

Nelson, Dan

From: Nelson, Dan
Sent: Friday, August 20, 2021 3:45 PM
To: 'Marci Pape'
Subject: RE: Amendment for permit 63-32237

Thank you Marci,

I look forward to getting a response from your client.

Dan Nelson

From: Marci Pape [mailto:Mpape@spfwater.com]
Sent: Friday, August 20, 2021 3:29 PM
To: Nelson, Dan <Dan.Nelson@idwr.idaho.gov>
Subject: RE: Amendment for permit 63-32237

Thank you for providing a detailed response, particularly for your description of the steps you take in creating your shapefiles. I have seen shapefiles like this in the past and have often wondered about their appearance, so this helps to explain things. I have let the water right owner know that I did not see any problems with the amendment as you've prepared it, and I expect that you will be receiving the signed document and payment soon.

- Marci

From: Nelson, Dan [mailto:Dan.Nelson@idwr.idaho.gov]
Sent: Thursday, August 19, 2021 11:20 AM
To: Marci Pape <Mpape@spfwater.com>
Subject: RE: Amendment for permit 63-32237

Hello Marci;

I know that you are aware that the map/shape files are not the official description of the acres in a water right, but I am required to make this point. The map is just a depiction of right at the time of licensing, and the actual amendment document and subsequent license document will be the true definition of this water right. Regardless how the map looks, the acres in the place of use table in the document is what defines what can and cannot be irrigated in each 40 acre tract.

I did check the back file for this permit, and I did use your shape files. I have attached a PDF of your shape file in red with a white border, and the shape file I created in yellow based on the 2019 aerial imagery. I found 125 acres and you came up with 128 acres in your shape files. Since the acre amounts were so close and you were actually on site, we decided to go with the acres you found. We have found that multiple people can go to a property come up with a very different understanding of what is actually happening, so we fill that you are more of the expert on what is actually being done at this location. Since we went with your acres, we used your shape files to attach to our database to ensure .

The reason for the strange look on the reference map you received is that shape files you provided had 8 different polygons. Some of those polygons overlap each other or share the same polygon lines or field borders. In our database, when lines overlap it automatically merges those shapes and doesn't show the lines that are shared to create a single polygon. Where the polygons are separated by a road or ditch (a space

between the polygons), then the database will show both polygon borders. When we receive or create multiple polygons for a place of use, this often happens when we connect the shape files to the database. It creates an accurate picture if all of the polygons are merged.

I generally only create one polygon for a place of use, unless the fields are separated by a significant distance. You will notice that in the shape file I created there are areas that I didn't think were irrigated because they looked like a road, pond or canal. If I would have used my map, I would have felt obligation to reduce the total acres or Permissible Place of Use down to the 125 acres I found to ensure the shape file and the acre description matches. I try very hard to ensure that the shape file in our mapping program matches the acre description in the acre table to avoid issues later if the water right is ever transferred. This is why I used your shape file, and I wasn't concerned about the areas in the map that the database merged or didn't merge the shape files.

I hope this explains the areas in the map that look a little different, and why we didn't make any corrections to your shape files. If you want to discuss it more, please don't hesitate give me a call.

Respectfully,

Daniel Nelson
Water Right Analyst 3
Idaho Department of Water Resources
Telephone (208) 287-4856
Fax (208) 287-6700 (attn: Dan Nelson)

From: Marci Pape [<mailto:Mpape@spfwater.com>]
Sent: Wednesday, August 18, 2021 3:56 PM
To: Nelson, Dan <Dan.Nelson@idwr.idaho.gov>
Subject: RE: Amendment for permit 63-32237

Hi Dan –

Thank you for cc'ing me on this permit amendment notice. Everything looks good to me except for one small detail. The shapefile seems unnecessarily complicated. In fact, it looks a bit like someone merged multiple shapes into one and didn't go back and clean up/delete vertices. I suppose it could be that SPF supplied you with the shapefile (I didn't check), but regardless, it seems like it would benefit from some cleanup. I've circled in red the spots I noticed. Other than that, I'm letting the client know that I don't see any other issues and recommend that he sign and return the form with payment.



Thanks,
Marci

Marci Pape, P.E. | Project Engineer

SPF Water Engineering, LLC
300 E Mallard Drive, Suite 350 | Boise, ID 83706
p. 208.383.4140 | f. 208.383.4156 | d. 208.489.2143
e. mpape@spfwater.com | w. www.spfwater.com



From: Nelson, Dan [<mailto:Dan.Nelson@idwr.idaho.gov>]
Sent: Tuesday, August 17, 2021 11:31 AM
To: Marci Pape <Mpape@spfwater.com>
Subject: Amendment for permit 63-32237

Hello Marci;

Attached to this email is the amendment and amendment cover letter for permit 63-32237. If you have any questions, please let me know.

Respectfully,

Daniel Nelson
Water Right Analyst 3
Idaho Department of Water Resources
Telephone (208) 287-4856
Fax (208) 287-6700 (attn: Dan Nelson)

August 17, 2021

JOHNSON RESEARCH LLC
24007 HWY 20-26
PARMA ID 83660

RE: Water Right Permit No. 63-32237

Dear Permit Holder:

The Idaho Department of Water Resources (Department) is reviewing permit 63-32237 prior to issuing a water right license. By issuing a license, the Department confirms the extent of development that has been established in compliance with the terms of the permit.

On December 13, 2019, Department staff received a letter and a field report from certified water right examiner, Marci Pape, concerning the above referenced permit. Ms. Pape found that instead of developing 3 points of diversion you only developed 2 points of diversion. The first point of diversion in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 8 in Township 5 North, Range 4 West, was authorized as a point of diversion in the permit. The second point diversion described by Ms. Pape was located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 5 in Township 5 North, Range 4 West.

The permit did not authorize a point of diversion in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 5 in Township 5 North, Range 4 West. In order to move forward with the licensing of this permit, you will need to amend the permit to include the point of diversion in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 5 in Township 5 North, Range 4 West.

The enclosed Application for Amendment form depicts the elements of the water right as it will appear on the license when issued. Please review each amendment form carefully. If you concur with the information presented, please sign and return the form with the \$100.00 filing fee within 14 days.

If you have any questions, please don't hesitate to contact me.

Sincerely,



Daniel A. Nelson
Analyst 3
Water Right Section
Idaho Department of Water Resources
Telephone # (208) 287-4856
Email – dan.nelson@idwr.idaho.gov

Enclosure(s): Three Applications for Amendment with maps

cc Marci Pape – SPF Water Engineering – By Email

Nelson, Dan

From: Nelson, Dan
Sent: Tuesday, August 17, 2021 11:31 AM
To: 'Marci Pape'
Subject: Amendment for permit 63-32237
Attachments: 63-32237 amendment.pdf

Hello Marci;

Attached to this email is the amendment and amendment cover letter for permit 63-32237. If you have any questions, please let me know.

Respectfully,

Daniel Nelson
Water Right Analyst 3
Idaho Department of Water Resources
Telephone (208) 287-4856
Fax (208) 287-6700 (attn: Dan Nelson)

TO: Water Right File 63-32237

FROM: Daniel Nelson – Analyst 3

DATE: January 9, 2020

SUBJECT: Licensing Review of Water Right 63-32237

The field exam for this right was performed by Certified Field Examiner Marci Pape of SPF Water Engineering. The measurements and the recommendations in Ms. Pape's field report seem reasonable. Due to current rounding standards, the acre amount will be corrected to 106 instead of 105.6, and the annual volume will be increased to 477 af to match the corrected acre amount. There are only a couple of things that need additional consideration.

History and Overlap:

This permit is the first of two permits filed for this farm. The second permit, 63-33654, is described as an overlapping right for the point of diversion in Ms. Pape's field report, but 63-33654 was not included as an overlap in the place of use overlap. Ms. Pape does stated in the narrative that the field in the NWNW of Section 8 is part of the permissible place of use for permit 63-33654. Therefore, 63-33654 should have been included in the place of use overlap analysis on the front of the field report.

Point of Diversion:

The permit shows 3 points of diversion in Section 8. Ms. Pape's field exam shows that 2 points of diversion were actually developed. The first diversion point is in the NWNW of Section 8 and the second diversion point is in the SWSE of Section 5. Both diversions are in Township 5 North, Range 4 West. An amendment will be needed to address the changes in the points of diversion from the permit to what was actually developed.

Place of Use:

Ms. Pape provided two shape files for this permit. The first shape file showed the acres actually irrigated. The second shape file showed the permissible place of use authorized by the permit. The shape file showing acres irrigated showed a total of 128 acres that have been irrigated since this permit was approved. The permissible place of use border authorized by the permit show lands that don't appear to have been irrigated. Therefore, the permissible place of use border should be the 128 acre shape file, since those 128 acres are the only lands that have been irrigated within the permissible place of use proposed in the permit during the development period.

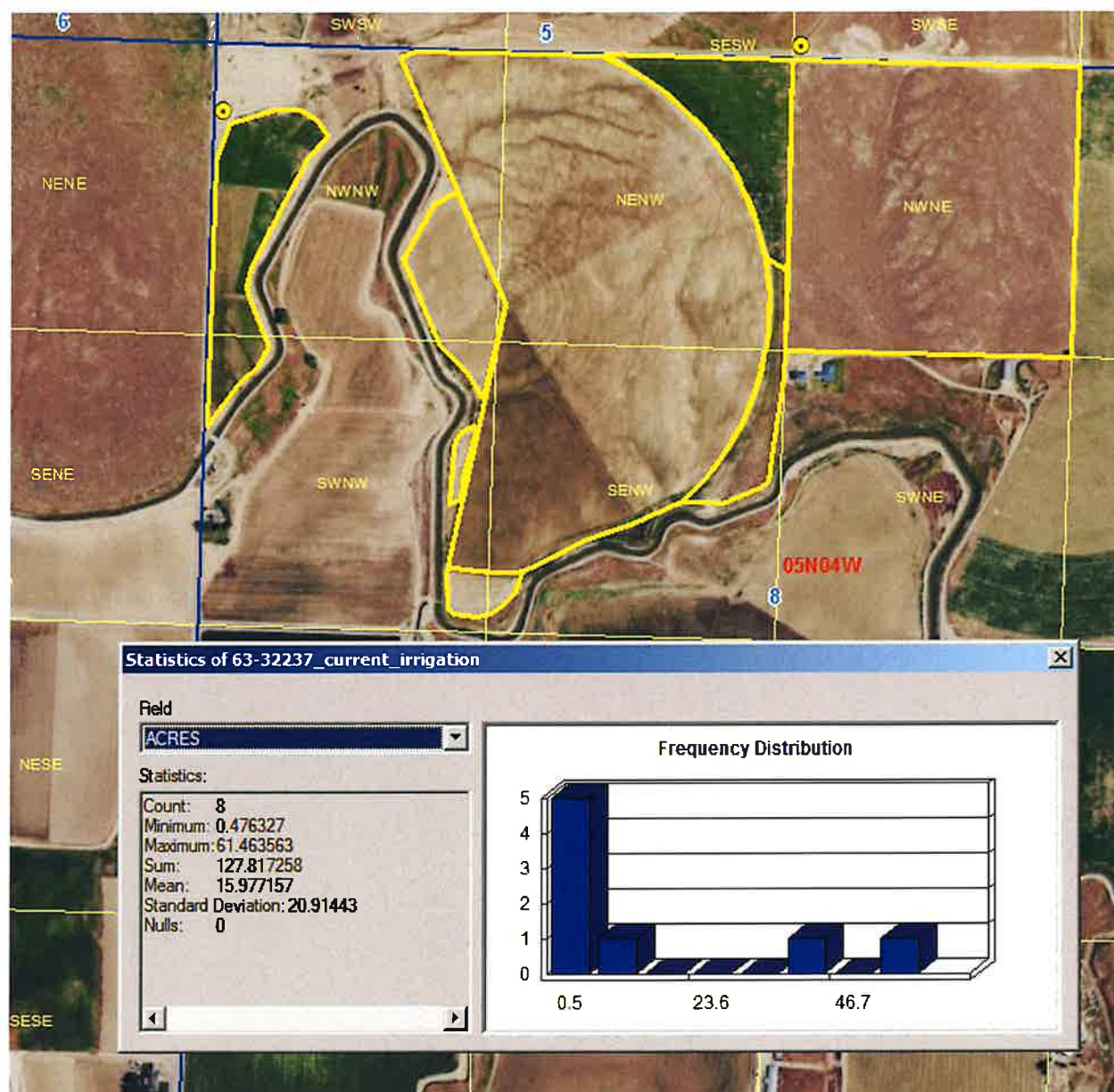
A permissible place of use is still needed for this permit, since the permit is limited to 105.6 acres and 126 acres have been irrigated within the original permissible place of use described in this permit. The 22 acres being irrigated that are not covered by this permit are authorized by permit 63-33654. As stated above, this permit and permit 63-33654 share a common place of use of 40 acres in in the NWNE of Section 8. Almost the entire 40 acre tract in the NWNE of Section 8 is irrigated, which allows the acres in this tract to be divided up between the two rights to ensure full coverage of the irrigated field.

Conditions:

Conditions 046, 26A, and 004 will be removed at licensing. Condition 121 will be changed to condition 103. The remainder of the conditions will be carried forward to licensing.

Permit 63-32237 Place of use

The field examiner request a permissible place of use, which we can give for the acres irrigated. As you can see from this map the yellow border shows the total number of acres (128 acres) that were irrigated on this property. The remaining acres are authorized by water right permit 63-33654.



Irrigated Acre Review Permit 63-32237

The following is the 7/20/2018 Google Map Aerial Imagery for the place of use for this permit. The current aerial imagery available to the Department doesn't show the irrigation of the lands in the NWNE of Section 8, but this aerial image clearly shows that there is a mainline running down the middle of the 40 acre tract, and some type of measurement lines running off of the mainline.



This field shown
below

As you can clearly see the mainline and the sprinkler lines below for the field in the NWNE Section 8



Mainline running
down the middle
of the field

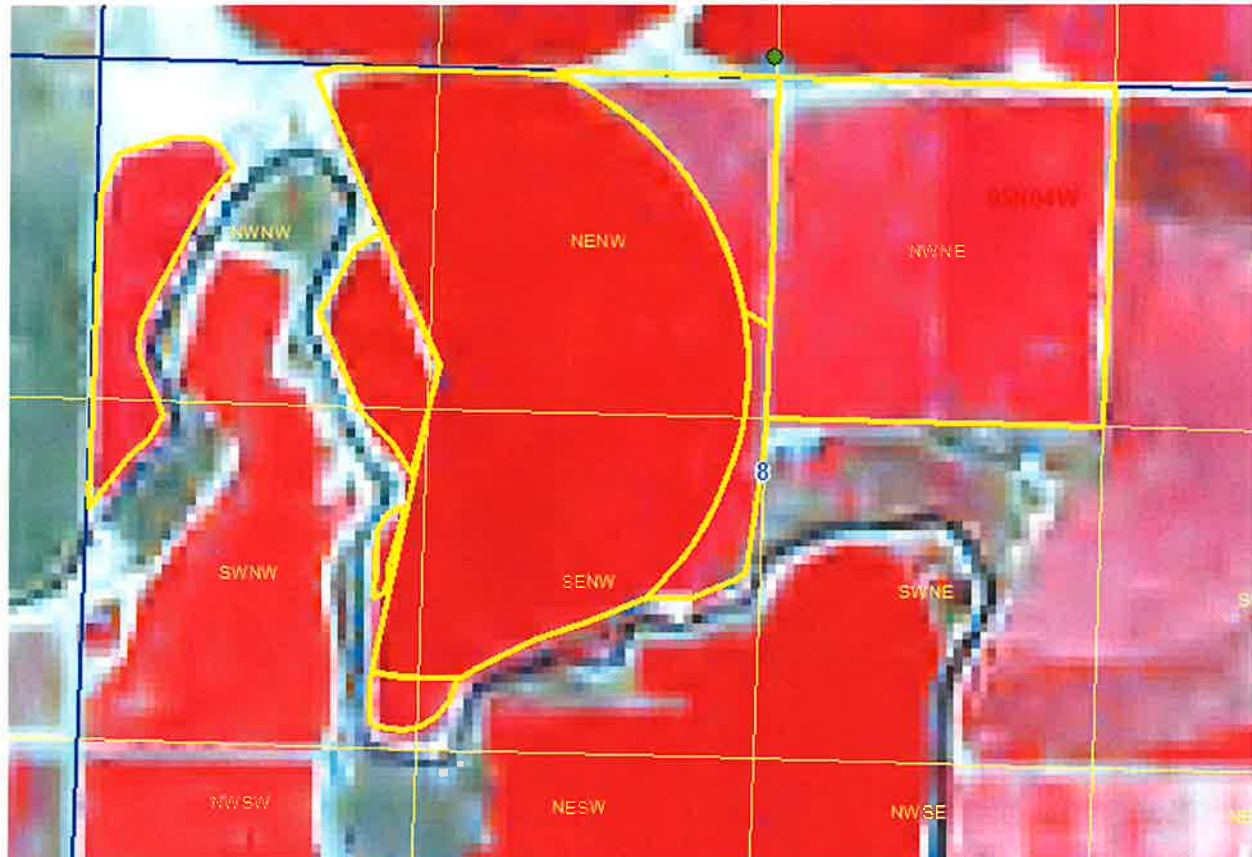
Sprinkler line in
field

Mainline running
down the middle
of the field



Irrigated Acre Review Permit 63-32237 (Continued)

The 7/11/2019 Sentinel image below shows the ground that is clearly being irrigated. It matches the shape file provided by the field examiner relatively well.



Nelson, Dan

From: Nelson, Dan
Sent: Tuesday, January 14, 2020 1:37 PM
To: 'Marci Pape'
Subject: RE: Permit 63-32237 - Beneficial Use Field Exam package

Marci,

Thank you for your quick response. I will move forward with the processing of this permit.

Dan Nelson

From: Marci Pape [mailto:Mpape@spfwater.com]
Sent: Tuesday, January 14, 2020 12:28 PM
To: Nelson, Dan <Dan.Nelson@idwr.idaho.gov>
Subject: RE: Permit 63-32237 - Beneficial Use Field Exam package

Thanks for the feedback, Dan. Scott did concur that this approach is consistent with his experience. I appreciate your prompt review, as always.

From: Nelson, Dan [mailto:Dan.Nelson@idwr.idaho.gov]
Sent: Thursday, January 9, 2020 1:41 PM
To: Marci Pape <Mpape@spfwater.com>
Subject: RE: Permit 63-32237 - Beneficial Use Field Exam package

Hello Marci,

I am in the process of finishing up the review of permit 63-32237 and preparing the amendment of permit. **First of all, I want to thank you for such a well done field report. I am extremely thankful to folks like you who do such a good job.**

I do need to let you know that I am going to have to use the Current Irrigation Shape you supplied for the permissible place of Use shape for this permit instead to the Permissible Place of Use Shape you sent in the email and included in your field report. Unless all of the lands in a permissible place of use are irrigated during the development period, we cannot include the non-irrigated ground in the permissible place of use. We can only license the things that were done during the development period. Your irrigation shape was 126 acres, and this permit is limited to 105.6 acres. The license will be issued for 106 acres within a 126 acre permissible place of use.

You will notice that I rounded the acre limit up to 106 acres. It is the Department's policy not to go to the tenth of an acre on water rights with 10 acres or more.

If you want to talk about the permissible place of use issue, please don't hesitate to contact me. I would be happy to go through it with you. We have been doing this for quite some time, and gone through this same process with Terry and Scott. They may be able to help explain it also.

Thank you so much again for such a well done field report.

Daniel Nelson

Water Right Analyst 3
Idaho Department of Water Resources
Telephone (208) 287-4856
Fax (208) 287-6700 (attn: Dan Nelson)

From: Marci Pape [<mailto:Mpape@spfwater.com>]
Sent: Wednesday, December 11, 2019 3:11 PM
To: Nelson, Dan <Dan.Nelson@idwr.idaho.gov>
Subject: Permit 63-32237 - Beneficial Use Field Exam package

Dan –

On behalf of Johnson Research, I am submitting the Proof of Beneficial Use and the Beneficial Use Field Exam report for permit 63-32237. Attached is the scanned version of the package and the associated shapefiles (current irrigation and PPU). The original signed documents will be sent tomorrow morning.

Thank you.

Marci Pape, P.E. | Project Engineer

SPF Water Engineering, LLC

300 E Mallard Drive, Suite 350 | Boise, ID 83706

p. 208.383.4140 | f. 208.383.4156 | d. 208.489.2143

e. mpape@spfwater.com | w. www.spfwater.com



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

DEC 13 2019

DEPARTMENT OF
WATER RESOURCES

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. 63-322371. Owner Johnson Research LLCPhone No. 208-722-5829Current address 24007 Hwy 20-26, Parma, ID 836602. Examiner's name Marci Pape (CWRE No. 142)EXAM DATE 08/20/20193. Accompanied by Jeff JohnsonEmail jjohnson@johnsonresearchllc.comAddress 24007 Highway 20-26, Parma, ID 83660Relationship to permit holder Permit holderPhone No. see above4. Source Ground Water

tributary to _____

B. OVERLAP REVIEW

None. Within Black Canyon Irrigation District boundary but District

1. Other water rights with the same place of use water not used here (above canal).2. Other water rights with the same source and point of diversion Permit 63-33654**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
1		NW	NW	NW	8	5N	4W	Canyon	Google Earth, Exam, GPS
									N43°47'29.95" W116°51'11.01"
2		SW	SW	SE	5	5N	4W	Canyon	Google Earth, Exam, GPS
									N43°47'34.39" W116°50'35.55"

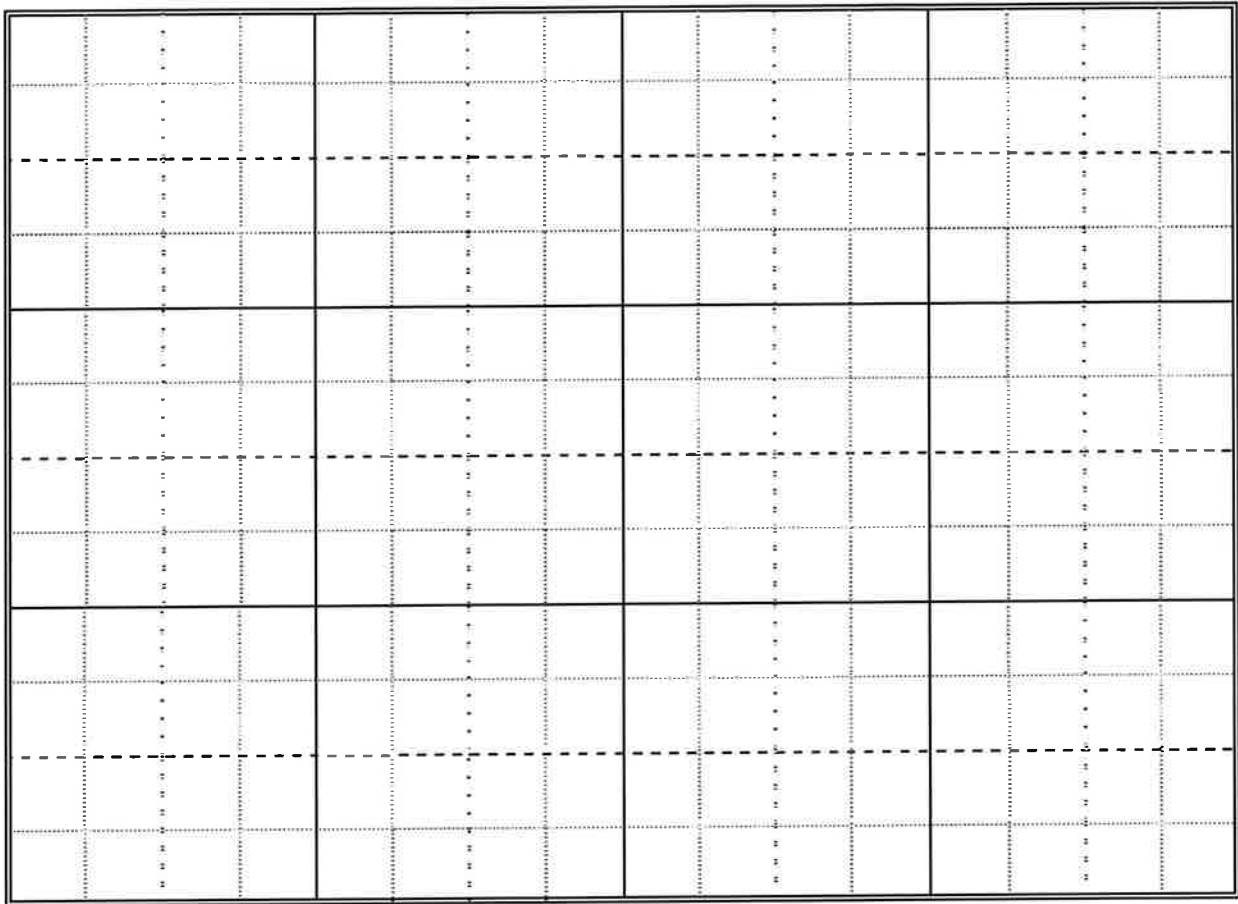
2. Place(s) of Use:

Method of determination 2018 Photo, Exam

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
5N	4W	8		40			40	28	9	28									145

105.6 acres irrigation within a 145 acre permissible place of use

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
1 - D0066073	NIDEC Motor	250	U10 7574728-0003	unknown	10-inch, 320-ft setting depth
	Corp.				
2 - D0076988	NIDEC Motor	400	Y08 7677976-0006	unknown	12-inch, 440-ft setting depth

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
1 - Flowmeter	magnetic	Seametric	AG2000-1000	012014003406	10-inch	
2 - Flowmeter	magnetic	Seametric	AG3000-1200	072017003676	12-inch	

2. **Measurements:** _____

Examiner measured: _____

Well 1 - 1646 gpm or 3.67 cfs

Total cfs = 3.67+6.29 cfs = 9.96 cfs

Well 2 - 2824 gpm or 6.29 cfs

E. NARRATIVE/REMARKS/COMMENTS

Based on exam findings, permit 63-32237 is recommended to be licensed for the permitted rate, 2.11 cfs, and 105.6 acres.

See attached narrative and the following attachments.

Exam Attachments

Attachment A: Field Exam Maps

Attachment B: System Components, Well Reports, and Diagrams

Attachment C: Flow Measurement Data

Attachment D: Exam Photos

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 attached

Measured Method:

Flow meter. See attachment C.

Total measured flow rate from Wells 1 and 2 (3.67 cfs + 6.29 cfs) is 9.96 cfs.

Total permitted flow rate is 2.11 cfs.

Flow rate based on irrigated acres = 105.6 acres x 0.02 cfs/ac = 2.11 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 105.6 \text{ acres} \times 4.5 \text{ afa/ac} = 475.2 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 2.11 \times 260 \text{ days} \times 1.9835 = 1088.1 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 475.2 \text{ afa}$$

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Irrigation	03/01	11/15	2.11 cfs	475.2 afa
Totals:			2.11 cfs	475.2 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. AUTHENTICATION**

Field Examiner's Signature

Marc S. Pape

Date

12/11/19

Reviewer

Date



E. NARRATIVE/REMARKS/COMMENTS

Overlapping water rights. There is one overlapping permit, 63-33654.

- Permit 63-33654 authorizes the diversion of 17 cfs of groundwater from up to five wells for irrigation use of 850 acres within a 1129-acre PPU. The permit has not been fully developed, but is diverted from the same two wells as permit 63-32237.

Water system description. Two wells provide irrigation water for the place of use.

- The first well, Well 1 or the "Hansen well", is located one mile north of the intersection of Market Rd. and Fountain Rd. The well is completed to a depth of 700 feet, with a 16-inch casing to 363 feet; 16-inch casing and screen from 363 to 383 feet; 16-inch casing from 383 to 401 feet; and 10-inch casing from 401 to 411 feet. It is equipped with a variable speed 250-hp submersible pump with a 320-foot setting depth. After approximately 20 feet of straight 10-inch discharge piping from Well 1, the pipe is buried and travels east.
- Well 2 is located one mile north and 1/2 mile east of the Market Rd./Fountain Rd. intersection. It was completed in 2017 and has been integrated into the current irrigation system. It is completed to a depth of 700 feet, with an 18-inch casing to 412 feet; an 18-inch casing and screen from 412 to 422 feet; an 18-inch casing from 422 to 495 feet; a 10-inch casing and screen from 495 to 560 feet; a 10-inch casing from 560 to 630 feet; a 10-inch casing and screen from 630 to 650 feet; and a 10-inch casing from 650 to 673 feet. It is equipped with a constant-speed 400-hp submersible pump with a 440-foot setting depth. Well 2 has about 12 feet of 12-inch discharge piping leading south to a magnetic flow meter, then approximately 10 more feet to a butterfly valve. At this point, the pipe splits, with one section continuing south and burying, and another section running east. The pipe running east has been equipped with a 15-hp booster pump and flow meter before also being buried.

The permit amendment, approved 4/17/2019, added another 40 acres (NWNE Sec 8) to the PPU. This 40-acre tract is also authorized as part of the PPU for Permit 63-33654. The entire 40-acre tract is currently irrigated from this system using handlines, as shown in 2018 Google Earth imagery, with 17 acres authorized under this right and the remaining acres authorized under Permit 63-33654.

Measured Flow Rate.

- **Well 1.** The examiner measured a flow rate of 3.67 cfs from Well 1 after more than 10 minutes of steady flow and a stable pressure of 70 psi.
- **Well 2.** The examiner measured a flow rate of 6.29 cfs at the flow meter nearest the well and a stable pressure of 50 psi after more than 10 minutes of steady flow.

The combined measured diversion rate from the two wells and pumps is 9.96 cfs.

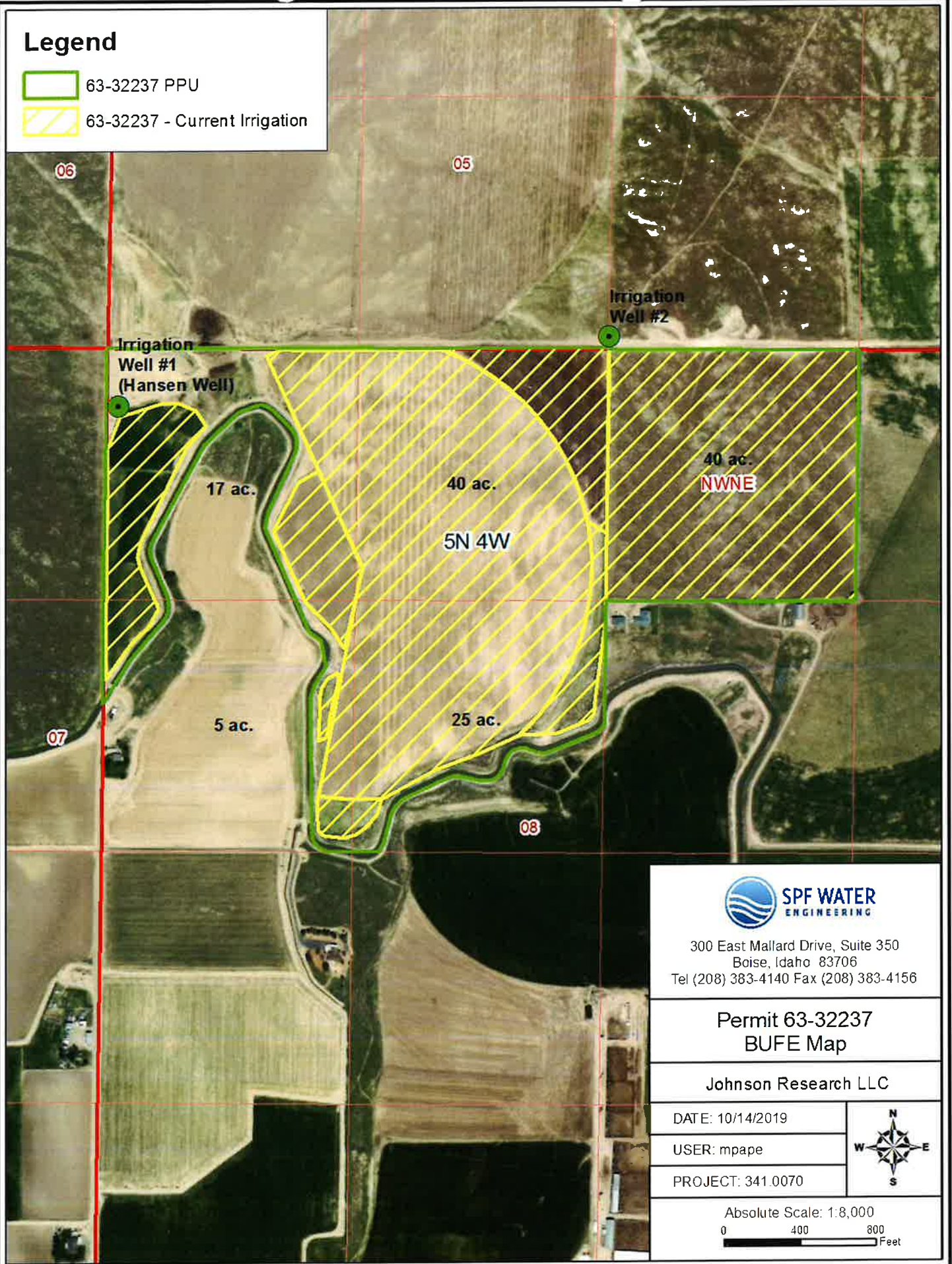
Rate and Volume Determination.

- Diversion rate has been determined based on the permitted amount (2.11 cfs)
- Diversion volume for irrigation has been determined based on irrigated area (105.6 acres at 4.5 afa/ac)

Attachment A
Field Exam Maps

Legend

- 63-32237 PPU
- 63-32237 - Current Irrigation



300 East Mallard Drive, Suite 350
Boise, Idaho 83706
Tel (208) 383-4140 Fax (208) 383-4156

Permit 63-32237 BUFE Map

Johnson Research LLC

DATE: 10/14/2019

USER: mpape

PROJECT: 341.0070



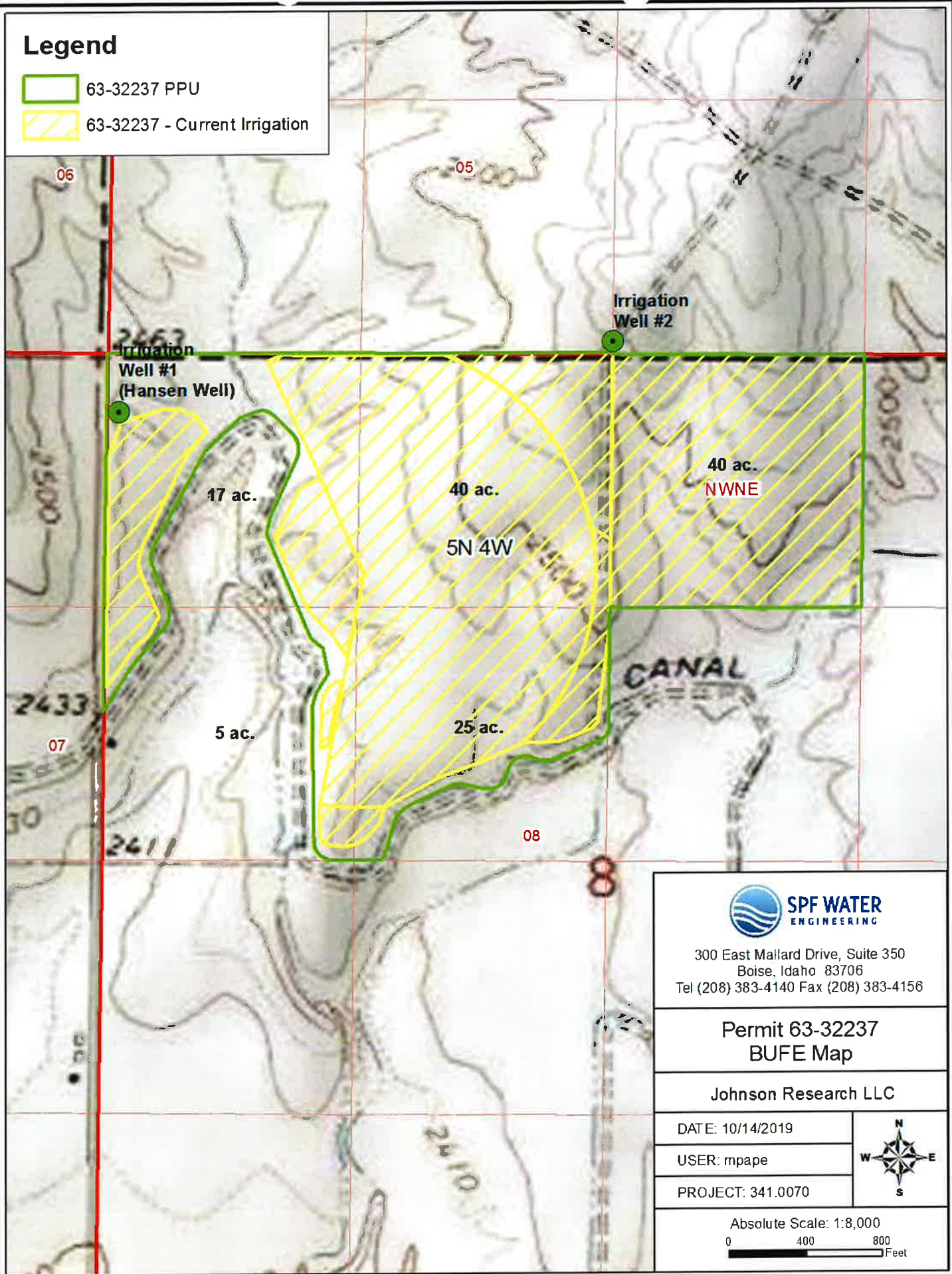
Absolute Scale: 1:8,000

0 400 800 Feet

Legend

- 63-32237 PPU
- 63-32237 - Current Irrigation

Path: S:\PROJECTS\THRU L\PROJECTS\PROJECTS\Map\Project\63-32237 BUFE Map.v2.mxd



300 East Mallard Drive, Suite 350
Boise, Idaho 83706
Tel (208) 383-4140 Fax (208) 383-4156

Permit 63-32237
BUFE Map

Johnson Research LLC

DATE: 10/14/2019

USER: mpape

PROJECT: 341.0070



Absolute Scale: 1:8,000

0 400 800 Feet

COORDINATE REFERENCE SYSTEM: NAD 1983 2011 StatePlane Idaho West FIPS 1103 Ft US

Attachment B

System Components, Well Reports, and Diagrams

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

1. WELL TAG NO. D 0066073

Drilling Permit No. 964534-870593

Water right or injection well # 63-32237

2. OWNER: Johnson Research, LLC

Name _____

Address 24007 Hwy 20-26

City Parma State ID. Zip 83660

3. WELL LOCATION:

Twp. 5 North ☒ or South ☐ Rge. 4 East ☐ or West ☒

Sec. 8 1/4 NW 1/4 NW 1/4

Gov't Lot _____ County Canyon

Lat _____ (Deg. and Decimal minutes)

Long. _____ (Deg. and Decimal minutes)

Address of Well Site 1 mile north of the intersection of Market Rd and Fountain Rd City 4 miles east of Parma

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

Lot. _____ Blk. _____ Sub. Name _____

4. USE:

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

5. TYPE OF WORK:

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

6. DRILL METHOD:

☐ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other Reverse

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
Bentonite chip	310'	0'	3500 lbs	poured

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
16"	+2'	363'	.375	steel	☒	☐	☐	☒
16"	383'	401'	.375	steel	☒	☐	☐	☒
10"	401'	411'	.365	steel	☒	☐	☐	☒

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

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____

Manufactured screen ☒ Y ☐ N Type Johnson Vee Wire

Method of installation _____

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
363'	383'	.060		16"	stainless	

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☒ N Type _____

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
3/8" gravel	310'	385'	8 yards	poured
10x20 sand	385'	450'	9,750 lbs	poured

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) 140' Static water level (ft) 140'

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

Describe access port 2" pipe on north side of well

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
<u>122.6</u>	<u>1975</u>	<u>299</u>	☒	☐	☐	☐

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
30"	0	17	Cemented fine sand & hardpan		X
24"	17	51	Cemented fine sand & small gravel		X
	51	79	Sandstone & hard white clay		X
	79	95	tan clay		X
	95	118	tan & blue clay		X
	118	179	fine sand	X	
	179	183	tan sand, coarse sand & tan clay		X
	183	250	cemented sand & gravel	X	
	250	265	tan clay with fine sand streaks	X	
	265	298	course sand	X	
	298	304	tan clay		X
	304	328	tan & black clay with thin sand streak	X	
	328	349	tan clay		X
	349	363	blue clay		X
	363	383	Course sand	X	
	383	410	blue clay		X
16"	410	446	Fine sand some course	X	
12'	446	485	blue clay		X
	485	507	blue clay with thin fine sand streaks	X	
	507	653	blue clay		X
	653	661	dark brown clay		X
	661	700	blue clay		X

RECEIVED

APR 15 2014

WATER RESOURCES
WESTERN REGION

Completed Depth (Measurable): 446'

Date Started: Nov 12, 2013

Date Completed: Mar 7, 2014

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 Stevens & Sons

Co. No. 153

*Principal Driller [Signature] Date Mar 15, 2014

*Driller [Signature] Date Mar 15, 2014

*Operator II _____ Date _____

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

2017 Irrigation Well

1. WELL TAG NO. D 0076988

Drilling Permit No. 977044 - 883101

Water right or injection well # 63-33654

2. OWNER: E.G. Johnson Farms Inc.

Name

Address 24007 Hwy 20-26

City Parma State ID Zip 83660

3. WELL LOCATION:

Twp. 5 North ☒ or South ☐ Rge. 4 East ☐ or West ☒

Sec. 5 1/4 SW 1/4 SE 1/4

Gov't Lot County Canyon

Lat. 43 47.575 (Deg. and Decimal minutes)

Long. -116 50.590 (Deg. and Decimal minutes)

Address of Well Site 1 mile north and 1/2 mile east of the interse

ction of Market Rd&Fountain City Parma

(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 Reverse Rotary

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
Bentonite	0	440	57,500lbs	Dry pour

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
18	+2	412	.375	Steel	☒	☐	☐	☒
18	422	495	.375	Steel	☒	☐	☐	☒
10	560	630	.322	Steel	☒	☐	☐	☒
10	650	673	.322	Steel	☒	☐	☐	☒

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

9. PERFORATIONS/SCREENS:

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

Method of installation Lower in one string

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
412	422	.030		18	Stainless	
495	560	.030		10	Stainless	
630	650	.030		10	Stainless	

Length of Headpipe Length of Tailpipe

Packer ☐ Y ☒ N Type

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
8-12 Sand	440	695	42,000 lbs	Dry pour

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) 220 Static water level (ft) 220

Water temp. (°F) 67° Bottom hole temp. (°F) 68°

Describe access port 2" pipe on side

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
80	2000	480

Test method:

Pump	Bailer	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	6	Fine-medium brown sand		X
24	6	28	Caliche		X
24	28	34	Fine-medium brown sand		X
24	34	47	Brown clay		X
24	47	98	Fine-med sand, gravel, br clay seams		X
24	98	163	Fine-coarse br sand, river cobbles		X
24	163	187	Brown clay		X
24	187	208	Fine-coarse br. sand, pea gravel		X
24	208	213	Brown clay		X
24	213	228	Med-coarse br. sand, sm clay seam	X	X
24	228	243	Brown clay		X
24	243	248	Fine br sand w/brown clay streaks	X	X
24	248	265	Fine brown sand	X	
24	265	270	Brown clay		X
24	270	274	Fine-coarse br. sand w/br clay lense	X	
24	274	291	Brown clay		X
24	291	309	Fine-coarse brown sand	X	
24	309	329	Brown clay		X
24	329	333	Med-coarse brown sand	X	
24	333	336	Brown clay		X
24	336	352	Blue clay		X
24	352	368	Br clayw/sm fine-coarse sand streak	X	X
24	368	374	Blue clay		X
24	374	381	Fine brown sand	X	
24	381	417	Blue clay w/sm blue sand streaks	X	X
24	417	426	Fine-med blue sand	X	
24	426	496	Blue clay w/ fine blue sand streaks	X	X
24	496	525	Fine-med blue sand	X	
24	525	564	Fine-coarse blue sand	X	
24	564	572	Blue clay		X
24	572	579	Fine-med blue sand	X	
24	579	585	Blue clay		X

Completed Depth (Measurable): 693'

Date Started: Aug 15, 2017

Date Completed: Nov 28, 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 Riverside Inc

Co. No. 333

*Principal Driller

Date

*Driller

Date

*Operator II

Date

Operator I

Date

* Signature of Principal Driller and rig operator are required.



By S. King Date 8/20/2017 Client Johnson - Osburn Prop Sheet 1 of 1
Chkd By _____ Description Water Permit 63-32237 Job No 341 0070

MOTOR NIDEL MOTOR CORP
250 HP

ID # U ID 7574728-0003

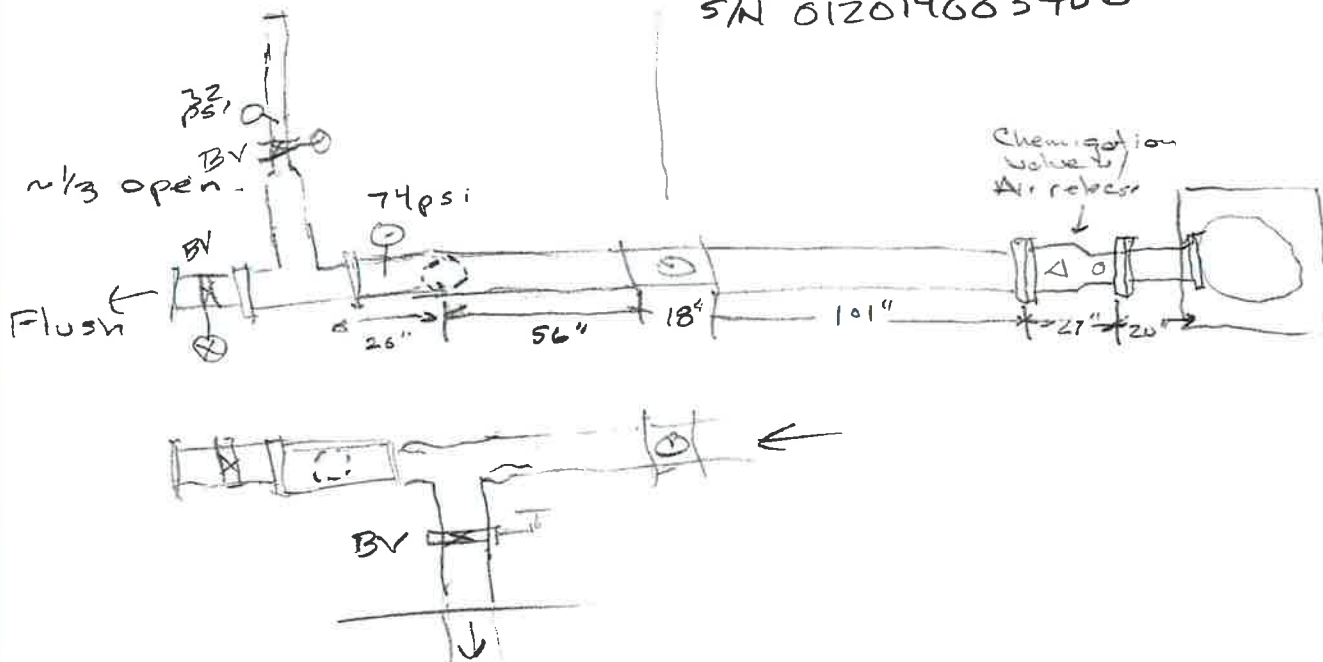
Pump NO TAG

74psi gage

VFD 51 HZ 192 A

Psi 70

Seametrics
Model AG 2000-1000
S/N 012014603406



Q measurement	Time	GPM	PSI	HZ	
2002.58	0	1841			0.68
19.65	.59	1760	69	60	<u>0.61</u>
<u>- 5.80</u>	.60	1704	70	59	0.07 AF
13.85 min	<u>.61</u>	1644	70	59	= 22,800 gal
	.64	1624	70	58.9	
	.65	1624	70	58.9	22,800 gal
	.67	1620			<u>13.85 min</u> = 1647 gpm
	.68	1616			



By S. King Date 8/20/2019 Client Johnson Sheet 2 of 2
Chkd By _____ Description _____ Job No 341.0070

Well 2

Q meter - well

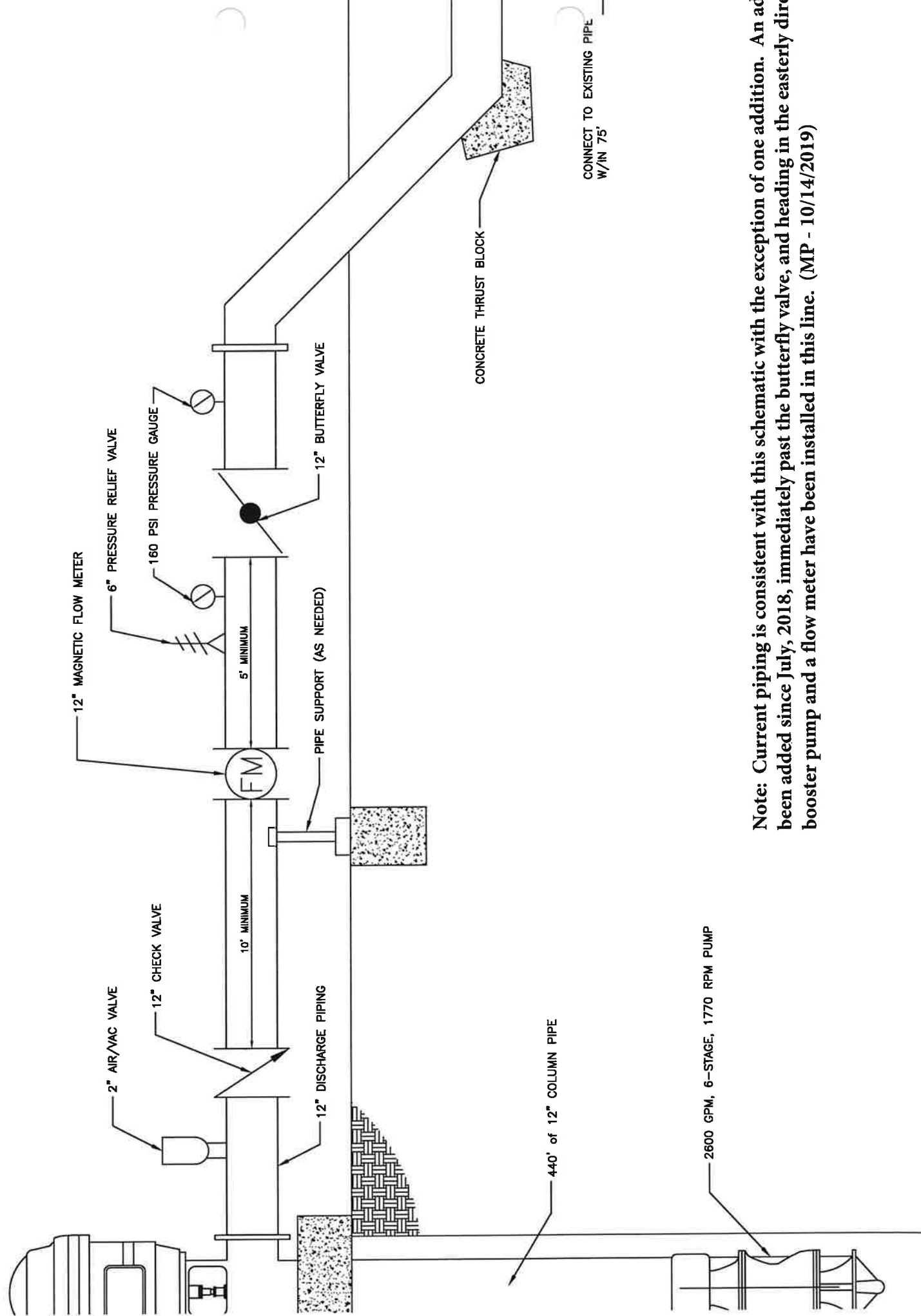
Vol	RATE	TIME	PSI	HZ
974.29	2804	0	50	Across the line
.36	2804	8:05.07	50	
974.40	2850	12:41.66	50	

$$\begin{aligned}
 & 974.40 \\
 & - 974.29 \\
 & \hline
 & 0.11 \text{ AF} \\
 & = 35,844 \text{ gal} / 1269 \text{ min} = 2824 \text{ gpm}
 \end{aligned}$$

meter 2 - Booster

Vol gal x 1000	Time (-timer)	Rate	PSI	meter for Pivot to North
~~49653~~	~~30~~	712		
		<u>707</u>		

$$\begin{aligned}
 \text{Well 1: } & 1647 \text{ gpm} \\
 \text{Well 2: } & + 2824 \text{ gpm} \\
 & \hline
 & 4471 \text{ gpm} \\
 & = 9.96 \text{ cfs}
 \end{aligned}$$



Note: Current piping is consistent with this schematic with the exception of one addition. An additional 12 inch magnetic flow meter has been added since July, 2018, immediately past the butterfly valve, and heading in the easterly direction. (MP - 10/14/2019)

Attachment C
Flow Measurement Data

Johnson Beneficial Use Field Exam

Well: Well 1 (Hansen Well) Date: 8/20/2019 Pump: 250 hp					Well: Well 2 (Irrigation Well) Date: 8/20/2019 Pump: 400 hp				
Flow meas. (afa) Time GPM PSI HZ					Flow meas. (afa) Time GPM PSI HZ				
2002.58	0:00	1841			974.29	0	2804	50	Across the line
2002.59	1:47:46	1760	69	60	974.36	8:05:04	2804	50	
2002.60	3:39:51	1704	70	59	974.40	12:41:40	2850	50	
2002.61	5:48:02	1644	70	59	Begin test period: >= 10 min. run time before begin, stabilized pressure				
2002.64	11:35:58	1624	70	58.9					
2002.65	13:36:20	1624	70	58.9					
2002.67	17:37:12	1620							
2002.68	19:39:19	1616							
Total flow: 0.07 ac-ft 22,810 gal Total time: 13:51:17 minutes 13.85 minutes Avg. Div. Rate: 1,646 gpm 3.67 cfs					Total flow: 0.11 ac-ft 35,844 gal Total time: 12:41:40 minutes 12.69 minutes Avg. Div. Rate: 2,824 gpm 6.29 cfs				
Total Div. Rate: 4,470 gpm 9.96 cfs									

Attachment D
Exam Photos

Johnson Research – Permit 63-32237

Well 1 Photos:



Figure 1: Well 1 (Hansen Well) - pump motor (40hp) information



Figure 2: System control panels located next to Well 1 (vfd panel is on furthest right of photo)



Figure 3: Well 1 & well pump (looking W)



Figure 4: Well 1, pump, and discharge piping (looking N)



Figure 5: Well 1, pump, and discharge (looking NE)



Figure 6: Well 1 discharge piping and flush (looking N)



Figure 7: Well 1 flow meter information



Figure 8: Well 1 flow meter reading near end of measurement period



Figure 9: Well 1 pressure gage reading



Figure 10: Irrigated field S of Well 1



Figure 11: Irrigated fields SE of Well 1



Figure 12: Irrigated fields E of Well 1

Well 2 Photos:



Figure 13: Well 2 (Irrigation Well) IDWR well tag

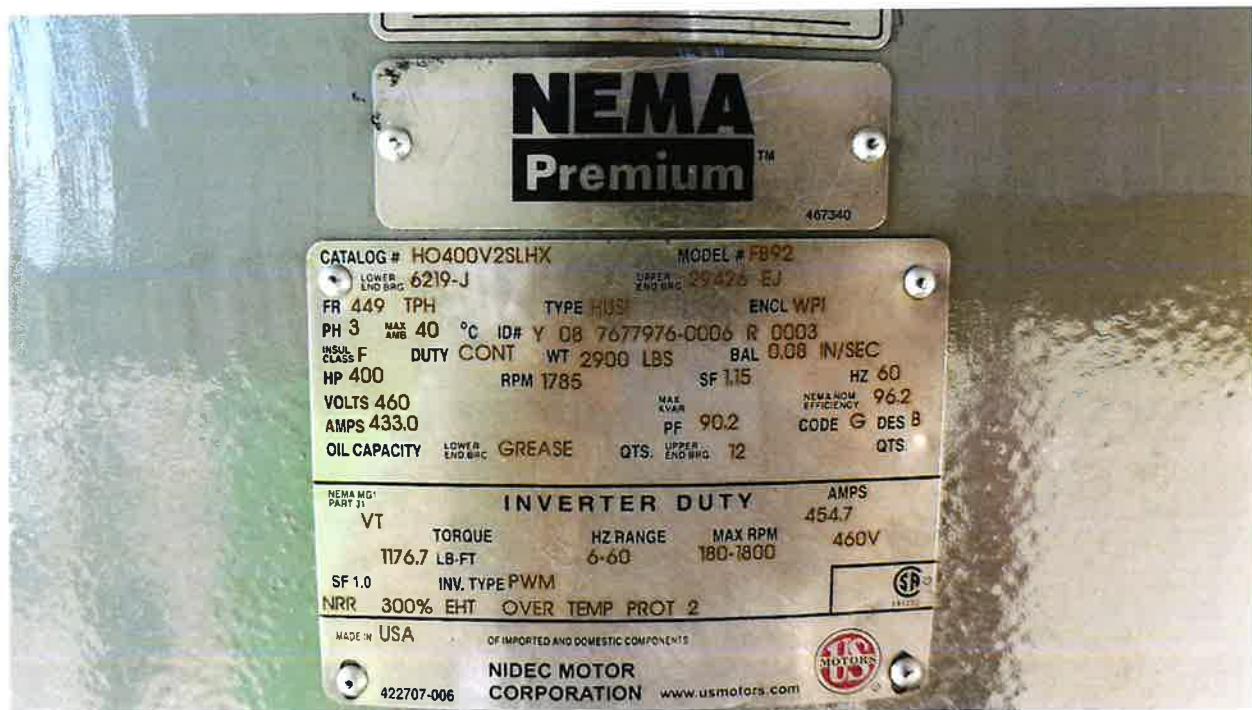


Figure 14: Well 2 motor information



Figure 15: Well 2, pump, and discharge piping (looking E)



Figure 16: Well 2, pump, and discharge piping (looking N)



Figure 17: Well 2, pump, and discharge piping (looking NW)



Figure 18: Well 2 primary flow meter



Figure 19: Well 2 flow meter information



Figure 20: Well 2 pressure gage reading



Figure 21: Discharge piping and booster pump (looking ENE)



Figure 22: Flowmeter in easterly flowing discharge piping from Well 2



Figure 23: Flowmeter information for flowmeter in easterly flowing discharge piping from Well 2

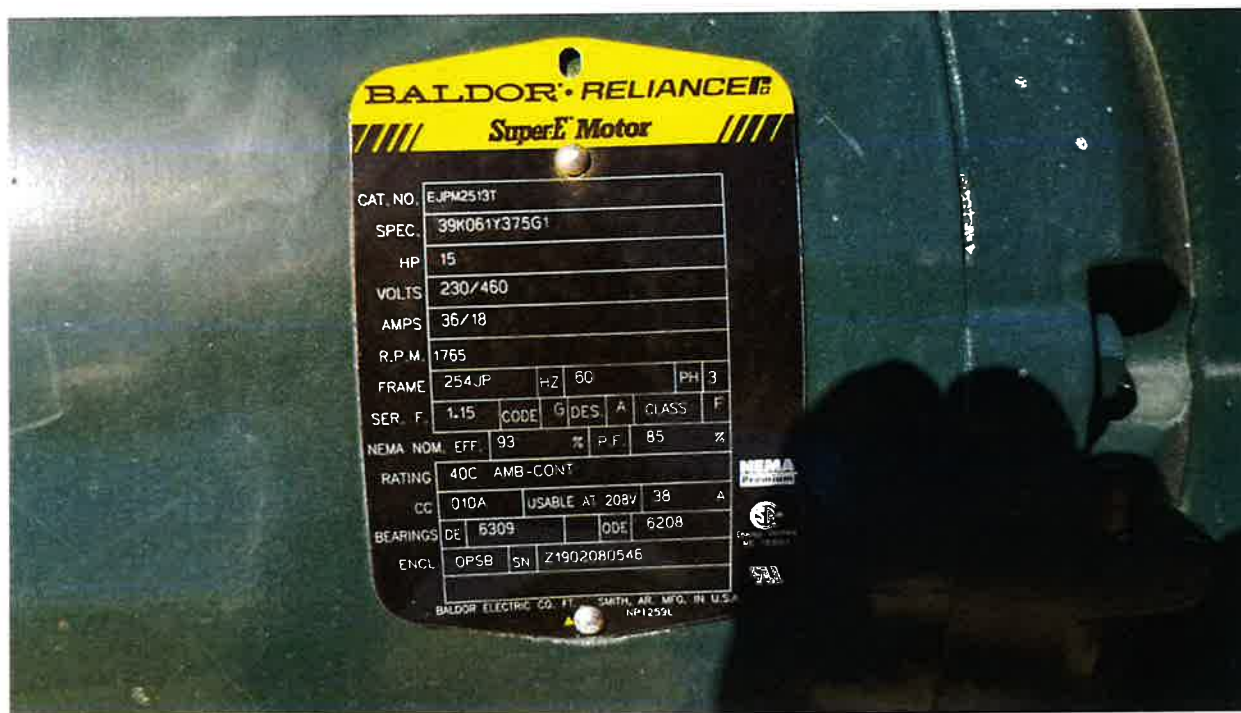


Figure 24: Booster pump motor information (from Well 2 easterly flowing discharge)



Figure 25: Booster pump information (from Well 2 easterly flowing discharge)



Figure 26: Irrigated fields ESE of Well 2



Figure 27: Irrigated fields SSE of Well 2



Figure 28: Irrigated fields SSW of Well 2