

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
BENEFICIAL USE FIELD REPORT

**A. GENERAL INFORMATION**

**Permit No:** 45-7498  
**Exam Date:** 7/23/2019

1. Current Owner:  
GEORGE M KELLEY AND/OR JO ANN KELLEY  
PO BOX 25  
ALBION ID 83311
2. Accompanied by: Bill Kelley and Allison Inouye, IDWR Sr. Agent  
Phone No: 208-312-0087  
Address: ALBION ID  
Relationship to permit Holder: Son

3. **SOURCE:**  
GROUND WATER  
GROUND WATER

**Method of Determination:** Aerial photography, Site visit, verified by Bill Kelly

**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: None. Note that rights 45-7153, 45-7176, and 45-7260 are used in the same system, but are decreed for adjacent acres. Right 45-7498 is for additional acres above and beyond these three rights, but on adjacent lands.

Comments: Existing Water Rights

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

Water Right No.	Source	Purpose of Use	Basis
45-7153	Ground Water	Irrigation	Decree
45-7176	Ground Water	Irrigation	Decree
45-7260	Ground Water	Irrigation	Decree

Comments: Existing Water Rights

**C. DIVERSION AND DELIVERY SYSTEM**

1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SW¼ NW¼, Sec. 10, Twp 12S, Rge 25E, B.M. CASSIA County  
GROUND WATER SE¼ NW¼, Sec. 10, Twp 12S, Rge 25E, B.M. CASSIA County

Method of Determination: Aerial photography, Site visit, verified by Bill Kelly

**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	
12S	25E	3											6.0	6.0					12.0
12S	25E	9			3.0				40.0	38.0									81.0
12S	25E	10		40.0	14.5		5.0			0.5	1.0	6.0	39.0	23.0		6.0			135.0

Total Acres: 228.0

Method of Determination: Aerial photography, Site visit, verified by Bill Kelly

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
WMIS #1000172	N/A	N/A	None	N/A	None
WMIS #1000215	N/A	N/A	None	N/A	None

**D. FLOW MEASUREMENTS**

No measurement was taken at the time of this exam. The development period for permit 45-7498 was from 6/2/1982 to 7/1/1987. A measurement taken on 8/12/1987 for permit 45-7260 for the same system. This measurement was used for permit 45-7498.

**E. FLOW CALCULATIONS**

\_\_\_\_\_ Additional Computation Sheets Attached

Measured Method: None, the calculations from permit 45-7260 was used for this permit.

A measurement was taken on 8/12/1987 for both wells totaling a combined capacity of 4.53 cfs for the wells. Since these measurements were taken shortly after the end of the development period for this permit, this measurement is used for licensing permit 45-7498.

Recommend licensing permit 45-7498 with a flow rate of 4.53 cfs.

**F. VOLUME CALCULATIONS**

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 228 \text{ acres} \times 4 \text{ af/a} = 912 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 4.53 \text{ cfs} \times 246 \text{ days} \times 1.9835 = 2210.37 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

$$V_{IR} = 912 \text{ AF}$$

Recommended Volume 912 AF

**G. NARRATIVE/REMARKS/COMMENTS**

On March 5, 1982 George and Esther Montgomery filed an Application for Permit for 5.2 cfs from two wells for the irrigation of 260 acres. The permit was approved on June 22, 1982 with Proof of Beneficial Use due on or before June 1, 1987. A request for extension of time was filed and proof was extended to July 1, 1987. An Assignment of Permit was filed on June 16, 1995 by George and Esther Montgomery to Warren Yadon. Proof of Beneficial Use was filed by Mr. Yadon subsequently to the Assignment of Permit, for 4.56 cfs for 260 acres with 228 acres being developed. On September 27, 1996 Permit 45-7498 was reinstated and the priority date was advanced to June 16, 1995. Permit 45-7498 was assigned to George and/or JoAnn Kelly on September 2, 2010.

On September 23, 2019 Allison Inouye and I met with Bill Kelley at the Albion Country Store where we explained our reason for meeting was to verify the development of permit 45-7498 and to complete a licensing exam. We then drove out to Mr. Kelley's farm whereby he showed us the irrigation system and the land he is currently farming under permit 45-7498 and associated water rights (45-7153, 45-7176, and 45-7260). He explained that some of the land under permit 45-7498 was currently in the Conservation Reserve Program, (CRP), and is expected to expire in a couple of years. The land in CRP is comprised of several corners of the existing pivots, a 40 acre tract and a number of smaller acreages around the currently irrigated land. Mr. Kelley has the additional equipment, (mainline, pivot and hand lines) to irrigate the entire 228 acres under permit 45-7498 including the land currently in CRP. Review of older aerial photography indicated that these lands had been irrigated in the past. This permit has had a rather complex history with the permit being reinstated based on pre July 1, 1987 development. Based on this concept, the system capacity is based on an August 12, 1987 measurement for the licensing of right 45-7260 from the same system. Note that this results in no additional flow for the licensing of permit 45-7498, but provides additional acres and volume from the same system. The irrigation system consists of two wells tied together and four booster pumps with mainline to two full pivots, two half pivots, two quarter pivots, and a number of hand lines and other sprinkler systems. Permit 45-7498 was amended to update the location of one of the wells and to identify the 228 acres developed of the original 260 acres listed on the original application.

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

**H. RECOMMENDATIONS****1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	3/15 to 11/15	4.53 CFS	912.0 AF
<u>Totals:</u>		4.53 CFS	912.0 AF

**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 ☐ None

**I. AUTHENTICATION**

Benny Walker - Water Resource Agent, Senior

Field Examiner's Name

Benny Walker Date 6/16/20

**Permit 45-7498**



**Place of Use**







**Above: Place of Use and a pivot being stored**



**Above: Point of Diversion with Two Booster Pumps**



**Permit 45-7498**



**Above: Point of Diversion**

**Below Two Booster Pumps**





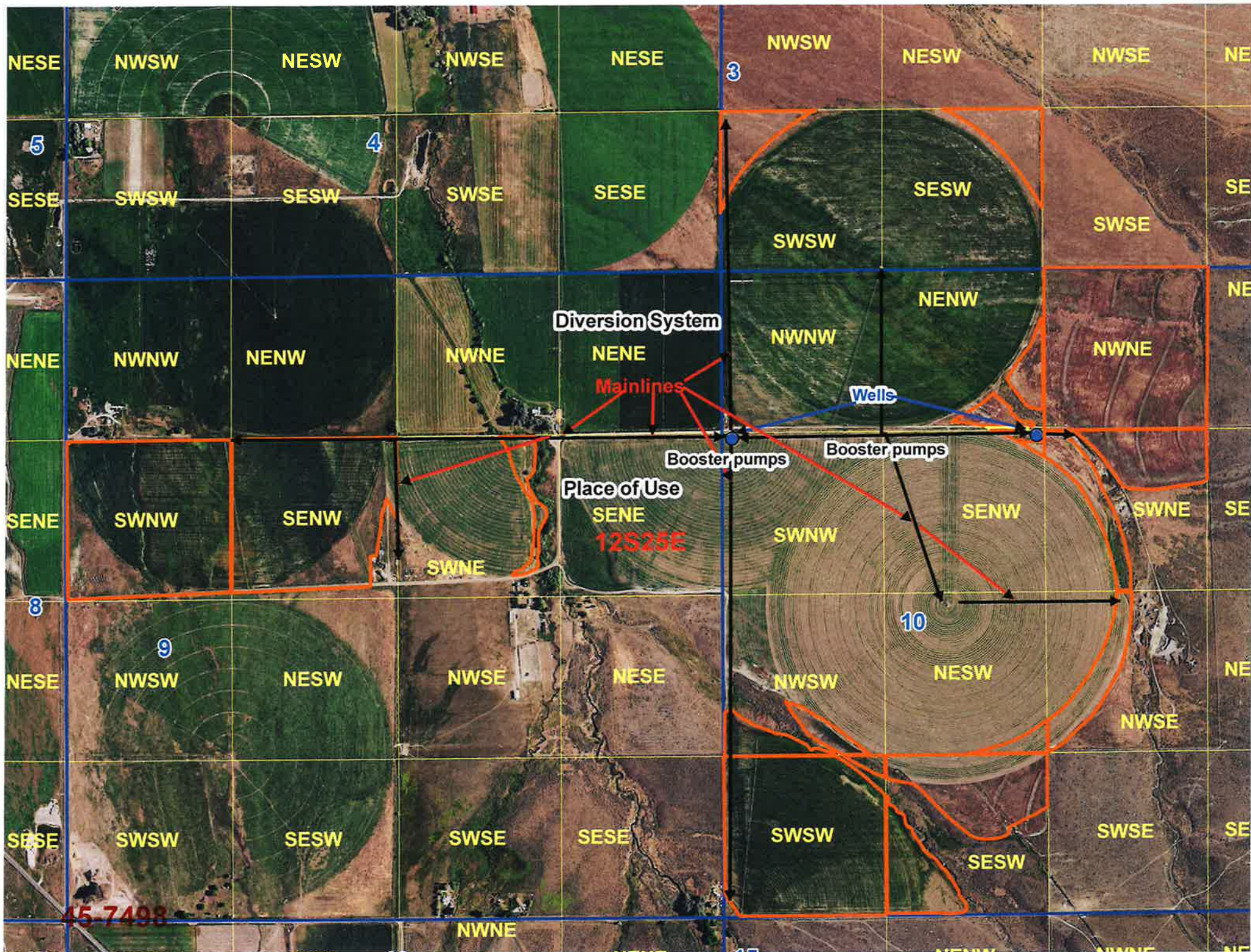


Meters Installed at each Pump











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FEB 16 1989

Form 219  
6/86

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
**BENEFICIAL USE FIELD REPORT** Department of Water Resources

**A. GENERAL INFORMATION**

Permit No. 45-7260  
1. Owner: Ester Montgomery Phone No. 673-5331  
Current Address: Star Rt Box 11 Albion Idaho 83311  
2. Accompanied by: George Montgomery EXAM. DATE: 8-12-87  
Address: Star Rt Box 13 Albion Idaho 83311 Phone No. 673-6644  
Relationship to Permit Holder: son  
3. Source: groundwater tributary to \_\_\_\_\_

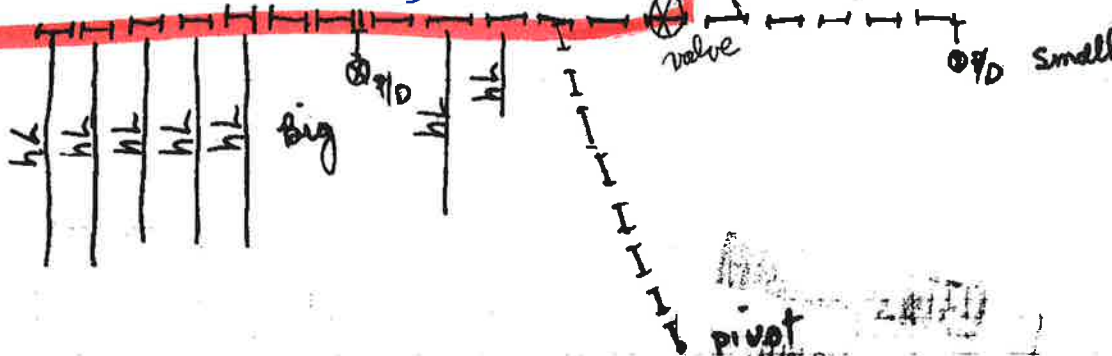
**B. OVERLAP REVIEW**

1. Other water rights with same place of use: \_\_\_\_\_ ☐ Copies Attached
2. Other water rights with same point of diversion: \_\_\_\_\_ ☐ Copies Attached ☐ Copies of Field Exam's Attached

**C. SYSTEM DESCRIPTION**

1. Diversion System Diagram: Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable. ☐ Alternative diagram attached

Licensing Exam  
for 45-7260. August 12, 1987  
measurements of wells  
used for measurements  
of system capacity for  
45-7498 licensing exam.



Scale: 1" = \_\_\_\_\_

2. ☒ Copy of U.S.G.S. Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required). ☒ Aerial Photo Attached (required for irrigation of 10 acres or more).  
☒ Photo of Diversion and System Attached (required for all but single household domestic groundwater, and stockwater).



**System Description (continued)**

3. Narrative: Description (As operating at time of measurement. Indicate pressure, number of sprinklers, etc.)

System consists of 2 wells, 2 pumps, mainlines, 2 - 1/4 mile pivots, and 7 handlines 132 birds on 5 lines and 2 lines have 25+12 birds. The mainlines are connected between the 2 wells. However the valve that lets water come in is frozen shut and inoperable. There was no water passing from 1 system to the other. So in essence the 2 systems were separate

☐ See Remarks on page 4 for continuation

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Big	G.E.	150	CKJ313171	Aurora	00229
Small	G.E.	75	EJJ509478	Aurora	354-82292

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

5. Point(s) of Diversion:

Ident. No.	Gov't. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
Big			SW	NW	10	12S	25E	Cassia	Aerial Photo / Visual
Small			SE	NW	10	12S	25E	Cassia	Aerial Photo / Visual

6. Place(s) of Use:

Indicate Method of Determination

Twp.	Rge.	Sec.	NE 1/4				NW 1/4				SW 1/4				SE 1/4				Totals
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
12S	25E	3											33						33
12S	25E	9						26	39										65
12S	25E	10						10	17		5	7		2		11			52

150  
NOT RECORDED

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Do not use this space



45-7260

Small Well

Do not use this space

**D. FLOW MEASUREMENTS**☐ Additional Data Sheets Attached

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Annubar					8"	

2. Measurements:

 $Q = 1.76$  cfswhen small well was tested, 1-pivot was in operation**E. FLOW CALCULATIONS**☐ Additional Computation Sheets Attached

1. Measured Method:

 $Q = 1.76$  cfs

2. Alternate Method for Checking Purposes:

$$Q = \frac{(75)(8.8)(.7)}{258.5} = 1.79 \text{ cfs}$$

**F. PUMP EFFICIENCY DATA (Optional)**Discharge Pressure: 21 psi x 2.31 = 48.5 ft (1); Dynamic pumping level: 210 ft (2)Total Head: (1) + (2) = 258.5 (3); Flow rate: 1.76 cfs (4)Water HP: (3) x (4) ÷ 8.8 = 51.7 (5)Meter Input KW: 3.6 x 57.6 KH x \_\_\_\_\_ CTR or \_\_\_\_\_ MULT x \_\_\_\_\_ PTR x 2 N/ 6.5 T = \_\_\_\_\_ (6)

Meter Input HP: (6) x 1.34 = \_\_\_\_\_ (7)

Panel Input KW: \_\_\_\_\_ Ave PF x \_\_\_\_\_ Ave Volts x \_\_\_\_\_ Ave Amps x .001732 = \_\_\_\_\_ (6)

Panel Input HP: (6) x 1.34 = \_\_\_\_\_ (7)

Efficiency: (5)/(7) x 100 = \_\_\_\_\_ %

Raf River Electue # 33 120 041**G. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

 $V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$  \_\_\_\_\_ $V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$  \_\_\_\_\_ $V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$  \_\_\_\_\_

2. Volume Calculations for Other Uses:

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Big Well

Do not use this space

#### D. FLOW MEASUREMENTS

☐ Additional Data Sheets Attached

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Annukeer					10"	

2. Measurements:

$$Q_T = Q_R + Q_S = 2.77 + 1.76 = 4.53 \text{ cfs}$$

when large well was tested, 1 pivot and the 7 handlines were running

#### E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

1. Measured Method:

$$Q = 2.77 \text{ cfs}$$

2. Alternate Method for Checking Purposes:

$$Q = \frac{(150 \text{ VFE} \times 7)}{319.7} = 2.89 \text{ cfs}$$

#### F. PUMP EFFICIENCY DATA (Optional)

Discharge Pressure: 54 psi x 2.31 = 124.7 ft (1); Dynamic pumping level: 195 ft (2)

Total Head: (1) + (2) = 319.7 (3); Flow rate: 2.77 cfs (4)

Water HP: (3) x (4) ÷ 8.8 = 100.6 (5)

Meter Input KW: 3.6 x 4.8 KH x \_\_\_\_\_ CTR or \_\_\_\_\_ MULT x \_\_\_\_\_ PTR x 2 N/ 27.0 T = \_\_\_\_\_ (6)

Meter Input HP: (6) x 1.34 = \_\_\_\_\_ (7)

Panel Input KW: \_\_\_\_\_ Ave PF x \_\_\_\_\_ Ave Volts x \_\_\_\_\_ Ave Amps x .001732 = \_\_\_\_\_ (6)

Panel Input HP: (6) x 1.34 = \_\_\_\_\_ (7) Efficiency: (5)/(7) x 100 = \_\_\_\_\_ %

#### G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = (372 \times 3.5) = 1302 \text{ Afa}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = (4.53 \times 246 \times 1.9835) = 2210 \text{ Afa}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 1302 \text{ Afa}$$

2. Volume Calculations for Other Uses:

$$45-7260 \quad (150 \times 3.5) = 525 \text{ Afa} \checkmark$$
$$(3 \times 246 \times 1.9835) = 1464 \text{ Afa}$$

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#### H. REMARKS AND OVERLAP REVIEW ANALYSIS

On the permit there are 150 acres. The acres should be amended as indicated in item #6 of the field exam. There is a total of 372 acres under irrigation total volumes + flows are based on total acreage. The overlap map shows how the different licenses and permits actually relate to each other. Place of use descriptions are such that all acres are covered at least by 1 license or permit but not more than 2 separate ones. Total amount of water, when combined with 45-7153 + 45-7176 shall not exceed 4.53 cfs or 1302 Afa % is as noted in item #5 of field report. License is for 3.0 cfs recommend 3.0 cfs along with conditional statement in blue ink above

#### I. RECOMMENDATIONS

##### 1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
irrigation	3-15	11-15	3.00	525
Totals:			3.00	525

##### 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

#### J. AUTHENTICATION

Field Examiner's Name

Darren Knuteson

Signature

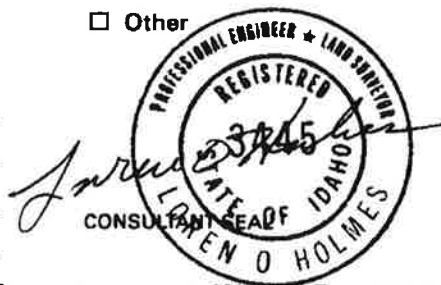
Darren Knuteson

Certification Date

5/15/87

Field Report Preparation Date

8/12/87



K. Licensing recommendation shall be prepared by an Idaho Department of Water Resources employee on a computer printout attached hereto.

reviewed: Roxanne McCarthy 3/6/89

FILED

JUN 24 1990

State of Idaho  
DEPARTMENT OF WATER RESOURCES  
SUPPLEMENTAL FIELD REPORT FOR ANNUBAR MEASUREMENT

Measured by: Dan Knutson Date 8-12-87  
Owner: Estee Montgomery Permit No. 45-7260

Description of well &/or measuring site

- Include any clarifications of the sketch
- Include legal description if more than one p.d. is described in the Field Report

Small Well

MEASURED INSIDE PIPE DIAMETER IN INCHES (ID)

CIR = Pipe Circumference in Inches = 27.72  
T = Pipe Thickness in Inches = 1/8  
ID = 2 [ ( 0.1592 X CIR ) - T ] = ..... 8.58

ANNUBAR DESCRIPTION & CONSTANT (C)

Size Used in Test 8"

State ID No. \_\_\_\_\_

Select C based on size from Table below.

Nominal Pipe Size	C
4"	4.23
6"	3.75
8"	3.87
10"	3.94
12"	3.99
14"- 16"	4.01
18"- 24"	4.02
30" or larger	4.03

C selected ..... 3.87

DIFFERENTIAL PRESSURE READING IN INCHES OF H<sub>2</sub>O (H)

High Reading = 38.9  
Low Reading = 31.2  
High - Low = H = ..... 7.7

CALCULATION OF DISCHARGE IN CFS (Q)

$$Q = \frac{(ID)^2 \cdot (\sqrt{H}) \cdot (C)}{448.8}$$
$$Q = \frac{(8.58)^2 \cdot (\sqrt{7.7}) \cdot (3.87)}{448.8} = 1.76 \text{ CFS}$$

SKETCH (If not shown on Field Report)

MICROFILMED

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State of Idaho  
DEPARTMENT OF WATER RESOURCES  
SUPPLEMENTAL FIELD REPORT FOR ANNUBAR MEASUREMENT

Measured by:

Loren Krutson

Date

8-12-87

Owner:

Ester Montgomery

Permit No.

45-7260

Description of well &/or measuring site

- Include any clarifications of the sketch
- Include legal description if more than one p.d. is described in the Field Report

Big Well

MEASURED INSIDE PIPE DIAMETER IN INCHES (ID)

CIR = Pipe Circumference in Inches = 33.84"

T = Pipe Thickness in Inches = 1/8

ID =  $2 [ ( 0.1592 \times \text{CIR} ) - T ] = \dots\dots\dots$  10.53

ANNUBAR DESCRIPTION & CONSTANT (C)

Size Used in Test 10"

State ID No. \_\_\_\_\_

Select C based on size from Table below.

Nominal Pipe Size	C
4"	4.23
6"	3.75
8"	3.87
10"	3.94
12"	3.99
14"- 16"	4.01
18"- 24"	4.02
30" or larger	4.03

C selected 3.94

DIFFERENTIAL PRESSURE READING IN INCHES OF H<sub>2</sub>O (H)

High Reading = 36.8

Low Reading = 28.7

High - Low = H = 8.1

CALCULATION OF DISCHARGE IN CFS (Q)

$$Q = \frac{(ID)^2 \cdot (\sqrt{H}) \cdot (C)}{448.8}$$

$$Q = \frac{(10.53)^2 \cdot (\sqrt{8.1}) \cdot (3.94)}{448.8} = 2.77 \text{ cfs}$$

SKETCH (If not shown on Field Report)

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