STATE OF OREGON WATER SUPPLY WELL REPORT (as required by ORS 537.765 & OAR 690-205-0210)

WELL I.D. LABEL# L	100761
START CARD#	208763
ORIGINAL LOG #	

(1) LAND OWNER Owner Well I.D. ASR Test Well			
First Name Last Name	(9) LOCATION OF WELL (legal description)		
Company City of Cornelius	County WASHINGTO Twp 1 N N/S Range 3 W E/W WM		
Address 1355 N. Barlow Street	Sec 34 SW 1/4 of the SW 1/4 Tax Lot 3000		
City Cornelius State OR Zip 97113	Tax Map Number 1N334CC		
(2) TYPE OF WORK New Well Deepening Conversion	Tax Map Number 1N334CC Lot Lat o ' " or 0 DMS or DD Long o ' " or 0 DMS or DD		
Alteration (complete 2a & 10) Abandonment(complete 5a)	Long o o o DMS or DD		
(2a) PRE-ALTERATION Dia + From To Gauge Stl Plstc Wld Thrd	Street address of well Nearest address		
Casing:			
Material From To Amt sacks/lbs	City Water Park, near intersection of Clark St & 18th Ave, Cornelius, OR		
Seal:			
(3) DRILL METHOD	(10) STATIC WATER LEVEL		
Rotary Air Rotary Mud Cable Auger Cable Mud	Date SWL(psi) + SWL(ft)		
Reverse Rotary Other	Existing Well / Pre-Alteration Completed Well 03-30-2015 56		
(4) PROPOSED USE Domestic Irrigation Community	Flowing Artesian? Dry Hole?		
Industrial/ Commercial Livestock Dewatering	WATER BEARING ZONES Depth water was first found 22		
Thermal Injection Other ASR	SWL Date From To Est Flow SWL(psi) + SWL(ft)		
(5) BORE HOLE CONSTRUCTION Special Standard (Attach copy)	Most sand formations:		
Depth of Completed Well 1,589 ft.	NM 0 1,205 7		
BORE HOLE SEAL sacks/			
Dia From To Material From To Amt lbs	Perforated intervals.		
20 0 16 Bentonite 0 25 115 S	03-30-2015 1,205 1,589 500 56		
16 16 100 Calculated 45 14 100 1,219 Cement 25 1,205 422 S			
14 100 1,219 Cement 25 1,205 422 S 10 1,219 1,589 Calculated 400	(11) WELL LOG Ground Flevation		
	Glound Elevation		
How was seal placed: Method A B C D E Other bent. pour & probe	Material From To See attached formation log		
Backfill placed from ft. to ft. Material			
Filter pack from ft. to ft. Material Size			
Explosives used: Yes Type Amount			
(5a) ABANDONMENT USING UNHYDRATED BENTONITE			
Proposed Amount Pounds Actual Amount Pounds			
(6) CASING/LINER			
(6) CASING/LINER Casing Liner Dia + From To Gauge Stl Plstc Wld Thrd	RECEIVED BY OWRD		
● 10 x 3 1,205 .365 ● ○ x	HECEIVED OF STREET		
8 1,194 1,589 .322			
	APR 2 7 2015		
	MI W W		
Shoe Inside Outside Other Location of shoe(s) 1,589	SALEM, OR		
Temp casing Yes Dia From To			
(7) PERFORATIONS/SCREENS Perforations Method Factory mill cut			
	D + G + 111 10 2014		
Screens Type Material Perf/ Casing/ Screen Scrn/slot Slot # of Tele/	Date Started 11-12-2014 Completed 03-30-2015		
Screen Liner Dia From To width length slots pipe size	(unbonded) Water Well Constructor Certification		
Perf Liner 1,259 1,279 0.25 2.5 380	I certify that the work I performed on the construction, deepening, alteration, or		
Perf Liner 1,299 1,319 0.25 2.5 380	abandonment of this well is in compliance with Oregon water supply well		
Perf Liner 1,339 1,439 0.25 2.5 1,900	construction standards. Materials used and information reported above are true to		
Perf Liner 1,459 1,479 0.25 2.5 380	the best of my knowledge and belief.		
Perf Liner 1,499 1,519 0.25 2.5 380	License Number 1927 Date 04-22-2015		
(8) WELL TESTS: Minimum testing time is 1 hour	Signed Ram And		
Pump Bailer Air Flowing Artesian	Signed 1400		
Yield gal/min Drawdown Drill stem/Pump depth Duration (hr)	(bonded) Water Well Constructor Certification		
500 117 105	I accept responsibility for the construction, deepening, alteration, or abandonmen		
	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.		
Temperature 68 °F Lab analysis Yes By	construction standards. This report is true to the best of my knowledge and bench.		
Water quality concerns? Yes (describe below) TDS amount	License Number 649 Date 04-22-2015		
From To Description Amount Units	Signed Suptim frances		
	Contact Info (optional)		
OPIGINAL WATER RESOURCES I	SEPARTMENT		

WATER SUPPLY WELL REPORT - continuation page

WELL I.D. LABEL# L	100761
START CARD#	208763
ORIGINAL LOG #	

	ORIGINAL LOG#	
(2a) PRE-ALTERATION	Water Quality Concerns	
Dia + From To Gauge Stl Plstc Wld Thrd	From To Description	Amount Units
	From 16 Description	71110unt Ontis
Material From To Amt sacks/lbs		
E DODE HOLE CONCEDION	(10) STATIC WATER LEVEL	
(5) BORE HOLE CONSTRUCTION	SWL Date From To Est Flow	SWL(psi) + SWL(ft)
BORE HOLE SEAL socket	Tiom To Est riow	DWE(hai) . BWE(it)
Dia From To Material From To Amt lbs		
Material From 10 Afric 105		
Calculated		
Calculated		
Calculated		
Calculated		
FILTER PACK From To Material Size	(11) WELL LOG	
From To Material Size		Erom
	Material	From To
6) CASING/LINER		
Casing Liner Dia + From To Gauge Stl Plstc Wld Thrd		
7) PERFORATIONS/SCREENS		
Perf/ Casing/ Screen Scrn/slot Slot # of Tele/		
Screen Liner Dia From To width length slots pipe siz	RECEIVED BY OWRD	
Perf Liner 1,539 1,559 0.25 2.5 380	TO THE PROPERTY OF THE PROPERT	
1,337 1,337 0.23 2.3 380	-	
	100000000000000000000000000000000000000	
	APR 2 7 2015	
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	SALEM, OR	
	Unitelyi, Un	
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	Comments/Remarks	
(8) WELL TESTS: Minimum testing time is 1 hour		
Viald col/min Drawdown Drill store /Down dowth Decesion (1-1)		
Yield gal/min Drawdown Drill stem/Pump depth Duration (hr)		
	Formations above basalt repeatedly squeezed.	
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CITY OF CORNELIUS

ASR TEST WELL

Formation Log

by Schneider Water Services

<u>FM</u>	<u>TO</u>	DESCRIPTION Top Soil
2	22	Clay, brown, medium-soft, silty
22	27	Sand, brown, fine, lense of soft brown clay
27	52	Sand, grey, fine, lense of medium-soft grey cley
52	65	Clay, light grey, soft with some grey sand
65	71	Clay, light grey, soft, silty
71	76	Clay, light grey, soft, silty, some wood
76	80	Clay, light grey, soft, silty
80	84	Sand, grey, fine, some soft grey clay, silty
84	92	Clay, light grey, soft, silty
92	100	Clay, blueish grey, medium-soft
100	104	Clay, blue-grey, medium
104	111	Clay, brown, medium-soft, silty
111	118	Sand, multi-colored, coarse to fine, some cementation
118	128	Clay, blue-grey, medium, silty
128	132	Clay, grey, soft, silty
132	136	Clay, brown, medium-soft, lense of claystone, silty
136	140	Sand, multi-colored, coarse to fine, silty, some clay
140	142	Clay, grey, medium
142	145	Sand, multi-colored, coarse to fine, cemented
145	151	Sand, dark grey, medium
151	173	Clay, grey, medium
173	183	Clay, brown, medium, lenses of cemented sand, silty
183	196	Clay, greenish grey, soft, some sand & silt
196	206	Clay, brown & grey, medium-firm, sandy & silty
206	218	Sand, dark grey, coarse to fine, in clay, tan, medium-soft
218	238	Clay, greenish grey, medium and medium to fine, silty and wood
238	253	Clay, greenish grey, medium
253	268	Sand, brown, coarse to fine, some clay
268	299	Clay, grey, medium
299	309	Clay, brown, soft, silty, sand, medium-fine, multi-color
309 315	315 320	Clay, grey, medium, silty, some sand, medium-fine, multi-color Clay, brown, medium-soft, silty, sandy
320	329	Clay, grey, medium
329	356	Clay, blueish grey, medium, sandy & silty
356	364	Sand, black, medium to fine, wood
364	374	Clay, blueish grey, medium
374	380	Clay, dark brown, medium-soft
380	386	Clay, grey & brown, medium, silty
386	393	Sand, dark brown, medium, some clay
393	400	Clay, brown, medium-soft, silty
400	408	Sand, dark brown, medium-fine, silty, with tan & grey clay
408	415	Clay, grey, medium
415	419	Clay, tan & grey, medium, silty
419	426	Clay, dark grey, soft
426	436	Clay, grey, medium, silty
436	448	Clay, blueish grey, medium-soft, silty & sandy
448	454	Sand, black, coarse to fine
454	474	Clay, blueish grey, soft, silty & sandy
474	479	Sand, black, coarse to fine
479	486	Clay, light blue, finn
486	491	Clay, light grey, soft Clay, light brown, soft & silty RECEIVED BY OWRD
491	495	Clay, light brown, soft & silty
495	502	Clay, light blue, soft & sticky
502	508	Clay, light green, medium, silty Clay, blue, medium, sandy & silty APR 2 7 2015
508	514	Clay, olde, filedidiff, salidy & sitty
514	518	Clay, dark grey, medium, silty & sticky
518	522	Clay, green, firm SALEM, OR
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CITY OF CORNELIUS

ASR TEST WELL

Formation Log

by Schneider Water Services

		by Schneider Water Servi	ces
<u>FM</u>	<u>TO</u>	DESCRIPTION	
522	529	Clay, light blue, medium-soft	•
529	533	Clay, dark grey, medium, firm	
533	537	Clay, green, medium-firm, silty	
537	551	Clay, blue, medium, silty	
551	559	Sand, black, coarse to fine	
559	560	Clay, dark grey, medium-firm	
560	566	Clay, blue, medium-soft	
566	571	Clay, green, medium	
571	586	Clay, blue, medium, sandy with silt	
586	600	Clay, blue, medium-soft	
600	612	Clay, grey, medium, silty, sandy, some wood	
612	618	Clay, grey, medium	
618	622	Clay, brown, medium-firm	
622	631	Clay, green, medium-soft, silty	
631	641	Clay, grey, medium, silty, sandy	
641	666	Clay, dark brown, firm, silty	
666	688	Clay, green-blue, medium, silty	
688	695	Clay, light blue, soft	
695	699	Clay, green-blue, medium-firm	
699	704	Clay, grey, medium-firm	
704	714	Clay, green, medium, silty	
714	720	Sand, dark grey, medium-fine	
720	728	Clay, grey, medium, sandy	
728	737	Clay, blueish grey, medium, sandy	
737	747	Clay, light blue, medium-soft, silty	
747	754	Clay, blue, medium, sand & silty	
754	758	Clay, green, medium-soft	
758	762	Clay, light brown, medium	
762	772	Clay, blue, medium, sandy	
772	775	Sand, black & grey, medium-firm	
775	790	Clay, grey, firm	
790	806	Clay, blueish grey, medium-soft	
806	826	Clay, grey, medium-firm	
826	846	Clay, blueish grey, medium, sandy	
846	862	Clay, greenish grey, medium-soft, silty	
862	870	Clay, brown, soft	
870	878	Clay, blue, firm	
878	886	Clay, brown, medium-firm	
886	898	Clay, greenish grey, medium, sandy	
898	906	Clay, brown, firm	
906	921	Clay, blue & brown, medium-firm	
921	931	Clay, brown, medium-soft	
931	937	Clay, grey, medium-soft, silty	
937	948	Clay, brown, medium, silty	
948	968	Clay, grey, medium	
968	973	Clay, greenish grey, medium-soft	
973	979	Clay, dark brown, medium	
979	983	Clay, dark brown, firm	
983	993	Clay, light brown, medium-soft, sandy	
993	1000	Clay, brown, soft, silty	
1000	1010		
1010		Clay, grey, medium, silty	RECEIVED BY OWRD
1020		Clay, brown, firm, silty & sandy	
1035	1045	Sand, brown, medium-fine, silty, some light grey sand	
1045		Clay, reddish brown, medium-soft	APR 2 7 2015
1054	1066	•	····· 💆 🕯 💆
1066	1084		
1084	1091	Clay, dark brown, medium-soft	SALEM, OR
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CITY OF CORNELIUS

ASR TEST WELL

Formation Log

by Schneider Water Services

1579 1589 Basalt, dark grey, medium, fractured, broken, occ vesicules

		by Schneider water Services	
<u>FM</u>	<u>TO</u>	DESCRIPTION	
1091	1096	Clay, brown, medium-soft, sandy	
1096	1101	Clay, orange brown, medium, silty	
1101	1108	Clay, light brown, medium, sandy & silty	
1108	1110	Clay, reddish brown, firm, silty	
1110	1117	Clay, light brown, soft	
1117	1126	Clay, brown, medium, silty	
1126	1136	Clay, brown, medium-firm, sandy	
1136	1140	Clay, brown, medium-firm, silty	
1140		Clay, tan, medium-soft, silty, sandy	
1146		Sandstone, grey, coarse to fine, hard to soft	
1156	1188	Basalt, grey, medium, weathered, broken	
1188	1200	Basalt, dark grey, medium, fractured, some vesicles	
1200	1219	Basalt, dark grey, hard	
1219	1221	Basalt, dark grey, medium-soft, some fractured	
1221	1223	Basalt, grey, medium-hard	
1223	1233	Basalt, black, medium, fractured, some vesicules	
1233	1238	Basalt, black, medium, fractured, some vesicules, sand, blue, minerals	
1238 1243	1243	Basalt, black, medium, fractured, vesicular, blue, clay & minerals	
1243	1252	Basalt, dark grey & black, medium-hard, fractured, some minerals Basalt, black, medium, fractured, vesicular, minerals (broken to 1259)	
1260	1260 1270		
1270	1270	Basalt, dark grey, medium-hard, fractured, occ vesicule, minerals Basalt, grey, medium, fractured, vesicular, with minerals & clay	
1270	1284	Basalt, brown, medium-soft, fractured, vesicular	
1284	1289	Basalt, dark grey, medium, fractured, vesicular	
1289	1291	Basalt, brown, multi-color, fractured, heavily mineralized	
1291	1301	Basalt, dark grey, medium-hard, fractured, occ vesicule, some minerals	
1301	1304	Basalt, multi-color grey, medium, fractured, minerals	
1304	1314	Basalt, brown, mcdium, fractured, some vesicules, broken	
1314	1319	Basalt, grey, medium, fractured, broken	
1319	1323	Basalt, brown, medium-soft, fractured, broken	
1323	1330	Basalt, grey, medium, fractured	
1330	1339	Basalt, grey, medium-hard, fractured	
1339	1346	Basalt, dark grey, medium, fractured, some vesicules, some claystone & minerals	
1346	1353	Basalt, grey, medium-hard, fractured, some minerals	
1353	1354	Basalt, grey, medium-hard, fractured	
1354	1356	Basalt, dark grey, medium-hard, fractured	
1356	1366	Basalt, dark grey, medium, fractured, vesicular, some minerals with black, claystone	
1366	1386	Basalt, grey, medium, fractured, vesicular, some claystone	
1386	1404	Basalt, grey, medium, fractured	
1404	1414	Basalt, grey, medium, fractured, some minerals	
1414	1433	Basalt, dark grey, medium, fractured	
1433	1435	Clay, greenish grey, medium	
1435	1444	Basalt, dark grey, medium, fractured, broken	
1444	1453	Basalt, dark grey, medium, fractured, broken, clay & claystone	
1453	1469	Basalt, dark grey, medium, fractured, broken, some vesicules, with minerals & clay	
1469	1493	Basalt, dark grey, medium, some claystone	
1493	1497	Clay, green, firm, silty, other color, claystone	
1497		Basalt, dark grey, medium	
1505	1512		
1512	1532	Basalt, dark grey, medium, fractured, broken with some clay	
1532		Basalt, dark grey, medium, fractured, broken with mineral and clay	DEOENTED DV OWDD
1535	1537	•••	RECEIVED BY OWRD
1537		Clay, green & grey, firm, some medium	
1538	1547	Basalt, dark grey, medium-hard	APR 2 7 2015
1547	1559	Basalt, dark grey, medium-hard, occ vesicules & fractured	AFR Z 1 LUIJ
1559	1563	Basalt, dark grey, medium, fratured, broken	
1563	1573	Basalt, dark grey, medium	SALEM, OR
1573	1579	Basalt, grey, medium, broken, fractured	SALLIVI, OI 1