## STATE OF IDAHO DEPARTMENT OF WATER RESOURCES BENEFICIAL USE FIELD REPORT

## A. GENERAL INFORMATION

- 1. Current Owner: KEITH STANLEY WOOD 1003 HUMMINGBIRD LN BLANCHARD ID 83804
- 2. Accompanied by: Keith Wood Phone No: 208-304-3113 Address: Same as above Relationship to permit Holder: Permit Holder

# 3. SOURCE:

GROUND WATER

Method of Determination: DRG and Arcmap.

#### **B. OVERLAP REVIEW**

Other water rights with the same place of use:

Water Right No.	Source	Purpose of Use	Basis	
95-9981	GROUNDWATER	IRRIGATION	LICENSE	

YES Overlap

Comments: right 95-9981 is for irrigation use by same applicant that overlaps this rights irrigation POU.

2. Other water rights with the same point-of-diversion: <u>NO</u> Overlap

Water Right No.	Source	Purpose of Use	Basis
95-17326	GROUNDWATER	DOMESTIC, STOCKWATER	DECREED
95-9981	GROUNDWATER	IRRIGATION	LICENSE

Comments: rights 95-9981, 95-17326, and this right 95-10029 have the same POD, used by same applicant.

# C. DIVERSION AND DELIVERY SYSTEM

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

GROUND WATER NE¼ NW¼, Sec. 23, Twp 54N, Rge 05W, B.M. BONNER County

Method of Determination: GPS; POD is a well D0051245 located at -116°55.833, 48°01.044.

#### PLACE OF USE: IRRIGATION

Tum Dog	S		NE NW			SW		SE			Totals							
Twp Rng	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
54N 05W	23					2.0												2.0

Right Acre Limit:2.0

Total Acres: 2.0

Method of Determination: Field exam, Google Earth, and Arcmap.

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3.

- Delivery System Diagram Attached (required). Indicate all major components and distances between components. Х 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 X 1:24,000 or greater.
- X Aerial Photo Attached (required for irrigation of 10+ acres).
- X Photo of Diversion and System Attached

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Well or Diversion ID No.*	Motor Make	Нр	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
96-91-N-152	FRANKLIN	3			
A0015424					1

#### D. FLOW MEASUREMENTS

1.						
Measurement Equipment	Туре	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: Unable to perform flow measurements; water pipe ran direct from well to pressure tank buried beneath ground. Theoretic Pumping Equation derived diversion rate of 36.9 gpm, equaling 0.08 cfs.

# E. FLOW CALCULATIONS

Additional Computation Sheets Attached Measured Method: Theoretic pumping equation computed with 3 hp pump lifting 165 feet, with a system operating pressure of 40 psi, resulting in 0.08 cfs.

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# F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

V<sub>1R</sub> = (Acres Irrigated) x (Irrigation Requirement) = 2.0 ac x 3.0 AF = 6.0 AF

V D.R. = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 0.06 cfs x 214 days x 1.9835 = 25.5 AF

V = Smaller of V<sub>LR</sub> and V<sub>DR</sub> = 6.0 AF

2. Volume Calculations for Other Uses: N/A

#### G NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 6/9/2017 with permit holder, Keith Wood, showed a 1991 well with 3hp pump. I was unable to perform any flow measurements because system was pumped directly into underground pressure tank system. Theoretical pumping equation estimated flow rate at 36.9 gpm or 0.08 cfs. The department standard diversion rate for 2.0 acres equals 0.06 cfs, but applicant's well services right 95-17326 for domestic purposes, and substantiates

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the greater diversion rate. As such, **0.06 cfs** will be applied as the maximum diversion volume at time of licensing. GPS was taken on the well and given IDWR tag A0015424. This right was applied for by applicant to increase the diversion rate authorized by right 95-9981, 0.01 cfs, in order to meet the applicant's irrigation requirements for 2 acres of land.

During field exam, the irrigation area was sketched out and applicant stated he irrigated using portable sprinklers. During licensing review, google maps and Arcmap aerial imagery clearly show the irrigated area, which was traced out to equal 2.0 acres. The irrigation annual volume equals 2.0 acres x 3.0 afa = **6.0 af**, which will be applied as the annual volume and maximum diversion volume at time of licensing.

Condition 26A and 046 were removed from permit at time of licensing. Condition F06 was added to describe that rights 95-9981, 95-17326, and this right 95-10029 have the same POD, used by same applicant. Condition X35 was added to describe right 95-9981 and 95-10029 when combined shall not exceed a total diversion rate of 0.06 cfs, a total annual maximum diversion volume of 6.0 af at the field headgate, and the irrigation of 2.0 acres. Applicant's well services three afore mentioned water rights, resulting in overlap of POD. The well produces adequate flow to service the applicant's irrigation, and domestic usage, while not overproducing and is not a concern for overlap. WRs 95-9981 and this right 95-10029 overlap the same POU for irrigation purposes; condition X35 was applied to mitigate any overlap concern, and this right 95-10029 was applied for to gain the diversion rate required to meet irrigation requirements for 2 acres of land. There are no other overlap concerns for this right.

Have conditions of permit approval been met? x Yes No

## H. RECOMMENDATIONS

## 1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
IRRIGATION	04/01 to 10/31	0.06 CFS	6.0 AF
	Totals:	0.06 CFS	6.0 AF

## 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 a	bove X	None

AUTHENTICATION	Luke Bates - Water Resource Agent				
Field Examiner's Name	SAR	Date	8/	12/2020	
Reviewer ad Fr	M	Date	8/12	12020	



# THEORETICAL PUMPING EQUATION FOR WATER RIGHT 95-10029

Unable to perform flow measurement because well pumped directly to underground pressure tanks. Theoretical pumping equation estimates flow rate at 36.9 gpm or 0.08 cfs.

		PUMP EQUATIONS WATER RIGHT No.		95- 10029		
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	3	257.517	0.8	165	40
Q =	0.082	cfs	36.9	gpm		





POD - WELL A0015424



POD – WELL AND CONTROL PANEL



POD – 3 HP PUMP IN WELL



IRRIGATION POU - 2 AC FIELD

