

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-31731

Exam Date: 9/20/2012

1. Current Owner: MICHAEL VALENZUELA
29677 HURTZ RD
PARMA ID 83660
(208) 908-9341
2. Accompanied by: MICHAEL VALENZUELA
Phone No: (208) 908-9341
Address: 29677 HURTZ RD, PARMA, ID 83660
Relationship to Permit Holder:

3. SOURCE

UNNAMED DRAIN

TRIBUTARY

SNAKE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use:
2. Other water rights with the same point of diversion:

C. DIVERSION AND DELIVERY SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

UNNAMED DRAIN NE1/4SW1/4 Sec. 30, Twp 06N, Rge 05W, B.M. CANYON County

Method of Determination: GPS

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
06N	05W	30	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	5.4
																			5.4

Total Acres: 5.4

Method of Determination:

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
	Baldor Reliance	7.5	JPL1509T		

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

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Model No.</u>	<u>Size</u>
Pitot tube	glycerin filled, stainless steel	4CFH4	100 psi

2. Measurements:

Pressure reading from single nozzle of #100 Nelson Big Gun = 50 psi

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method:

Nelson brochure: #100 sprinkler with 0.9-inch nozzle at 50 psi = 165 gpm (0.37cfs)

Theoretical pump flow rate (using 7.5 HP, 70% efficiency, 5 feet of lift, and 50 psi):

$$Q = (8.8 \times 7.5 \times 0.7) / (5 + (50 \times 2.31)) = 0.38 \text{ cfs (172 gpm)}$$

Nelson = 0.37 cfs

Theoretical = 0.38 cfs

The diversion rate to be licensed under this right will be limited to 0.12 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5.4 \text{ acres} \times 3.5 \text{ AF/acre} = 18.9 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.37 \text{ cfs} \times 245 \text{ days} \times 1.9835 = 179.8 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 18.9 \text{ AF}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

This permit was field examined on 9/20/12 by myself, Craig Tesch, and Jennifer Cuhaciyan of IDWR. The owner Michael Valenzuela accompanied us on the exam. This permit authorizes the diversion of drain water that flows through the Valenzuela property to be used for irrigation purposes.

Water is diverted from the drain channel by a pump located on its south bank at the end of a walking bridge. The pump and drain are located in the northern portion of the overall property, in a location south of the house but north of the irrigated fields. The drain passes through the property in an east-west direction; water enters the property on the east, leaves on the west, and ultimately discharges to the Snake River.

The irrigation system consists of a 7.5 HP, 3450 RPM, Baldor Reliance pump that pulls water from the drain via a 5-inch corrugated plastic pipe, and supplies it to a #100 Nelson Big Gun sprinkler through a 4-inch buried steel pipe. The 4-inch steel pipe travels about 300 feet southwest from the pump to several risers, one of which is the hookup for the Nelson Big Gun. The two fields south of the risers, approximately 2.5 acres each, are irrigated by the Nelson Big Gun on a cart. Back at the pump location, a 2-inch pipe branches off from the 4-inch pipe and travels northeast across the drain channel to small sprinklers that water the lawn around the house.

On average, the owner irrigates when needed during the irrigation season from March through October. Water that is released onto the property is consumptively used by vegetation or seeps into the subsurface. A tag was hammered into a wood beam on the west side of the pump (#A0017577).

Flow of water onto the irrigated fields is controlled by the Baldor Reliance pump and Nelson Big Gun. Both the pump and Big Gun were operating during the time of the field exam, and a measurement of pressure was taken at the Big Gun. Total pressure using a pitot tube in the single nozzle was 50 psi. According to the Nelson brochure, a #100 sprinkler with 0.9-inch nozzle at 50 psi produces 165 gpm (0.37 cfs) of discharge. In comparison, a theoretical calculation of the Baldor Reliance pump flow rate (7.5 HP, 70% efficiency, 5 feet of lift, 50 psi) results in 172 gpm (0.38 cfs) of discharge.

The owner also possesses Farmers Coop Ditch Co. shares; however, water from these shares is physically unable to reach the Valenzuela property. The Coop shares are not part of this water right.

In summary, the beneficial use of this water right includes irrigation of 5.4 acres. No overlapping water rights exist on the place of use.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/01 to 11/01	0.120 CFS	
	11/15		
	<u>Totals:</u>	0.120 CFS	

Current Standard

C. S. Smith 12-15-12

2. Recommended Amendments

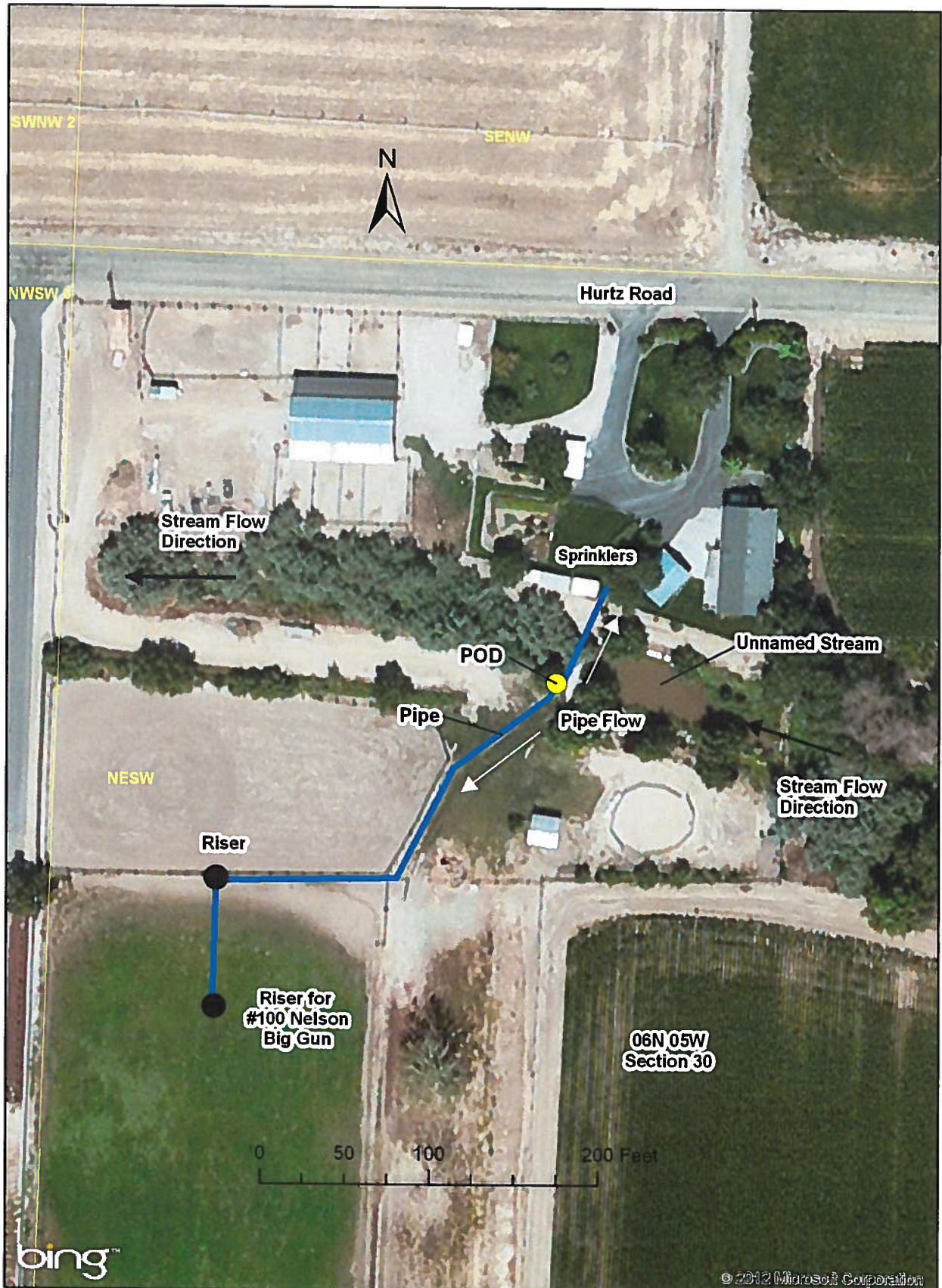
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Craig Tuck Date 12/12/2012

Reviewer _____ Date _____



Photos taken by Craig Tesch on 9/20/2012

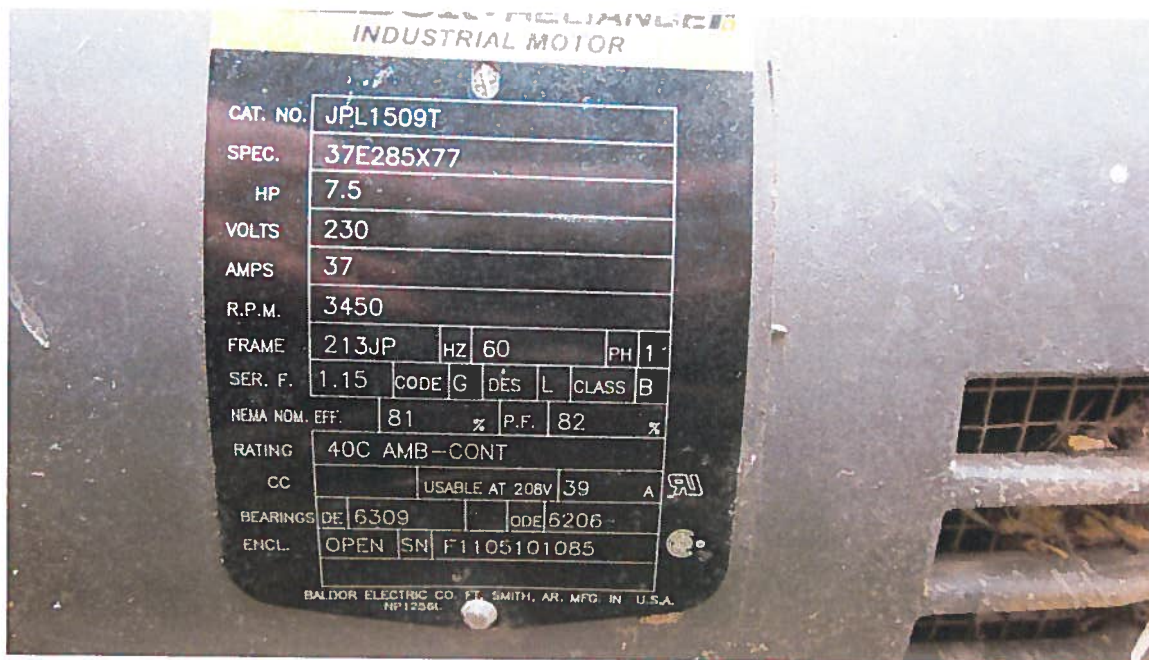


Licensed POD – Looking north across the unnamed drain showing the 7.5 HP Baldor Reliance pump and discharge pipes.



Licensed POD – Looking at the pump and corrugated plastic pipe pulling water from the unnamed drain.

Photos taken by Craig Tesch on 9/20/2012



Licensed POD – Baldor Reliance pump information label.



Licensed POU – Standing at the northeast corner of the POU looking southwest at the #100 Nelson Big Gun on a cart.

Photos taken by Craig Tesch on 9/20/2012



Licensed POU – Standing at the northeast corner of the POU looking southwest at the #100 Nelson Big Gun on a cart.