameter of well bore to bottom of seal 18 in.
Were any loose strata cemented off? [ ] Yes [X] No Depth
Was a drive shoe used? [ ] Yes [X] No
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? [X] Yes [ ] No Size of gravel:
Gravel placed from 300 ft. to 159 ft.

RECEIVED
MAR 27 2008
WATER RESOURCES DEPT
SALEM OREGON

(11) LOCATION OF WELL:
County DESC Driller's well number
NE ¼ NW ¼ Section 9 T. 15S R. 13E W.M.
Bearing and distance from section or subdivision corner

(12) WELL LOG:
Diameter of well below casing CASED
Depth drilled 330 ft. Depth of completed well 300 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 as drilling proceeds. Note drilling rates.

MATERIAL	From	To	SWL
OVER BURDEN	0	5	
HARD LAVA	5	17	
BOULDER CONE-	17	20	
SOFT LAVA -	20	38	
HARD RED LAVA	38	50	
BROKEN RED LAVA	50	56	
HARD GREY LAVA	56	58	
RED CONE	58	88	
MED HARD RED LAVA	88	96	
HARD BLUE LAVA	96	108	
SOFT BROWN LAVA	108	118	
SOFT CONE	118	129	
SOFT GREY LAVA	129	137	
CREVIS	137	140	
CAVING BOULDER CONE-	140	157	
SAND STONE	157	135	
SOFT LAVA	135	165	
WATER BEARING SAND	165	199	175
HARD BLUE GRAVEL	199	220	
RED CINDERS	220	235	
WATER BEARING PUMICE	235	265	
CRUSH STRATA	265	280	
SAND	280	320	165

Work started 4-11 1969 Completed 7-15 1969
Date well drilling machine moved off of well 7-15 1969

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] Thomas Roman (Drilling Machine Operator) Date 8-1, 1969
Drilling Machine Operator's License No. 320

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 JACKSON DRILLING (Person, firm or corporation) (Type or print)
Address REDMOND ORE.
[Signed] Thomas J. Cooper (Water Well Contractor)
Contractor's License No. 442 Date 8-1, 1969

(USE ADDITIONAL SHEETS IF NECESSARY)

City of Redmond Well #2

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

DESC 3879

WATER WELL REPORT
STATE OF OREGON
(Please type or print)
(Do not write above this line)

RECEIVED
FEB 18 1975
STATE ENGINEER
SALEM, OREGON

State Well No. 15S/13E-16cb
State Permit No.

(1) OWNER:
Name City of Redmond
Address Redmond, Oregon

(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 ☒
16 " Diam. from 2 ft. to 280 ft. Gage .250
14 " Diam. from 255 ft. to 433 ft. Gage .250
" Diam. from ft. to ft. Gage

(6) PERFORATIONS:
Perforated? ☒ Yes ☐ No.
Type of perforator used Factory slot
Size of perforations 6 in. by 1/8 in.
2,000 perforations from 255 ft. to 423 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? H. & H. Drilling, Inc.
Yield: 117½ gal./min. with 35 ft. drawdown after 29 hrs.
" " " "
" " " "
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m.
Temperature of water 52 Depth artesian flow encountered ft.

(9) CONSTRUCTION:
Well seal—Material used Portland Cement
Well sealed from land surface to 280 20 to 40' 20" ft.
Diameter of well bore to bottom of seal 18 to 280 in. 18"
Diameter of well bore below seal 16 in.
Number of sacks of cement used in well seal 34 Yards sacks
Number of sacks of bentonite used in well seal sacks
Brand name of bentonite
Number of pounds of bentonite per 100 gallons of water lbs./100 gals.
Was a drive shoe used? ☐ Yes ☒ No Plugs Size: location
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? potable depth of strata
Method of sealing strata off
Was well gravel packed? ☐ Yes ☒ No Size of gravel:
Gravel placed from ft. to ft.

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MAR 27 2008
WATER RESOURCES DEPT
SALEM, OREGON

(10) LOCATION OF WELL:
County Deschutes Driller's well number
NW ¼ SW ¼ Section 16 T. 15 S R. 13 East W.M.
Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.
Depth at which water was first found 278 ft.
Static level 265 ft. below land surface. Date 2-14-75
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:
Diameter of well below casing 16 to bottom
Depth drilled 452 ft. Depth of completed well 452 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
Top Soil	0	4	
Mild Brown Lava	4	15	
Brown Conglomorate	15	85	
Pumice	85	95	
Tan Conglom.	95	157	
Loose Black Cinders	157	164	
Hard Black Lava	164	205	
Red Cinders	205	225	
Black Sand	225	236	
Brown Sandstone	236	278	
Water bearing Brown Sandstone	278	400	265
Hard Clay stone	400	427	
Tan " with some sand small gravel	427	433	
Hard Clay stone	433	449	
Black Basalt	449	452	

Work started 2-15 1974 Completed 2-14 1975
Date well drilling machine moved off of well 2-14 1975

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] Tom Postwell (Drilling Machine Operator) Date 2-14, 19 75
Drilling Machine Operator's License No. 558

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 H. & H. DRILLING, INC. (Person, firm or corporation) (Type or print)
Address P.O. Box 51 Redmond, Oregon 97756
[Signed] Tom Postwell (Water Well Contractor)
Contractor's License No. 488 Date 2-14, 19 75

(USE ADDITIONAL SHEETS IF NECESSARY)

SP*45656-119

City of Redmond Well #4

Desc 407 Sec. Per Wm is 22 'cw

15s/13E-22bd (for official use only)

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

PLEASE TYPE or PRINT IN INK

(1) OWNER:
Name City of Redmond
Address City Hall
City Redmond State Oreg. 97756

(2) TYPE OF WORK (check):
New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:
Rotary Air ☐ Driven ☐
Rotary Mud ☐ Dug ☐
Cable ☒ Bored ☐

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Thermal: Withdrawal ☐ Reinjection ☐
Other: Piezometric ☐ Grounding ☐ Test ☐

(5) CASING INSTALLED: Steel ☒ Plastic ☐ Threaded ☐ Welded ☒
18" Diam. from +3 ft. to 718½ ft. Gauge .375
" Diam. from ft. to ft. Gauge

LINER INSTALLED: Steel ☒ Plastic ☐ Threaded ☐ Welded ☒
12" Diam. from 707½ ft. to 765 ft. Gauge .250

(6) PERFORATIONS: Perforated? ☐ Yes ☒ No
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 Johnson
Type P.S. (see pg. 3 for full screen info) Model No.
Diam. 18 Slot Size .050 Set from 533.5 ft. to 553.5 ft.
Diam. 12 Slot Size .050 Set from 735 ft. to 755 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? Buckner Pump
Yield: 1300 gal./min. with 40 ft. drawdown after 72 hrs.
Air test gal./min. with drill stem at ft. hrs.
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m.
Temperature of water 54* Depth artesian flow encountered ft.

(9) CONSTRUCTION: Special standards: Yes ☐ No ☒
Well seal—Material used Portland Cement
Well sealed from land surface to 50 ft.
Diameter of well bore to bottom of seal 24 in.
Diameter of well bore below seal 24 in.
Amount of sealing material 85 sacks ☒ pounds ☐
How was cement grout placed? Pumped

Was pump installed? no Type HP Depth ft.
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: Monterey #8
Gravel placed from 520 ft. to 765 ft.
¾" gravel from 50' to 520'

(10) LOCATION OF WELL by legal description:
County Deschutes SE ¼ NW ¼ of Section 20 of
Township 15S (Township is North or South), Range 13E (Range is East or West), WM.
Tax Lot Lot Block Subdivision
MAILING ADDRESS OF WELL (or nearest address) unknown

(11) WATER LEVEL of COMPLETED WELL:
Depth at which water was first found 362 ft.
Static level 362 ft. below land surface. Date 5-24-85
Artesian pressure lbs. per square inch. Date

(12) WELL LOG: Diameter of well below casing ---
Depth drilled 765 ft. Depth of completed well 765 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
Top Soil, Sandy	0	2	
Broken Lava Conglomerate	2	8	
Lava Conglomerate	8	27	
Broken Lava, Cindery	27	30	
Red-Black Lava, Soild	30	55	
Pumice Conglomerate	55	60	
White Pumice	60	92	
Cindery Black Rock	92	97	
Red-Black Cindery Rock	97	105	
Cinders & Clinkers	105	113	
Red Cinders	113	122	
Cinders& Lava Rock	122	126	
Black Basalt	126	137	
Red- Black Basalt, Broken	137	143	
Hard, Black Basalt	143	247	
Red Cinders, Soft	247	251	
Black Basalt	251	254	
Red Cinders	254	345	
Brown Sandstone, Mild	345	365	
Brown Sandstone, Coarser	365	374	
Brown Sandstone W/Pea Gravel	374	385	

Date work started 11-27-84 /completed 5-25-85
Date well drilling machine moved off of well 5-25 19 85

(unbonded) Water Well Constructor Certification (if applicable):
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] (signature) Date 6-6, 19 85

(bonded) Water Well Constructor Certification:
Bond 10596951 (number) Issued by: AMWEST (Surety Company Name)
On behalf of Buckner Pump Service (type or print name of Water Well Constructor)

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
(Signed) Robert Buckner (Water Well Constructor)
(Dated) June 6, 1985

NOTICE TO WATER WELL CONSTRUCTOR
The original and first copy of this report are to be filed with the WATER RESOURCES DEPARTMENT, SALEM, OREGON 97310 within 30 days from the date of well completion.

SP*46866-690

 15s/13E-22DA

STATE OF OREGON

WATER WELL REPORT

(as required by ORS 537.765)

RECEIVED
JUL 12 1985
WATER RESOURCES DEPT
SALEM, OREGON

PLEASE TYPE or PRINT IN INK

(for official use only)

(1) OWNER:

Name City of Redmond
Address City Hall
City Redmond State Oreg. 97756

(2) TYPE OF WORK (check):

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

(3) TYPE OF WELL:

Rotary Air ☐ Driven ☐
Rotary Mud ☐ Dug ☐
Cable ☒ Bored ☐

(4) PROPOSED USE (check):

Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Thermal: Withdrawal ☐ Reinjection ☐
Other: Piezometric ☐ Grounding ☐ Test ☐

(5) CASING INSTALLED:

Steel Threaded ☒ Plastic ☐
Welded ☐ Welded ☒

18" Diam. from +3 ft. to 718½ ft. Gauge .375
" Diam. from ft. to ft. Gauge

LINER INSTALLED:

Steel Threaded ☒ Plastic ☐
Welded ☐ Welded ☒

12" Diam. from 707½ ft. to 765 ft. Gauge .250

(6) PERFORATIONS:

Perforated? ☐ Yes ☒ No
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 Johnson
Type P.S. (see pg. 3 for full screen info) Model No.
Diam. 18 Slot Size .050 Set from 533.5 ft. to 553.5 ft.
Diam. 12 Slot Size .5 Set from 735 ft. to 755 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? Buckner Pump
Yield: 1300 gal./min. with 40 ft. drawdown after 72 hrs.
Air test gal./min. with drill stem at ft. hrs.
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m.
Temperature of water 54* Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Special standards: Yes ☐ No ☒
Well seal—Material used Portland Cement
Well sealed from land surface to 50 ft.
Diameter of well bore to bottom of seal 24 in.
Diameter of well bore below seal 24 in.
Amount of sealing material 85 sacks ☒ pounds ☐
How was cement grout placed? Pumped

Was pump installed? no Type HP Depth ft.
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: Monteray #8
Gravel placed from 520 ft. to 765 ft.

¾ gravel from 50' to 520'

(10) LOCATION OF WELL by legal description:

County Deschutes SE ¼ NW ¼ of Section 20 of
Township 15S (Township is North or South), Range 13E (Range is East or West), WM.
Tax Lot Lot Block Subdivision
MAILING ADDRESS OF WELL (or nearest address) unknown

(11) WATER LEVEL of COMPLETED WELL:

Depth at which water was first found 362 ft.
Static level 362 ft. below land surface. Date 5-24-85
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing ---
Depth drilled 765 ft. Depth of completed well 765 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
Dk. Brwn. Sandstone & Blk. Sand	385	396	
Dk.Brwn.Sandstone-blk.Sand more firm	396	450	
Brwn. Sandstone-finer Sand some clay bonding	450	455	
Dk. Brown Sandstone, some mult- colored pea gravels,possible water-465-485'	455	528	
Grey-Brwn. Tufted Ash Layer Firm	528	540	
Sandstone Conglomerate, Slow Drilling Gravels-Dk. Brwn	540	565	
Med. Brwn. Sandstone	565	590	
Fine grained w/some clay bondg			
Dk. Brwn. Sandstone,Coarser Sands	590	620	
Coarse, DK. Brwn. Sandstone w/¼" minus pea gravels	620	645	
Coarse DK. Brwn. Sandstone W/ more gravel-harder	645	650	
Finer Grained Sandstone	650	697	

Date work started 11-27-84 /completed 5-25-85
Date well drilling machine moved off of well 5-25 19 85

(unbonded) Water Well Constructor Certification (if applicable):

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] [signature] Date 6-6, 19 85

(bonded) Water Well Constructor Certification:

Bond 10596951 (number) Issued by: AMWEST (Surety Company Name)
On behalf of Buckner Pump Service (type or print name of Water Well Constructor)

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief:

(Signed) (Water Well Constructor)
(Dated) June 6, 1985

NOTICE TO WATER WELL CONSTRUCTOR
The original and first copy of this report are to be filed with the WATER RESOURCES DEPARTMENT, SALEM, OREGON 97310 within 30 days from the date of well completion.

SP*46866-690

RECEIVED
MAR 27 2008
WATER RESOURCES DEPT
SALEM, OREGON

15S/13E-22bd

STATE OF OREGON

WATER WELL REPORT

(as required by ORS 537.765)

RECEIVED
JUL 12 1985
WATER RESOURCES DEPT
SALEM, OREGON

PLEASE TYPE or PRINT IN INK

(for official use only)

(1) OWNER:

Name City of Redmond
Address City Hall
City Redmond State Oreg. 97756

(2) TYPE OF WORK (check):

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

(3) TYPE OF WELL:

Rotary Air [ ] Driven [ ]
Rotary Mud [ ] Dug [ ]
Cable [X] Bored [ ]

(4) PROPOSED USE (check):

Domestic [ ] Industrial [ ] Municipal [X]
Irrigation [ ] Thermal: Withdrawal [ ] Reinjection [ ]
Other: Piezometric [ ] Grounding [ ] Test [ ]

(5) CASING INSTALLED:

Steel [X] Plastic [ ]
Threaded [ ] Welded [X]

18 " Diam. from +3 ft. to -718½ ft. Gauge .375
" Diam. from ft. to ft. Gauge

LINER INSTALLED:

Steel [X] Plastic [ ]
Threaded [ ] Welded [X]

12 " Diam. from 707½ ft. to 765 ft. Gauge .250

(6) PERFORATIONS:

Perforated? [ ] Yes [X] No
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? [X] Yes [ ] No
Manufacturer's Name Johnston
Type P.S. Model No.
Diam. 18 Slot Size .050 Set from 533.5 ft. to 553.5 ft. and 593.5' to 633.5' and 688.5 to 708.5 '
Diam. 12 Slot Size .050 Set from 735 ft. to 755 ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? [X] Yes [ ] No If yes, by whom?
1300 gal./min. with 40 ft. drawdown after 72 hrs.
Air test gal./min. with drill stem at ft. hrs.
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m.
Temperature of water 54* Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Special standards: Yes [ ] No [X]
Well seal—Material used Portland cement
Well sealed from land surface to 50 ft.
Diameter of well bore to bottom of seal 24 in.
Diameter of well bore below seal 24 in.
Amount of sealing material 85 sacks [X] pounds [ ]
How was cement grout placed? Pumped

Was pump installed? no Type HP Depth ft.
Was a drive shoe used? [ ] Yes [X] No Plugs Size: location ft.
Did any strata contain unusable water? [ ] Yes [X] No
Type of Water? depth of strata
Method of sealing strata off
Was well gravel packed? [X] Yes [ ] No Size of gravel: Monterey #8
Gravel placed from 520 ft. to 765 ft.

¼" gravel from 50' to 520'

(10) LOCATION OF WELL by legal description:

County Deschutes ¼ ¼ of Section 20 of
Township 15S (Township is North or South), Range 13E (Range is East or West), WM.
Tax Lot, Lot, Block, Subdivision
MAILING ADDRESS OF WELL (or nearest address) unknown

(11) WATER LEVEL of COMPLETED WELL:

Depth at which water was first found 362 ft.
Static level 362 ft. below land surface. Date 5-24-85
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing ----
Depth drilled 765 ft. Depth of completed well 765 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
Sand & Some Gravels-unstable (water between 695-715)	697	710	362
Sandstone-Brwn W/some tuff ash and whites	710	728	362
Brown Sandstone W/ more Cinders, Sands and Gravels	728	754	362
Dk. Grey Basalt	754	765	362

Date work started 11-27-84 /completed 5-25-85
Date well drilling machine moved off of well 5-25-85 19

(unbonded) Water Well Constructor Certification (if applicable):

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] [signature] Date 6-6, 19 85

(bonded) Water Well Constructor Certification:

Bond 10596951 (number) Issued by: AMWEST (Surety Company Name)
On behalf of Buckner Pump Service (type or print name of Water Well Constructor)

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief:

(Signed) (Water Well Constructor)
(Dated) June 6, 1985

NOTICE TO WATER WELL CONSTRUCTOR
The original and first copy of this report are to be filed with the WATER RESOURCES DEPARTMENT, SALEM, OREGON 97310 within 30 days from the date of well completion.

SP*46866-690

RECEIVED
MAR 27 2008
WATER RESOURCES DEPT
SALEM, OREGON

City of Redmond well No 5

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. 51647

Pg 1 of 3

WELL ID # L23805

(START CARD) # 101989

(1) OWNER:

Well Number: #5

Name City of Redmond

Address P.O. Box 726

City Redmond State OR Zip 97756

(2) TYPE OF WORK:

[X] New Well [ ] Deepening [ ] Alteration (repair/recondition) [ ] Abandonment

(3) DRILL METHOD:

[ ] Rotary Air [ ] Rotary Mud [X] Cable [ ] Auger

[ ] Other

(4) PROPOSED USE:

[ ] Domestic [X] Community [ ] Industrial [ ] Irrigation

[ ] Thermal [ ] Injection [ ] Livestock [ ] Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval [ ] Yes [X] No Depth of Completed Well 802 ft.

Explosives used [ ] Yes [X] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
26"	0	802	Cement	0	100	297 Sacks
26"	0	802	Cement	370	400	66 sacks

How was seal placed: Method [ ] A [ ] B [X] C [ ] D [ ] E

[ ] Other

Backfill placed from 100 ft. to 375 ft. Material Bentonite

Gravel placed from 400 ft. to 802 ft. Size of gravel #6 SilicaRes

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	16"	+2	507	.375	[X]	[ ]	[X]	[ ]
	16"	547	567	.375	[ ]	[ ]	[ ]	[ ]
	16"	797	802	.375	[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
Liner:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

[ ] Perforations Method

[X] Screens Type Stainless Material 316L

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
507	547	.080		16"	Pipe	[X]	[ ]
567	797	.080		16"	Pipe	[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]

(8) WELL TESTS: Minimum testing time is 1 hour

[X] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
2300	2.5'	360	24 hr.

Temperature of Water 57 Depth Artesian Flow found

Was a water analysis done? [X] Yes By whom Coffee Labs

Did any strata contain water not suitable for intended use? [X] Too little

[ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other

Depth of strata: 208

(9) LOCATION OF WELL by legal description:

County Deschutes Latitude Longitude

Township 15S N or S. Range 13E E or W. of WM.

Section 20AA NE ¼ NE ¼

Tax Lot 2900 Lot Block Subdivision

Street Address of Well (or nearest address)

19th & Quartz Ave.

(10) STATIC WATER LEVEL:

259 ft. below land surface. Date 3/23/98

Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 208

From	To	Estimated Flow Rate	SWL
208	209	30+	208
275	405	1000	208
536	802	9000	259

(12) WELL LOG:

Ground elevation

Material	From	To	SWL
Gray Basalt	0	39	
Red & Black Cinders	39	40	
Brown Ash & Cinders	40	45	
Brown Basalt	45	48	
Gray Basalt	48	54	
Brown Ash	54	55	
Gray Basalt	55	81.5	
Gray Tuff	81.5	86	
Hard Gray Basalt	86	101.5.	
Gray Volcanic Conglomerate	101.5	124	
Brown Ash Conglomerate	124	125	
Fracture Lost Cuttings (Grouted)	125	131	
Brown Conglomerate	131	136	
Brown & Gray Lava with Ash	136	157	
Gray Basalt & Ash	157	159	
Red Ash (Soft)	159	161	
Brown & Gray Basalt & Ash	161	167	
Hard Gray & Brown Basalt	167	172	
Soft Brown Ash	172	174	
Gray Basalt Medium Hard	174	177	
Brown & Gray Basalt with Brown Ash	177	184	
Brown & Gray Basalt with Gray Ash	184	190	
Redish Brown Ash with Broken Basalt	190	204	
Brown Lava with Ash	204	208	
Continued on next page			

Date started 8/29/97 Completed 3/23/95

(unbonded) Water Well Constructor Certification:

I certify that the work 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.

RECEIVED JUL 1 1998 WATER RESOURCES DEPT. SALEM, OREGON

WWC Number

Signed 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.

WWC Number 1385

Signed Robert Bucker Date 4-27-98

Western Water Development Corporation

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WATER RESOURCES DEPT
SALEM, OREGON

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

MAY 1993 desc 51647

WELL ID #

(START CARD) # 101989

(1) OWNER:

Well Number:

Name City of Redmond

Address

City State Zip

(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 ft.

Explosives used [ ] Yes [ ] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E

[ ] Other

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
Liner:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

[ ] Perforations Method

[ ] Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]

(8) WELL TESTS: Minimum testing time is 1 hour

[ ] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time

Temperature of Water 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 Latitude Longitude

Township 15S N or S. Range 13E E or W. of WM

Section 20AA ¼ ¼

Tax Lot Lot Block Subdivision

Street Address of Well (or nearest address)

(10) STATIC WATER LEVEL:

ft. below land surface. Date

Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found

From	To	Estimated Flow Rate	SWL

(12) WELL LOG:

Ground elevation

Material	From	To	SWL
Red Cinders WB (sealed off)	208	209	208
Brown Lava with Ash	209	226	208
Hard Gray Lava with Ash	226	235	208
Brown Conglomerate	235	245	208
Gray Conglomerate	245	275	208
Brown Conglomerate WB	275	305	208
Brown Lava with Gray Ash WB	305	325	208
Brown & Gray Conglomerate WB	325	342	208
Brown Lava & Ash WB	342	366	208
Brown Conglomerate with Ash Wb	366	389	208
Brown & Gray Conglomerate	389	405	208
Brown Lava with Ash	405	425	208
Gray Conglomerate with Brown Basalt	425	439	208
Hard Gray Lava with Brown Ash	439	459	208
Medium Hard Gray Lava some Ash	459	480	208
Hard Gray Lava with Ash	480	508	208
Hard Gray Basalt	508	536	208
Broken Lava, Sand, Gravel WB	536	565	259
Silty Sand & Lava Chunks WB	565	608	259
Brown,Gray Broken Lava Hard WB	608	681	259
Brown Sand & Gravel WB	681	691	259
Brown Vesicular Lava WB	691	706	259
Medium Gray Basalt WB	706	710	259
Brown Vesicular Basalt	710	714	259
Continued on next page			

Date started 8-21-97 Completed 3-23-98

(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.

RECEIVED

Signed JUL 1 1998 WWC Number

Date

WATER RESOURCES DEPT.

SALEM, OREGON

(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.

WWC Number 1385

Signed Date

Western Water Development Corporation

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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

MAY 1998 clerk 5164.7

WELL ID # _____
(START CARD) # 101989
Page 3 of 3

(1) OWNER: Well Number: _____
Name City of Redmond
Address _____
City _____ State _____ Zip _____

(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 _____ ft.
Explosives used [ ] Yes [ ] No Type _____ Amount _____

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E
[ ] Other _____
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
Liner:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:
[ ] Perforations Method _____
[ ] Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]

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

Yield gal/min	Drawdown	Drill stem at	Time

Temperature of Water _____ 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 _____ Latitude _____ Longitude _____
Township 15S N or S. Range 13E E or W. of WM.
Section 20AA _____ ¼ _____ ¼
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____

(10) STATIC WATER LEVEL:
_____ ft. below land surface. Date _____
Artesian pressure _____ lb. per square inch. Date _____

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

From	To	Estimated Flow Rate	SWL

(12) WELL LOG:
Ground elevation _____

Material	From	To	SWL
Gray Broken Lava Hard WB	714	738	259
Brown Vesicular Lava Pinholes WB	738	765	259
Brown & Gray Lava WB	765	783	259
Soft Brown Conglomerate WB	783	802	259

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JUL 1 1998
WATER RESOURCES DEPT.
SALEM, OREGON

Date started 9-21-97 Completed 3-23-98

(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.
WWC Number _____
Signed _____ 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.
WWC Number 1385
Signed _____ Date _____
Western Water Development Corporation

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WATER RESOURCES DEPT
SALEM, OREGON

City of Redmond Well #6

STATE OF OREGON

DESC 55853

Desc 55853

WELL ID # 64895

(START CARD) # 150744

WATER SUPPLY WELL REPORT

(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form

(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:

[X] New Well [ ] Deepening [ ] Alteration (repair/recondition) [ ] Abandonment

(3) DRILL METHOD:

[ ] Rotary Air [ ] Rotary Mud [X] Cable [ ] Auger

[ ] Other

(4) PROPOSED USE:

[ ] Domestic [X] Community [ ] Industrial [ ] Irrigation

[ ] Thermal [ ] Injection [ ] Livestock [ ] Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval [ ] Yes [X] No Depth of Completed Well 855 ft.

Explosives used [ ] Yes [X] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount 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 [X] 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	[X]	[ ]	[X]	[ ]
	16in	850	855	.375	[X]	[ ]	[X]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
Liner:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

[ ] Perforations Method Factory

[X] Screens Type Slotted Material SS316L

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
550	850	.070		16in	pipe	[X]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]

(8) WELL TESTS: Minimum testing time is 1 hour

[X] 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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WATER RESOURCES DEPT

SALEM, OREGON

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.

WWC Number

Signed 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.

WWC Number 1385

Signed Robert Buckner Date 1/27/04

Robert Buckner

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WATER RESOURCES DEPT

SALEM, OREGON

DESC 55853

DRILLERS'

LOG OF BOREHOLE

BOREHOLE Redmond Well #6 PAGE 1 OF 6

LOCATION 121° 10'28" W 44° 15'33" N

LOGGED BY Gale Abernathy & Bob Buckner

PROJECT City of Redmond, OR Well #6

LOC. OR COORDS. SE¼ Sec. 21, T. 15S., R. 13 E. (Willamette Mer)

GROUND ELEV.

TOTAL DEPTH

BOREHOLE DIAM. 26"

DRILLER Western Water Development

RIG Bucyrus-Erie 22L

BIT(S) 26" Star

FLUID Not Applicable

	START	FINISH
DATE	9/02/03	10/31/03
TIME	08:30	16:00

GEOPHYS. LOG X YES __ NO

HOW LEFT See Geophy. log

DEPTH	PEN. RATE	CIRC. RET.	CIRC. LOSS	AIR LIFT Q(GPM)	MATERIAL	SYMBOL	DESCRIPTION AND COMMENTS
	FT/04Y	62	4/2				0-1 Brown sand 1-2 Broken brown & grey lava
10		6.5	4/3		Lava Flow		2-14' Grey vesicular lava
		0	9/4				
		2.5	4/5				14-24' Hard grey lava
20		3.5	4/6				
		6	4/8		Rubble Zone		24-28.5' Brown lava w/ red cinders
30		4	4/10				
		1	4/11				31-32 Hard grey lava 32-33 Brown lava 33-35' Dark brown & grey lava, Hard 35-37 Dark Brown & grey lava rock, broken or caving 37-38 Brown & grey lava, broken, caving 38-40 Hard grey lava
		2	4/14				
		3	4/16				
40		3	4/19				40-43 Hard grey lava 43-45' Hard grey rock 43'-43.5' Hard grey rock 45-47 Hard grey rock
		2	4/21				
		2	4/23				
		3	4/23				47-50 Grey lava rock
50		5	4/23				Hard grey lava
		4	4/24				55-56 Hard grey lava
60		2	4/26		Lava Flow		Med grey lava
		2	4/28				61-66 Medium grey lava
		5	4/28				66-71 Medium grey lava
70		6	4/30				71-77 Medium grey lava
		4	5/1				Med. grey lava
80		4	5/2				Med. hard grey lava
		4	5/3				86-88 Med Hard grey lava 88-91 Red & Brown conglomerate
90		6	5/5		Inter Flow Zone		91-92 Harder grey & brown lava 92-95' Hard dark grey lava 95-101 Black, grey & brown lava
		3	5/6				
		6	5/7				
100		5	5/8				
		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
		9	5/12				115-119 Brown & Grey lava
120		2	5/13				119-122 Hard grey lava
		5	5/14		Lava Flow		122-127 Grey Lava
		4	5/15				127-131 Med. grey lava
130		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	5/20				142-146 Med grey lava
							146-147 Med. grey lava
150		9	5/21		Sandstone		147-150 Red & brown sandstone

Added cement to stabilize borehole

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MAR 27 2008

WATER RESOURCES DEPT
SALEM, OREGON

RECEIVED

JAN 28 2004

DESC 55853

DRILLERS'

LOG OF BOREHOLE

BOREHOLE Redmond Well 4 PAGE 2 OF 6

LOC. OR COORDS. SE¼ Sec. 21 T. 15S., R. 13E. (Willamette Meridian)

GROUND ELEV.

TOTAL DEPTH 872 FT

BOREHOLE DIAM. 26"

DRILLER Western Water Development

RIG Bucyrus-Erie 36L

BIT(S) 26" Star

FLUID Not Applicable

	START	FINISH
DATE	4/03/03	10/30/03
TIME	08:30	16:00

GEOPHYS. LOG X YES NO

HOW LEFT See Constr Log

LOCATION 121° 10.428' W 44° 15.173' N

LOGGED BY Gale Abernathy & Bob Bucknam

PROJECT City of Redmond, OR Well #4

DEPTH	PEN. RATE	CIRC. RET.	CIRC. LOSS	AIR LIFT Q(GPM)	MATERIAL	SYMBOL	DESCRIPTION AND COMMENTS
		9	5/21				150-153 Red & brown sandstone
		7	5/22				153-162 Medium brown sandstone
160							missing reports
170		6	5/24		sandstone		170-172 Brown/grey sandstone
							172-176 Brown & grey - Broken water loss 178' ±
180		8	5/28				176-184 Brown & black sandstone
		5	5/29				184-189 Brown & black sandstone
190		3	5/30				189-192 Grey & black sandstone
		4	6/2				192-196 Grey & brown lava
		2.5	6/3				196-198.5' Broken brown & grey lava
200		7.5					198.5-203 Hard grey basalt, broken
		3	6/5		Basalt Lava Flow		203-206 Hard grey basalt, broken
210		5	6/6				206-211 Hard grey basalt, broken
		2	6/7				211-213' Grey basalt
		3	6/9				213-216 Grey basalt
		4	6/10				216-220 Hard grey basalt
220		4	6/11				220-224 Hard grey basalt
		4	6/12		rubble zone		224-228 Hard grey basalt. Loss zone @ 224.5' Broken 224'-226'. Hammer 226-228'
230		2	6/13				228-230 Broken grey lava Run 2nd Plumbness Test
		5	6/16				230-235 Broken black & brown lava
		8	6/17				235-238 Hard dark grey-black lava - Caving ?
240		7	6/18				238-242 Black & Brown lava - Sloughing ± 226'
		5	6/19		Basalt Lava Flow		242-247 Black & brown lava, softer & broken
250		6	6/20				247-253 Black & brown lava
		4	6/23				253-257 Hard grey basalt
		5	6/24				257-260 Hard grey basalt
260							260-262 Broken grey lava
							262-264 Broken grey
		8	6/25				264-270 Brown volcanic conglomerate
270					Volcanic Conglomerate		
		5	6/26				270-278 Brown volcanic conglomerate
280			6/27				278-292 Brown volcanic conglomerate
		14					
290							292-295 Brown volcanic conglomerate Rig down for repairs thru 7/10
		3	6/28				
		7	7/6				295-300 Dark grey volcanic conglomerate

RECEIVED

JAN 28 2004

RECEIVED

MAR 27 2008

WATER RESOURCES DEPT
SALEM, OREGON

DRILLERS'

LOG OF BOREHOLE

BOREHOLE Redmond Well 6 PAGE 3 OF 6

LOC. OR COORDS. SE¼ Sec 21 T.15N, R.13E. (Willamette Meridian)
GROUND ELEV.
TOTAL DEPTH 877 FT
BOREHOLE DIAM. 26"

DRILLER Western Water Development
RIG Bucyrus Erie 36L
BIT(S) 26" STAR
FLUID N/A

	START	FINISH
DATE	4/02/03	10/30/03
TIME	08:30	16:00

GEOPHYS. LOG X YES NO
HOW LEFT See County Log

LOCATION 121° 10' 42.8" W 44° 16' 17.8" N
LOGGED BY G. Hasbrouck & Bob Buckner
PROJECT City of Redmond, OR Well #6

DEPTH	PEN. RATE	CIRC. RET.	CIRC. LOSS	AIR LIFT Q(GPM)	MATERIAL	SYM-BOL	DESCRIPTION AND COMMENTS
310		7	7/8		volcanic conglomerate		300-307
		5	7/9				307-312 Dark grey volcanic conglomerate
		6	7/10				312-316 Dark grey volcanic conglomerate 316-318 Brown hard sandstone
320					sandstone		
		7	7/11				318-327 Brown sandstone
							327-327 Brown sandstone
330		7	7/14				327-332 Brown sandstone
							332-336 Dark grey sandstone
		6	7/15	SWL 335'-340'			336-338 Brown sandstone
340		9	7/16		sandstone w/ gravel		338-347 Brown sandstone w/ gravel
350		11	7/17				347-358 Brown sandstone w/ gravel & silt — water @ 345', SWL = 335'-340'
360		12	7/18				358-370 Brown sandstone w/ gravel
370					sandstone		
		10	7/21				370-380 Grey sandstone
380		1	7/25				Note: problems with casing, lost 9' 7/22, filled 380 to 371' 380-381 gravelly sandstone
		10	7/24				381-391 Light grey sandstone
390		6	7/25				391-397 grey sandstone
400		8	7/28				397-407 Brown & grey sandstone
410		13	7/29				407-418 Brown sandstone
420		10	7/30				418-428 Brown & grey sandstone
430		10	7/31				428-438 Brown & grey sandstone
440		8	8/1				438-446 Brown & grey sandstone
450		6	9/4				446-451 Red-brown sandstone - Planeness & alignment test, performed @ 440'

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SALEM, OREGON

DRILLERS'

LOG OF BOREHOLE

BOREHOLE Redmond Well 6 PAGE 4 OF 6

LOC. OR COORDS. SE¼ Sec 21, T. 15S, R. 13E. (W. Hamilton Co.) DRILLER WESTERN WATER DEVELOPMENT

GROUND ELEV. ____

TOTAL DEPTH 872 FT

BOREHOLE DIAM. 26"

RIG Bucyrus Erie 36L

BIT(S) 26" Stnl

FLUID N/A

	START	FINISH
DATE	9/02/03	10/30/03
TIME	09:30	16:00

GEOPHYS. LOG X YES ___ NO

HOW LEFT See Constr Log

LOCATION 121° 10' 42.8" W 44° 15' 12.3" N

LOGGED BY Gabe Abernathy & Bob Buckner

PROJECT City of Redmond Well #6

DEPTH	PEN. RATE	CIRC. REC	CIRC. LOSS	AIR LIFT Q(GPM)	MATERIAL	SYMBOL	DESCRIPTION AND COMMENTS
460		11	8/5		sandstone		457-462 Red brown sandstone 462-462 Brown-tan sandstone
470		14	9/6				462-470 Brown-Tan sandstone 470-477 Grey sandstone
480		11	9/7				476-487 Grey sandstone
490		8	8/8				487-495 Grey sandstone - possibly broken. basalt fragments 495-500 Brown & grey sandstone
500		13	8/11				500-508 Grey sandstone, softer
510		12	8/12				508-520 Grey sandstone w/ black sand streaks
520		10	8/13				520-530 Brown & grey sandstone
530		12	8/14		sandstone w/ gravel		530-542 Brown sandstone w/ pea gravel
540		12	8/15				542-554 Dark grey sandstone w/ gravel
560		13	8/18				554-567 Dark grey sandstone w/ gravels
570		10	8/19				567-577 Dark grey sandstone w/ gravels possibly sloughing
580		13	8/20				577-590 Dark grey sandstone w/ gravel
590		15	9/20				590-597 Dark grey sandstone w/ gravels 597-597 Tan brown sandstone w/ gravels
600							

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DRILLERS'

LOG OF BOREHOLE

BOREHOLE Redmond well 6 **PAGE** 5 **OF** 6

LOCATION 121° 10' 48" W 44° 15' 15" N 13 mi E Bowman
LOGGED BY GALE ABERNATHY
PROJECT City of Redmond
WELL # 6

LOC. OR COORDS. SE¼ Sec 21, T.15S, R.13E (Willamette)
GROUND ELEV.
TOTAL DEPTH 872 FT
BOREHOLE DIAM. 26"
FT / DFT port

DRILLER WESTERN WATER DEVELOPMENT
RIG Bucyrus-Erie 86L
BIT(S) 26" STAR
FLUID N/A

	START	FINISH
DATE	9/02/03	10/30/03
TIME	08:30	16:00

GEOPHYS. LOG X YES NO
HOW LEFT See Constr. Log

DEPTH	PEN. RATE	BIT RPM	BIT WOB	AIR LIFT Q(GPM)	MATERIAL	SYM-BOL	DESCRIPTION AND COMMENTS
610		15	8/11		Sandstone w/gravel		577-605 Tan-brown sandstone w/gravels
		12	8/22				605-618 Brown sandstone w/ gravel
620		14	8/25				618-632 Brown sandstone w/ gravel
630		10	8/14				632-650 Dark brown sandstone w/ cinders & gravels
640							
650		9	8/27				650-670 Dark brown sandstone w/ gravels
660							
670							
680		16	8/28				670-686 Dark brown sandstone w/ gravels
690		12½	8/29				686-697 Dark brown sandstone w/gravels & cinders
							697-699 Hard grey lava
700							699-723 Hard grey lava
		5"	9/2				703-706 Hard grey basalt
		3"	9/13				706-708.5 Hard grey basalt
		2.5"	9/4				708.5-712.5
710		4	9/5		Basalt Lava Flow		712-715 Hard grey basalt
		3	9/8				715-718.5 Hard grey basalt
		3.5	9/9				
720		4.5"	9/10				720-724.5 Hard lt grey basalt
			9/11				724.5-729 Hard grey basalt
730		4"	9/12				729-733 Hard grey basalt
		4	9/15				733-735.5 Hard grey basalt
		8	9/16				735.5-741 Brown sandstone w/ small gravel
740					Sandstone w/gravel		741-746 Brown sandstone w/ gravel
		12	9/17				746-753 grey sandstone w/ gravel
750							

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SALEM, OREGON

DRILLERS'
LOG OF BOREHOLE

BOREHOLE Redmond Well 6 **PAGE** 6 **OF** 6

LOC. OR COORDS. SE¼ Sec 21 T.15S, R.13E (Willamette)	DRILLER Wester Water Development		START / FINISH
GROUND ELEV.		DATE	4/02/03 / 10/30/03
TOTAL DEPTH 872 ft	RIG Bucyrus-Erie 36L	TIME	08:30 / 15:00
BOREHOLE DIAM. 26"	BIT(S) 26" Star	GEOPHYS. LOG	X YES __ NO
	FLUID None	HOW LEFT	See Constr. Log

LOCATION 121°10.428' W 44°15.173' N
LOGGED BY Gaso Abernathy for Bor Buckner
PROJECT City of Redmond Well #6

DEPTH	PEN. RATE	DATE	AIR LIFT Q(GPM)	MATERIAL	DESCRIPTION AND COMMENTS
	12	9/13		Sand stone	746-753 grey sandstone w/ gravel
	4	9/18		Basalt	753-757 Hard grey vesicular lava
760	3	9/19			757-760 Hard grey basalt
	3	9/22			760-763 Hard grey basalt 763-765 Hard grey basalt
	4	9/23		flow boundary ?	765-767 Dark grey lava (softer)
770	7	9/24			767-774 Dark grey lava
	6	9/25			774-780 Grey vesicular lava
780	4	9/26			780-784 Grey Vesicular Basalt, Harder
	4	9/29			784-788
790	4	9/30			788-792 Hard grey basalt
	2	10/01			792-794 Hard grey basalt
	3	10/02		flow boundary ?	794-797 Hard grey basalt
800					797-803 Grey vesicular lava Broken ?
	7	10/06			
	2				803-806 Hard grey basalt 806-807 Hard grey basalt
810	5	10/8			807-811 Dark grey vesicular lava Note: Driller remarked the water in the bailer was clean.
	5	10/9			811-816 Dark grey Vesicular Lava
	1	10/14		Flow boundary	816-817 Grey vesicular Lava
820	5	10/15		NO CUTTINGS	817-822 Grey Vesicular Lava ? NO SAMPLE AFTER 818 FT "LIVE WATER" - Abe
	3	10/14			822-825 Grey Vesicular Lava ? w/ cinder seams NO SAMPLE COLLECTED IN BAILER
830	5	10/15			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 ? Heavy. Hole caved 34'. NO SAMPLE Cuttings returned 843'
	2	10/22			845-848 Dark grey basalt
850	2	10/23			848-850 Hard grey basalt, Caving (from above)
	4	10/24		NO CUTTINGS	850-851 Hard grey lava 851-854 Broken grey lava? No cuttings
	12	10/27			854-860 Broken lava ? No cuttings
860				Cinders, Sand & gravel	860-866 Dark red-brown cinders with sand & small gravel "Bad hole"
					866-868 Brown red cinders & gravels. Note: 4' of fill the start of shift. Caving
870	5	10/28			868-871 Brown & grey vesicular lava.
	1	10/29			871-872 [Terminate drilling on 10/29 due to formation instability. Bail the hole on 10/30
880					E-Logged 11/2/03 - sloughed in to 862'

City of Redmond Well #7

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 57788

Desc 57188

WELL ID # L 84243

(START CARD) # 187111

(1) OWNER:

Well Number: 7

Name City of Redmond

Address P.O. Box 726

City Redmond State OR Zip 97756

(2) TYPE OF WORK:

[X] New Well [ ] Deepening [ ] Alteration (repair/recondition) [ ] Abandonment

(3) DRILL METHOD:

[ ] Rotary Air [ ] Rotary Mud [X] Cable [ ] Auger

[ ] Other

(4) PROPOSED USE:

[ ] Domestic [X] Community [ ] Industrial [ ] Irrigation

[ ] Thermal [ ] Injection [ ] Livestock [ ] Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval [ ] Yes [X] No Depth of Completed Well 860' 862 ft.

Explosives used [ ] Yes [X] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
26	0	862	Cement Slurry	0	68	210 sacks
			Cement Slurry	282	322	242 sacks

How was seal placed: Method [ ] A [ ] B [X] C [ ] D [ ] E

[ ] Other

Backfill placed from 68 ft. to 275 ft. Material Bentonite Chips

Gravel placed from 322 ft. to 862 ft. Size of gravel 6x12 & 1/4-

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	16	+2	525	.375	[X]	[ ]	[X]	[ ]
	16in	625	700	.375	[X]	[ ]	[X]	[ ]
	16in	750	780	.375	[X]	[ ]	[X]	[ ]
	16in	860	862.5	.375	[X]	[ ]	[X]	[ ]
Liner:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

[ ] Perforations Method Factory

[X] Screens Type Slotted Material 316L

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
525	625	.100		16in	pipe	[X]	[ ]
700	750	.100		16in	pipe	[X]	[ ]
780	860	.060		16in	pipe	[X]	[ ]
						[ ]	[ ]
						[ ]	[ ]

(8) WELL TESTS: Minimum testing time is 1 hour

[X] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
2700	3	370	24 hr.

Temperature of Water 54-58 Depth Artesian Flow found

Was a water analysis done? [X] Yes By whom Umpqua Labs

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 10(D) NW 1/4 SE 1/4

Tax lot 1100 Lot Block Subdivision

Street Address of Well (or nearest address) 450 NE 11th St.

Redmond, OR 97756

(10) STATIC WATER LEVEL:

326 ft. below land surface. Date 12/13/2006

Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 335

From	To	Estimated Flow Rate	SWL
335	850	5000+	326

(12) WELL LOG:

Ground elevation 3040'

Material	From	To	SWL
See Attached Borehole Lithology			

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MAR 27 2008
WATER RESOURCES DEPT
SALEM, OREGON

Western Water Development
P.O. Box 1670
Redmond, OR 97756

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FEB 07 2007
WATER RESOURCES DEPT
SALEM, OREGON

Date started 6/7/2006 Completed 12/14/2006

(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.

WWC Number

Signed 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.

WWC Number 1385

Signed Robert Buckner Date 12/24/2006

Robert Buckner

ORIGINAL - WATER RESOURCES DEPARTMENT FIRST COPY - CONSTRUCTOR SECOND COPY - CUSTOMER

DESC 57788

CITY OF REDMOND
WELL #7 DRILLERS FROMATION LOG

Description		From	To	
3/4" Crushed Rock		0	1	
Broken Gray Lava		1	15	
Gray Basalt		15	31	
Red Cinders		31	34	
Broken Black/Red Rock		34	53	
Brown Rock		53	61	
Black Lava		61	77	
Brown Sandstone		77	84	
Brown Conglomerate		84	88	
Black Lava		88	107	
Brown Sandstone		107	121	
Redish & Black Lava		121	130	
Brown Sandstone		130	133	
Black Lava		133	144	
Gray Lava		144	158	
Reddish Brown Rock		158	159	
Brown Rock		159	172	
Brown Sandstone		172	176	
Red and Black Lava		176	181	
Redish & Brown Sandstone		181	191	
Black Lava		191	206	
Brown Sandstone		206	209	
Coarse Black Sand		209	221	
Black Lava		221	243	
Brown Sandstone		243	249	
Black Lava & with Brown Ash		249	273	
Hard Black Basalt		273	283	
Red Sandstone		283	306	
Brown Sandstone		306	325	
Light Brown Sandstone		325	335	
Dark Brown Sandstone	WB	335	391	330
Black Sandstone	WB	391	423	328
Fine Black Sand	WB	423	458	328
Brown Sandstone	WB	458	526	328
Broken Blue & Gray Basalt	WB	526	529	328
Blue & Gray Basalt	WB	529	537	328
Gray Basalt	WB	537	553	328
No Cuttings Semi Soft	WB	553	565	328
No Cuttings Harder	WB	565	580	328
Red & Black Basalt	WB	580	600	328
No Cuttings Broken & Hard	WB	600	610	328
Black Basalt	WB	610	613	328
Black Sandstone	WB	613	625	328
Brown Sandstone	WB	625	632	328
Reddish Brown Sandstone	WB	632	641	328
Multi Colored Coarse Sand	WB	641	658	328

DESC 57788

Dark Brown Sandstone	WB	658	690	328
Brown Sandstone	WB	690	706	328
Blue & Gray Basalt	WB	706	711	328
Gray Basalt	WB	711	731	328
No Cuttings Soft	WB	731	734	328
No Cuttings Harder	WB	734	741	328
No Cuttings Soft	WB	741	745	328
No Cuttings Harder	WB	745	750	328
Broken Vesicular Basalt	WB	750	754	327
Black Sandstone	WB	754	770	327
Black & Brown Sandstone	WB	770	785	327
Vesicular Black Basalt	WB	785	790	327
Vesicular Red & Black Basalt	WB	790	800	327
Hard & Broken No Cuttings	WB	800	810	327
Brown Sandstone with Multi				327
Colored Sand Lenses	WB	810	818	327
Vesicular Red & Black Basalt	WB	818	826	327
Black Sandstone	WB	826	831	327
Black & Gray Basalt	WB	831	838	327
Red & Black Basalt	WB	838	843	327
Vesicular Black Basalt	WB	843	847	327
Hard Black & Gray Basalt	WB	847	850	327
Very Hard Gray Basalt		850	960	327

DESC 57788

CITY OF REDMOND WELL #7 AS BUILT