

Crooked River Ranch Water Co.
PO Box 1388
Crooked River Ranch, OR 97760

JEFF
488

100/100/07
138/12E/24bbe

Well #2
Community Supply

Application 6-12579
Permit 6-11376

480 V

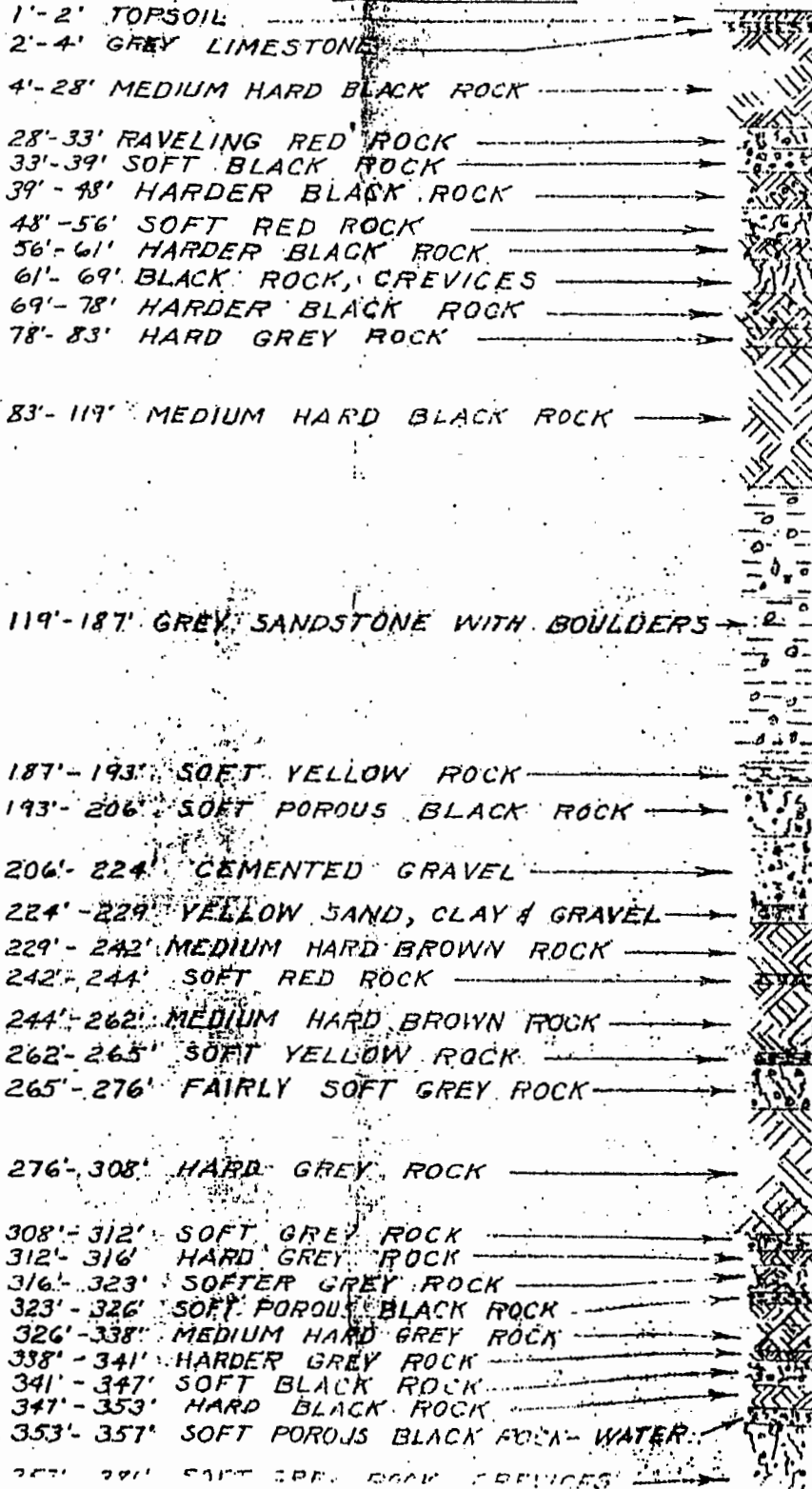
Total Depth = 429 ft.
Completed Depth = 429 ft.
Date Drilled ?

GRR WELL LOG Jefferson County

WELL NO. 2
NOT TO SCALE

AUTO
TRANSFORM
START

RECEIVED
JAN 12 2015
OWRL
S
N07



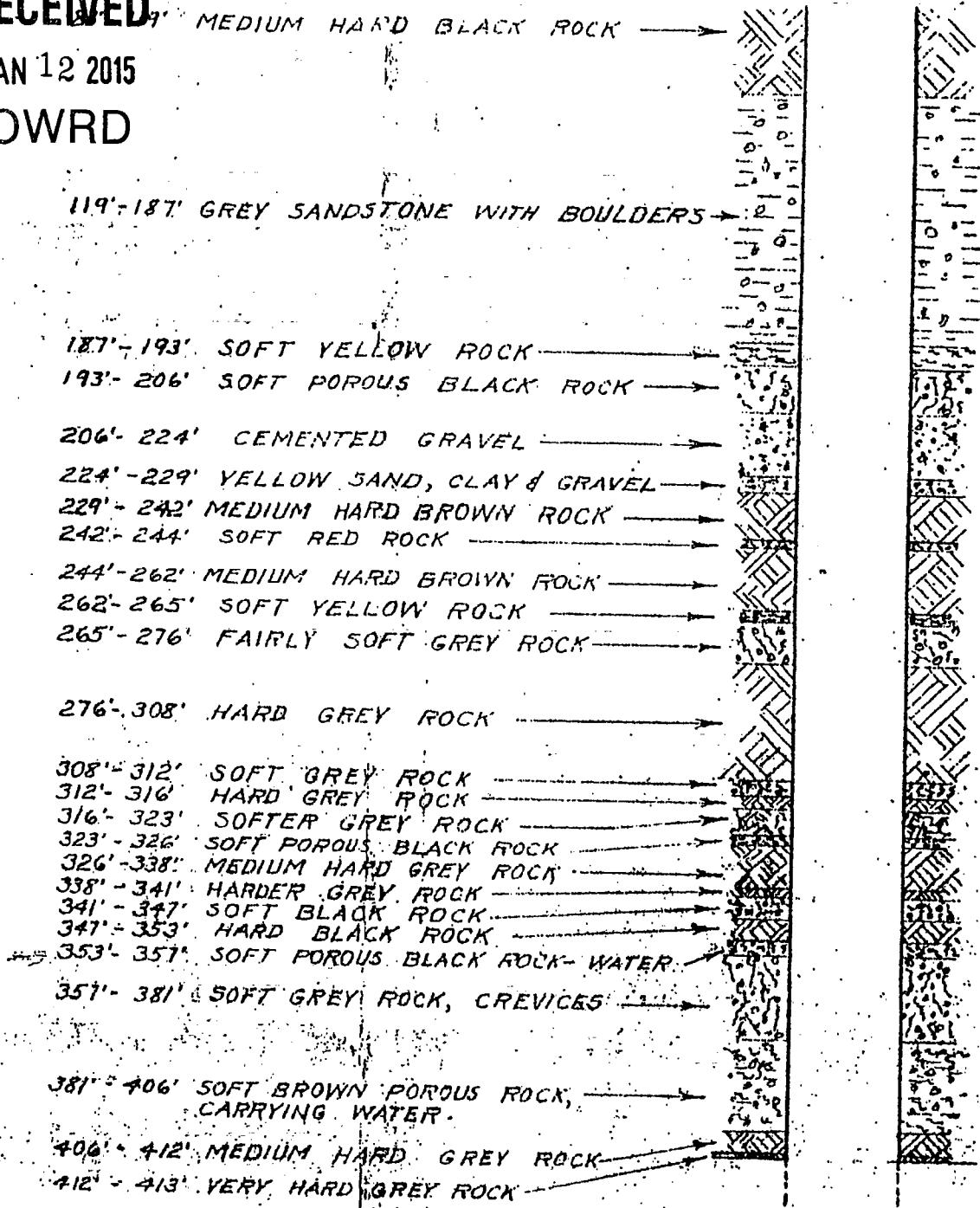
* Data from water right application file 6-12579.
Well located by USGS in 1994 as part of Middle
Deschutes Groundwater study.

Karl C. Woznick

RECEIVED

JAN 12 2015

OWRD



NOTES

1. REMOVE EXISTING 2" CONCRETE SLAB. INSTALL 6" CONCRETE SLAB WITH WIRE MESH REINFORCING.
2. EXTEND 16" Ø CASING 18" TO 21" TO PROVIDE 24" FROM TOP OF CASING FINISHED FLOOR SLAB, FULL DEPTH WBLD.
3. INSTALL 2" Ø WELL VENT WITH SCREENED RETURN BEND. WELD 2" Ø PIPE TO PLACEMENT OF NEW CONCRETE SUPPORT.
4. INSTALL AIR LINE TO 620 FT. LEVEL. MOUNT DEPTH GAGE (READING IN FT. CF
5. DRILL EXISTING CONG. SUPPORT & SET 3-3/4" x 12" STL. DOWELS WITH EPOXY.
6. INSTALL 3" STL. RETURN LINE FROM PRESSURE RELIEF VALVE TO 16

Application No. G-12579

Permit No. SANITARY SURVEY REPORT OREGON HEALTH DIVISION DRINKING WATER PROGRAM COMMUNITY WATER SYSTEMS	SUPPLY NAME: CROOKED RIVER RANCH ID NUMBER : 4100862 COUNTY : JEFFERSON SURVEYED BY: JOHN STRAUGHAN DATE : 1/24/90
--	---

RECEIVED
JUN 18 1991
WATER RESOURCES DIVISION
SALEM, OREGON

Sheets Attached:
<input type="checkbox"/> Narrative Summary/Recommendations <input type="checkbox"/> Storage/Distribution <input type="checkbox"/> Inventory Master Data <input type="checkbox"/> Booster Pumps/Production Data <input type="checkbox"/> Water System Schematic <input type="checkbox"/> Certification <input type="checkbox"/> Location Map(s) <input type="checkbox"/> Monitoring/Water Quality

Additional Attachments:	WELL LOGS, CODE SHEETS
--------------------------------	------------------------

Narrative Summary:	<p>Crooked River Ranch is a community system in Jefferson county bounded by the Deschutes River, the Crooked River and Deschutes county. The water system relies on an 800 gpm well for their source and the golf course well as an emergency source. There are two reservoirs which have a combined volume of 800,000 gallons. The water system was started as a development about 1973, Therefore system is relatively new and in good repair.</p>
---------------------------	--

RECEIVED
JAN 12 2015
OWRD

Requirements/Recommendations:
REQUIREMENTS: 1. Prepare a sampling plan for the water system. 2. Complete monitoring for radiological contaminants, sodium and corrosivity as per monitoring section.
RECOMMENDATIONS: 1. Seal holes in well pump bases. 2. Contact a professional engineer to prepare a master plan for the water system.

JAN 12 2015

OWRD

INVENTORY MASTER INFORMATION	SUPPLY NAME: CROOKED RIVER RANCH						
	ID NUMBER : 4100862						
Date of Last Survey:	(MM/DD/YY)	7/30/86					
System Type:		C					
Ownership of System:	(1,2,3,4,5)	2					
Population Served:	(Total Number)	1200					
Number of Connections:	(Total Number)	600					
Twelve-Month Period:		T					
Year-Round Residents		Y					
Primary Service Characteristic:	(R,T,S,O)	R					
Secondary Service Characteristic:	(1,2,3,4,5,6,9)	4					
Number of Sources:	(Total Number)	2					
Counties Served (Refer to Codes):	(___/___/___)	16					
Emergency Systems Available (Name & ID Number):							
PWS _____	(41_____)	-					
PWS _____	(41_____)	-					
PWS _____	(41_____)	-					
Percent Ground:	(%)	100					
Percent Surface:	(%)	-					
Percent Purchased Ground:	(%)	-					
Percent Purchased Surface:	(%)	-					
Active:	(Y/N)	Y					
Activate Date	(MM/DD/YY)	-					
Deactivate Date	(MM/DD/YY)	-					
Deactivate Reason:	(A,C,D,M,N,O,P,R,S,U,O)	-					
Number of Tanks in Supply:	(Total Number)	2					
Number of Gallons in Storage:	(Total Number)	800,000					
Mailing Address City/State/Zip Contact Name/Phone Comments	PO BOX 1388 CROOKED RIVER RANCH, OR 97760 KEN WOLF 923 1041 OPERATOR						
Legal (Owner) Address City/State/Zip Contact Name/Phone Comments	PO BOX 1388 CROOKED RIVER RANCH, OR 97760 DICK BROWNLEY CHAIRMAN WATER ASSOCIATION						
Supply Address City/State/Zip Contact Name/Phone Comments	SAME						
SOURCE DATA	(Sources for Individual Compliance Monitoring)						
		*		**		***	
Source ID - Source Name	Type	Seller	Status	VOC	SOC	SWI	
A WELL #2	G	41	P	Y	-	N	
B WELL #3	G	41	E	Y	-	N	
C		41					
D		41					
* (S)urface/(G)round/(P)urchased Surface/(W)urchased Ground ** (P)ermanent/(S)easonal/(E)mergency/(O)ther/(I)nterim *** Vulnerability to Contamination - (Y)es/(N)o VOCs/SOCs/Surface Water Influence							
							Page 2 of 11

JAN 12 2015

QWRD

SOURCE OF SUPPLY - WELL

SUPPLY NAME: CROOKED RIVER RANCH
ID NUMBER : 4100862

Source ID/Detail ID - Well Detail Name

A	A	WELL #2
B	A	WELL #3

Well Data:

Source ID Letter:		A	B		
Detail ID Letter:		A	A		
Well/Spring/Stream:		W	W		
Source/Detail Status:	(P/S/E/O/I)	P	E		
Treatment Objective/Process:	()	A	A		
Treatment Objective/Process:	()	-	-		
Treatment Objective/Process:	()	-	-		
Treatment Objective/Process:	()	-	-		
Capacity:	(GPM)	3000	2500		
Latitude: Degrees	()	44	44		
Minutes	()	26	25		
Seconds	()	05	20		
Longitude: Degrees	()	123	123		
Minutes	()	14	14		
Seconds	()	48	10		
Location Map Included (USGS):	(Y/N)	Y	Y		
Well Log Attached:	(Y/N)	Y	N		
Depth of Well:	(FT.)	429	494		
Year of Installation:	(19)	-	49		
Casing Diameter:	(IN.)	16	16		
Grout Seal:	(Y/N)	Y	Y		
Gravel Pack:	(Y/N)	N	N		
Openings - Screens/Slots/Torch:	(S/L/T)	-	-		
Length of Open Interval:	(FT.)	28	35		
Depth to Top of Intake:	(FT.)	353	307		
Water Level Device:	(Y/N)	Y	Y		
Static Water Level:	(FT.)	280	286		
Pumping Water Level:	(FT.)	282	288		
Comments:					

Pump Data:

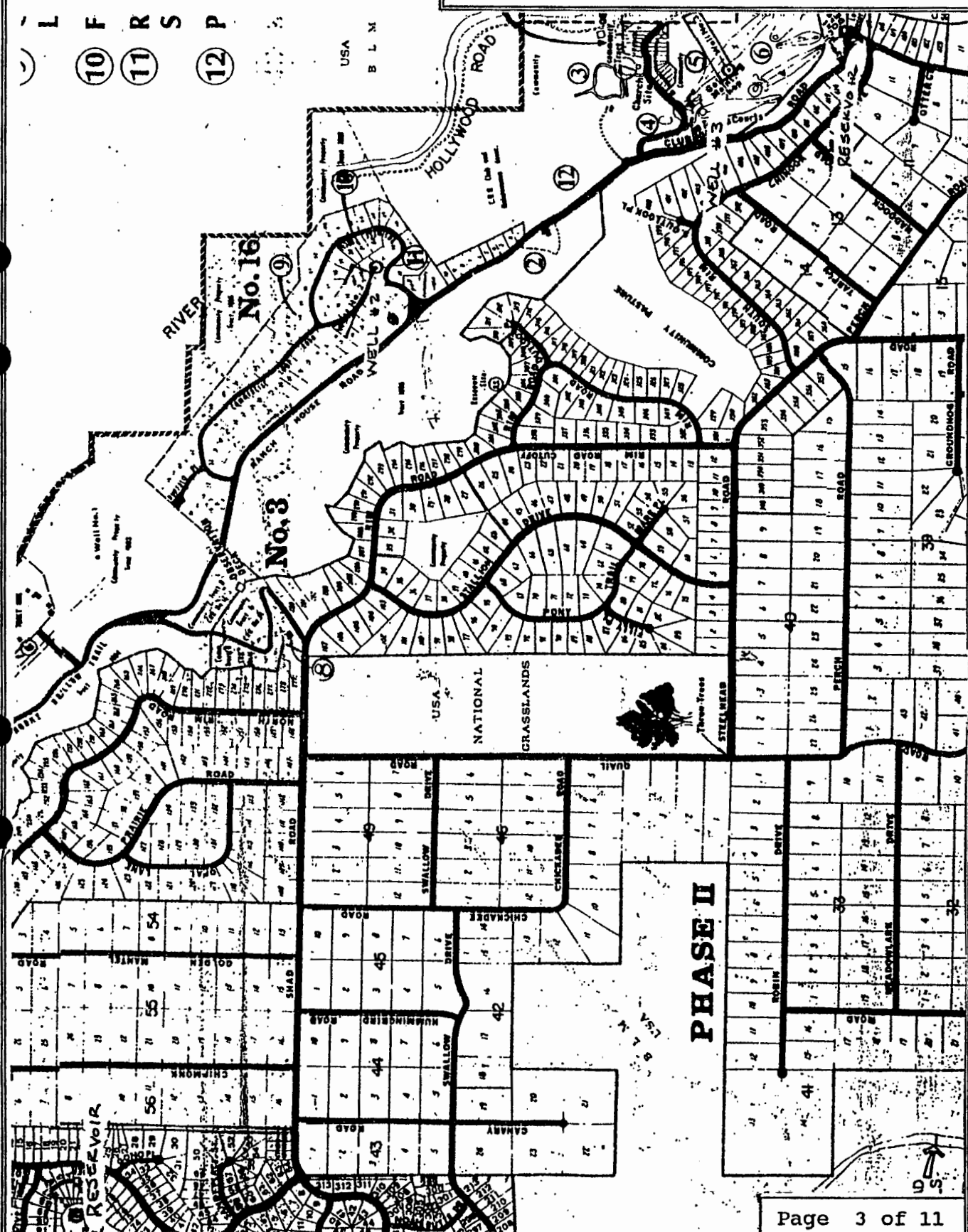
Pump Type:	(VT, SU, CE, SJ, DJ, OT)	VT	VT		
Pump Setting:	(FT.)	319	380		
Capacity:	(GPM)	800	475		
At TDH:	(FT.)	580	570		
Discharge Pressure:	(PSI)	105	80		
Horsepower:	(HP)	150	100		
Date Pump Pulled:	(19)	-	-		
Bearing Lubrication - (Oil/Water):	(O/W)	W	W		
Pump Base Sealed:	(Y/N)	Y	Y		
Comments:					

WATER SYSTEM OVERALL SCHEMATIC

SUPPLY NAME: CROOKED RIVER RANCH
ID NUMBER : 4100862

L F R S P
10 11 12

USA
B L M



PHASE II



RECEIVED

JAN 12 2015

OWRD

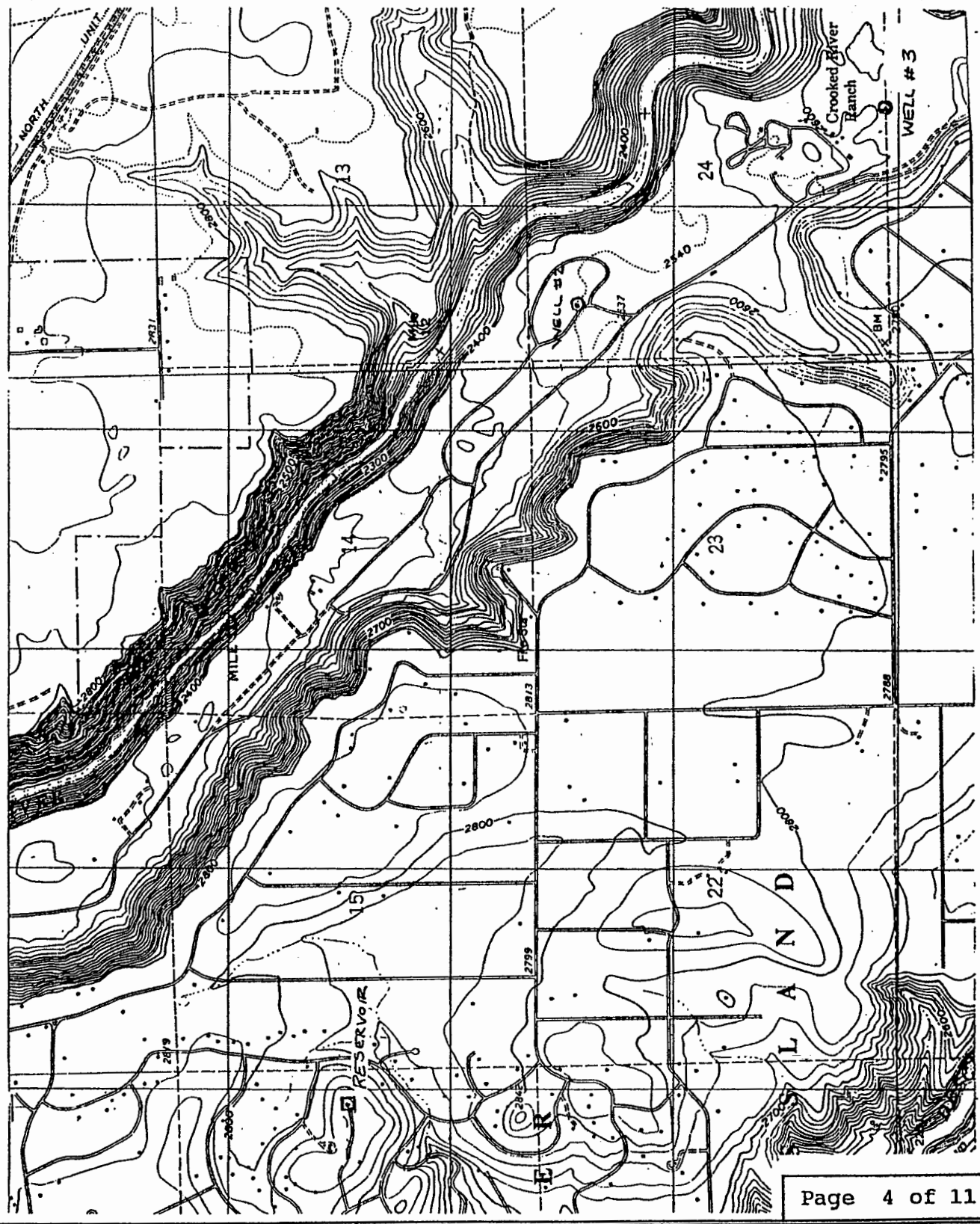
LOCATION MAP (USGS QUAD SHEET)

SUPPLY NAME: CROOKED RIVER RANCH
ID NUMBER : 4100862

Quadrangle Map

USGS Map Name - OPAL CITY, OREG
USGS Map Number - 44121-D2-TF-024

STEELHEAD FALLS, OREG
44121-D3-TF-024



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

JEFF
880
 PAGE 1 of 2

RECEIVED JUN 10 1994

1358/16E/16de
 pg. 1

(START CARD) #65238

WATER RESOURCES DEPARTMENT

(1) OWNER: Well Number **4**

Name Crooked River Ranch
 Address PO Box 1388
 City Crooked River Ranch State OR Zip 97760

(2) TYPE OF WORK:
 New Well Deepen Recondition Abandon

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

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

(5) BORE HOLE CONSTRUCTION:
 Special Construction approval Yes No Depth of Completed Well 951 ft.
 Explosives used Yes No Type _____ Amount _____

HOLE			SEAL			Amount
Diameter	From	To	Material	From	To	sacks or pounds
20	0	16	Cement	0	30	35 sacks
18	16	762	7 Sack Slur	30	495	14 yards
13	762	882	Cement	495	520	50 sacks
12 1/2	882	951				

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: 14	+1	762	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 Swift Factory Perf.
 Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
640	760	1/2x2	5600	14		<input checked="" type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

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

Yield gal/min	Drawdown	Drill stem at	Time
AIR Pump 800	N/A	951	1 hr.
750	2'	602	8 hr.
1400	8'	602	5 min.

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 Jefferson Latitude _____ Longitude _____
 Township 13 S N or S. Range 12 E E or W. WM.
 Section 16 NE 1/4 SE 1/4
 Tax Lot 72 Lot # 7 Block _____ Subdivision _____
 Street Address of Well (or nearest address) Cinder Road

(10) STATIC WATER LEVEL:
502 ft. below land surface. Date 5-26-93
 Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found 504

From	To	Estimated Flow Rate	SWL
600	762	300	502
762	951	500	502

(12) WELL LOG:

Ground elevation _____

Material	From	To	SWL
Clay and large cobbles Br.	0	6	
Basalt fractured Grey	6	18	
Basalt hard Grey	18	28	
Basalt fractured Grey	28	33	
Basalt weathered Grey with clay soft yellowish brown	33	50	
Sandstone med. conglomerate	50		
Brown Sandstone	50		
Conglomerate		128	
Pumice	128	132	
Conglomerate	132	156	
Lava med. gry. rounded	156	208	
Basalt and gry. & brn. with fractures	208	216	
Basalt lavender hard	216	225	
Basalt gry. & brn. hard	225	260	
Basalt very hard	260	326	
Soft rock brn. weathered	326	345	
Sandstone conglomerate	345	425	
Basalt red hard	425	470	

cont. page 2

Date started _____ Completed _____

(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 well construction standards. Material used and information reported above are true to my best knowledge and belief.

Signed [Signature] WWC Number 1358
 Date 6-8-94

(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 well construction standards. This report is true to the best of my knowledge and belief.

Signed [Signature] WWC Number 1358
 Date 6-8-94

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

JEFF
880
 PAGE 2 of 2

RECEIVED

JUN 1 0 1994

138/12E/160d
 pg. 2

WATER RESOURCES DEPT. (START CARD) # 65238

(1) OWNER: Well Number 4
 Name Crooked River Ranch
 Address PO Box 1388
 City Crooked River Ranch State OR Zip 97760

(2) TYPE OF WORK:
 New Well Deepen Recondition Abandon

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

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

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

HOLE DIAMETER		SEAL		Amount sacks or pounds
From	To	From	To	

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:				<input type="checkbox"/>	<input type="checkbox"/>	<input 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 _____
 Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input 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
			1 hr.

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: _____

SALEM, OREGON
 (9) LOCATION OF WELL by legal description:
 County Jefferson Latitude _____ Longitude _____
 Township 13 S N or S. Range 12 E E or W. WM.
 Section 16 NE $\frac{1}{4}$ SE $\frac{1}{4}$
 Tax Lot 72 Lot # 7 Block _____ Subdivision _____
 Street Address of Well (or nearest address) Cinder Road

(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
Pumice conglomerate	470	562	
Sandstone brn.	562	600	
Basalt grey hard	600	633	
Sandstone brn. conglomerate	670		
Soft drilling		695	
Basalt gry. hard	695	708	
Basalt med. weathered	708	714	
Basalt hard gry. with fractures	714	762	
Conglomerate	762	845	
Pumice conglomerate	845	865	
Basalt grey hard	865	882	
Lava pourous red & brn.	882	913	
Hard grey	913	921	
Lava red broken & pourous	921	927	
Basalt grey hard	927	951	

Date started 4-25-94 Completed 5-26-94

(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 well construction standards. Material used and information reported above are true to my best knowledge and belief.
 Signed Raymond B. Stadel 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 well construction standards. This report is true to the best of my knowledge and belief.
 Signed Raymond B. Stadel WWC Number 1358 Date 6-8-94

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

JEFFERSON 00002
 50662

WELL ID # L 43040

(START CARD) # 131169

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

(1) OWNER: Well Number: 2
 Name Crooked River Ranch Water Company
 Address P.O. Box 1388
 City Crooked River Ranch State OR Zip 97760

(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 461+ ft.
 Explosives used Yes No Type _____ Amount _____

HOLE		SEAL		Amount	
Diameter	From To	Material	From To	sacks or pounds	
15.5		Not Disturbed			

How was seal placed? Method A B C D E
 Other Not Disturbed

Backfill placed from _____ ft. to _____ ft. Material _____
 Gravel placed from _____ ft. to _____ ft. Material _____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:	14in	+2.5	461	.250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(7) PERFORATIONS/SCREENS:

Perforations Method _____
 Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
341	401	1/8	1680	14in	pipe	<input type="checkbox"/>	<input checked="" type="checkbox"/>
401	461	1/8	3360	14in	pipe	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Pump Bailor Air Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
850	2	340	24 hr.

Temperature of Water 48 Depth Artesian Flow found _____
 Was a water analysis done? Yes By whom Coffey 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 Jefferson Latitude _____ Longitude _____
 Township 13S N or S. Range 12E E or W. of WM.
 Section 24B SW 1/4 NW 1/4
 Tax lot 2800 Lot _____ Block _____ Subdivision _____
 Street Address of Well (or nearest address) 13845 SW Commercial Loop, Crooked River Ranch, OR

(10) STATIC WATER LEVEL:
282 ft. below land surface. Date 6/28/2000
 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 2540

Material	From	To	SWL
Well was surveyed and found to have significant deflection zones beginning just below the existing surface seal. The records indicate that this well was originally drilled with a cable tool. While the hole was fairly straight it had alignment problems that would prevent the placement of liner casing in the borehole without removing the crooked zones. The drill string was tooled up with two 20ft. full bodied stabilizers and a 15.5" roller cone hole opener bit. Reaming and straightening was necessary from top to bottom. The most significant deviation was from 325 ft. to 380 ft. After making several passes with the drill string, casing placement occurred without event until the 400 ft. level where we had to push on it from time to time to advance the casing to the borehole bottom. We believe there is a significant water bearing zone in the well bottom as we had very little in the way of material from reaming operations in the hole. Our determination is that there is live moving water in the bottom to carry drill cuttings away.			

Date started 6/21/2000 Completed 6/29/2000

(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.

WESTERN WATER DEVELOPMENT
 Signed P.O. Box 1670 WWC Number _____
Redmond, OR 97756 Date _____

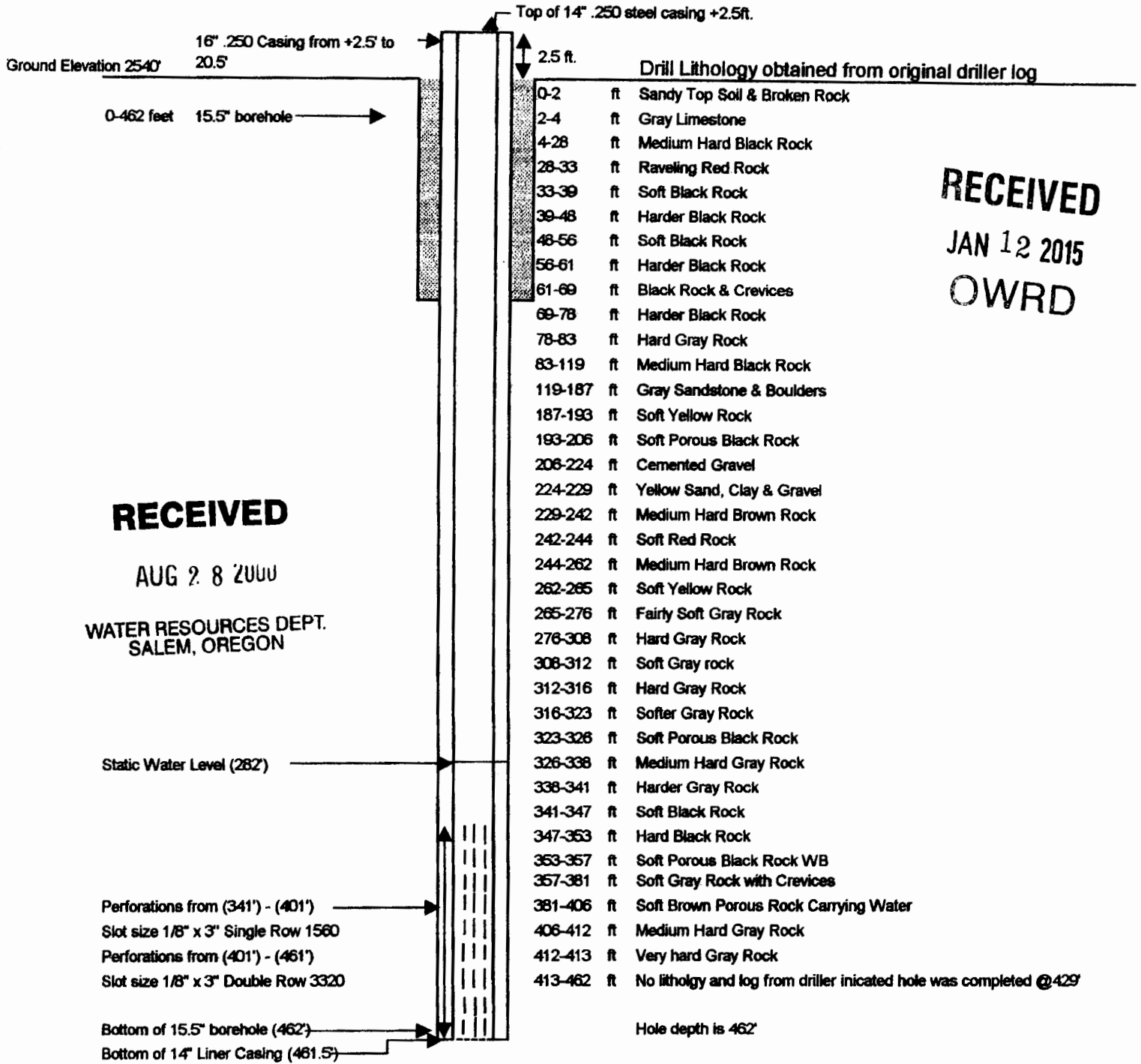
(bonded) Water Well Constructor Certification:
 I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed Robert Buckner WWC Number 1385
Robert Buckner Date 7/21/2000

JERRY SUDD
50662

WESTERN WATER DEVELOPMENT
P.O. Box 1670
Redmond, OR 97756

Crooked River Ranch Water Company WELL #2 CONSTRUCTION DIAGRAM



RECEIVED
JAN 12 2015
OWRD

RECEIVED

AUG 28 2000

WATER RESOURCES DEPT.
SALEM, OREGON