

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 63-337241. Owner John NorthrupPhone No. 208-870-8060

Current address _____

2. Examiner's name Cody ParkerEXAM DATE 04/30/20193. Accompanied by John Northrup

Email _____

Address _____

Relationship to permit holder Same

Phone No. _____

4. Source Ground Water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use None, no surface water shares used to irrigate2. Other water rights with the same source and point of diversion Domestic use**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
			NE	SE	5	04N	01W	Ada	Site Visit, Well Driller Report

2. Place(s) of Use:

Method of determination Site visit, aerial imagery, digital PLSS map

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N	01W	5													4.4				4.4

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.

Scale: 1" = _____

- ☐ Copy of USGS 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)
- ☐ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0077040	Grundfos	1		Grundfos	2" discharge

*Code to correspond with no. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. **Measurements:** _____

Pump curve only _____

E. NARRATIVE/REMARKS/COMMENTS

This permit authorizes the diversion of 0.18 cfs groundwater to irrigate 8.7 acres. Proof of beneficial use was submitted March 26, 2018. WRA Cody Parker completed this field exam on April 30, 2019.

The original 10-acre parcel was split into two separate parcels. Each parcel has its own well that irrigates a portion of the acreage authorized by the permit. The original owner submitted an assignment of permit for the portion he does not own, resulting in two separate licenses from this permit. This license 63-33724 represents the irrigation on the southern parcel which was retained by the permit holder.

The POD is a six-inch well that was drilled to a depth of 165 ft. The owner says a 1-hp Grundfos 22SQE10-190 pump diverts water from the well to two-inch line that feeds a series of Nelson R33 sprinklers and movable water cannons with 3/16" nozzles.

According to the well driller's report, there was drawdown to 145 ft during the pumping test and the casing goes down to 158 ft. The most likely depth of the pump is somewhere around 155 ft below ground surface and the pumping level is somewhere around 140 ft bgs. Pressure at the well head while the system is running is 65 psi. For a total dynamic head of 290 ft, the pump curve shows that the pump would not produce any flow, which indicates that the owner was mistaken about which pump was set in the well. My estimate based on sprinkler size and pressure suggests a total diversion rate of 0.07 cfs. Because I was not able to directly measure the diversion rate I have recommended giving the owner 0.07 cfs. The recommended annual volume was determined from the headgate requirement.

The well also provides water to a home for domestic use. There are no surface water shares from an irrigation company or district available to water this acreage.

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

F. FLOW CALCULATIONS☐ Additional computation sheets attachedMeasured Method:
See Attached**G. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{I,R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 4.4 \text{ acres} \times 4.5 \text{ afa/acre} = 19.8 \text{ afa}$$

$$V_{D,R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.07 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 36.1 \text{ afa}$$

$$V = \text{Smaller of } V_{I,R} \text{ and } V_{D,R} = 19.8 \text{ afa}$$

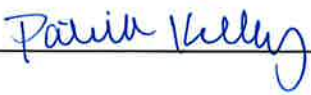
2. Volume Calculations for Other Uses:
No other uses**H. RECOMMENDATIONS**

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Irrigation	03/01	11/15	0.07 cfs	19.8 afa
Totals:			0.07 cfs	19.8 afa

2. Recommended Amendments

- ☐ Change P.D. as reflected on page 1 ☐ Add P.D. as reflected on page 1 ☒ None
☐ Change P.U. as reflected on page 1 ☐ Add P.U. as reflected on page 1 ☐ Other

I. AUTHENTICATIONField Examiner's Signature  Date 6-21-19Reviewer  Date 6-21-2019

SEAL

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

Pump Curve:

Static Water Level = 60 ft (well driller's report)

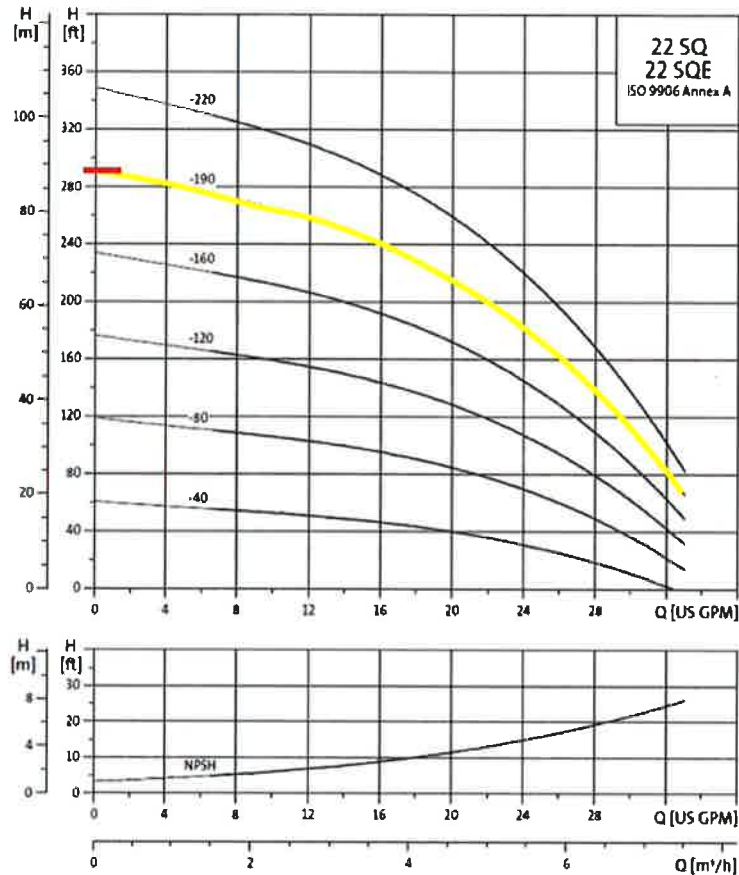
Pump set at 155 ft estimated from well driller's report

Pumping level estimated at 140 ft

Pressure at well head = 65 psi x 2.31 ft/psi = 150 ft

TDH = 290 ft

22 SQ, SQE



Flow Rate = 0 gpm

Sprinklers:

Nelson R33 Sprinklers (gold nozzle) @ 60 psi (estimated) = 4.5 gpm x 3 = 13.5 gpm

3/16" nozzles @ 60 psi = 8.5 gpm x 2 = 17 gpm

Total flow rate from sprinklers = 30.5 gpm = **0.07 cfs**

BU Standard: 4.4 acres x 0.03 cfs/acre = **0.13 cfs**

Permit: **0.18 cfs**

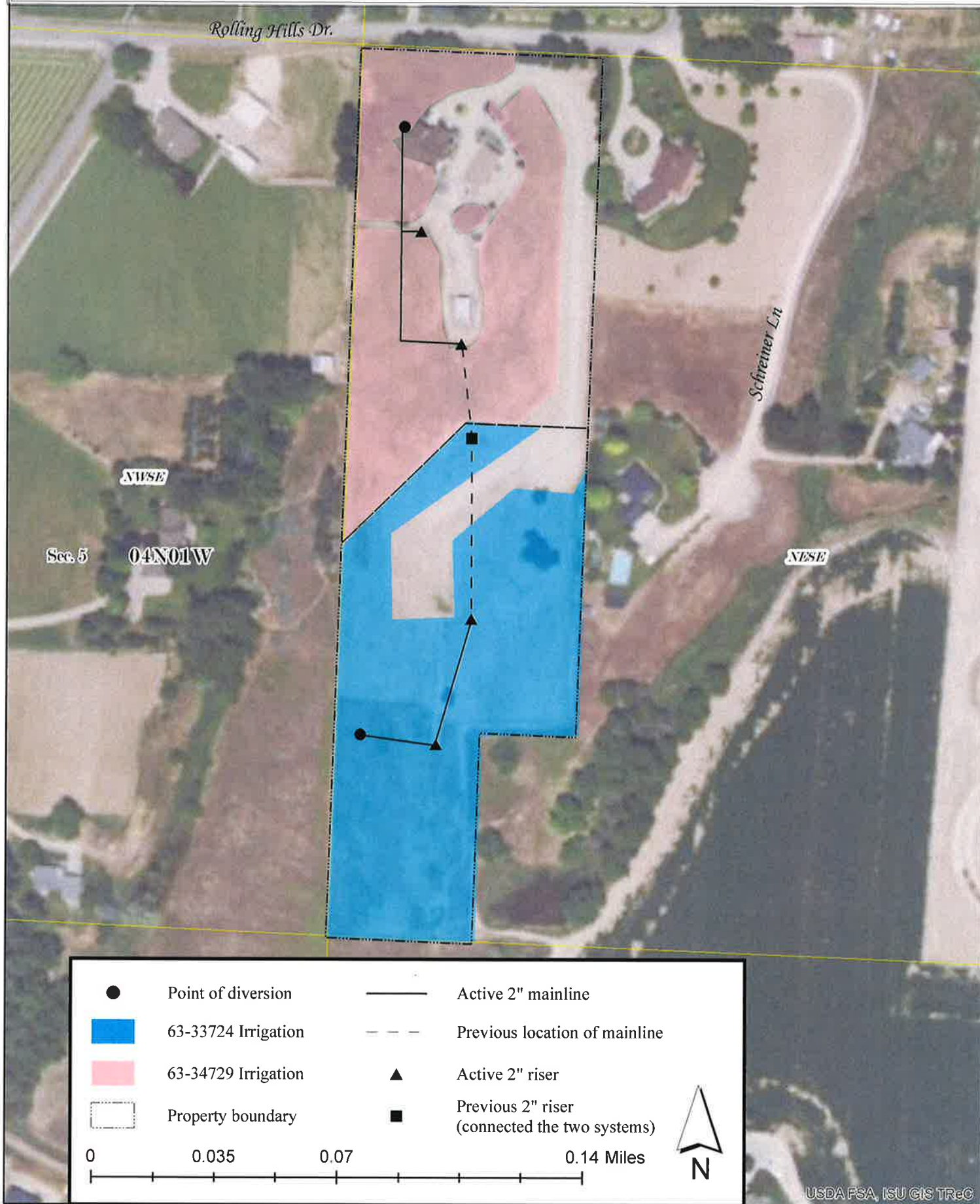
Exam Fee: **0.20 cfs**

RECOMMENDED: 0.07 cfs

Right No. 63-34729 &
63-33724

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

System Diagram



State of Idaho
Department of Water Resources
Beneficial Use Field Report
63-33724

IRRIGATION

01W

04N



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.035 0.07 0.14 Miles



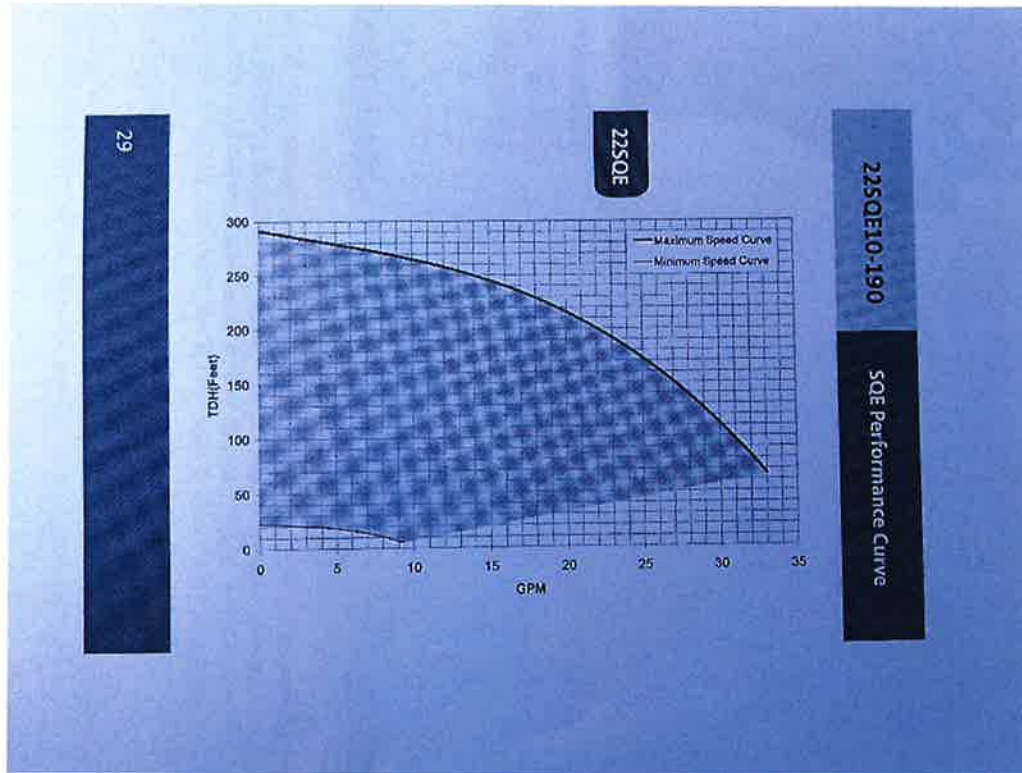
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This six-inch well with metal tag no. D0077040.



The flow rate for the movable sprinklers used to irrigate the place of use.

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The pump curve for the 1.5 hp submersible Grundfos pump.



Nelson R33 Rotator sprinklers used to irrigate the southern pasture of the place of use.

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 0077040

Drilling Permit No. 885722
Water right or injection well # _____

2. OWNER

Name Northrup, John
Address 9951 W. Rolling Hills Dr.
City Star State ID Zip 83669

3. WELL LOCATION:

Twp. 4 North ☒ or South ☐ Rge. 1 East ☐ or West ☒
Sec. 5 1/4 NE 1/4 SE 1/4
10 acres 40 acres 160 acres

Gov't Lot _____ County Canyon
Lat. 43° 42.656 (Deg. and Decimal minutes)
Long. 116° 28.686 (Deg. and Decimal minutes)
Address of Well Site TBD next to 9951 W Rolling Hills Dr.
City Star

(Show at least name of road - Distances 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 ft³)	Placement method/procedure
Med Chips	0	42	22 Bags	Poured

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
6"	+2	158	.250	Steel	☒	☐	☐	☒

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 158'

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____
Manufactured 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 ft³)	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) 60' Static water level (ft) 60'
Water temp. (°F) 58 Bottom hole temp. (°F) 58
Describe access port Sanitary Well Seal

Well test:

Test method:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
145	60	60	☐	☐	☒	☐

Water Quality test or comments: Good/No odor

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	2	Top Soil		X
10	2	8	Clay		X
10	8	14	Gravel		X
10	14	42	Sandy Gravel		X
6"	42	60	Sandy Clay		X
6	60	105	Sand	X	
6	105	115	Sandy Clay		X
6	115	135	Sand	X	
6	135	140	Clay		X
6	140	155	Sand	X	
6	155	165	Clay		X
6	165		Sand	X	

RECEIVED

JAN 09 2018

WATER RESOURCES
WESTERN REGION

Completed Depth (Measurable) 165'
Date: Started 9/7/2017 Completed 9/10/2017

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 Can-Ada Well Drilling & Pump Co No. 304

*Principal Driller Earl Skinner *Earl Skinner* Date 10/1/2017

*Driller _____ Date _____

*Operator II Brad Skinner *Brad Skinner* Date 10/1/2017

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

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04N01W5

Basin/Sequ	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total/Acres
63-33724 NORTH GROUND IRRIGATION																4.4				4.4
63-11353	MATTOSS	GROUND IRRIGATION				3.5														3.5
63-120G	ANDERSON	BOISE R' IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-12121	EWERT, C	WASTE W IRRIGATION																		
63-12323	GREENE	GROUND IRRIGATION					2													5
63-123C	FARMER	BOISE R' IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
63-124N	FARRIS, I	BOISE R' IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-124Q	CHASE, R	BOISE R' IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-125G	FARRIS, I	BOISE R' IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-125J	CHASE, R	BOISE R' IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-126E	FARRIS, I	BOISE R' IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-126F	BOWERM	BOISE R' IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-161X	CONSUM	BOISE R' IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-165M	BOISE C'	BOISE R' IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-168B	BORTLE, BOISE R' IRRIGATION																			
63-168D	FARRIS, I	BOISE R' IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-173	FARRIS, I	BOISE R' IRRIGATION																		
63-198AC	FARRIS, I	BOISE R' IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-198AG	FARMER	WASTE W IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-21729	FARMER	WASTE W IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-248	FARMER	BOISE R' IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-254	FARRIS, I	BOISE R' IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-255	COUZEN	BOISE R' IRRIGATION																		
63-297	FARMER	BOISE R' IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-31230	KLEIN, M	GROUND IRRIGATION															5.5			5.5
63-31257	BENNION	GROUND IRRIGATION				2														2
63-31440	KLEIN, M	GROUND IRRIGATION															5			5
63-31441	BRUCE S	GROUND IRRIGATION															4.5			4.5
63-32480	DRAINAC	UNNAME IRRIGATION								X	X	X	X	X	X	X	X	X	X	
63-32518	FARRIS, I	UNNAME IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-32519	FARRIS, I	UNNAME IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-32520	FARRIS, I	UNNAME IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-32521	FARRIS, I	WASTE W IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-32522	FARRIS, I	WASTE W IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-34524	SCHREIN	GROUND IRRIGATION														12				12
63-370	FARRIS, I	BOISE R' IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-4960	FARRIS, I	BOISE R' IRRIGATION						X	X	X	X	X	X	X	X	X	X	X	X	
63-8191	MEDIN, B	GROUND IRRIGATION															4			4
63-8526	KLEIN, M	UNNAME IRRIGATION															5			5
63-9115	BARNETT	UNNAME IRRIGATION															5			5

Drainage/irrigation districts and companies, no overlap