

IDAHO DEPARTMENT OF WATER RESOURCES
Water Measurement Program

WATER MEASURING DEVICE CERTIFICATION

(Revised 7/2002)

District WO 130Diversion Name Irrigation Well

Inventory Date _____

Inventory Examiner _____

PCC o.k.? ☐ Yes ☐ NoTest Date 8/29/07Person performing test JJ/JCExam complete? ☒ Yes ☐ NoName: Valley School

Water Right No.: _____

Legal Description: T _____ R _____ Sec. _____ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ Site Tag No.: DOO 23735Diversion Name: Irrigation Well

Current Owner

Name Laural NelsonPhone 829-5353

Address _____

Cell _____

City _____ St _____ Zip _____

E-mail _____

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

Name Dave LewisPhone 420-7608

Address _____

Cell _____

City _____ St _____ Zip _____

E-mail _____

SECTION 1 – Well Site Identification

Global Positioning System Data:

Data Collection Filename _____ Offset _____

IDWR Site Tag Identification No. _____

Site Tag Location description: well head casing

PLS/USGS LOCATOR _____

For Department/District Use Only

Received by _____

Date _____

Reviewed by _____

Date _____

Data Entry By _____

Date _____

SECTION II – Installed Meter Information

METER AND MOUNTING PIPE INFORMATION			
Motor HP		Volume units	Acre-Feet _____ Gallons _____ Other (specify) _____
Meter Install Date		Volume multiplier	$\times 100$
Manufacturer	Sensus	Installation location	☐ Excel ☐ Fair ☒ Good ☐ Poor
Meter Type		Pipe material	PVC
Meter Model	PROP	Outside diameter	2.38
Serial Number	65093486	Wall thickness	.196
Size (nominal)	2	Inside diameter	
Measure Flow Rate?	☒ Yes ☐ No	Amount of straight pipe upstream from meter	_____ Inches _____ Pipe Lengths
Measurement Units	☐ CFS ☒ GPM Other (specify) _____	Amount of straight pipe downstream from meter	_____ Inches _____ Pipe Lengths
Flow Rate Multiplier	$\times 1$	Standard Meter Type	☒ Sonic ☐ Pyg ☐ Collins ☐ Hall ☐ Anub ☐ Dye/chem ☐ Other _____
Measure Cumulative Volume?	☐ Yes ☐ No	Standard Meter Confidence	☐ Excellent 2% ☒ Good 5% ☐ Fair 10% ☐ Poor > 10%

FLD 12 Spacing = 1.12

Multiple FlowmetersAre multiple flowmeters used to measure diversions from this well? ☐ Yes ☒ No

If yes, how many? _____

(Attach separate form for each meter checked and/or calibrated.)

Multiple Wells

If this meter measures diversions from multiple wells, list names and locations of other wells:

SECTION III – Certification for Calibration of a Water Measurement Meter

Measurement No. 1 (M_1) is the measured rate of flow from the permanently installed flow meter.

Measurement No. 2 (M_2) is the measured rate of flow from the measuring device being used to check the flow for the calibration. This method or device must be accurate to within $\pm 5\%$ error. Describe below the method and equipment used to perform this measurement.

$$\text{Percent Difference} = (M_1 - M_2) + M_2 \times 100 = \pm \% \quad (\text{Acceptable is within } \pm 10\%) \quad (\text{equation 1})$$

$$\text{Calibration Multiplier} = M_2 + M_1 \quad (\text{equation 2})$$

Is flowmeter installed according to manufacturer's specifications? ☐ Yes ☐ No ☐ Unsure

Describe any apparent problems with installation or operation _____

Flowmeter accuracy prior to any adjustments: _____ Totalizer reading _____

Flowmeter accuracy after final adjustment: _____ Totalizer reading _____

Flowmeter calibration multiplier: _____

FLOWMETER ACCURACY CALIBRATION TABLE							
Installed meter (totalizer reading)	Time	Total Gallons	Average Flow Rate GPM (M_1)	Standard total gallons	Average Flow Rate GPM (M_2)	% diff. ($\pm$)	Comments and adjustments
33270 ²⁰	Start	380	37.0		~~33.4~~	+10.7	time off
33274 ⁰⁰	10:10						
	10:26						
33276 ⁰⁵	Start		37		34	+8.8%	use this !!
33280 ³⁵	10:00						GOOD meas. :)

Notes – Comments – Calculations: Signal = 4724 5 Bars

FUST = 33 GPM

10 sprinklers in this Station (15 Stations total)

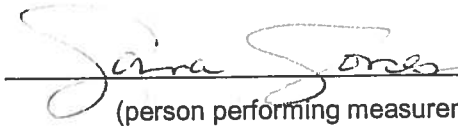
TimeClock: 2421.95

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 (check one)	
Static Water Level _____ ft Date _____	Pumping Water Level _____ ft (at condition _____) Date _____

Sketch and/or photograph of installation:

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


(person performing measurements)

Date

8/29/07

JJ 30,825

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
Water Measurement Program

TIME CLOCK / HOUR METER WORKSHEET

Use of a Time Clock or Hour Meter is recommended only for constant flow rate pumps (usually open discharge) when power records cannot be used to accurately estimate volume (e.g. other loads on power meter). Operation time of the pump is recorded by the time clock, which together with flow rate measurements can be used to estimate volume pumped.

Date of test 10-05-04

Person performing test C. Yenter

Name:	<u>Valley School District</u>
Water Right No:	
Legal Description:	<u>T 9S R 20E Sec. 31</u> <u>1/4 SW</u> <u>1/4 SW</u> <u>1/4</u>
Site Tag No:	<u>A0011886</u>
Diversion Name:	<u>New Well</u>

Current Owner

Name _____ Phone _____
Last, First, MI
 Address _____ City _____ State _____ Zip _____

Operator (if leased or operated by someone else)

Name Nelson, Laurel (Supt.) Phone 829 5333
Last, First, MI

SECTION I WELL SITE IDENTIFICATION

Global Positioning System Data:

Data Collection Filename Previous Offset _____

IDWR Site Tag Identification No. _____

Site Tag location description: _____

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	(Subm)	Manufacturer	(Subm)
Serial Number		Serial Number	
Model Number		Rated Horsepower	75
Type		Rated Amps	
Impeller Diameter		Rated Volts	
Rated Speed		Rated Speed	
Rated Discharge		Phase	
Rated Head		Service Factor	

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 647

see attached page

PSI open disch (not meas) ^{PSI}

Water Level Data

Does the well have access to measure water levels? Yes / No

Static Water Level _____ ft
Date _____

Pumping Water Level _____ ft (at condition # 1)
Date _____

Attach sketch of pumping plant layout or photograph of pumping plant and piping.

Comments: Hour meter already installed on well panel -
Used timed fill in storage tank to determine well discharge.
Fills to from top of tank so flow will not be variable. No other
diversions from well directly except for emergency fire sprinklers.

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 C. J. Carter Date 10-07-04
(person performing measurements)

LOG NAME:VALLEY SCHOOL
D0023735

8/29/2007 13:21

START :08-29 13:14
END :08-29 13:24
INTERVAL:00:01:00

+3.530E+0 ft/s
+3.415E+1 gal/m
+TOTAL 0000237 gal
NORMAL

8/29/2007 13:14

+3.497E+0 ft/s
+3.384E+1 gal/m
+TOTAL 0000000 gal
NORMAL

8/29/2007 13:22

+3.505E+0 ft/s
+3.391E+1 gal/m
+TOTAL 0000271 gal
NORMAL

8/29/2007 13:15

+3.509E+0 ft/s
+3.394E+1 gal/m
+TOTAL 0000033 gal
NORMAL

8/29/2007 13:23

+3.512E+0 ft/s
+3.398E+1 gal/m
+TOTAL 0000305 gal
NORMAL

8/29/2007 13:16

+3.519E+0 ft/s
+3.405E+1 gal/m
+TOTAL 0000067 gal
NORMAL

8/29/2007 13:24

+3.518E+0 ft/s
+3.404E+1 gal/m
+TOTAL 0000339 gal
NORMAL

8/29/2007 13:17

+3.514E+0 ft/s
+3.400E+1 gal/m
+TOTAL 0000101 gal
NORMAL

FUJI= 34 GPM
SENSUS=37 GPM
8.80%

8/29/2007 13:18

+3.517E+0 ft/s
+3.403E+1 gal/m
+TOTAL 0000135 gal
NORMAL

8/29/2007 13:19

+3.534E+0 ft/s
+3.419E+1 gal/m
+TOTAL 0000169 gal
NORMAL

8/29/2007 13:20

+3.512E+0 ft/s
+3.398E+1 gal/m
+TOTAL 0000203 gal
NORMAL

well test - timed fill method

Start depth = 2.72' (manually started)

Stop depth 5.86' (off @ float setting)

(4 diameter)
- Depths measured with graduated stick from tank access port, top of tank

T = 6:14.25 (6.23 min)

A = 42.08

ID = 88" 7.32'

Total V = 1014.2 ft³

L = 24.1'

= 7586.3 gal

Start

$$h/D = \frac{2.72}{7.32} = .37 = .2642 \text{ (A/D}^2 \text{) from table}$$

$$A = D^2 \times .2642 = 53.58 \times .2642 = 14.16$$

$$V = 14.16 \times 24.1 = 341.2 \text{ ft}^3 \times 7.48 = \underline{2552 \text{ gal}}$$

STOP

$$7.32 - 5.86 = 1.46$$

$$h/D = \frac{5.86}{7.32} \times \frac{1.46}{7.32} = .19 = .1039 \text{ (A/D}^2 \text{)}$$

$$A = D^2 \times .1039 = 53.58 \times .1039 = 5.57$$

$$V = 5.57 \times 24.1 = 134.2 \text{ ft}^3 \text{ (empty)} = 1014.2 - 134.2 = 880.0 \text{ ft}^3$$

$$= \underline{6582.7 \text{ gal}}$$

(filled)

$$\Delta V = 4030.7 \text{ gal}$$

$$t = 6.23 \text{ min}$$

$$Q = 646.98 \approx 647 \text{ gpm}$$