

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-33787
Exam Date: 10/01/2024

1. Current Owner:
MIYASAKO FARMS LLP PO BOX 1060 HOMEDALE ID 83628-1060
2. Accompanied by: Dan
Phone No: (208) 724-2225
Address: PO Box 1060 Homedale, ID 83628
Relationship to permit Holder: permit holder

3. SOURCE:
GROUND WATER

Method of Determination: Proof of beneficial use, GIS, field exam, driller's report

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
63-2344	Unnamed	Irrigation	Decreed
63-33251	Indian Creek	Irrigation	Decreed

Comments: 36 overlapping water rights or permits. Most of these belong to irrigation districts, except for one private irrigation right with an unnamed source.

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
63-11220	Groundwater	Irrigation	License

Comments: One overlap in point of diversion exists. License 63-11220 irrigates 27 acres in the SESW ¼ ¼ of 03N04W sec. 11 at a rate of 0.54 cfs.

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER SE¼ SW¼, Sec. 11, Twp 03N, Rge 04W, B.M. CANYON County
GPS Coordinates: 43 36.12N -116 47.02W

Method of Determination: Field Examination, GIS, driller's report.

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	04W	11					40.0			40.0	40.0								120.0

Total Acres: 120.0

Method of Determination: Field examination, proof of beneficial use, GIS tax lot data.

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.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0064436	Nidec Motor Co.	100	H0100V2516	Robbco 12JME	213283

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NA	NA	NA	NA	NA	NA	NA

2. Measurements: No additional measurements were collected in the field. Owner has installed an Octave 8" C750 flow meter.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

As per AP Memo #17: $0.02 \text{ cfs} \times 120 \text{ acres} = 2.4 \text{ cfs}$

System running was pumping 1279 gpm at the time of the field exam.

$1279 \text{ gpm} \times 0.00223 \text{ cfs} = 2.85 \text{ cfs}$.

Theoretical Flow Analysis: $(8.8 \times 100 \text{ hp} \times 0.82 \text{ eff.}) / [(157 \text{ ft lift}) + (0 \text{ psi} \times 2.31)] = 721.6 / 157 = 4.60 \text{ cfs}$

$(8.8 \times 100 \text{ hp} \times 0.82 \text{ eff.}) / [(244 \text{ ft lift}) + (0 \text{ psi} \times 2.31)] = 721.6 / 243 = 2.97 \text{ cfs}$

Pump depth calculation:

The permitted flow rate is 2.96 cfs.

Flow rate ratio: $2.4 \text{ cfs} / 4.6 \text{ cfs} = 0.522 \text{ cfs}$

Pump depth = $157 \text{ ft} (1 / 0.522) = 243.9 \text{ ft}$

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 120 \text{ acres} \times 3.5 \text{ AF} = 420 \text{ AFA}$

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = (2.4 \text{ cfs} \times 259 \text{ days}) \times 1.9835 = 1,232.9 \text{ AFA}$

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 420 \text{ AFA}$

2. Volume Calculations for Other Uses: N/A. Irrigation is the only use for this license.

G. NARRATIVE/REMARKS/COMMENTS

The Miyasako Farms was permitted for 2.96 cfs ground water to irrigate a total of 148 acres within the NENW, SENW, and NESW, and SWSE $\frac{1}{4}$ $\frac{1}{4}$'s of 03N 04W section 11. During the development period, the owner of the permit did not irrigate SWSE, so it will be removed from the place of use from the license. SESW is covered by water right 63-11220 which is conditioned to use the same point of diversion. The owner of the license has installed an octave submersible agriculture flow meter to the well, so no additional flow measurements were collected during the field visit. At the time of the visit, the flow meter showed a reading of 1279 gpm, or 2.85cfs. The owner stated that the pump was being run close to full capacity for the purposes of the field examination. Water is pumped through an open-ended pipe into a surface ditch at the southeast corner of the SESW 03N04W sec. 11 $\frac{1}{4}$ $\frac{1}{4}$. From there, the system utilizes gravity to deliver water to the 120 irrigated acres. The ditch runs west, along the edge of the parcel, then north to the top of the irrigated area (system diagram, figure 1). A headgate located at the southern end of each 40-acre section diverts water into a smaller ditch, delivering water to plots in 40-acre increments. To justify an appropriate rate of flow, two theoretical calculations are shown above. The pressure of 0 psi is used since the pipe is open-ended. The lower value for lift (157 ft) was achieved by adding the static water level (100 ft) and the drawdown (57 ft). The upper value (244 ft) was calculated using a linear function based off the system capability to pump 4.6 cfs at 157 ft pump depth if the pump was outputting 2.96 cfs, which was the permitted rate. This calculation proves the system capability of delivering the permitted rate, although we will be licensing for the actual use of 2.4cfs.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Volume</u>
IRRIGATION	03/01 to 11/15	2.4 CFS	

Totals: 2.4 CFS

2. Recommended Amendments

 Change P.D. as reflected above Add P.D. as reflected above X None

 Change P.U. as reflected above Add P.U. as reflected above X None

I. AUTHENTICATION Kate Englund - Water Resource Agent

Field Examiner's Name Kate Englund Date 10/3/2024

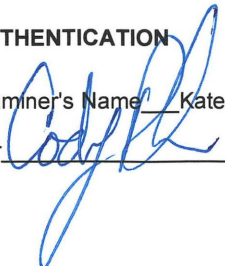
Reviewer  Date 10-30-2024



Figure 1 System diagram outlining the place of use, point of diversion location, and irrigation ditch location. The farm is irrigated with a gravity irrigation system including the main ditch, represented with red, and siphon tubes which are placed seasonally and not represented in the diagram.



Figure 2 Well head and 100hp pump location located in the SESW $\frac{1}{4}$ of 03N 04W sec. 11.



Figure 3 Metal well tag with identification number D0064436 located on the well head.

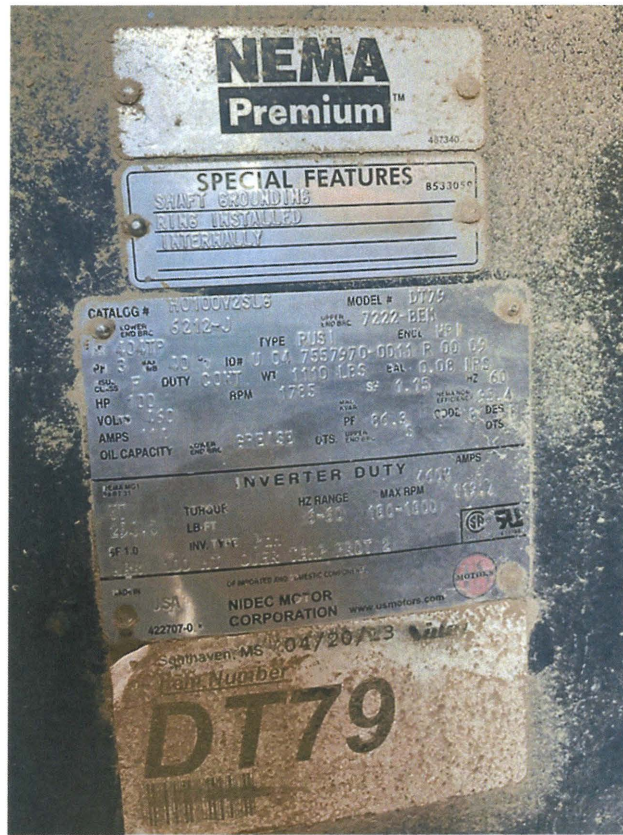


Figure 4 Motor tag with serial number and specifications associated with well D0064436.

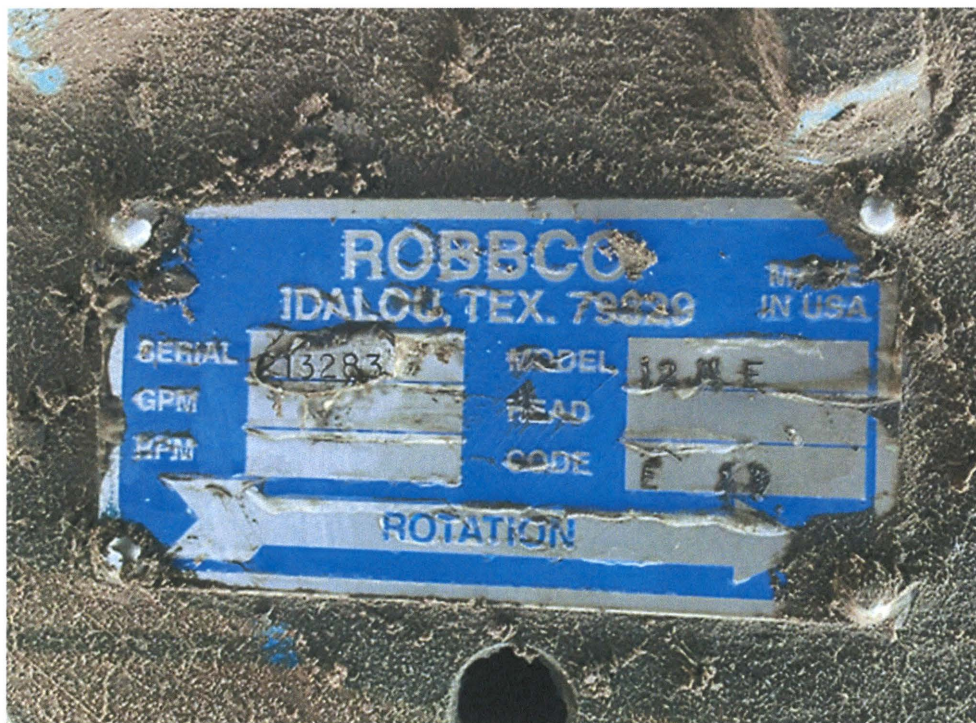


Figure 5 Pump tag showing pump serial number associated with well D0064436.



Figure 6 Octave agriculture flow meter reading 1279 gpm at time of field examination.



Figure 7 Diversion system including well house (point of diversion) and the open-ended pipe that delivers water to the ditch from well. Photo taken facing North.



Figure 8 Photo of irrigation ditch, taken facing South.



Figure 9 Photo of irrigation diversion and ditch that delivers water to a 40-acre section of the place of use. Photo was taken facing West.

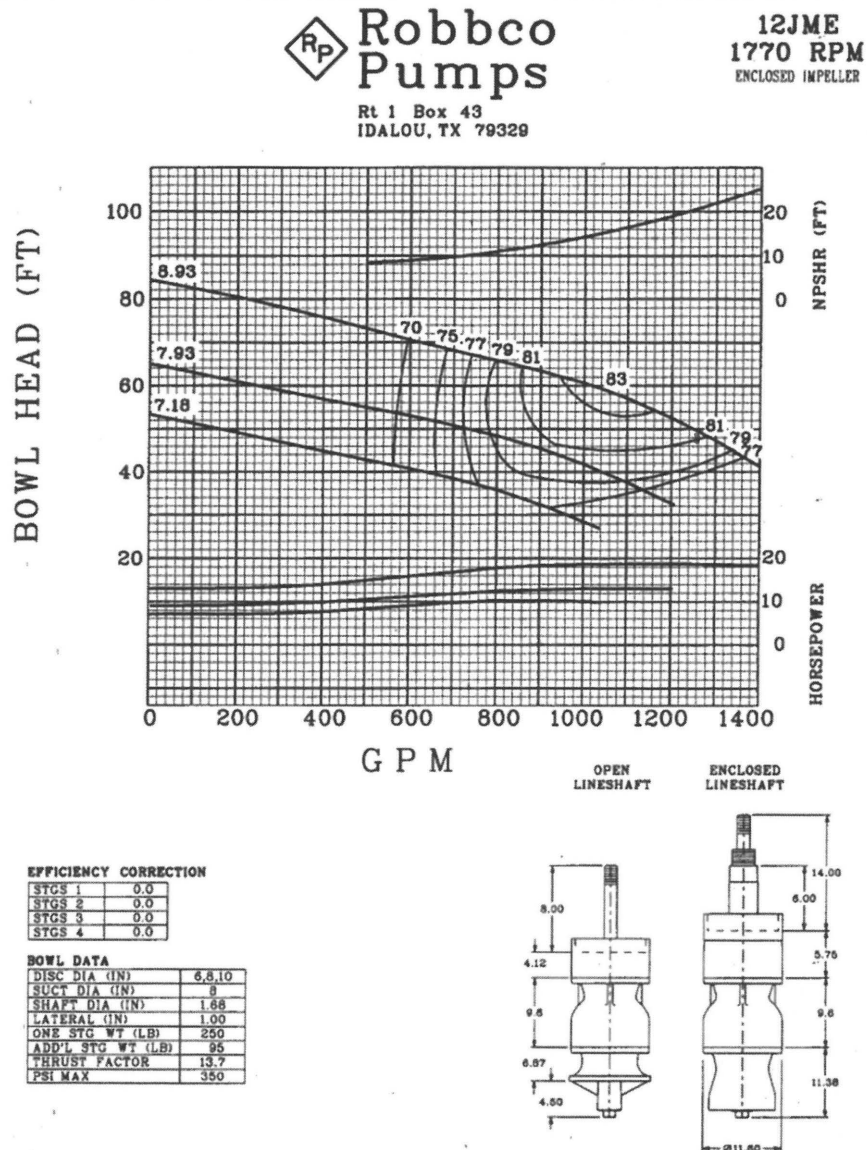


Figure 10 Robbco Pumps efficiency curve, found on Robbco Pumps website.