

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No. 51-7346

1. Owner: J R Simplot Company Phone No.: 208-336-2110

Current Address: PO Box 27, Boise, ID 83707

2. Accompanied by: Kent Frisch EXAM DATE: 10/4/2012 & 5/29/2014

Address: _____ Phone No. 208-801-1901

Relationship to Permit Holder: Farm Manager

3. Source: Bruneau River _____ tributary to Snake River

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 51-2, 51-3, 51-5, 51-10271, 51-10350, 51-10351, 51-2091, 51-2120, 51-2123, 51-2127, 51-2150, 51-2165, 51-2169, 51-2170, 51-2213B, 51-7047, 51-7058, 51-7082A and 51-2089B

2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

[illegible]

2. Place(s) of Use:

Indicate Method of Determination: Site visit, discussion with Farm Manager.
See attached Field Exam map or License amendment for acres/QQ.

[illegible]

		23					34			28	30	34	39				165
		26			28	32	38	29	13	36	12	.6					186
														Total Acres			1010

3. Delivery System Diagram: Indicate all major components and distances between components. Indicate weir/pipe size as applicable.

SEE ATTACHED SHEET.

YES Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (Required).

YES Aerial Photo Attached (required for irrigation of 10+ acres).

YES Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	ZJS	100	D01-9983A		0074747 – 10.8"
	High Thrust	150	1407102	Wayne	0074746 - 18.04"
	High Thrust	150	31374	Wayne	0074745 – 18.04"

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calibration Date

2. Measurements: Unable to get flow measurement on either discharge pipe. Not enough room to get away from turbulence caused by elbow from pump into ground. See attached photo of pump site. Did theoretical calculation. See attached sheet.

NARRATIVE/REMARKS/COMMENTS: This permit is for spring high flows prior to using Bruneau-Buckaroo shares and ground water. Calculations indicate the pumps have capacity to cover the 1010 acres found during the field exam. The original permit had two PODs upstream and downstream from the current location. In addition, the original permit called for 1061 acres. During the field exam, 93 acres listed on the Permit in sections 3 & 4 and the NENE section 9 and NWNW & SWNW section 10 are being excluded. This area cannot be reached by the delivery system. However, additional acres served by the system have been included in the NWNW (20 acres) and SWSE (9 acres) section 15. All of these changes are

shown on the amended license. Water pumped through the 100 hp pump goes to approximately 320 acres at the southern end of the farm. Water from the two 150 hp pumps is put into a storage pond and pumped from there to the 690 acres on the northern portion of the farm. See system diagram for specific areas served. The larger pumps are turned on and off based on a water level in the pond. As the level goes down the pumps are turned on to maintain an adequate water level for pumping for the pond into the system.

OVERLAP

The amended license has combined limits on acres, rate and volume with all of other Simplot GW irrigation rights covering this property, combined limits on acres with Bruneau-Buckaroo rights and combined limits on acres with Simplot GW and Bruneau-Buckaroo rights.

Decreed water right 51-5 in the name of the Bruneau-Buckaroo Ditch Company has a condition providing 250 acres (4.4 cfs) of ditch water within 1311 acres of land owned by Owen Ranches. These lands are now in the name of JR Simplot Company and are generally covered by this permit. Given the requirement to deliver 250 acres of water and a map in the file for 51-5 showing these 250 acres within the 1010 being permitted, the licensed is being conditioned to limit irrigation to 760 acres when Bruneau-Buckaroo Ditch water is available. Since 2004, there is no indication this water would have been used anywhere with the 1311 acres specified in the 51-5 condition except within those lands being considered for licensing under this permit. Additionally, Kent Fritsch said that Simplot delivery system for Bruneau-Buckaroo ditch water does not extend north of the irrigation shown in the amended license.

RECOMMENDATIONS:

Approve permit as amended in license.

Have conditions of permit approval been met? X yes ___ no

F. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method: N/A. Could not get a proper reading from Tyme-Flyte. Too much turbulence.

$$\frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}} = \frac{8.8 * .7 * 300}{5 + 2.31 * 40 + 0} = 18.98 \text{ cfs}$$

$$\frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}} = \frac{8.8 * .7 * 100}{5 + 2.31 * 90 + 0} = \frac{2.83 \text{ cfs}}{21.81 \text{ cfs}}$$

0.02 cfs/acre or 20.2 cfs total (0.02 * 1010 = 20.2 cfs) needed for acreage and rate.

Pumping system is adequate fro need. Rate will be limited to 20.2 cfs.

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

2. Volume Calculations for Other Uses: N/A

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial use	Period Of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Irrigation	3/1	11/15	20.2	
TOTAL			20.2	

2. Recommended Amendments

☒ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None
☒ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

MICHAEL CISCELL – SENIOR GIS ANALYST

Field Examiner's Name  Date 6/16/2015

Reviewer _____ Date _____

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 51-7346
 Reviewer: Michael Ciscell
 Date of Review: 5/29/2014

P/D No.:	Scenario 1	Scenario 2	Scenario 3	
PUMP HORSEPOWER	150	150	100	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	5	5	5	
DISCHARGE PRESSURE	40	40	92	
RATE OF FLOW (cfs)	9.49	9.49	2.83	Total
(gpm)	4257.9	4257.9	1271.1	21.81
				9786.84

The above calculates the formula = $Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

Used theoretical calculation. Not enough room on pipe to do an actual measurement. Obtained psi from owner's gage. Lift was measured directly with tape. Permit rate was for 21.2 cfs and the theoretical shows that the pumps can actually divert 21.81 therefore this measurement calculation sounds reasonable. There are 1010 acres irrigated with the maximum allowable diversion rate of 0.02 cfs/acre or 20.2 cfs total (0.02 * 1010 = 20.2 cfs).

System diagram for Permit 51-7346:

Diversion and distribution from Bruneau River by 2 150 hp pumps and 1 100 hp pump. Water from Bruneau-Buckaroo Canal Company shares can enter the system through pump in ditch, (not a part of this permit). Bruneau River pumps are regulated by storage pond level. Larger pumps are on until pond reaches certain level, then shut off and water is pumped from pond to northern fields. Smaller pump is regulated separately.

● Water Right POD

□ Lands irrigated under Permit 51-7346

— Mainlines from 100 hp pump

— Mainlines from 150 hp pumps

Booster pump

Storage pond

Pump from Bruneau-Buckaroo Ditch

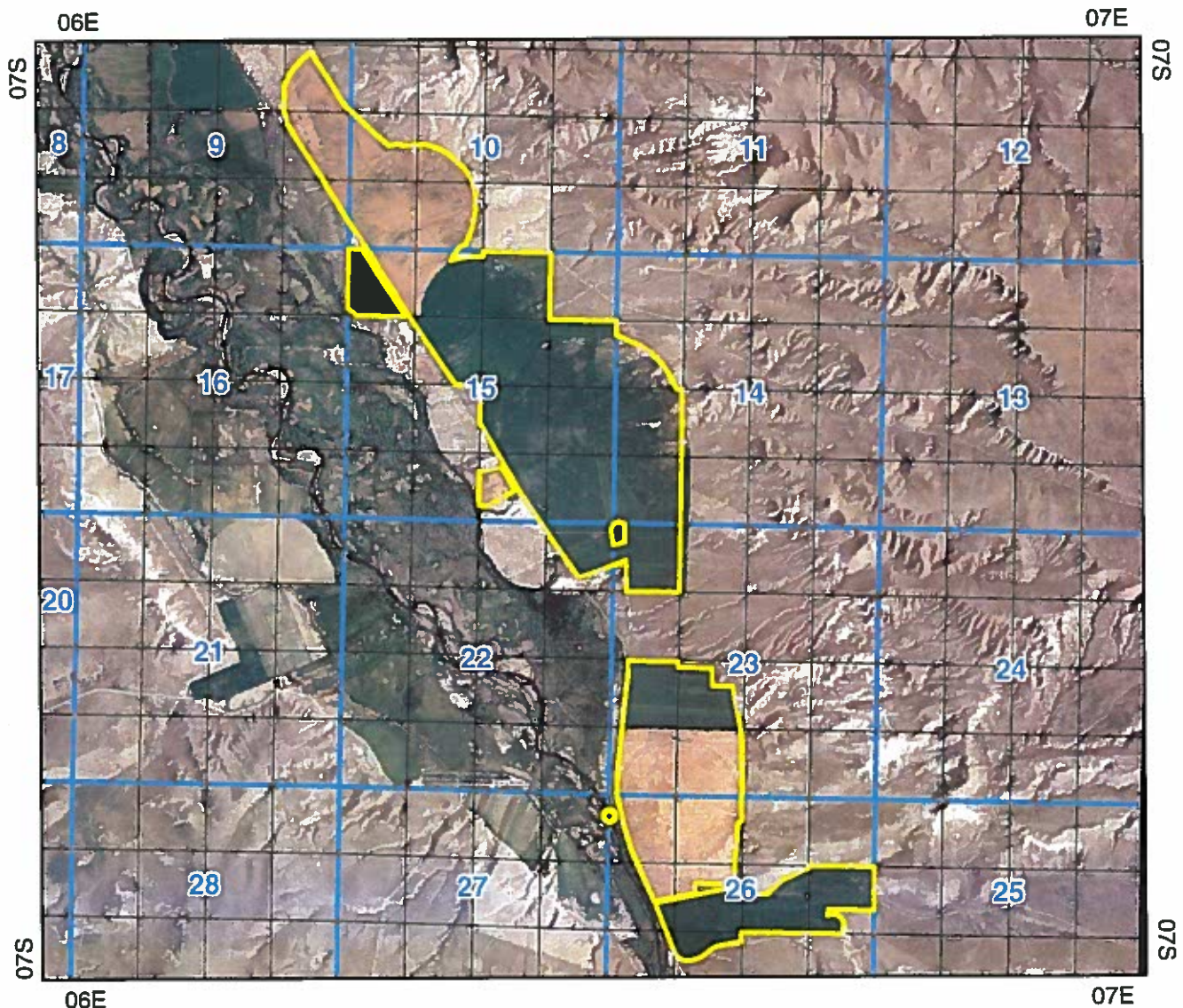
Booster pump

Pumping Station:
2 150 hp pumps - 18" discharge pipe
1 100 hp pump - 10.8" discharge pipe

0 0.1 0.2 0.4 0.6 0.8
Miles

State of Idaho
Department of Water Resources
Field Exam of Water Right License
51-7346

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



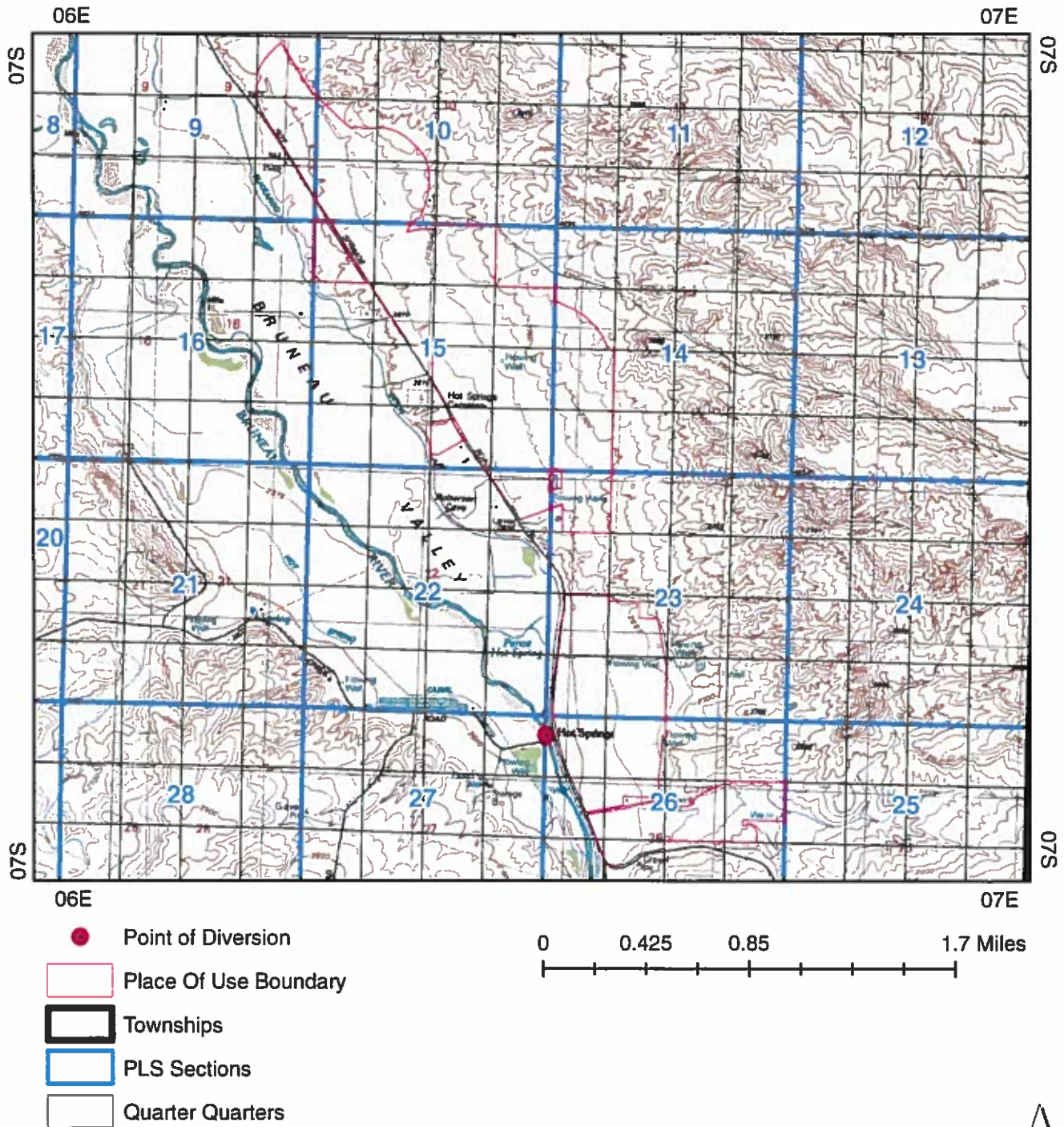
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.425 0.85 1.7 Miles



State of Idaho
Department of Water Resources
Field Exam of Water Right License
51-7346

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



Field Exam Photos for 51-7346
5/29/2014



Pumping station from Bruneau River – gray pumps 150 hp, white pump 100hp



Elbows in discharge pipes caused turbulence making it impossible to get a good measurement.



Pump intakes



Bridge crossing Bruneau River upstream of pumping station. Pump intakes on left.



Looking east from pumping station across Bruneau-Buckaroo Ditch.
These fields irrigated from 100 hp pump



Looking NE from pumping station across Bruneau-Buckaroo Ditch
These fields irrigated from 100 hp pump