

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 84-7209

Exam Date: 8/17/2012

1. Current Owner: ROY ULERY
3168 NEFF RD
OROFINO ID 83544
(208)476-4277

DENNIS R ULERY
3168 NEFF RD
OROFINO ID 83544
(208)476-4277

CAROL M ULERY
3168 NEFF RD
OROFINO ID 83544
(208)476-4277

2. Accompanied by: Jim Moore
Phone No: (208) 413-1938
Address: 265 Neff Road
Relationship to Permit Holder: Current Owner

3. SOURCETRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 84-10197 and 84-10194
2. Other water rights with the same point of diversion: none

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

GROUND WATER NE1/4NW1/4NW1/4 Sec. 22, Twp 36N, Rge 02E, B.M. CLEARWATER County

Method of Determination: Field verification with Garmin GPS unit

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
36N	02E	22																	20.0

Total Acres: 20

Method of Determination:

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
☒ 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>
84-88-2-D2	UNK	UNK	UNK	UNK	UNK

The well is equipped with a submersible pump. The pump is assumed to be the original pump installed at the time the well was drilled. I attempted to contact the drilling firm that drilled and installed the well, but they are no longer in business. The well driller's report indicates the well was tested at 75 gpm, but it is not known whether that test was conducted with the pump that is currently installed or a temporary pump installed and removed by the driller.

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

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
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Note: The well was not operational at the time of the field exam, therefore a measurement was not available. In addition, there was no water being diverted or used at the time of the field exam; therefore, no measurements were made.

E. FLOW CALCULATIONS☒ Additional Computation Sheets Attached

Measured Method: Theoretical Horsepower Worksheet

Recommend 0.20 CFS

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 20 \text{ acres} \times 3.5 \text{ acre/foot} = 70 \text{ acre/feet}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.2 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 84.9 \text{ acre/feet}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 70 \text{ acre/feet}$$

2. Volume Calculations for Other Uses:

$$\text{Volumes for stockwater use: } 1500 \text{ hogs} \times 4 \text{ gallon/day per hog} \times 365 \text{ days} / 325,850 = 6.7 \text{ AF/yr}$$

G. NARRATIVE/REMARKS/COMMENTS

This field exam for permit 84-7209 was conducted on 8/17/2012 by Dennis Owsley. Jim Moore, the owner of the property, accompanied me on the exam. This permit authorized the diversion of 0.20 cubic feet per second of groundwater for stockwater, irrigation, domestic, and commercial purposes. The source of water for this permit is groundwater, diverted from a single well located on the property.

During the field interview with the owner, he indicated they bought the property in 1991 in a foreclosure status. The proof of beneficial use was submitted in 1989, prior to the current owner purchasing the property. The permit was authorized to provide water to a 1,500 head hog farm (for animal and pen washing), irrigate crops, provide domestic uses, and to provide stock water to the livestock. The current owner indicated when he purchased the property the farm was in place, consisting of five hog barns, an anaerobic digester, a centralized water storage reservoir, with crops being previously irrigated on the property. The hog barns were removed, and the irrigation practices were discontinued. In addition, a single trailer house (1977 24' X 56' Fleetwood) was removed from the property that was utilizing the POD for domestic purposes.

During the field exam the current owner provided information of the use of the previous water usage to the best of his knowledge. He indicated when he purchased the property that most of the irrigation and water delivery system had been disconnected. However, many of the water delivery components still exist and inferences can be made as to how the system historically operated. It appears the well was used to pump water up to the large cement reservoir. The reservoir has multiple outlets (approximately five) that provided water through a gravity feed system to various components of the farm and any overflow from the cement reservoir was diverted to a pond for future uses.

The owner indicated he has only used the POD a few times since purchasing the property as there is a separate well that provides water to their residence (Water Right No. 84-10197). The POD is a six-inch well that is 155 feet deep and was tested at 75 gpm. The well was not functioning at the time of the field exam; therefore a measurement was not made. The few times that the POD has been pumped in the past 20 years was to fill a pond that is located on the property. The current owner has stocked the pond with fish for recreational purposes and utilized the well to fill the pond.

Reviewing the limited aerial photography available for the property in the late 1980's indicates that irrigation on the property did occur, however the resolution of the images makes it difficult to determine precisely where the irrigation occurred. In addition, the photos show the existence of the pig barns that were later removed by the current owner. Other small out building including the anaerobic digester still exist providing documentation of the farm's existence and operation. The large cement reservoir still exists as well as the pipeline that connects the well to the reservoir. The reservoir capacity is approximately 28,000 gallons. [Volume of Cement Storage Reservoir: 16' long X 12' wide X 20' deep = $3840 \text{ ft}^3 \times 7.48 = 28,742$ gallons]. There is no storage component associated with this permit.

Based on the aerial photographs and the interview with the current owner, it appears all of the components of the permit were being put to beneficial use. In addition, the two existing decreed water rights that overlap the place of use of this permit (84-10197 and 84-10194) have similar beneficial uses for the pond on the property and the other groundwater well located on the property. Water right 84-10197 covers domestic use and minor stockwater use. This well is not connected to the commercial system. Therefore, I recommend that this permit be licensed for the 0.20 cfs issued through the permit, as the information available indicates this permit was being beneficially used before the farm went bankrupt. The ownership of the license should be transferred to the current owner.

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

H. RECOMMENDATIONS

1. Recommended Amounts

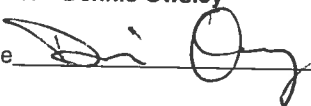
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	4/01 to 11/01	0.200 CFS	70 AF/YR
DOMESTIC	1/01 to 12/31	0.080 CFS	0.6 AF/YR
COMMERCIAL	4/01 to 11/01	0.020 CFS	6.7 AF/YR
STOCKWATER	1/01 to 12/31	0.110 CFS	6.7 AF/YR
<u>Totals:</u>		0.200 CFS	77.3 AF/YR

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 – Dennis Owsley

Field Examiner's Name  Date 11-15-2012

Reviewer _____ Date _____

Field exam photos for 84-7209.



Photo 1. View of the of the pond and place of use. Photo taken on 8/17/2012 by D.Owsley.



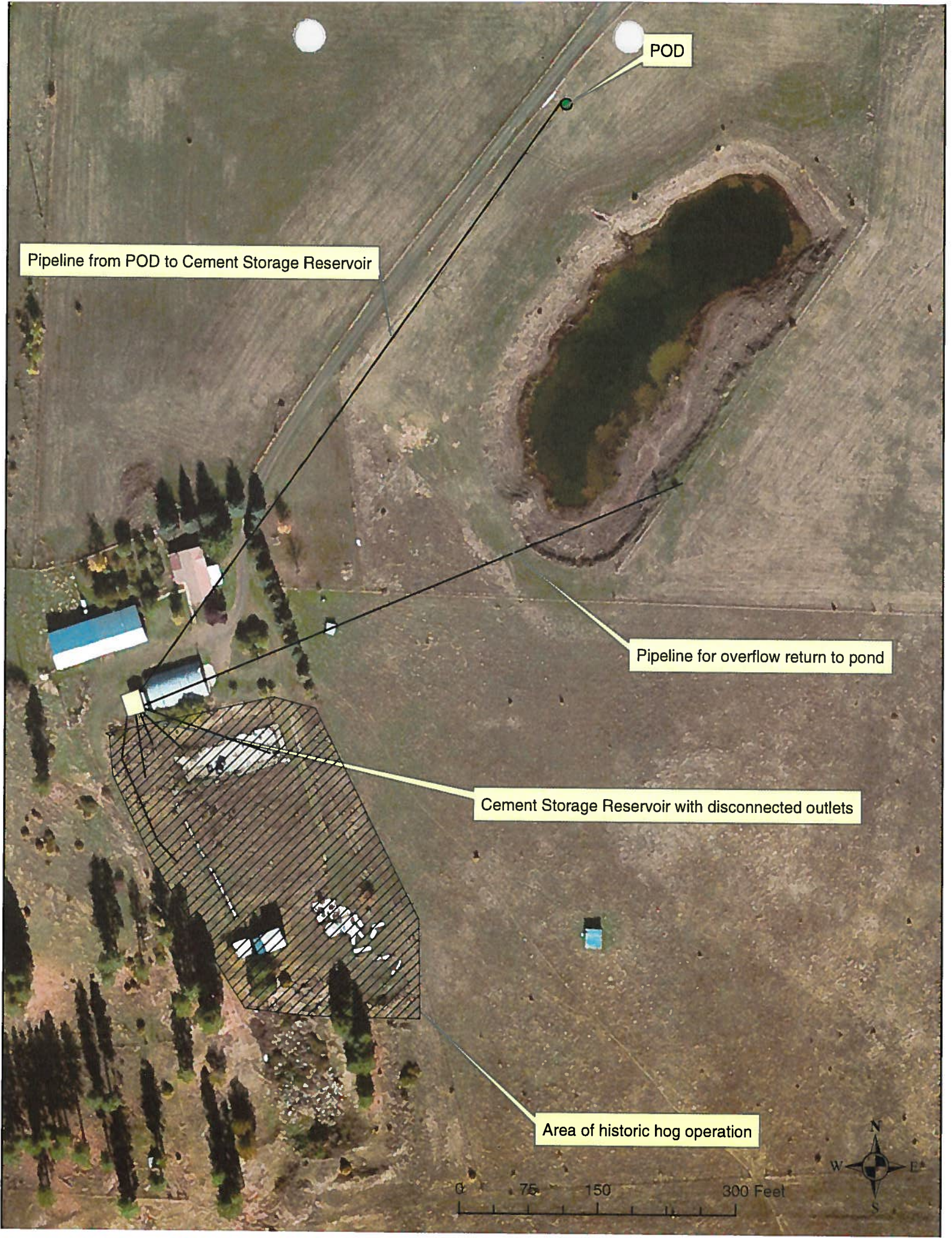
Photo 2. View of the cement water storage reservoir. Photo taken on 8/17/2012 by D.Owsley.



Photo #3. View of manure digester building and out building from hog farm operation. Photo taken by D. Owsley on 8/17/2012.



Photo #4. View of discharge pipe into pond. Photo by D. Owsley taken on 8/17/2012.



POD

Pipeline from POD to Cement Storage Reservoir

Pipeline for overflow return to pond

Cement Storage Reservoir with disconnected outlets

Area of historic hog operation

0 75 150 300 Feet



1992 Imagery for Field Exam for Water Right 84-7209 showing irrigated lands and hog operation



Property line of permittee

POD

Hog operation

Irrigated lands

0 200 400 800 Feet

1992 Imagery for Field Exam for
Water Right 84-7209

POD

Pipeline from POD to Cement Water Reservoir

Overflow return to pond

Cement Storage Reservoir

Hog Operation

0 75 150 300 Feet



Aerial Photo for 84-7209



POD



0 125 250 500 Feet

State of Idaho
Department of Water Resources

R02E



A number line from 0 to 0.1 with tick marks every 0.01. The labels 0, 0.045, 0.09, and 0.1 are shown above the line. The tick mark for 0.045 is highlighted with a vertical line.

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



State of Idaho
Department of Water Resources

Attachment To Water Right License

84-7209

This map depicts the DOMESTIC 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.



0 0.0325 0.065 0.13 Miles

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



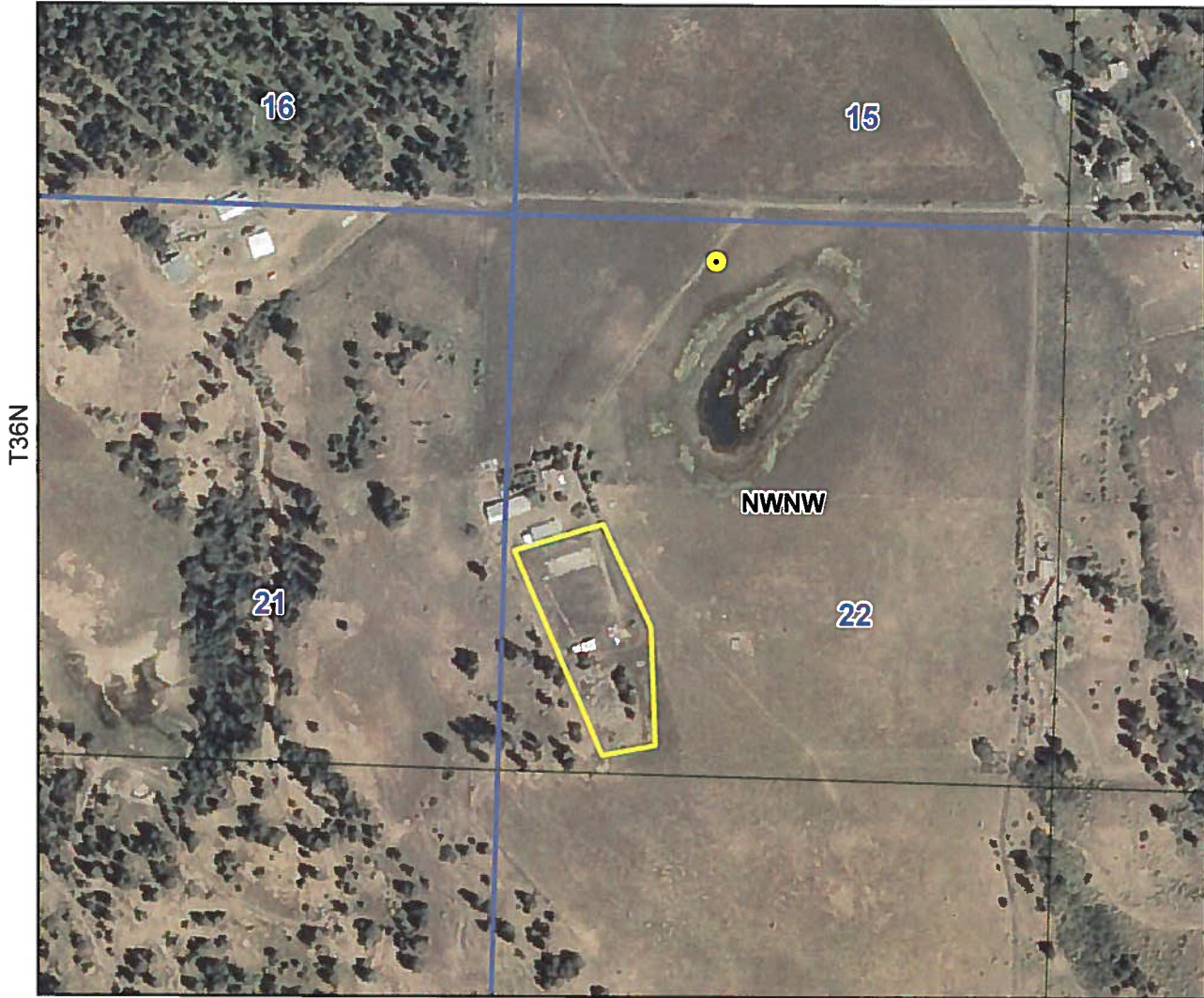
State of Idaho
Department of Water Resources

Attachment To Water Right License

84-7209

This map depicts the COMMERCIAL 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.

R02E



0 0.05 0.1 0.2 Miles

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



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 84-7209
 Examiner: D. Owsley
 Date of Field Exam: 8/17/2012

	Option 1	Option 2	
P/D No.:	D0025900		
PUMP HORSEPOWER	5	5	5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	120	140	140
DISCHARGE PRESSURE	15	10	5
FRICTION	0	0	0
RATE OF FLOW (cfs)	0.20	0.19	0.20
(gpm)	89.4	84.8	91.2

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.

Examiners Notes:

Estimates of pump capabilities for POD. Assumed large capacity pump (5 Hp) considering size of farm and pumping distances. Pumped into a storage reservoir, therefore pressures were considered low.