

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

**A. GENERAL INFORMATION**

**Permit No:** 71-10949  
**Exam Date:** 08/28/2019

## 1. Current Owner:

SALMON FALLS LAND & LIVESTOCK CO INC  
MICHAEL J HENSLEE  
95A BELL RAPIDS RD  
HAGERMAN ID 83332-6039

## 2. Accompanied by: Mike Henslee, Permit Holder and Del Oveson, Ranch Manager

Phone No: Mike's cell: 208-539-7252

Address: same as above

Relationship to permit Holder:

3. **SOURCE:**

GROUND WATER

**Method of Determination:** Visually observed the wells running and water coming out the other end, in addition to consultation with Mike Henslee.

**B. OVERLAP REVIEW**

## 1. Other water rights with the same place of use:

Water Right No.	Source	Purpose of Use	Basis
71-10882	Pole Creek	Stockwater, irrigation	Decree

Comments: Permit 71-10949 supplements the Pole Creek right in low flow portions of the year in order to have more flow in Pole Creek for the benefit of endangered fish species.

## 2. Other water rights with the same point-of-diversion: None

**C. DIVERSION AND DELIVERY SYSTEM**1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NE¼ SE¼, Sec. 15, Twp 07N, Rge 14E, B.M. CUSTER County

GROUND WATER NE¼ SE¼, Sec. 15, Twp 07N, Rge 14E, B.M. CUSTER County

GROUND WATER SW¼ NW¼, Sec. 23, Twp 07N, Rge 14E, B.M. BLAINE County

GROUND WATER SW¼ NW¼, Sec. 23, Twp 07N, Rge 14E, B.M. BLAINE County

Method of Determination: ArcMap aerial imagery, site visit, and information from Mike Henslee.

**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	
07N	14E	10															2.8	0.6	3.4
07N	14E	14					32.0	31.0	39.0	33.0	31.0	34.0	36.0	31.0					267.0
07N	14E	15	35.0	35.0	40.0	38.0	9.5			38.0	31.0	0.4	10.0	40.0	36.0	35.0	38.0	40.0	425.9
07N	14E	22	27.0	25.0	39.0	33.0	26.0	1.2		15.0					2.5	1.0			169.7
07N	14E	23					23.0	39.0	24.0	14.0		2.2							102.2

Total Acres: 968.2

**PLACE OF USE: STOCKWATER**

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
07N	14E	14						X		X		X	X						
07N	14E	15				X									X	X			
07N	14E	22	X	X		X													
07N	14E	23								X									

Method of Determination: ArcMap aerial imagery, site visit, and information from Mike Henslee.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X 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.

X

X Aerial Photo Attached (required for irrigation of 10+ acres).

X

X Photo of Diversion and System Attached

X

4.

Well or Diversion ID No.*	Motor Make	Hp	Drilling Tag Number	Pump Make	Pump Serial No. or Discharge Size
North irrigation		100			
South irrigation		100			
North stockwater		2	D0063413 on casing		
South Stockwater		2	D0062639 on casing		

**D. FLOW MEASUREMENTS**

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Flow Tracker	Ultrasonic	GE	PT878			March 2019

2. Measurements: Measured each irrigation well and the installed meters read 10-15% higher than the portable meter. When installed, they were on the IDWR approved meter list.

North Well Installed meter: 1881.1 gpm (4.19 cfs)

IDWR meter: **1627.3 gpm (3.63 cfs)**

South Well Installed meter: 1721.6 gpm (3.84 cfs)

IDWR meter: **1556.5 gpm (3.47 cfs)**

**E. FLOW CALCULATIONS**  X   Additional Computation Sheets Attached

Measured Method: The maximum observed flow on the IDWR meters was 1556.5 gpm (3.47 cfs) for the south well and 1627.3 gpm (3.63 cfs) for the north well for a total flow of **7.1 cfs**. Straight length of pipe above and below meter was not ideal, but the straight length above and below the installed meters was also not ideal. Will use IDWR meter for licensing purposes. The stockwater wells were not measured, but attached sheets showing theoretical flows from the stock wells demonstrate the potential for each stockwater well to produce 0.07 cfs.

**F. VOLUME CALCULATIONS**

## 1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 968.2 \text{ acres} \times 3 \text{ AF/acre} = 2904.6 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 7.1 \text{ cfs} \times 184 \text{ days} \times 1.9835 = 2591.2 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{2591.2 \text{ AF}}$$

## 2. Volume Calculations for Other Uses:

$$\text{Stockwater volume calculated as: } 1800 \text{ cows} \times 12 \text{ gallons/day} \times 184 \text{ days} = 3,974,400 \text{ gallons}/325850 \text{ (gal/AF)} = \mathbf{12.2 \text{ AF}}$$

**G. NARRATIVE/REMARKS/COMMENTS**

The field exam for permit 71-10949 was completed on August 28, 2019 with Mike Henslee, vice president of the corporation, and Del Oveson, ranch manager, present. This permit was filed to supplement the existing Pole Creek stockwater/irrigation water right (71-10882) on the Salmon Falls Land and Livestock ranch near Smiley Creek at times of the year when surface water flows are low in Pole Creek, in order to maintain flows for endangered fish in the Salmon River and its tributaries.

Irrigation water is diverted from two wells, with 100 HP pumps on each well, into the inter-connected irrigation system made up of 15 full and partial pivots, plus a few hand lines. The stockwater component of the permit is not diverted from the same wells as were authorized under this permit. During the field exam, Mr. Henslee indicated that the stockwater is diverted from two wells drilled as monitor wells in the vicinity of the irrigation wells. For this reason, the permit will need to be amended to show 4 points of diversion (POD). The place of use for irrigation will be amended at the same time. The stockwater is plumbed separately into two independent systems separate from the irrigation system, so after the permit is amended, the right will be split into two individual stockwater rights (71-11000 and 71-11001) and the original irrigation right, 71-10949.

On the day of the exam, flow rates were checked at each irrigation well with a GE PT878 portable ultrasonic flowmeter. The highest observed flow from the south well was 1556.5 gpm, or 3.47 cfs, while the highest flow from the north well was observed at 1627.3 gpm, or 3.63 cfs. Straight spacing upstream and downstream of the IDWR meter was not ideal, but I placed in meter in the best possible location. Using the installed flowmeters to confirm flow rate was not ideal, either, as the north well lacked the required downstream straight length of pipe. The portable meter reading will be used for licensing purposes. The combination of the two measured flow rates, **7.1 cfs**, is recommended for licensing for irrigation purposes. The recommended irrigation volume is **2591.2 AF** (see volume calculations in this report). The stockwater wells were not measured, but theoretical calculations show that each well is capable of producing 0.07 cfs, which will be the licensed rate. This rate is higher than the permitted rate, but the additional rate is made available because the licensed irrigation rate was lower than the permitted irrigation rate, so the stockwater and irrigation rates in total are less than the overall permitted rate. Mr. Henslee indicated that the two stockwater wells run approximately equal amounts through the season. When split off, the stockwater rights will be licensed at **0.07 cfs** each, with a 0.14

cfs combined limit. It is anticipated that the stockwater rights will have individual volumes of **12.2 AF**, with a combined volume limit of 12.2 AF. Mr. Henslee indicated that between the two systems that the same 1800 head of cattle are rotated back and forth in varying amounts and times through the season (both stockwater rights need to be limited to 12.2 AF total). During the field exam Mr. Henslee used a map to delineate the two stockwater systems and show which wells serve which troughs (see attached map).

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	05/01 to 10/31	7.10 CFS	2,591.2 AF
STOCKWATER	05/01 to 10/31	0.14 CFS	12.2 AF
<u>Totals:</u>		7.24 CFS	2603.4 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

Field Examiner's Name

  
Jim Bitzenburg - Senior Water Resource Agent

Date 2-11-2020

Reviewer

Date



Upper (north) well

Meter installation at upper well





Lower (south) well

Meter installation at lower well





Lower (south) stockwater point of diversion

Upper (north) stockwater point of diversion



71-10949 Salmon Falls Land & Livestock



Irrigation place of use



71-10949 Salmon Falls Land & Livestock



Cattle and stockwater place of use



71-10949 Salmon Falls Land & Livestock

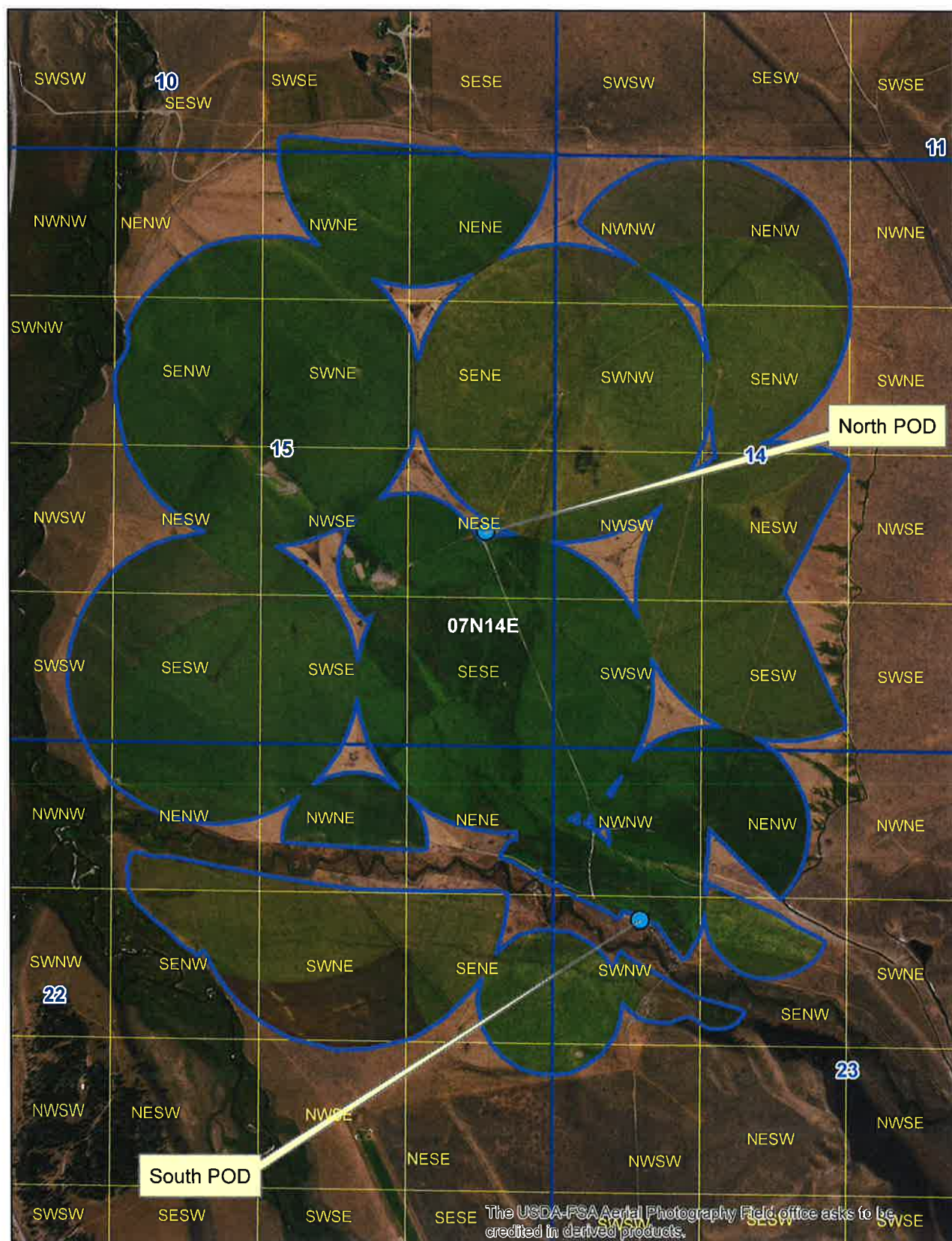


IDWR portable flowmeter reading at lower (south) well.

IDWR portable flowmeter reading at upper (north) well.



# 71-10949 Irrigation PODs and POU & System Diagram



## Legend

- Township/Range
  - Irrigation POU
  - Sections
- QQ

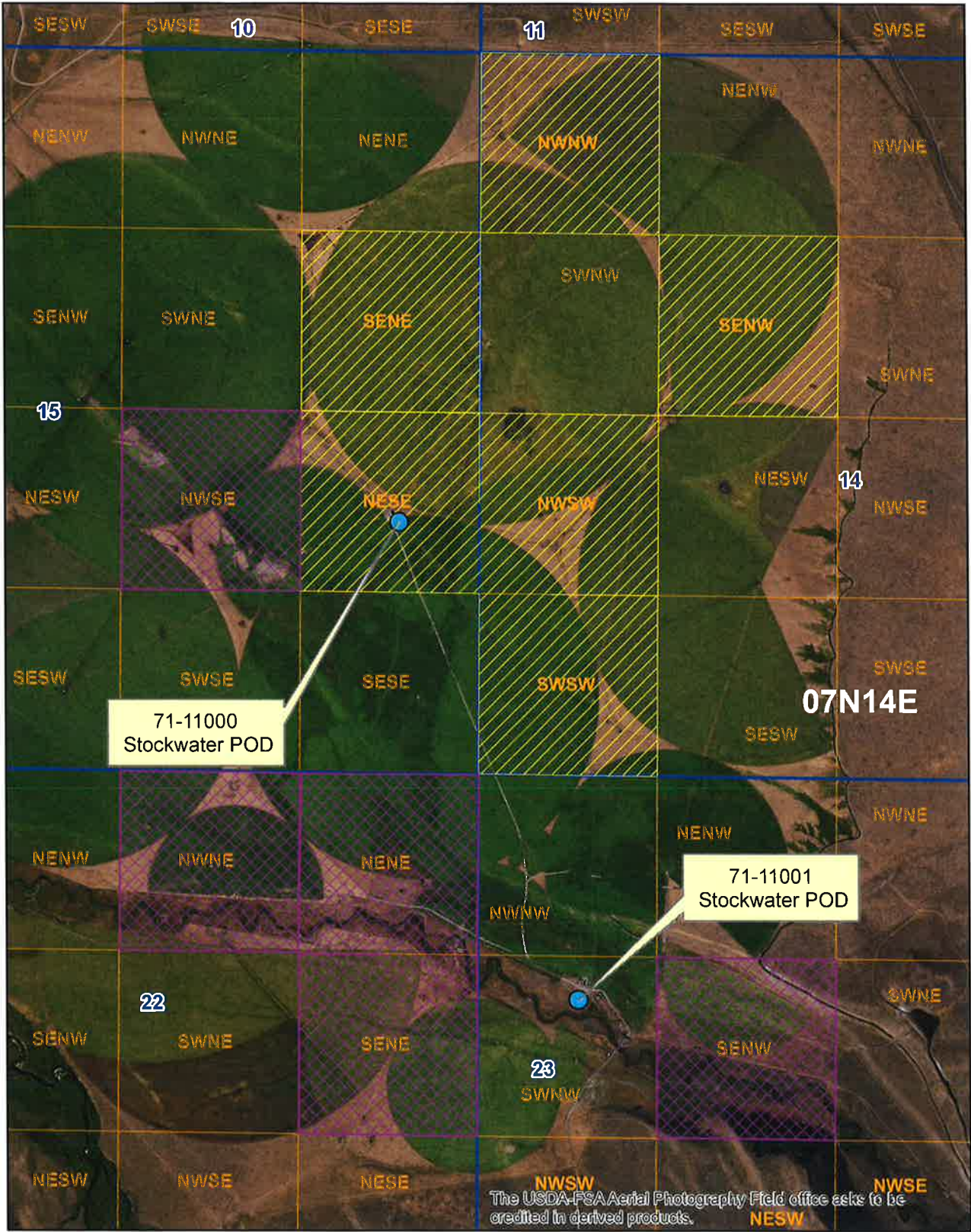
0 0.125 0.25 0.5 Miles






The USDA-PSA Aerial Photography Field office asks to be credited in derived products.



# 71-11000 & 71-11001 POD and POU Map and System Diagram



## Legend

-  Township/Range
-  Sections
-  QQ
-  71-11000 Stockwater POU
-  71-11001 Stockwater POU

The USDA-FSA Aerial Photography Field office asks to be credited in derived products.

## GROUNDWATER THEORETICAL ANALYSIS

**FILE:** Salmon Falls Land & Livestock 71-10949

**DATE:** 1/8/20

**BY:** North Stockwater Well

**THEORETICAL RATE OF FLOW:**      $Q = \frac{(8.8 \times (HP) \times (EFF.))}{TDH}$

**Q**     = CFS

**HP**     = Total Brake Horsepower of pumping plant (including booster)

**Eff.**     = Pumping plant efficiency (assume 70% or 0.70)

**TDH**     = Total dynamic head = [ (LIFT) + (PSI X 2.31) ]

**LIFT**     = Depth to water in FEET from land surface to pumping water level

**PSI**     = Pumping pressure measured in PSI near pump (if open discharge assume [0])

( 8.8 ) X ( 2.0 ) X ( 0.70 )     12.320

[ ( 56.0 ) + ( 50.0 X 2.31 ) ] 115.500     171.500

**Q** = 0.072

**LIFT FROM:**

**PSI FROM:**

**NOTES ON PUMP:**

Measurement ☐

Owner ☐

Area estimate ☐

Well Logs ☒

Measurement ☐

Owner ☐

Estimate ☒

Owner Gage ☐

Motor Make, Serial or ID

Pump Make, Serial or ID, rating

Booster Y ☐ N ☐

**REMARKS:** HP supplied by permit holder.

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## GROUNDWATER THEORETICAL ANALYSIS

FILE: Salmon Falls Land & Livestock 71-10949

DATE: 1/8/20

BY: North Stockwater Well

THEORETICAL RATE OF FLOW:  $Q = \frac{(8.8 \times (HP) \times (EFF.))}{TDH}$

Q = CFS

HP = Total Brake Horsepower of pumping plant (including booster)

Eff. = Pumping plant efficiency (assume 70% or 0.70)

TDH = Total dynamic head = [ (LIFT) + (PSI X 2.31) ]

LIFT = Depth to water in FEET from land surface to pumping water level

PSI = Pumping pressure measured in PSI near pump (if open discharge assume [0])

( 8.8 ) X ( 2.0 ) X ( 0.70 ) 12.320

[ ( 48.5 ) + ( 50.0 X 2.31 ) ] 164.000

Q = 0.075

LIFT FROM:

PSI FROM:

NOTES ON PUMP:

Measurement ☐  
Owner ☐  
Area estimate ☐  
Well Logs ☒

Measurement ☐  
Owner ☐  
Estimate ☒  
Owner Gage ☐

Motor Make, Serial or ID  
\_\_\_\_\_  
Pump Make, Serial or ID, rating  
\_\_\_\_\_  
\_\_\_\_\_

Booster Y ☐ N ☐

REMARKS: HP supplied by permit holder.

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IDAHO DEPARTMENT OF WATER RESOURCES  
WELL DRILLER'S REPORT

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JAN 07 2013

## 1. WELL TAG NO. D

Drilling Permit No.

Water right or injection well #

## 2. OWNER:

Name

Address

City

State

Zip

## 3. WELL LOCATION:

Twp. 7E North ☒ or South ☐ Rge. 14 East ☒ or West ☐Sec. 23 10 acres 1/4 40 acres 1/4 160 acres 1/4

Gov't Lot

County

Lat.

°

55-23.63N

(Deg. and Decimal minutes)

Long.

°

114-47-26.89W

(Deg. and Decimal minutes)

Address of Well Site

(Give at least name of road + distance to road or 1/4 section)

City

Lot

Blk.

Sub. Name

## 4. USE:

☐ Domestic☐ Municipal☐ Monitor☐ Irrigation☐ Thermal☐ Injection☒ Other

## 5. TYPE OF WORK:

☒ New well☐ Replacement well☐ Modify existing well☐ Abandonment☐ Other

## 6. DRILL METHOD:

☒ Air Rotary☐ Mud Rotary☐ Cable☐ Other

## 7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft <sup>3</sup> )	Placement method/procedure
Bentonite	0	51	8.2 bags	Overhaul

## 8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing Liner	Threaded	Welded
16"	0	145	.375	Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20"	0	145	.321	Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 195'

## 9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☐ N MethodManufactured screen ☒ Y ☐ N Type

Method of installation

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
190	225	100		14"	S.S.	

Length of Headpipe Length of Tailpipe

Packer ☐ Y ☐ N Type

## 10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft <sup>3</sup> )	Placement method
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## 11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☐ N Artesian Pressure (PSIG)

Describe control device

## 12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft)

Static water level (ft)

Water temp. (°F)

Bottom hole temp. (°F)

Describe access port

## Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
1.0	1500	24 hrs

## Test method:

☒ Pump☐ Bailor☐ Air☐ Flowing artesian

Water quality test or comments:

## 13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
24	0	5	clay cobbles		<input checked="" type="checkbox"/>
24	5	20	gravel + sand		<input checked="" type="checkbox"/>
24	20	30	cobbles + gravel		<input checked="" type="checkbox"/>
24	40	51	cobbles + gravel		<input checked="" type="checkbox"/>
20	51	59	cobbles + gravel		<input checked="" type="checkbox"/>
20	59	63	loose gravel		<input checked="" type="checkbox"/>
20	63	70	hard black, bin, red rock	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	70	80	cemented gravel clay	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	80	95	Brown clay + gravel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	95	117	Brown sand + cobbles	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	117	122	sand + gravel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	122	140	sand cobbles	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	140	145	cobbles gravel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	145	165	Boulders	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	165	173	large gravel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	173	180	small gravel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	180	200	cobbles + gravel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	200	215	gravel medium	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	215	220	compact gravel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	220	235	compact gravel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Completed Depth (Measurable): 225'Date Started: 11-13-12Date Completed: 12-7-12

## 14. DRILLER'S CERTIFICATION:

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name MT West Well Drilling Co. No. 543\*Principal Driller Michael Freedom Date 12-17-12

\*Driller \_\_\_\_\_ Date \_\_\_\_\_

\*Operator II \_\_\_\_\_ Date \_\_\_\_\_

Operator I \_\_\_\_\_ Date \_\_\_\_\_

\* Signature of Principal Driller and rig operator are required.

South Irrigation well  
Salmon Falls Land & Livestock 71-10949

IDAHO DEPARTMENT OF WATER RESOURCES  
WELL DRILLER'S REPORT

Location Corrected by IDWR To:

T07N R14E Sec. 23 SWSENW

By: mciscell 2013-10-21

## 1. WELL TAG NO. D 0062639

Drilling Permit No. 863946

Water right or injection well #

## 2. OWNER:

Name Salmon Falls Land &amp; Livestock Co., Inc.

Address 95-A Bell Rapids Road

City Hagerman State ID Zip 83332

## 3. WELL LOCATION:

Twp. 7 North ☒ or South ☐ Rge. 14 East ☒ or West ☐

Sec. 23 1/4 SW 1/4 NW 1/4

Gov't Lot County Custer

Lat. 43 55:23.63 (Deg. and Decimal minutes)

Long. 114 47:26.89 (Deg. and Decimal minutes)

Address of Well Site 1.5 Miles north of Sawtooth city

City Stanley

(Give at least name of road - Distance to Road or Landmark)

Lot. Blk. Sub. Name

## 4. USE:

☒ Domestic ☐ Municipal ☒ Monitor ☐ Irrigation ☐ Thermal ☐ Injection  
☐ Other

## 5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well  
☐ Abandonment ☐ Other

## 6. DRILL METHOD:

☒ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other

## 7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft <sup>3</sup> )	Placement method/procedure
Bentonite	0	40	2000 lbs	Annular

## 8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Unr	Threaded	Welded
6"	+2'	-248'	.250	Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) -248'

## 9. PERFORATIONS/SCREENS:

Perforations ☒ Y ☐ N Method air perfManufactured screen ☐ Y ☒ N Type

Method of installation

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
-150'	-250'	1/4x2	10	6"	Steel	.250

Length of Headpipe Length of Tailpipe

Packer ☐ Y ☒ N Type

## 10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft <sup>3</sup> )	Placement method

## 11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG)

Describe control device

## 12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 56 Static water level (ft) 56

Water temp. (°F) Bottom hole temp. (°F)

Describe access port Well Cap

## Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
	100+		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Test method:

Water quality test or comments:

## 13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
10	0	40			
6	40	250			
6					
	0	40	sand, gravel, trace clay some large gravel 1'-2'		X
	40	67	sand, gravel, trace clay some large gravel 1'-2'	X	
	67	93	Brown clay, gravel mix 2"-4" Gravel	X	
	93	115	Brown sand, pea gravel	X	
	115	122	Large sand & Gravel	X	
	122	148	Gravel Trace sand	X	
	148	164	Very compacted large boulders	X	
	164	172	Large Gravel	X	
	172	182	Small Gravel, Trace Sand	X	
	182	207	Very compact gravel, trace brown clay	X	
	207	216	Large Gravel H2O	X	
	216	228	Medium Gravel H2O	X	
	228	250	Very compacted gravel, some mix Volcanic Rock	X	

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AUG 22 2012

IDWR OF WATER RESOURCES  
SOUTHEAST REGION

Completed Depth (Measurable) 250

Date Started: Aug 13, 2012

Date Completed: Aug 14, 2012

## 14. DRILLER'S CERTIFICATION:

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Independent Drilling/KC Co. No. 343

\*Principal Driller Rodney J. Date Aug 14, 2012

\*Driller Date Aug 14, 2012

\*Operator II Date

Operator I Date

\* Signature of Principal Driller and rig operator are required.

south stockwater well

Salmon Falls Land &amp; Livestock 71-10949

IDAHO DEPARTMENT OF WATER RESOURCES  
WELL DRILLER'S REPORT

RECEIVED

OCT 25 2013

DEPT. OF WATER RESOURCES  
SOUTHERN REGION

## 1. WELL TAG NO. D 0063413

Drilling Permit No. 870126

Water right or injection well #

## 2. OWNER: Mike Henslee

Name Salmon Falls Land &amp; Livestock Co. INC

Address 95 A Bell Rapids Road

City Hagerman State ID Zip 83332

## 3. WELL LOCATION:

Twp. 7 North ☒ or South ☐ Rge. 14 East ☒ or West ☐

Sec. 15 1/4 NE 1/4 SE 1/4

Gov't Lot County Custer

Lat. 43 55 57.28 (Deg. and Decimal minutes)

Long. 114 47 43.89 (Deg. and Decimal minutes)

Address of Well Site 1.5 Miles North of Sawtooth City

City Stanley

(Circle at least 1 mile or 1/4 mile of land shown)

Lot. Blk. Sub. Name

## 4. USE:

☐ Domestic ☐ Municipal ☒ Monitor ☐ Irrigation ☐ Thermal ☐ Injection  
☐ Other

## 5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well☐ Abandonment ☐ Other

## 6. DRILL METHOD:

☒ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other

## 7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft <sup>3</sup> )	Placement method/procedure
Bentonite	0	-40'	1400 Lbs	Annular

## 8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Linear	Threaded	Welded
6	+1'	-280'	.250	Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) -280

## 9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N MethodManufactured screen ☐ Y ☒ N Type

Method of installation

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
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Length of Headpipe Length of Tailpipe

Packer ☐ Y ☒ N Type

## 10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft <sup>3</sup> )	Placement method
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## 11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG)

Describe control device

## 12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 48.5 Static water level (ft) 48.5

Water temp. (°F) Bottom hole temp. (°F) 49

Describe access port Well Cap

## Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
	300+	60

## Test method:

Pump	Ball	Air	Flowing artesian
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Water quality test or comments:

## 13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
10	0	40			
6	40	280			
	0	25	Coarse gravel, boulders and fines		X
	25	35	fine to very coarse gravel/trace Clay		X
	35	38	Boulder		X
	38	40	Fine to Medium Gravel		X
	40	68	well round coarse sand/coarse gravel	X	
	68	71	Boulder	X	
	71	73	Coarse Sand & Gravel	X	
	73	82	Coarse to Med Sand, trace clay	X	
	82	100	Coarse sand & Med Gravel	X	
	100	112	Coarse sand & fine Gravel	X	
	112	132	well rounded fine gravel/coarse sand	X	
	132	140	Medium to fine gravel	X	
	140	158	Coarse sand & fine Gravel	X	
	158	164	Very coarse gravel	X	
	164	173	Coarse sand & fine Gravel	X	
	173	180	Coarse sand & fine to med Gravel	X	
	180	193	Coarse sand & very fine Gravel	X	
	193	197	Very coarse gravel W/Coarse Sand	X	
	197	199	Very coarse gravel W/Coarse Sand	X	
			and strong clay		
	199	200	Fine to Medium sand & fines	X	
	200	213	fine sand to silts w/Med Gravel	X	
	213	220	fine sand to silts	X	
	220	227	fine to coarse sand & silts	X	
	227	260	fine sands and Medium Gravels	X	
	260	268	fine to coarse sand w/less Gravels	X	
	268	270	Boulder	X	
	270	280	Coarse sand & Medium Gravels	X	

Completed Depth (Measurable):

Date Started: Oct 4, 2013

Date Completed: Oct 10, 2013

## 14. DRILLER'S CERTIFICATION:

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Independent Drilling/KC Co. No. 343

\*Principal Driller *Andy Davis* Date Oct 10, 2013\*Driller *Kelly Adams* Date Oct 10, 2013

\*Operator II Date

Operator I Date

\* Signature of Principal Driller and rig operator are required.

north stockwater well

Salmon Falls Land &amp; Livestock 71-10949