

Groundwater Application Review Summary Form

Application # G- 18665

GW Reviewer D. BOSCHMANN Date Review Completed: 05/08/2018

Summary of GW Availability and Injury Review:

Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

Summary of Potential for Substantial Interference Review:

There is the potential for substantial interference per Section C of the attached review form.

Summary of Well Construction Assessment:

The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 05/08/2018
 FROM: Groundwater Section Darrick E. Boschmann
 Reviewer's Name
 SUBJECT: Application G- 18665 Supersedes review of NA
 Date of Review(s)

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

OAR 690-310-130 (1) *The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525.* Department staff review groundwater applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. **This review is based upon available information and agency policies in place at the time of evaluation.**

A. GENERAL INFORMATION: Applicant's Name: Rock Creek Ranch Inc. County: Harney

A1. Applicant(s) seek(s) 2.01 cfs from 1 well(s) in the Malheur Lake Basin,
Rock Creek (Catlow Valley) subbasin

A2. Proposed use Irrigation (120.7 acres primary) Seasonality: March 1 – October 31

A3. Well and aquifer data (**attach and number logs for existing wells; mark proposed wells as such under logid**):

Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	HARN 1669	Well 2	Black rock & cinders	2.01	33.00S-29.00E-13-NW SE	180 FEET SOUTH AND 120 FEET EAST FROM C1/4 CORNER, SECTION 13
2						
3						
4						
5						

* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	4598	?	24.2	07/23/1979	180	0-10	+1-17	None	None	600	115	P

Use data from application for proposed wells.

A4. **Comments:** _____

The proposed well is located in Harney County, along the west side of Catlow valley near Rock Creek below Rock Creek Reservoir. The area underlying the well was mapped as QTs (sedimentary deposits) by Walker & Repenning, 1965. Underlying QTs at this location are units Tst (Tuffaceous sedimentary rocks and tuffs) and Tb (basalt) (Walker & Repenning, 1965).

The well log for HARN 1669 indicates yellow clay to 17 feet, which is likely correlative with Walkers QTs/Tts units; underlain by black rock and cinders to 180 feet (TD), which is likely correlative with Walkers Tb unit.

*Note: the proposed well does not appear to meet current well construction standards. See section D.

*Note: the proposed well currently serves as the authorized POD for certificate 82352.

A5. **Provisions of the Malheur Lake** Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water **are**, or **are not**, activated by this application. (Not all basin rules contain such provisions.)

Comments: _____

A6. **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction. Name of administrative area: _____

Comments: Currently no administrative area. _____

B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

B1. **Based upon available data**, I have determined that groundwater* for the proposed use:

- a. is over appropriated, is not over appropriated, or **cannot be determined to be** over appropriated during any period of the proposed use. * This finding is limited to the groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;
- b. **will not** or **will** likely be available in the amounts requested without injury to prior water rights. * This finding is limited to the groundwater portion of the injury determination as prescribed in OAR 690-310-130;
- c. **will not** or **will** likely to be available within the capacity of the groundwater resource; or
- d. **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater resource:
 - i. The permit should contain condition #(s) 7N; Flow meter/reporting;;
 - ii. The permit should be conditioned as indicated in item 2 below.
 - iii. The permit should contain special condition(s) as indicated in item 3 below;

- B2. a. **Condition** to allow groundwater production from no deeper than _____ ft. below land surface;
- b. **Condition** to allow groundwater production from no shallower than _____ ft. below land surface;
- c. **Condition** to allow groundwater production only from the _____ groundwater reservoir between approximately _____ ft. and _____ ft. below land surface;
- d. **Well reconstruction** is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Groundwater Section.

Describe injury –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc): _____

B3. **Groundwater availability remarks:** _____

There are two State Observation Wells in the Catlow Valley. The State Observation Well with long term data closest to the proposed well is inactive State Observation Well 1150 (HARN 1683) located in T33S/R31E-sec 31; about 8 miles southeast of the proposed well; which has a period of record from 1987-2008. The other is State Observation Well 1151 (HARN 782) located in 33S/31E-8; about 8 miles east-northeast of the proposed well; which has a period of record from 1987-current. Water level trends in both wells seem to indicate a slight rate of decline over the period of record (see attachment); however the relative contribution of long term climate cycles and groundwater withdrawals to this decline cannot be determined.

If a permit is issued, the following conditions are recommended: _____

7N: Annual Measurement and Decline Condition

Flow meter condition: Use the water rights “large” permit condition requiring a totalizing flow meter and reporting.

C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

C1. **690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Black rock & cinders	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: _____

Some local well logs report static water levels that are somewhat above the depth that groundwater was first encountered. It is unknown however how continuous any overlying fine grained material is, and given the minimal head difference reported in local well logs it is likely that the regional aquifer is unconfined to weakly semiconfined.

C2. **690-09-040 (2) (3):** Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: _____

There are no perennial surface water sources in the vicinity of the proposed well. Although the NHD indicates a perennial reach, evaluation of historical imagery clearly shows that the reach of Rock Creek below Rock Creek reservoir is not perennial; and that for miles above the reservoir the creek flows only seasonally.

Water Availability Basin the well(s) are located within: No WAB data available.

C3a. **690-09-040 (4):** Evaluation of stream impacts for each well that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% *natural* flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. **Complete only if Q is distributed among wells.** Otherwise same evaluation and limitations apply as in C3a above.

	SW #		Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: This section does not apply.

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

Basis for impact evaluation: _____

 This section does not apply.

C4b. **690-09-040 (5) (b)** The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.

- C5. **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:
- i. The permit should contain condition #(s) _____;
 - ii. The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** _____

None.

References Used: _____

Walker, G.W. and Repenning, C.A., 1965. *Reconnaissance geologic map of the Adel quadrangle, Lake, Harney, and Malheur counties, Oregon* (No. 446).

OWRD water well reports, water level data, and/or hydrographs

Google Earth Imagery: 1994-2015.

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1 (owners well 2) Logid: HARN 1669

D2. **THE WELL does not appear to meet current well construction standards based upon:**

- a. review of the well log;
- b. field inspection by _____;
- c. report of CWRE _____;
- d. other: (specify) _____

D3. **THE WELL construction deficiency or other comment is described as follows:** _____

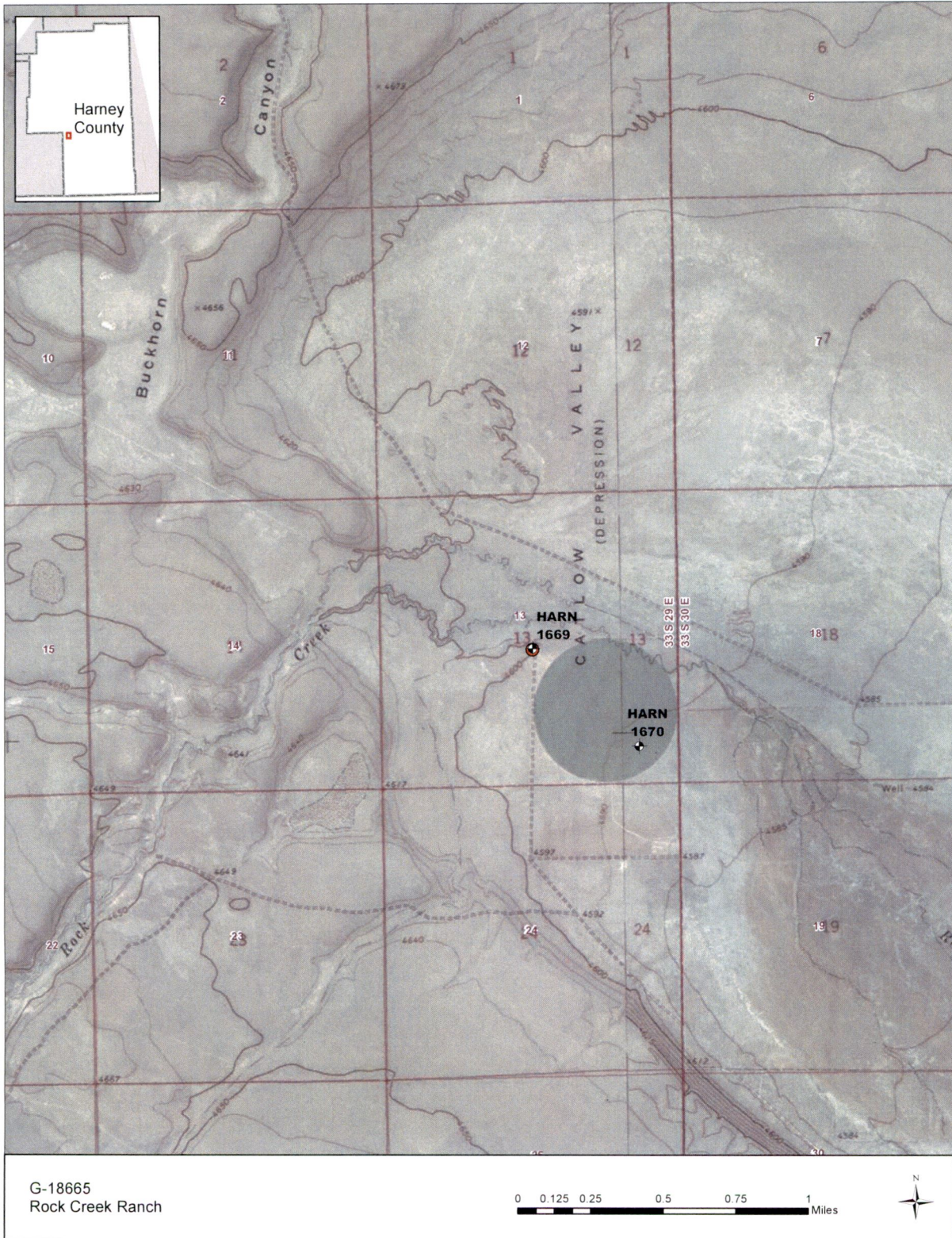
Insufficient seal depth (10 foot cement seal).

D4. **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Water Availability Tables

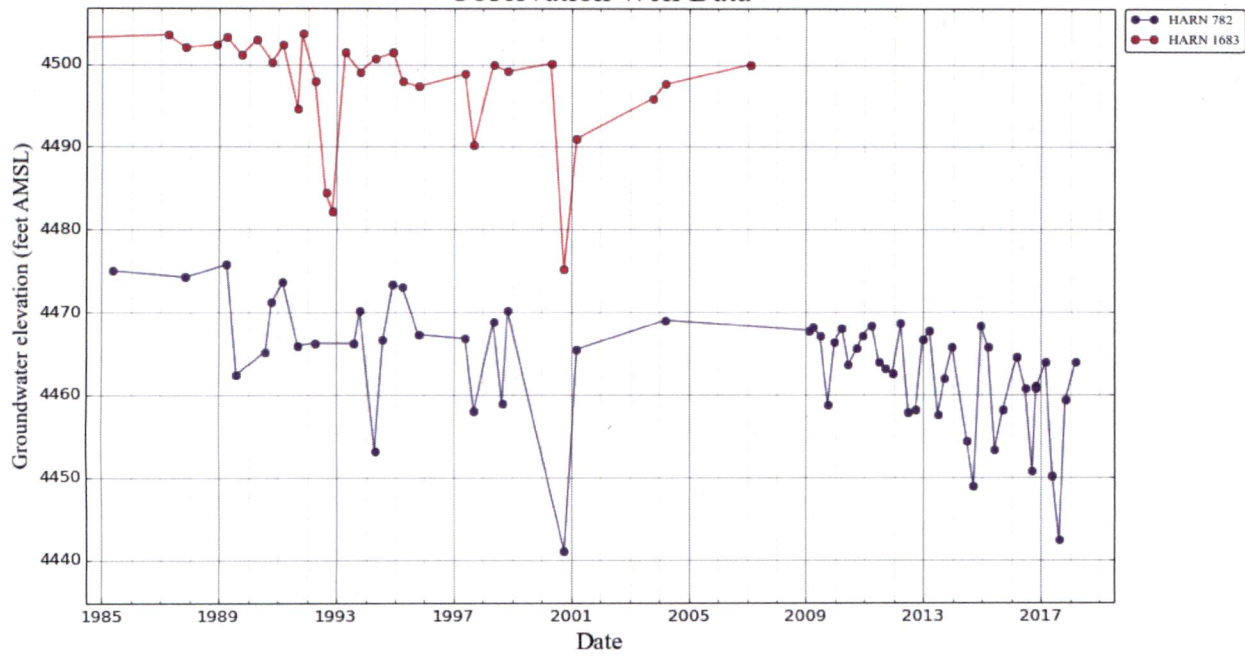
No WAB data available.

Well Location Map



Water-Level Trends in Nearby Wells

Observation Well Data



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.

WATER WELL REPORT

STATE OF OREGON (Please type or print)

(Do not write above this line)

RECEIVED

MAY 22 1969

STATE ENGINEER SALEM, OREGON

33/29-13 dbb

2

Handwritten: 6/6/69 Harney

Handwritten: 6-6434 G-4889

(1) OWNER:

Name Rock Creek Ranch, Inc. Address Frenchglen, Oregon 97736

(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 [] [] Bored []

(4) PROPOSED USE (check):

Domestic [] Industrial [] Municipal [] Irrigation [x] Test Well [] Other []

(5) CASING INSTALLED:

12" Diam. from 1 ft. to 17 ft. Gage .250

PERFORATIONS:

Perforated? [] Yes [x] No

Type of perforator used Size of perforations in. by in. 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.

(8) WATER LEVEL: Completed well.

level 25 ft. below land surface Date 5/15/69

(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? J.W. Rossberg 600 gal./min. with 115 ft. drawdown after 5 hrs.

Bailer test gal./min. with ft. drawdown after hrs. Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? [] Yes [x] No

(10) CONSTRUCTION:

Well seal—Material used cement Depth of seal 10 ft. Diameter of well bore to bottom of seal 12 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? [] Yes [x] No Size of gravel: Gravel placed from ft. to ft.

(11) LOCATION OF WELL:

County HARNEY Driller's well number Sell NW 1/4 SE 1/4 Section 13 T. 335 R. 29 EU W.M.

Bearing and distance from section or subdivision corner 255 feet S. 330 E from center Sect 13 T. 335 R. 29 E marked steel fence post

(12) WELL LOG:

Diameter of well below casing 12 ft. Depth drilled 180 ft. Depth of completed well 180 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.

Table with columns: MATERIAL, From, To, SWL. Rows: yellow clay (1-17), black rock (17-97), red cinders (97-108), black rock (108-180).

Work started September 1968 Completed January 1968 Date well drilling machine moved off of well 19

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] Jerry A. Miller Date May 15 1969 (Drilling Machine Operator)

Well was drilled on our land, using our well drill, Drilling Machine Operator's License No. by us.

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 Rock Creek Ranch, Inc., by Jerry A. Miller (Person, firm or corporation) (Type or print)

Address Frenchglen, Oregon

[Signed] (Water Well Contractor)

Contractor's License No. Date