PCC W 7-02

IDAHO DEPARTMENT OF WATER RESOURC
Water Measurement Program

POWER CONSUMPTION COEFFICIENT WOR

(Revised 7/2002)

Spreadsheet on computer.wpx add new WMIS POD

District WD 36A

Diversion Name Sherman Springs Pump

Inventory Date 7-15-04 Test Date 7-15-04

Inventory Examiner C. Knowles Person performing test C. Knowles

PCC o.k.? ☒ Yes ☐ No Exam complete? ☒ Yes ☐ No

Name: DAVE CROPPER

Water Right No.:

Legal Description: T 07S R 13E Sec. 13 ¼ ¼ ¼

Site Tag No.: A001132

Diversion Name:

Current Owner

Name _____ Phone _____

Address _____ Cell _____

City _____ St _____ Zip _____ E-mail _____

Operator (*if leased or operated by person other than owner)*

Name _____ Phone _____

Address _____ Cell _____

City _____ St _____ Zip _____ E-mail _____

Global Positioning System Data:

Data Collection Filename W071523A Offset 0

IDWR Site Tag Identification No. A001132

Site Tag Location description: Pump panel Pole

PLS/USGS LOCATOR /

For Department/District Use Only

Received by _____ Date _____

Reviewed by _____ Date _____

Data Entry By _____ Date _____

Well Pump and Motor Information

Pump Data		Motor Data	
Manufacturer	Berkeley	Manufacturer	Baldor
Serial Number	11476	Serial Number	37F197X48
Model Number	B3TPM	Rated Horsepower	15
Type		Rated Amps	
Impeller Diameter	6.125	Rated Volts	230
Rated Speed		Rated Speed	3650
Rated Discharge		Phase	3
Rated Head		Service Factor	1.15

Booster Pump and Motor Information

Pump Data		Motor Data	
Manufacturer		Manufacturer	
Serial Number		Serial Number	
Model Number		Rated Horsepower	
Type		Rated Amps	
Impeller Diameter		Rated Volts	
Rated Speed		Rated Speed	
Rated Discharge		Phase	
Rated Head		Service Factor	

Power and Water Metering Information

Kilowatt-Hour Meter		Water Measurement Equipment and Pipe Information	
Utility	IPCO	Std. Meter Manufacturer	
Pole Number	07513E1321	Std. Meter Model No.	
Meter Manufacturer	GE	Std. Meter Type (circle one)	Sonic Pyg Collins Hall Anub Dye/chem. Other
Meter Serial No.	92644842	Std. Meter Confidence (circle one)	Excl Good Fair Poor 2% 5% 10% >10%
Disc Constant (Kh)	43.2	PSI gauge ID location ≅ discharge head	District / Owner _____ Yes / No
Rated Voltage	460	Pipe Material	
Demand	12.24	Pipe Outside Diameter	
Multiplier (Mult)	X1	Pipe Inside Diameter	
CTR (Current) PTR (Voltage)	N/A	Distance of straight pipe upstream and down	Upstream _____ Downstream _____

Determination of Power Consumption Coefficient

Kilowatts of Energy Consumed

KW = 3.6 × Kh × Multiplier × No. of revolutions (N) ÷ Time (T) in seconds per N

Cond.#1 N = 5 (No. of Disc Rev) **Time** (sec) = (70.16)+(70.13)+(70.09)/3 = 70.11 Ave

3.6 × 43.6 (Kh) × 1 (Mult) × 5 (N) ÷ _____ (T) = * 11.19 KW

Cond.#2 N = _____ (No. of Disc Rev) **Time** (sec) = (_____)+(_____)+(_____)/3 = _____ Ave

3.6 × _____ (Kh) × _____ (Mult) × _____ (N) ÷ _____ (T) = *_____ KW

Cond.#3 N = _____ (No. of Disc Rev) **Time** (sec) = (_____)+(_____)+(_____)/3 = _____ Ave

3.6 × _____ (Kh) × _____ (Mult) × _____ (N) ÷ _____ (T) = *_____ KW

Measured Flow Rate and Discharge Pressure – Enter flow rate as determined by the "standard" water measurement meter in GPM, and discharge pressure measured in PSI. Attach documentation to support data such as notes, printout tapes, etc.

GPM Cond. #1 * 156.8 #2 * _____ #3 * _____

PSI Cond. #1 * 58 psi @ Center of pivot #2 * _____ #3 * _____

Power Consumption Coefficient (PCC) = KW × 5431 ÷GPM

PCC Cond #1 = * 11.19 (KW) × 5431 ÷ * 156.8 (gpm) = 387.58 (kWh/ac.ft)

Percent of seasonal use * 100 Description * Pivot w/ END Gun

PCC Cond #2 = * _____ (KW) × 5431 ÷ * _____ (gpm) = _____ (kWh/ac.ft)

Percent of seasonal use * _____ Description * _____

PCC Cond #3 = * _____ (KW) × 5431 ÷ * _____ (gpm) = _____ (kWh/ac.ft)

Percent of seasonal use * _____ Description * _____

Is the system operator required to track and report changes in system operation? ~ Yes ~ No (check one)

System Type (circle all that apply): Pivot, linear / Wheel ln / Hand ln / Gated pipe, flood / Drip / Open Discharge

	Crop Type	Number of Acres
1	Field Corn	27
2		
3		
4		
	Total Acres =	

WATER LEVEL DATA

Does the well have access to measure water levels? ~ Yes ~ No (*check one*)

Is this well part of USGS, IDWR, or another network of water level monitoring wells? ~ Yes ~ No ~ Uncertain

Static Water Level _____ ft Date _____

Pumping Water Level _____ ft at condition # _____) Date _____

Further describe system operating conditions (if necessary) and how percentage of seasonal use was obtained:

Sketch of pumping plan layout or photograph of pumping plant and piping:

Pivot Specs -

Delivered Flow = 172.1 gpm

Length = 479.1 ft

4 under pivot 21.65 Ac

7.9 gpm/Ac

END Gun Radius = 93'

3 HP Booster on end gun

Notes – Comments – Calculations: Corners – (Northwest) was not under production – NO H.L. on main line on west side of field.

I certify that the above information is true and correct to the best of my knowledge and ability and the measurements taken and recorded are in accordance with the standards and specifications of the equipment used.

Signature _____ Date _____

(person performing measurements)

Sherman Springs

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OUTER DIAMETER
8.0299    IN

PIPE MATERIAL
?         CS,SS

WALL THICKNESS
0.0890    IN

SPACING
5.794     IN V

0296.0  MMSEC
100.90  % T0

07-15 17:2600
+002.90 %  AI2

17:40+159.824E 0GPM   00R
     +  1.059E 0FPS   00R
      +00000 *G       00R
      -00000 *G       00R

17:41+163.258E 0GPM   00R
     +  1.082E 0FPS   00R
      +00154 *G       00R
      -00000 *G       00R

17:42+153.483E 0GPM   00R
     +  1.017E 0FPS   00R
      +00311 *G       00R
      -00000 *G       00R

17:43+137.633E 0GPM   00R
     +  0.912E 0FPS   00R
      +00467 *G       00R
      -00000 *G       00R

17:44+155.333E 0GPM   00R
     +  1.030E 0FPS   00R
      +00625 *G       00R
      -00000 *G       00R

17:45+156.918E 0GPM   00R
     +  1.040E 0FPS   00R
      +00778 *G       00R
      -00000 *G       00R

17:46+153.748E 0GPM   00R
     +  1.020E 0FPS   00R
      +00935 *G       00R
      -00000 *G       00R

17:47+167.749E 0GPM   00R
     +  1.112E 0FPS   00R
      +01091 *G       00R
      -00000 *G       00R

17:48+156.918E 0GPM   00R
     +  1.040E 0FPS   00R
      +01252 *G       00R
      -00000 *G       00R

17:49+155.333E 0GPM   00R
     +  1.030E 0FPS   00R
      +01410 *G       00R
      -00000 *G       00R

17:50+163.258E 0GPM   00R
     +  1.082E 0FPS   00R
      +01568 *G       00R
      -00000 *G       00R

17:51+169.598E 0GPM   00R
     +  1.125E 0FPS   00R
      +01726 *G       00R
      -00000 *G       00R
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