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RECEIVED  
APR 10 2017  
Department of Water Resources  
Eastern Region

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April 7, 2017

James Cefalo  
Idaho Department of Water Resources  
900 N. Skyline Drive, Suite A  
Idaho Falls, ID 83402-1718

**RE: Request to Reinstate a Permit Lapse More than Sixty Days Concerning Permit No. 22-7649; Completed Beneficial Use Field Report; Explanation of History Concerning Permit No. 22-7649.**

Dear James:

This letter is addressed to you because we discussed Permit No. 22-7649 last year, although I anticipate that you will have other Department staff process the documents enclosed with this letter.

This letter and all associated documents relate to Permit No. 22-7649. A copy of the permit is enclosed as **Exhibit 1**. Proof of beneficial was originally due on this water right on May 1, 1992. A request for extension of time was filed in March of 1992, and the proof due date was extended to May 1, 1995. The permit lapsed, and remains in a lapsed status at the current time. We have enclosed a *Request to Reinstate a Permit Lapsed More Than 60 Days* associated with this permit, which requires a statement of completion for submitting proof of beneficial use, a beneficial use field report, and a reinstatement application fee of \$250.00, all of which is included.

In order to assist the Department in reviewing these documents, we believe the review of our analysis will be beneficial.

27-7649 contains a place of use that is associated with eight water rights, all of which were recently split from two parent water rights originally owned by Riverside Farms identified as Water Right Nos. 22-7035 and 22-7207B. Those water rights collectively authorize the irrigation of 433 acres. 27-7649 contains statements in the application documents that it was being filed to bring the farm closer to the standard .02 cfs per acre authorized under Idaho law. Because proof was due in 1995, it is our obligation to establish, to the best of our ability, the extent of beneficial use during the time authorized by the permit in any extensions of time that were previously approved. We wish to discuss each of these documents.

First, we have included a spreadsheet, labeled as **Exhibit 2**, entitled "Permit No. 27-7649 Water Right Analysis." We hope this proves to be a useful document. 27-7649 originally

identified two wells as the authorized points of diversion, one of which is known as the Jergensen well (or sometimes referred to as the "240 well"). 27-7649 also identified a proposed new well to be located further north. This proposed location is depicted with a red dot on the map that has been enclosed as **Exhibit 2**. What eventually happened is that another well, known as the Hansen well, was tied into the Jergensen Well to service the farm. Accordingly, upon licensing of 27-7649, it will be necessary to amend the permit for licensing purposes to reflect this change.

Because the Jergensen well and the Hansen well are the authorized points of diversion for 27-7649, it is necessary for us to submit evidence supporting our claim that additional rate was developed from these two wells. This requires an analysis of the existing water rights authorized to be diverted from the Jergensen and Hansen wells, which we have provided on **Exhibit 3**. The current water rights authorized to be diverted from both of these wells totals 8.24 cfs. We believe there is evidence to demonstrate that both wells are capable of collectively diverting 11.24 cfs, which would evidence development of the 3.0 cfs of the 3.04 cfs requested under 22-7649.

First, concerning the diversion capacity of the Jergensen well, we have included the *Affidavit of Judd Crapo* as **Exhibit 4**, which describes his association with the irrigation infrastructure associated with this farm when it was purchased by Riverside Farms in 1980. As indicated in his affidavit, a pivot was installed in 1982 that requires some adjustments to the well's discharge in order to produce 1400 gallons a minute for the pivot and approximately 330 gallons per minute for two quarter line hand lines. In fact, the same pivot is on the property today, which we believe evidences that the system was capable of diverting at least 1730 gallons per minute, which is approximately 3.86 cfs.

Randy Johnson of Forsgren Associates, Inc., from Rexburg, Idaho, is a licensed water right field examiner who completed the field exam for the applicant. He measured the discharge of the Jergensen well in 2016 described in the field exam. His measurement showed a diversion rate of 4.02 cfs, which is very consistent with Judd Crapo's affidavit, and likely reflects more accurate measurement of what the system has been capable of diverting since the early 1980s. Given the existing field exam, the *Affidavit of Judd Crapo*, and the recent field exam, complete with the statement that the pump has not been changed since it was installed in the late 70s, all evidences that the Jergensen well is capable of diverting 4.02 cfs.

The Hansen well is located just over a quarter mile away from the Jergensen well. It is an authorized point of diversion for all of the eight water rights that were split from the original Water Right Nos. 22-7035 and 22-7207B. In addition, the Hansen well is authorized to divert Water Right Nos. 22-7207A, 22-13602, and 22-7489, all of which are owned by representatives of the Hansen family. A field exam for the licensing of Water Right No. 22-7489 was performed on August 13, 2001, a copy of which is attached as **Exhibit 5**. You will note that the person who accompanied the field examiner was Judd Crapo, which is evidence that he is very familiar with

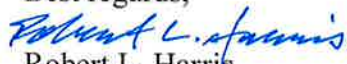
the entire irrigation system as the Crapos leased the Hansen property for a number of years. The field exam shows that in 2001 the Hansen well was capable of diverting 5.18 cfs, an amount that was measured without the associated booster pump turned on. It appears that Mr. Mueller, the field examiner, performed a calculation indicating that with the booster pump, the well would be capable of diverting 7.32 cfs. Based on this amount, Water Right No. 22-7489 was licensed at its requested diversion rate. Because this examination took place in 2001, we believe that it is close enough in time to when proof of beneficial use was due on 22-7649 to be reliable. Mr. Johnson performed a measurement of the Hansen well without the booster pump and he measured 5.08 cfs diverted from the Hansen well, which is remarkably close to the amounts measured in 2001.

We have elected to go with the more conservative diversion rate of 5.08 cfs, rather than the 2001 measured rate of 5.18 cfs. Accordingly, we believe that the 7.22 cfs measured from the Hansen well, both in terms of actual measurements and theoretical measurements for the booster pump, demonstrate that it is capable of diverting 7.22 cfs.

Collectively, the Jergensen well and the Hansen well are capable of diverting 11.24 cfs, which is 3.0 cfs in excess of the 8.24 cfs authorized to be diverted from the Jergensen and Hansen wells. Accordingly, we believe that this is sufficient evidence to reinstate the permit and license it at a diversion rate of 3.0 cfs to be used for the irrigation of 282 acres within a permissible place of use of 433 acres already authorized to be irrigated under Water Right Nos. 22-7035, 22-7207B, 22-14198, 22-14201, 22-14199, 22-14202, 22-14200, and 22-14203.

You will note that Riverside Farms is submitting proof of beneficial use as they were the permit holder at the time that proof was originally due. As you are likely aware, the place of use associated with the water rights to which 22-7649 will simply provide additional rate has now been divided in ownership amongst four entities. Therefore, we have included a completed *Assignment of Permit* form and the associated filing fee to assign 22-7649 to all four of these entities and individuals as joint owners of the permit. When the permit is licensed, we will then submit an ownership change for the license to divide it up in a pro-rated fashion based on the ownership of acres as between each of these landowners.

We appreciate your attention to this matter. If you have any questions or concerns, please contact me at 523-0620, or contact the licensed field examiner, Randy Johnson, at 356-9201.

Best regards,  
  
Robert L. Harris  
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

Enclosures

State of Idaho  
Department of Water Resources

# Permit To Appropriate Water

NO. 22-07649

Proposed Priority: April 6, 1989 Maximum Diversion Rate: 3.04 CFS  
This is to certify, that

RIVERSIDE FARMS  
C/O RICHARD CRAPO  
RT. 2 BOX 155  
ST. ANTHONY, ID 83445

has applied for a permit to appropriate water from: GROUNDWATER  
and a permit is APPROVED for development of water as follows:

| BENEFICIAL USE | PERIOD OF USE  | RATE OF DIVERSION |
|----------------|----------------|-------------------|
| IRRIGATION     | 04/01 to 11/01 | 3.04 CFS          |

LOCATION OF POINT(S) OF DIVERSION:

NENW Sec. 13, Township 07N, Range 41E  
NESW Sec. 13, Township 07N, Range 41E  
FREMONT County

PLACE OF USE: IRRIGATION

| TWN | RGE | SEC | ACRES   | ACRES   | ACRES   | TOTAL     |
|-----|-----|-----|---------|---------|---------|-----------|
| 07N | 41E | 13  | NENW 38 | NWNW 38 | SWNW 39 | 233<br>49 |
|     |     |     | SESW 39 | NESW 39 | NWSW 40 |           |
|     |     | 14  | NENE 38 | NWNE 11 |         |           |

Total number of acres irrigated: 282

CONDITIONS/REMARKS:

1. Proof of construction of works and application of water to beneficial use shall be submitted on or before May 1, 1992.
2. Subject to all prior water rights.
3. Permit holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code.
4. The right to the use of water acquired under this permit shall not give rise to any right or claim against the holder of a senior right based upon the theories of forfeiture, abandonment, adverse possession, waiver, equitable estoppel, estoppel by laches or customary preference.
5. The Director retains jurisdiction of the permit and any license subsequently issued to incorporate the use into a water district, require streamflow augmentation or other action needed to protect prior surface water and groundwater rights.
6. Permit holder shall commence the excavation or construction of diverting works within one year of the date this permit is issued and shall proceed diligently until the project is complete.
7. Prior to the diversion of water under this permit a flow measurement port or other device as specified by the Department shall be installed to provide for the installation of measuring equipment and the determination of the rate of diversion by the Department.

EXHIBIT

1

PAGE 2

State of Idaho  
Department of Water Resources

## Permit To Appropriate Water

NO. 22-07649

CONDITIONS/REMARKS:

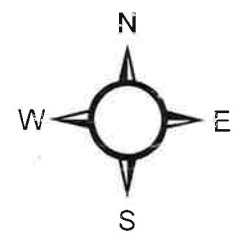
8. The rate of diversion of water for irrigation under this permit and all other water rights on the same land shall not exceed 0.02 cubic feet per second for each acre of land.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the seal and signature of the Director, affixed at Boise, this

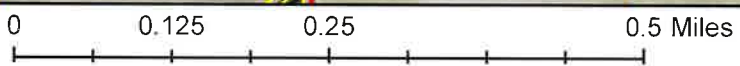
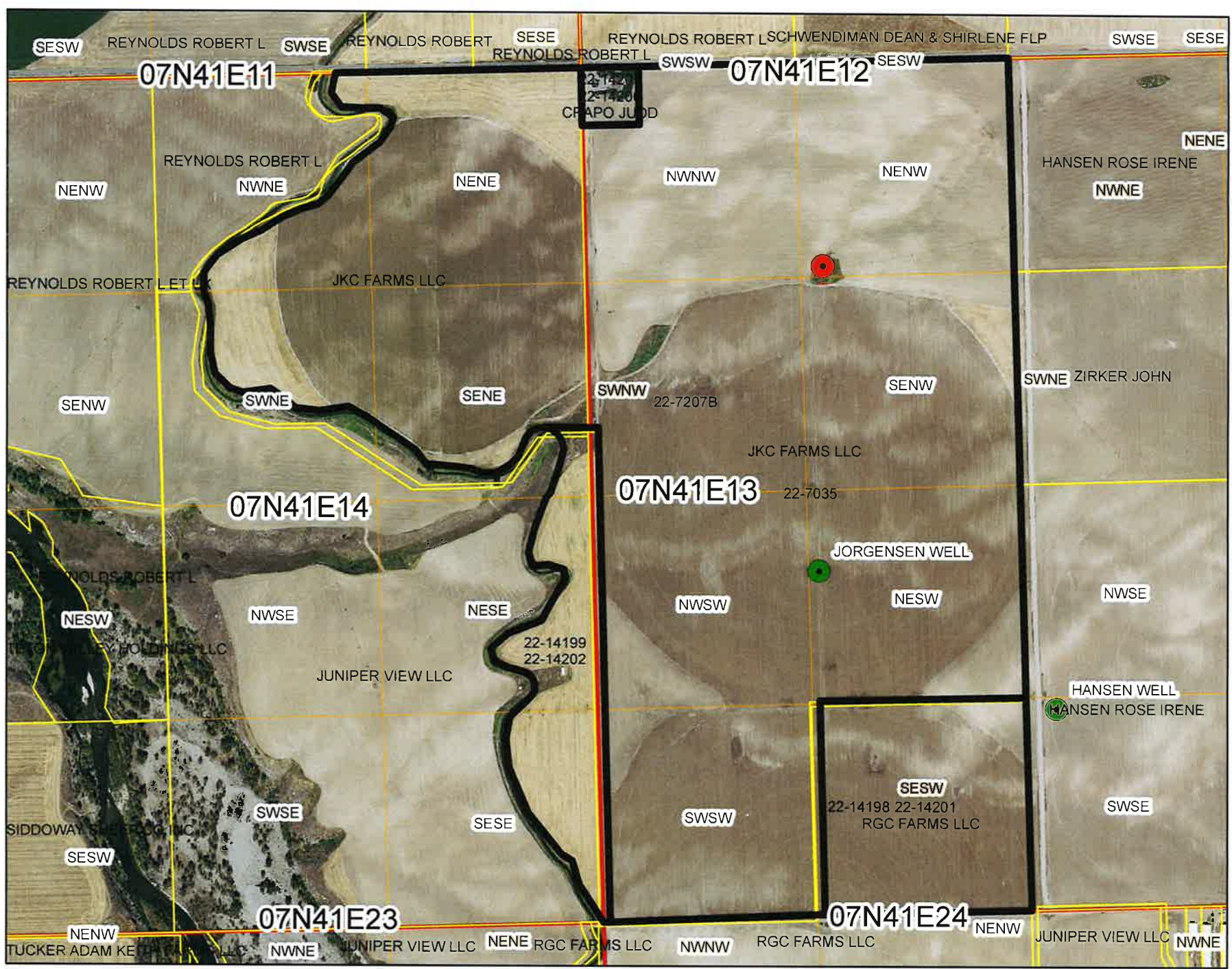
1st day of May, 1990

  
R. Keith Higginson, Director

# 22-7649 MAP



- Legend**
- 22-7649\_POU
  - Riverside\_PODs
  - 22-7649 Well Not Drilled
  - parcels
  - Sections
  - Quarter Quarters



# Permit No. 27-7649 Water Rights Analysis

| Water Right No. | Name on Water Right  | Basis          | Priority Date    | Source       | Beneficial Use | Individual Diversion Rate Limitation (cfs) | Combined Diversion Rate Limitation (cfs) | Individual Volume Limitation {AFA} | Combined Volume Limitation {AFA} | Individual Acre Limitation | Total Permissible Place of Use | Point of Diversion                                                                  | Notes |
|-----------------|----------------------|----------------|------------------|--------------|----------------|--------------------------------------------|------------------------------------------|------------------------------------|----------------------------------|----------------------------|--------------------------------|-------------------------------------------------------------------------------------|-------|
| 22-7035         | JKC Farms LLC        | Partial Decree | June 1, 1970     | Ground water | Irrigation     | 2.2                                        | 3.95                                     | 836.9                              | 1302.8                           | 239.5                      | 366.8                          | NWNESW, 7N, 41E, Sec. 13 (Jorgensen Well)<br>NWSWSE, 7N, 41E, Sec. 13 (Hansen Well) |       |
| 22-7207B        |                      |                | February 9, 1977 |              |                | 1.75                                       |                                          | 465.9                              |                                  | 133.3                      |                                |                                                                                     |       |
| 22-14198        | RGC Farms LLC        |                | June 1, 1970     |              |                | 0.23                                       | 0.41                                     | 88.8                               | 138.3                            | 25                         | 39                             |                                                                                     |       |
| 22-14201        |                      |                | February 9, 1977 |              |                | 0.18                                       |                                          | 49.5                               |                                  | 14                         |                                |                                                                                     |       |
| 22-14199        | Juniper View LLC     |                | June 1, 1970     |              |                | 0.15                                       | 0.26                                     | 55.3                               | 86.1                             | 15.8                       | 24.5                           |                                                                                     |       |
| 22-14202        |                      |                | February 9, 1977 |              |                | 0.11                                       |                                          | 30.8                               |                                  | 8.7                        |                                |                                                                                     |       |
| 22-14200        | Judd and Susan Crapo |                | June 1, 1970     |              |                | 0.02                                       | 0.03                                     | 6                                  | 9.9                              | 1.7                        | 2.7                            |                                                                                     |       |
| 22-14203        |                      |                | February 9, 1977 |              |                | 0.01                                       |                                          | 3.3                                |                                  | 1                          |                                |                                                                                     |       |
|                 |                      |                |                  |              |                | TOTAL DIVERSION RATE (cfs)                 | 4.65                                     |                                    |                                  |                            | 433                            |                                                                                     |       |

|          |                   |                |                                            |              |                               |      |      |       |       |     |      |                                            |  |
|----------|-------------------|----------------|--------------------------------------------|--------------|-------------------------------|------|------|-------|-------|-----|------|--------------------------------------------|--|
| 22-7207A | Rose Irene Hansen | Partial Decree | February 9, 1977                           | Ground water | Irrigation                    | 2.05 | 2.05 | 546   | 819   | 156 | 234  | NWSWSE , 7N, 41E, Sec. 13<br>(Hansen Well) |  |
| 22-13602 |                   |                | April 1, 1987<br>(enlargement of 78 acres) |              |                               | 1    |      | 273   |       | 157 |      |                                            |  |
| 22-7489  | Lyle Hansen       | License        | April 8, 1985                              |              |                               | 1.54 | None | 269.5 | 269.5 | 77  | None |                                            |  |
|          |                   |                |                                            |              | TOTAL DIVERSION<br>RATE (cfs) | 3.59 |      |       |       | 311 |      |                                            |  |

|               |                                                                                                                              |      |
|---------------|------------------------------------------------------------------------------------------------------------------------------|------|
| <b>STEP 1</b> | TOTAL WATER RIGHT DIVERSION RATE OF EXISTING WATER RIGHTS AUTHORIZED TO DIVERT FROM THE JORGENSEN WELL AND HANSEN WELL (cfs) | 8.24 |
|---------------|------------------------------------------------------------------------------------------------------------------------------|------|

|               |                                       |              |                                                                                                                                                                                                                                                                     |
|---------------|---------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>STEP 2</b> | Max Diversion of Jergensen Well       | 4.02         | This rate is based on a 2016 measurement, and is consistent with the Affidavit of Judd Crapo as to this well.                                                                                                                                                       |
|               | Max Diversion of Hansen Well          | 7.22         | This rate is based on a 2016 measurement of 5.08 cfs from the well (450 hp motor), which is .1 cfs less than the amount recorded in a 2001 field exam. It also includes an additional 2.14 cfs for the 200 hp booster pump that was taken from the 2001 field exam. |
|               | <b>TOTAL DEVELOPED DIVERSION RATE</b> | <b>11.24</b> |                                                                                                                                                                                                                                                                     |

|               |                                                                                                           |          |                                                                                                                                                    |
|---------------|-----------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>STEP 3</b> | <b>TOTAL DEVELOPED DIVERSION RATE - TOTAL EXISTING AUTHORIZED DIVERSION RATE OF EXISTING WATER RIGHTS</b> | <b>3</b> | This amount is the amount of the 3.04 cfs authorized developed under 22-7649, which demonstrates that the additional diversion rate was developed. |
|---------------|-----------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------|



|         |                                                          |        |               |              |            |      |      |      |      |     |      |                                                                                                   |                                                                                                                                                        |
|---------|----------------------------------------------------------|--------|---------------|--------------|------------|------|------|------|------|-----|------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22-7649 | JKC Farms LLC;<br>RGC Farms LLC;<br>Judd and Susan Crapo | Permit | April 6, 1989 | Ground water | Irrigation | 3.04 | None | None | None | 282 | None | NWNESE, 7N, 41E, Sec. 13 (Jergensen Well)<br>NENW, 7N, 41E, Sec. 13 (This well was never drilled) | The permit was developed with the Jorgensen well and the Hansen well (instead of the well that was never drilled). The proof due date was May 1, 1995. |
|---------|----------------------------------------------------------|--------|---------------|--------------|------------|------|------|------|------|-----|------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

**AFFIDAVIT OF  
JUDD K. CRAPO**

STATE OF IDAHO                     )  
                                              ) ss.  
County of Bonneville             )

I, Judd K. Crapo, do solemnly swear (or affirm) that the testimony given in this sworn statement is the truth, the whole truth, and nothing but the truth, that it is made on my personal knowledge, and that I would so testify in open court if called upon to do so.

And being so sworn I depose and say:

1. I was born on August 3, 1962. I am over the age of eighteen (18) and am competent to testify to the matters contained herein.
2. I currently reside in Fremont County, Idaho. My address is 2900 East 399 North, St. Anthony, Idaho, 83445.
3. I live on the northern portion of a farm that Riverside Farms purchased in 1980 from Remington Produce Inc. I have been the manager of this farm since 1982 and am familiar with the irrigation system associated with the farm. In particular, I am familiar with a well located in the NWNESW of Section 13, Township 7N, Range 41E, which I refer to as the "240 well." The 240 well was constructed in the 1970s by Keith Jergensen.
4. When Riverside Farms purchased the Remington farm, the 240 well utilized a 350 hp pump to divert water from the well. The farm used water diverted from the well to irrigate it exclusively with aluminum pipe hand lines.

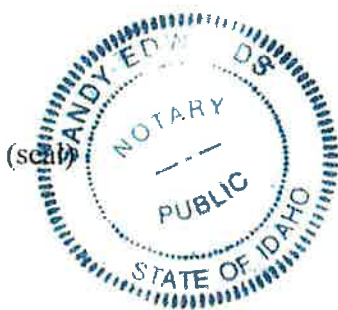


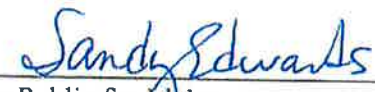
5. In 1982, I assisted in the installation of a Dickersen pivot to replace the hand lines that previously irrigated the farm. The pivot was tied into the 240 well. As part of the pivot installation, it was necessary to adjust the well's discharge in order to produce 1400 gpm for the pivot and approximately three hundred and thirty (330) gpm for two quarter-mile hand lines with each hand line having thirty-three (33) risers with five (5) gpm nozzles on each.
6. The pivot installation was successful. Riverside Farms was able to irrigate with the pivot and hand lines at the same time at a diversion rate of approximately 1730 gpm. We have operated the 240 well in this same manner up to the present day ever since the pivot was installed in 1982. In fact, the pivot we installed in 1982 is the same pivot in operation today.
7. The horsepower of the pump associated with the 240 well has remained at 350 hp and has not been changed.

DATED this 20 day of November, 2015.

  
Judd K. Crapo

SUBSCRIBED AND SWORN TO before me this 20 day of November, 2015.



  
Notary Public for Idaho

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

**A. GENERAL INFORMATION**Permit No. 22-74891. Owner: Irene Hansen

Phone No. \_\_\_\_\_

Current Address: 241 N 2300 E, St Anthony, ID 834452. Accompanied by: Judd Grapo EXAM DATE: 8-13-2001Address: 2417 E 482 N St Anthony ID 83445 Phone No. (208) 624-3293Relationship to Permit Holder: Manager / Leasee3. Source: Ground water tributary to \_\_\_\_\_**B. OVERLAP REVIEW**1. Other water rights with the same place of use: No2. Other water rights with the same point of diversion: Yes - 80 acres 47 acres 13 acres 80 acres  
22-7267A, 7267B, 13602**C. DIVERSION AND DELIVERY SYSTEM**

## 1. Point(s) of Diversion:

| Ident No. | Gov't Lot | 1/4                                 | 1/4 | 1/4 | Sec. | Twp. | Rge. | County  | Method of Determination/Remarks |
|-----------|-----------|-------------------------------------|-----|-----|------|------|------|---------|---------------------------------|
|           |           | <input checked="" type="checkbox"/> | SW  | SE  | 13   | 7N   | 41E  | Fremont | GPS. R081315A                   |
|           |           |                                     |     |     |      |      |      |         |                                 |
|           |           |                                     |     |     |      |      |      |         |                                 |
|           |           |                                     |     |     |      |      |      |         |                                 |

## 2. Place(s) of Use:

Indicate Method of Determination

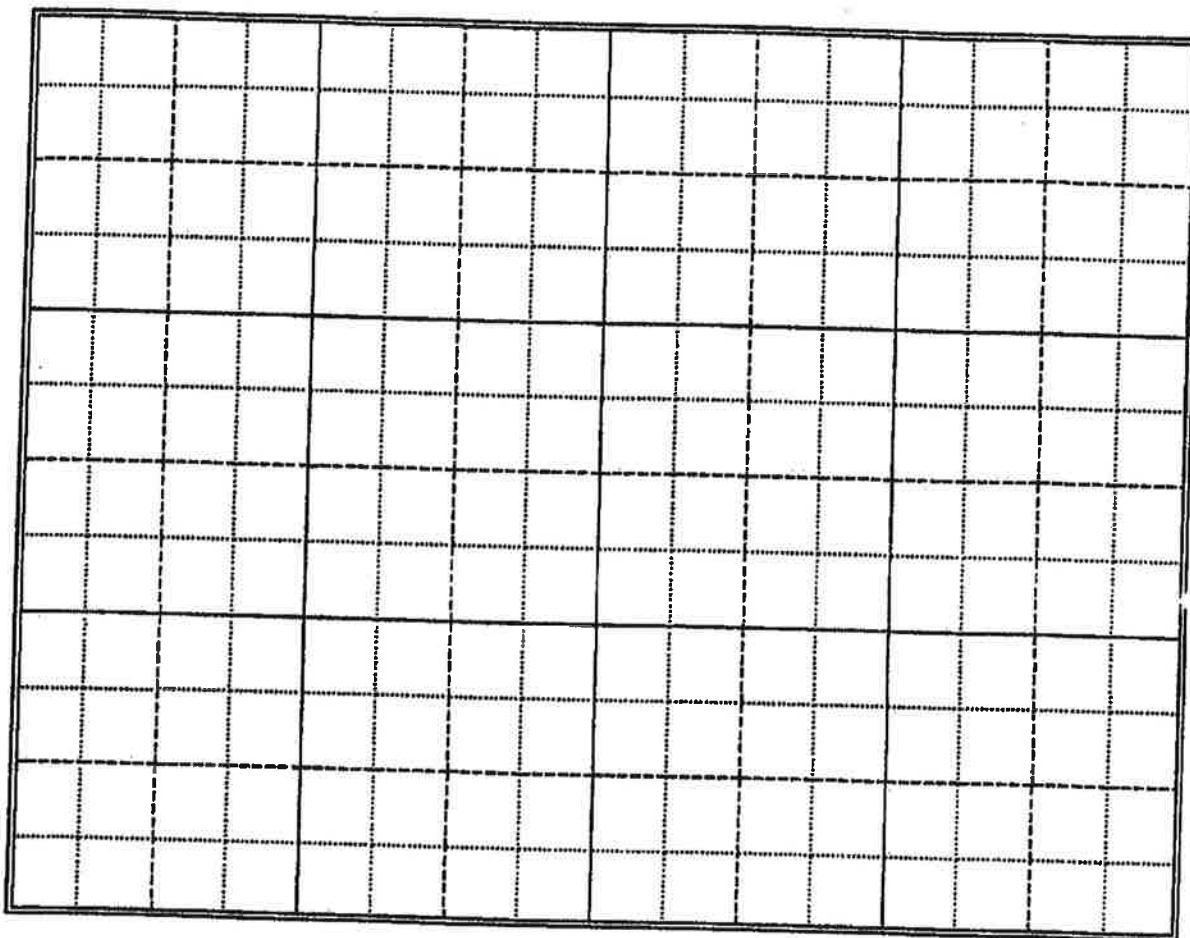
| TWP | RGE | SEC | NE |    |    |    | NW |    |    |    | SW |    |    |    | SE |    |    |    | Totals |
|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|
|     |     |     | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE |        |
| 7N  | 41E | 13  | 39 | 38 |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 77     |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 77     |

EXHIBIT

5

tabbles

3. Delivery System Diagram: Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable.



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 |
|---------------------------------------|--------------|-----|------------------|-----------|-----------------------------------|
|                                       | Westinghouse | 450 | 3S-77            | Johnson   |                                   |
| booster                               | GE           | 200 | 0PT204005        |           |                                   |
|                                       |              |     |                  |           |                                   |

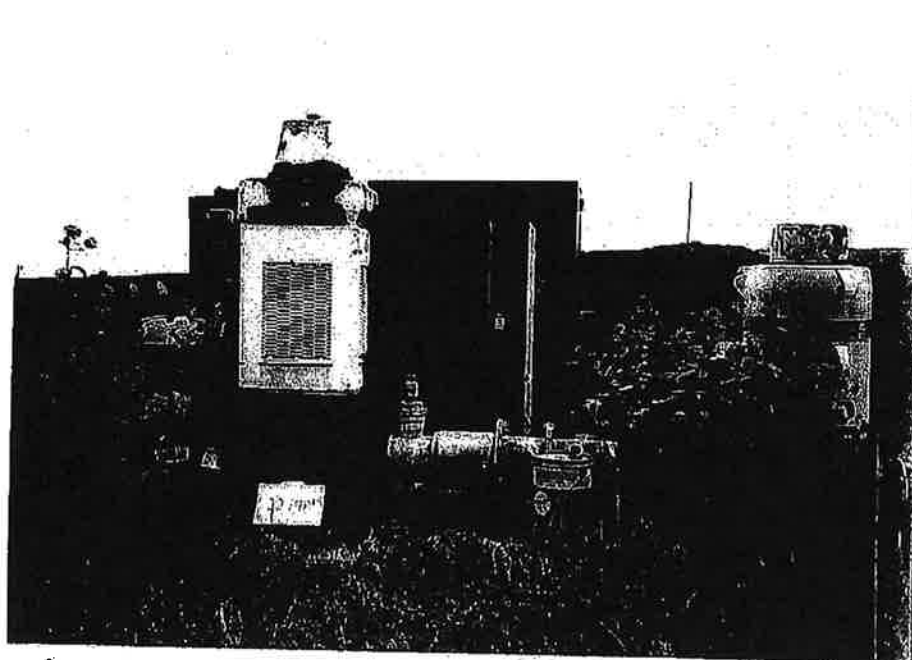
\*Code to correspond with No. on map and aerial photo

#### D. FLOW MEASUREMENTS

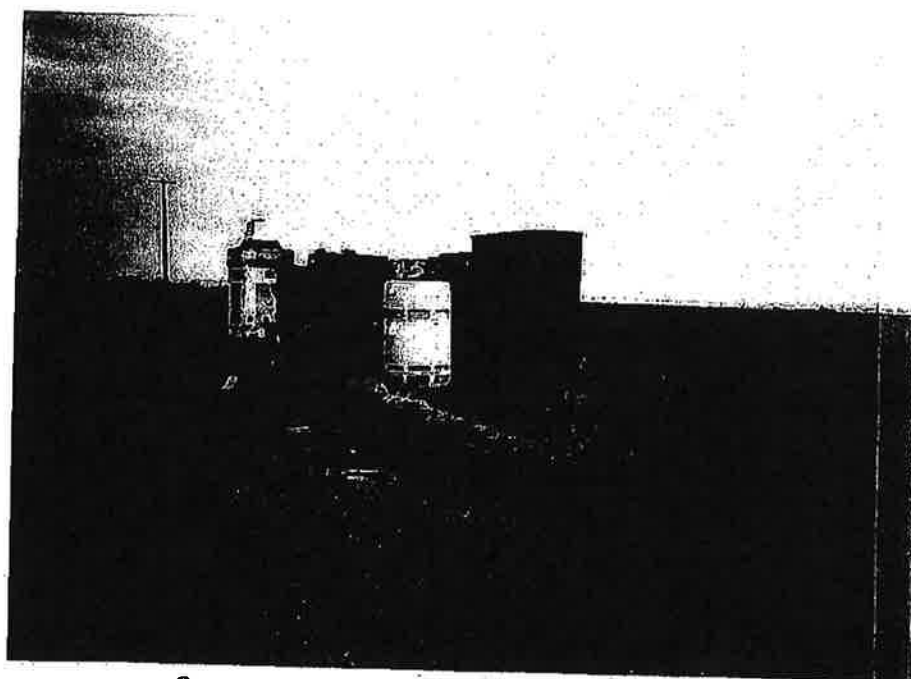
1.

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

2. Measurements: highest fuji reading observed by 2300 Gpm



POD 22-7489 looking west



Southwest view

LOG NAME: **22-7489**

START: 08-13-2001 09:20

END: 08-13-2001 09:25

INTERVAL: 00:01:00

08-13-2001 09:20:00

+6.866E+0 ft/s

+2.324E+3 gal/m

+5.179E+0 ft<sup>3</sup>/s

+TOTAL 0000000 gal

-TOTAL 0000000 gal

NORMAL

08-13-2001 09:21:00

+6.752E+0 ft/s

+2.286E+3 gal/m

+5.093E+0 ft<sup>3</sup>/s

+TOTAL 0002269 gal

-TOTAL 0000000 gal

NORMAL

08-13-2001 09:22:00

+6.859E+0 ft/s

+2.322E+3 gal/m

+5.173E+0 ft<sup>3</sup>/s

+TOTAL 0004578 gal

-TOTAL 0000000 gal

NORMAL

08-13-2001 09:23:00

+6.774E+0 ft/s

+2.293E+3 gal/m

+5.110E+0 ft<sup>3</sup>/s

+TOTAL 0006876 gal

-TOTAL 0000000 gal

NORMAL

08-13-2001 09:24:00

+6.857E+0 ft/s

+2.321E+3 gal/m

+5.172E+0 ft<sup>3</sup>/s

+TOTAL 0009177 gal

-TOTAL 0000000 gal

NORMAL

08-13-2001 09:25:00

+6.791E+0 ft/s

+2.299E+3 gal/m

+5.122E+0 ft<sup>3</sup>/s

+TOTAL 0011470 gal

-TOTAL 0000000 gal

NORMAL

$Q_{MAX} = \underline{2324} \text{ gpm} =$

$= \underline{5.18} \text{ cfs}$

$Q_{MIN} = \underline{2286} \text{ gpm} =$

$= \underline{5.09} \text{ cfs}$

$Q_{AVG} = \underline{2307.5} \text{ gpm} =$

$= \underline{5.14} \text{ cfs}$

**22-07489**

Measurement without booster

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 22-7489

Reviewer:

Date of Review: 5/28/2013

P/D No.:

PUMP HORSEPOWER

BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

|                    | without booster | with booster |           |
|--------------------|-----------------|--------------|-----------|
|                    | Senerio 1       | Senerio 2    | Senerio 3 |
| PUMP HORSEPOWER    | 450             | 450          | 0         |
| BOOSTER HORSEPOWER | 0               | 200          | 0         |
| PUMPING LEVEL      | 420             | 420          | 0         |
| DISCHARGE PRESSURE | 50              | 55           | 0         |
| RATE OF FLOW (cfs) | 5.18            | 7.32         | #DIV/0!   |

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: 70 efficiency.  
No Friction

Examiners Notes:

System was running 2 plots. Judd said the plots take 1200 gpm each. This matched closely with the flow reading.

There are other parcels that this well waters see areas outlined in yellow

Water is thermal, it is roughly 118° Fahrenheit

The system has a booster pump, but it hasn't been run this year. When it is run, it will increase the system flow 1000 gpm. Judd sold the power on it this year.

Crapos have run the farm for many years. Irene Hansen is a widow.

NOTE: Theoretical CFS WITH BOOSTER 7.32 CFS

ORIGINAL LICENSE 22-7207 = 4.1 CFS

WELL COULD PRODUCE AN ADDITIONAL 3.22 CFS with booster.

THIS ADDITIONAL 77 ACRES = 1.54 CFS

Have conditions of permit approval been met? ☒ yes ☐ no

**F. FLOW CALCULATIONS**

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

Measured Method:

**G. VOLUME CALCULATIONS**

## 1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 77 \times 3.5 = 269.5$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 1.54(1.9835)(214) =$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 269.5$$

## 2. Volume Calculations for Other Uses:

**H. RECOMMENDATIONS**

## 1. Recommended Amounts

| Beneficial Use | Period of Use |       | Rate of Diversion<br>Q (cfs) | Annual Volume<br>V (afa) |
|----------------|---------------|-------|------------------------------|--------------------------|
|                | From          | To    |                              |                          |
| Irr            | 4/1           | 10/31 | 1.54                         | 269.5                    |
|                |               |       |                              |                          |
|                |               |       |                              |                          |
|                |               |       |                              |                          |
|                |               |       |                              |                          |
| Totals:        |               |       | 1.54                         | 269.5                    |

## 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

**I. AUTHENTICATION**Field Examiner's Name Steve Mueller Date 8-13-01Reviewer DAVE CARLSON Date 5/28/2013

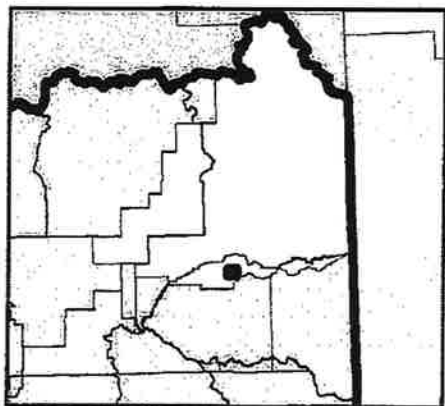
SEAL



# Idaho Department of Water Resources

**Water Right  
22-7489  
(IRRIGATION)**

-  Point of Diversion
-  Place of Use
-  State Outline
-  Townships
-  PLS Sections
-  Quarter Quarters



**Fremont County  
IDWR Basin 22**

Prepared by Carlson, Dave

2009 Aerial Photography

