

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-13967

Exam Date: 9/7/2018

1. Current Owner:

DARWIN N PANCHERI 11066 MISSOURI AVE NAMPA ID 83686-9242 (208) 602-8779 And/Or
JOAN L PANCHERI 9325 MISSOURI AVE NAMPA ID 83686

2. Accompanied by: Nate PancheriPhone No: 208-941-5620Address: 11066 Missouri Ave, Nampa, ID 83686Relationship to Permit Holder: Nate and Kurt Pancheri are the current owners of the property.

3. SOURCE:

GROUND WATER

B. OVERLAP REVIEW1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
65-2534	Payette River	Irrigation	Decree

Comments: Water right 65-2534 overlaps this permit. Water right 65-2534 describes 15 acres being irrigated in the NESW of Section 6 in Township 13 North, Range 4 East. However, there is only 12 acres being irrigated in the NESW of Section 6 in Township 13 North, Range 4 East, but there is 3 acres being irrigated with the same system for the same field in the SESEW of Section 6 in Township 13 North, Range 4 East. Since the mapping skills have been improved since water right 65-2534 was licensed and decreed, it is safe to assume that the 15 acres described water right 65-2534 is the same 15 acre field found to be irrigated by water right 65-13967 in the NESW and SESEW of Section 6 in Township 13 North, Range 4 East. Water right 65-2534 authorizes 10.00 cfs for 386 acres of irrigation or 0.026 cfs/acre, which is above the Department's standard of an inch per acre or 0.02 cfs per acre. Therefore, when water rights 65-2534 and 65-13967 are combined, they should be limited to 10.00 cfs, 1158 af, and 386 acres of irrigation. This field is within the city service area or planning area of the City of Cascade, but the City of Cascade does not supply any water or services to this property.

2. Other water rights with the same point of diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: Water right 65-534 directly overlaps the place of use for this permit, but is diverted at a different location and from a different source. No other rights are diverted out of this well.

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

GROUND WATER NE¼SW¼ Sec. 6, Twp 13N, Rge 04E, B.M. VALLEY County

Method of Determination: GPS, GIS, and Visual Inspection.

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
13N	04E	6									12.0			3.0					15.0

Total Acres: 15

Method of Determination: GIS and Visual Inspection.

3.

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

☒ 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.☒ Aerial Photo Attached (required for irrigation of 10+ acres).☒ Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	Hitachi	25	G39530E	Same As Motor	3 inch

*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
State office Panametric	Polysonic	Panametric				March 2018

2. Measurements:

I made an attempt to measure this well. Unfortunately, the piping was configured in a way that I could only measure the down portion of the piping that resulted in trying to measure a partially filled pipeline at a high rate of velocity. The outflow of the pipe was not conducive to a ditch measurement due to neglect, so I was not able to get an accurate measurement at the site. When I first started measuring the site, I received a measurement of 300 to 330 gpm, but after that I started getting extremely high flow rates (530 to 645 gpm) due the partially filled pipeline. I am assuming that the early 300 to 330 gpm measurements were the result of the initial pump startup at static water level of 58 feet, and the pump water level didn't have time to stabilize. The permit holder stated that the pipe flows approximately 300 gpm in the spring, but they have to valve it back later in the year. According to the theoretical calculation, the pump should be able to produce approximately 295 gpm, which matches the owner's estimate.

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

Measured Method:

Due to poor measurement conditions, a theoretical was used to determine the actual flow of this system. Please see attached theoretical sheet for my analysis of the flow rate.

Theoretical Calculation = 0.66 cfs.

Acre Limit = 15 acres X 0.02 cfs per acre = 0.30 cfs

Permit Allows = 0.80 cfs

I am recommending a diversion rate of 0.30 cfs, since that is the maximum allowable for the irrigation of 15 acres. The pump capacity is more than enough to cover the acres irrigated.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 15 \text{ acres} \times 3.0 \text{ af/ac} = 45 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.30 \text{ cfs} \times 184 \text{ days} \times 1.9835 = 109.5 \text{ af}$$

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

2. Volume Calculations for Other Uses:

N/A

G. NARRATIVE/REMARKS/COMMENTS

The place of use is for 15 acres in the NESW and SESW in Section 6. A submersible pump diverts water through a 3 inch mainline to a ditch system. The ditch system is number of small ditches that run back and forth across the field. A portion of water right 65-2534 is also used on this property. The water from 65-2534 comes in from a ditch about midway through the field and connects into the main ditch on the west side of the field. This is a very flat field, so the water pretty much goes where the ditches takes it. The majority of the water flows from the west to the east or back towards the river. There are numerous little ditches that are used to move water throughout the field. However, this field hasn't been irrigated in several years, so the ditch are in a really poor state of disrepair.

This permit is currently owned by Darwin and Joan Pancheri. However, Darwin and Joan Pancheri have recently sold this property to their sons Nate and Kurt Pancheri. Nate and Kurt Pancheri are still deliberating on how they want the ownership for this right and the existing rights that they purchased from their parents. They have not decided if they want to form a corporation, have joint ownership, or split the rights. They have decided to wait until these permits have been licensed before filing a change of ownership for all of their rights.

As discussed above, water right 65-2534 overlaps this place of use. Since water right 65-2534 supplies more than an inch per acre, a combined limitation will match the diversion rate and acre limits authorized by 65-2534. A volume will be added to the combined limitation condition based on the volume limit for 386 acres at 3.0 af per acre of 1,158 af.

Although it has been well documented that a measurement couldn't be made on this system, that shouldn't matter, since the capacity of the well is more than the amount allowed by the 15 acres being irrigated in this field.

Most of the conditions will be either removed or updated per current standards. Condition X35 will be added to include the combined limitations. No other special conditions should be needed for this permit.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

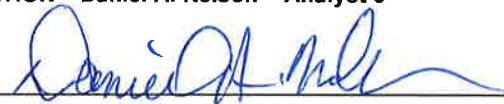
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/15 to 10/31	0.30 CFS	45.0 AF
<u>Totals:</u>		0.300 CFS	45.00 AF

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 – Daniel A. Nelson – Analyst 3

Field Examiner's Name



Date

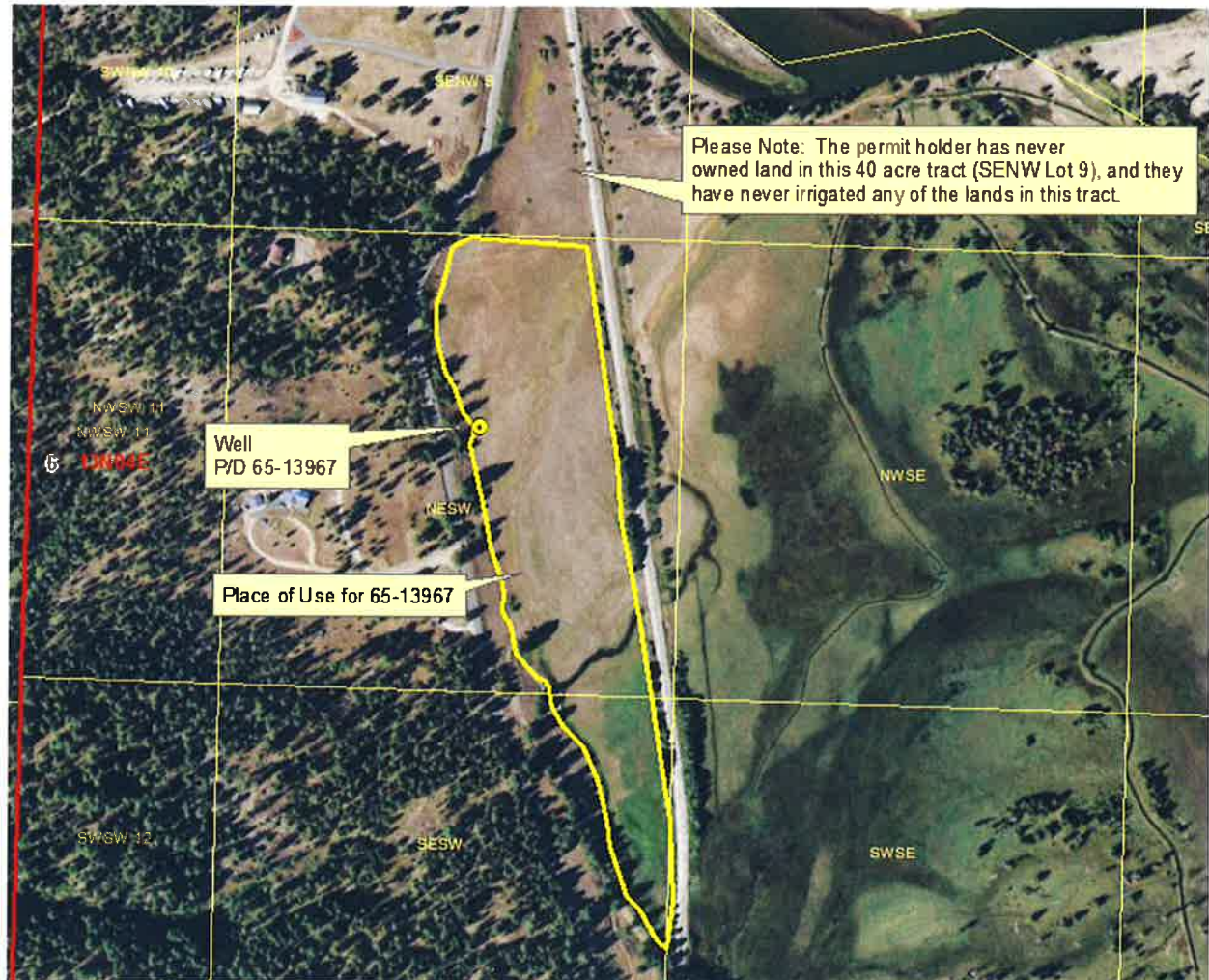
10-11-18

Reviewer

Date

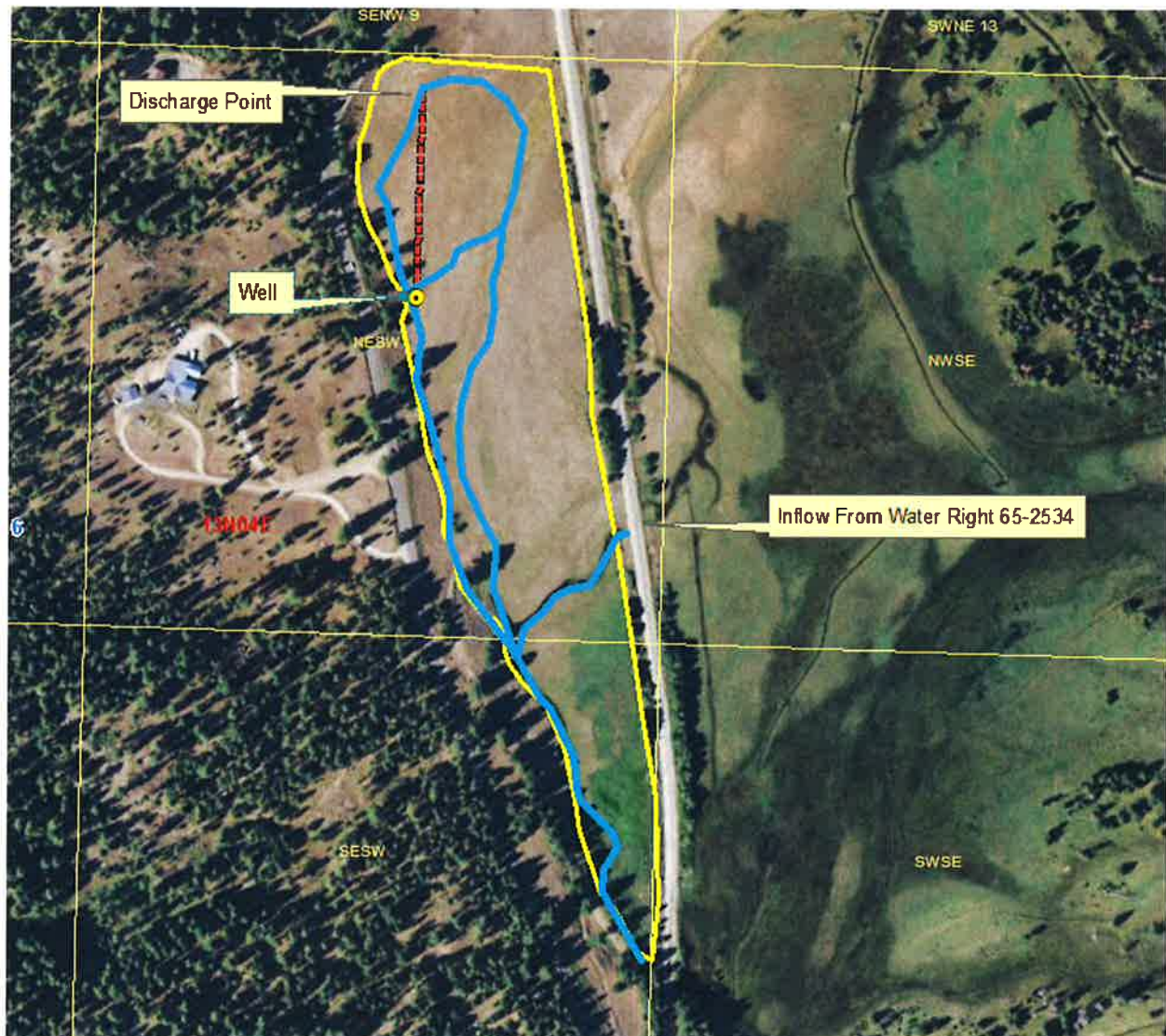
Permit 65-13967 – Field Exam Map

The aerial photo below shows the place of use and point of diversion for this permit. Please Note: that the permit holder has never owned land or irrigated land in Lot 9 (SENW) of Section 6. The permit described the point of diversion and a portion of the place of use in Lot 9 (SENW) of Section 6 Township 13 North, Range 4 East. An amendment will be needed to correct the point of diversion location, and the place of use in Lot 9 (SENW) will be removed at licensing.

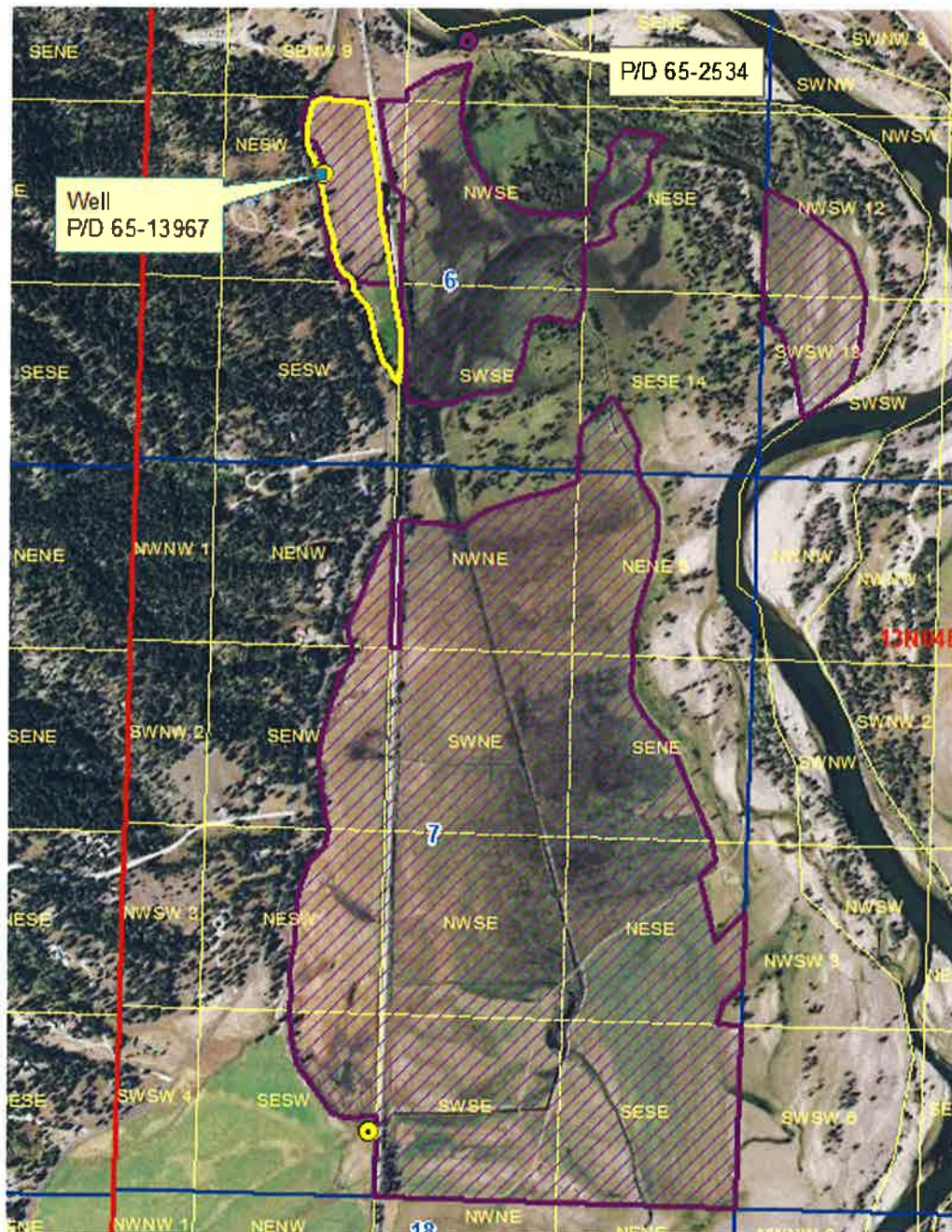


Permit -- 65-13967 -- System Diagram

The yellow border is the border of the field associated with this permit. The place of use is for 15 acres in the NESW and SESW in Section 6. The red dotted line is the pipeline from the well to the discharge point in the ditch. A portion of water right 65-2534 (15 acres in the NESW of Section 6) is also used on this a portion of this property. The water from 65-2534 comes in from a ditch about midway through the field and connects into the main ditch on the west side of the field. This is a very flat field, so the water pretty much goes where the ditches takes it. The majority of the water flows from the west to the east or back towards the river. There are numerous little ditches that are used to move water throughout the field. However, this field hasn't been irrigated in several years, so the ditch are in a really poor state of disrepair.



Water right 65-2534 overlaps this permit. Water right 65-2534 describes 15 acres being irrigated in the NESW of Section 6. However, there is only 12 acres being irrigated in the NESW of Section 6, but there is 3 acres being irrigated in the SESW of Section 6. Since the mapping skills have been improved since water right 65-2534 was licensed and decreed, it is safe to assume that the 15 acres described water right 65-2534 is the same 15 acre field found to be irrigated by water right 65-13967. Water right 65-2534 authorizes 10.00 cfs for 386 acres of irrigation or 0.026 cfs/acre, which is above the Department's standard of an inch per acre. Therefore, when water rights 65-2534 and 65-13967 are combined, they should be limited to 10.00 cfs, 1158 af, and 386 acres of irrigation.



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 65-13967
 Reviewer: Dan Nelson
 Date of Review: 9/7/2018

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Well #1
25
0
160
32
0.66
295

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:

I made an attempt to measure this well. Unfortunately, the piping was configured in a way that I could only measure the down portion of the piping that resulted in trying to measure a partially filled pipeline at a high rate of velocity. The outflow of the pipe was not conducive to a ditch measurement due to neglect, so I was not able to get an accurate measurement at the site. When I first started measuring the site, I received a measurement of 300 to 330 gpm, but after that I started getting extremely high flow rates (530 to 645 gpm) due the partially filled pipeline. I am assuming that the early 300 to 330 gpm measurements were the result of the initial pump startup at static water level of 58 feet, and the pump water level didn't have time to stabilize. The permit holder stated that the pipe flows approximately 300 gpm in the spring, but they have to valve it back later in the year. According to the theoretical calculation, the pump should be able to produce approximately 295 gpm, which matches the owner's estimate.

I took the pumping water level from the well driller's report that shows a pumping water level of 160 feet at a pumping rate of 200 gpm. Therefore, I feel this is a fair representation of the pumping water level for this well. The owner's pressure gauge showed a pumping pressure of 32 psi.

The owner also stated that later in the year after a day or two of pumping the water level gets too low and the pump starts capitating, so they generally have to valve the pump back. The water level seems to reflect the levels in Cascade Lake (the surface water levels in Cascade Lake are 80 feet above the well location), so when the lake gets lower in the later part of the summer, the water levels in the well tend to decline as well. Cascade Lake is approximately 1 1/4 miles west of the well. However, in the spring time, the water levels appear to reasonably stable, so they can run it without issues.

With all of the information available, the system capacity appears to be reasonably close to 0.66 cfs. However, only 15 acres is being irrigated, so I am recommending the diversion rate for this permit be limited to 0.30 cfs (0.02 cfs X 15 acres = 0.30 cfs).

PHOTOGRAPHER AND DATE OF PHOTOS Dan Nelson 9/7/2018

FILE NUMBER 65-13967

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The photos above show the well and the power box.

The photos below show the place of use. The top two photos show the place of use north of the well, and the bottom three photos show the place of use south of the well. See the ditches used to transport the open discharged water. Water is diverted through multiple ditches and wild flooded over the field.

