

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-14757

Exam Date: 5/31/2017

1. Current Owner:
WILLIAM NECKELS PO BOX 2 MIDVALE ID 83645

2. Accompanied by: William "Bill" Neckels
Phone No:
Address:
Relationship to Permit Holder:

3. SOURCE:
GROUND WATER

TRIBUTARY:

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 67-8060
2. Other water rights with the same point-of-diversion: None.

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

GROUND WATER NW¼SE¼ Sec. 1, Twp 12N, Rge 03W, B.M. WASHINGTON County

Method of Determination: GPS collected on site: 44d 24.265, -116d 38.327. Point compared to digital PLSS boundary map.

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	
12N	03W	1														40.0			40.0

Total Acres: 40

Method of Determination: ArcMap tools used to measure irrigated land area

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
D0070362	GE	20	GNJ713288		4' steel pipe to pivot system

*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
IDWR tag: 281888	Ultrasonic	GE Panametrics	PT878	PCC1316085	#403	3/28/2017

2. Measurements: Device placed at pivot point, prior to any sprinkler release, to quantify a total diversion rate from the well.

E. FLOW

Additional Computation Sheets Attached

CALCULATIONS

Measured Method: Ultrasonic

File Title: C:\Users\pkelly\Desktop\LOG13.LOG
 File Name: C:\Users\pkelly\Desktop\LOG13.LOG
 Start Time: 5/31/2017 14:11
 End Time: 5/31/2017 14:22
 Interval: 60
 Records: 11
 Cyclic Flags: 2
 Error Flags: 8208

Date/Time	Velocity (ft/s)	Volume (ft ³ /s)	Volume (gal/m)	Signal Up	Error #
5/31/2017 14:11	2.767469552	0.184904	82.99068	0	0
5/31/2017 14:12	2.781895696	0.185868	83.42329	66.91011	0
5/31/2017 14:13	2.781707391	0.185855	83.41765	66.91011	0
5/31/2017 14:14	2.778288577	0.185627	83.31512	66.91011	0
5/31/2017 14:15	2.782082069	0.18588	83.42888	66.91011	0
5/31/2017 14:16	2.785710366	0.186123	83.53769	66.91011	0
5/31/2017 14:17	2.77920289	0.185688	83.34254	66.91011	0
5/31/2017 14:18	2.775676529	0.185452	83.23679	66.91011	0
5/31/2017 14:19	2.770558487	0.18511	83.08331	66.91011	0
5/31/2017 14:20	2.746995142	0.183536	82.3767	66.91011	0
**5/31/2017 14:21	-0.046948696	-3.14E-03	-1.40789	66.9045	0
Average	2.775	0.186	83.215		

** System shut down during test, this data was omitted from the calculated average.

Permit	0.68 cfs
B.U. Standard Allowance	0.80 cfs
B. U. Proof Fee	\$100 → 0.21 to 1.00 cfs
Measurement or Theoretical Rate	0.19 cfs
License Recommendation	0.19 cfs

F. VOLUME CALCULATIONS**1. Volume Calculations for Irrigation:**

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 40 \times 4.0 = 160 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.19 \times 231 \times 1.9835 = 87.1 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 87.1 \text{ af}$$

2. Volume Calculations for Other Uses: None.**G. NARRATIVE/REMARKS/COMMENTS**

The field exam was conducted by agent Patrick Kelly and was accompanied by Bill Neckels on May 31, 2017. An assignment of permit was received a total of 3 times. In 2013, Mr. Neckels filed the assignment himself with Northwest Farm Credit Services in an attempt to place the permit in both parties name. Since this was not submitted by the permit owner, it was returned. Shortly after, the permit owner at the time submitted an assignment to place the permit solely in the name of Mr. Neckels. The Northwest Farm Credit Services were not included in this assignment, but someone at the department has added them as a current owner. Since they were not included in the appropriate assignment, I have change the credit service as a Security Interest.

Bill chauffeured me about the property. The current irrigation system uses a pivot system which Mr. Neckels said is the only irrigation use he is currently using. Since the development includes 40 acres during the beneficial use period, I am recommending a 40 acre POU. Irrigation practices have never occurred in the SWSE QQ, and will be dropped from the license. Digital PLSS boundaries appear to have shifted when compared to aerial photography. This does not justify an amendment to the permit.

Mr. Neckels runs 2 wells on the site. The original well was drilled for George Mitchell in 1977 and now supplies stockwater. A new well (D0070352) was drilled in 2015 for the irrigation use. Mr. Neckels stated that the old well did not support the pivot system very well and could hardly produce a significant amount of water for an extended period of time. The old well could still serve as a backup for 5 acres under 67-8060. Since the two permits are pertinent to separate wells, the user is not required to file an amendment to add a POD.

67-8060 and 67-14757 will carry a combined use limit of 40 acres.

The well log was correlated in ArcMap to match the GPS point collected on site.

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	03/15 to 10/31	0.19 CFS	87.1 AF
	<u>Totals:</u>	0.19 CFS	87.1 AF

2. Recommended Amendments

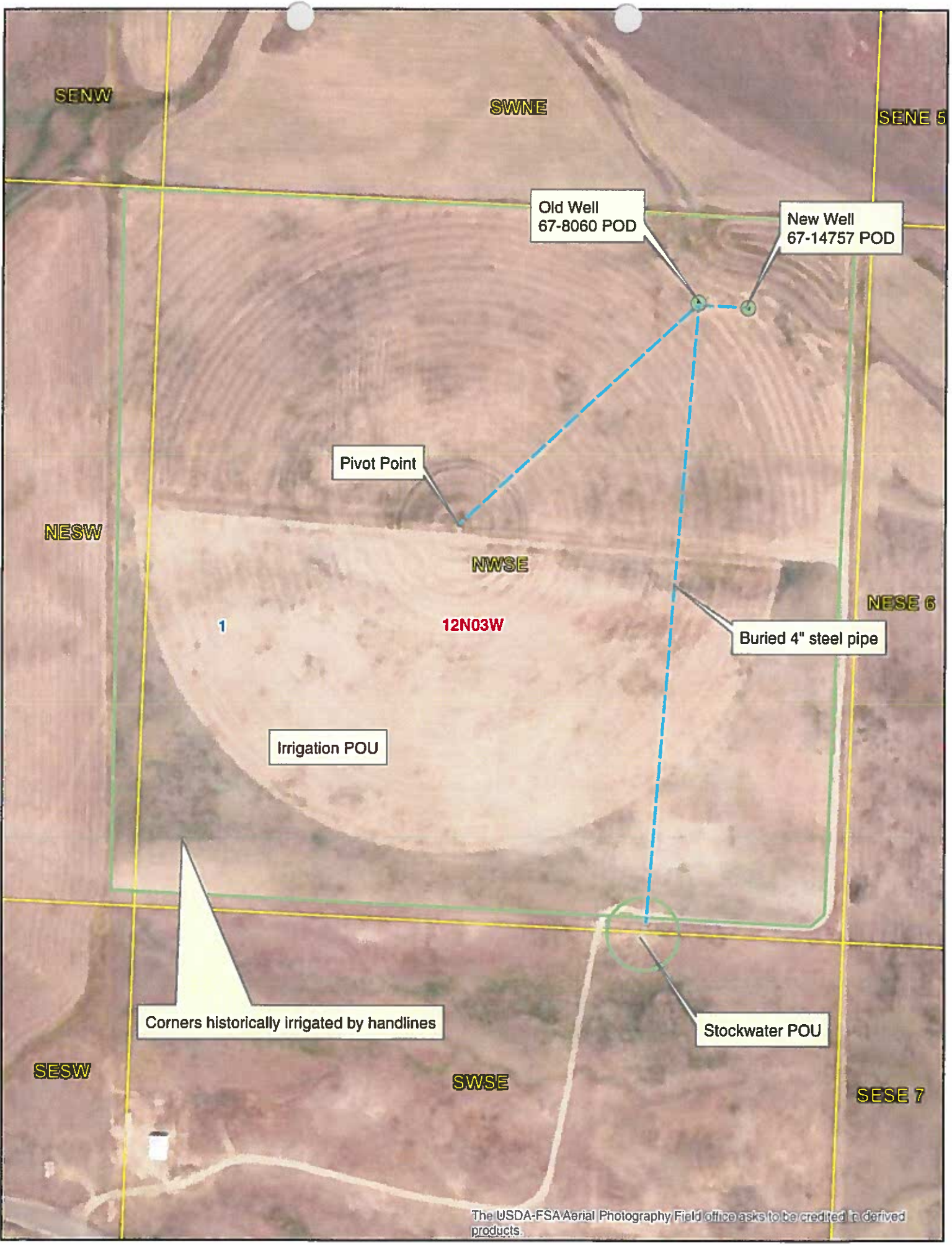
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION

Field Examiner's Name Patrick Kelly Date 5-31-2017

Reviewer _____ Date _____



SENW

SWNE

SENE 5

Old Well
67-8060 POD

New Well
67-14757 POD

Pivot Point

NESW

NWSE

NESE 6

1

12N03W

Buried 4" steel pipe

Irrigation POU

Corners historically irrigated by handlines

Stockwater POU

SESW

SWSE

SESE 7

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

1. WELL TAG NO. D 0070362

Drilling Permit No. 971445-877502

Water right or injection well # 67-14757

2. OWNER:

Name Bill & Sheila Neckels

Address po. box 2

City Midvale State id Zip 83645

3. WELL LOCATION:

Twp. 12 North ☒ or South ☐ Rge. East ☐ or West ☒

Sec. 1 1/4 NW 1/4 SE 1/4

Gov't Lot County Washington

Lat. 44 24.236 (Deg. and Decimal minutes)

Long. 116 38.326 (Deg. and Decimal minutes)

Address of Well Site

(Circle at least name of Road - Distance to Road or Landmark) City

Lot. Bld. Sub. Name

4. USE:

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

5. TYPE OF WORK:

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

6. DRILL METHOD:

☒ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft)	Placement method/procedure
3/8 bentonite	0	38	1800/lbs	pour

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing Liner	Threaded	Welded
10	2	107	.250	steel	☒	☐	☒

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 107

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 ft)	Placement method
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11. FLOWING ARTESIAN:

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

Describe control device

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) Static water level (ft) 24

Water temp. (°F) 54 Bottom hole temp. (°F)

Describe access port flat plat

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
240	300	2 hr	☐	☐	☒	☐

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
14	0	2	top soil		x
14	2	3	hard pan		x
14	3	14	brown sandy clay		x
14	14	40	blue clay		x
10	40	52	blue clay		x
10	52	56	sandy blue clay	x	
10	56	105	baked blue clay		x
10	105	145	lava		x
10	145	151	soft lava		x
10	151	175	red, blue, black lava		x
10	175	186	soft black lava	x	
10	186	190	red, blue, black lava		x
10	190	195	soft lava	x	
10	195	240	red, blue, black lava		x
10	240	276	hard lava		x
10	276	280	fractured lava	x	
10	280	284	broken up lava		

RECEIVED

MAY 23 2016

WATER RESOURCES
WESTERN REGION

Completed Depth (Measurable): 284

Date Started: 11-16-15

Date Completed: 12-15-15

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 Waterpro Well Drilling

Co. No. 626

*Principal Driller Monte Poser

Date 5-23-16

*Driller

Date

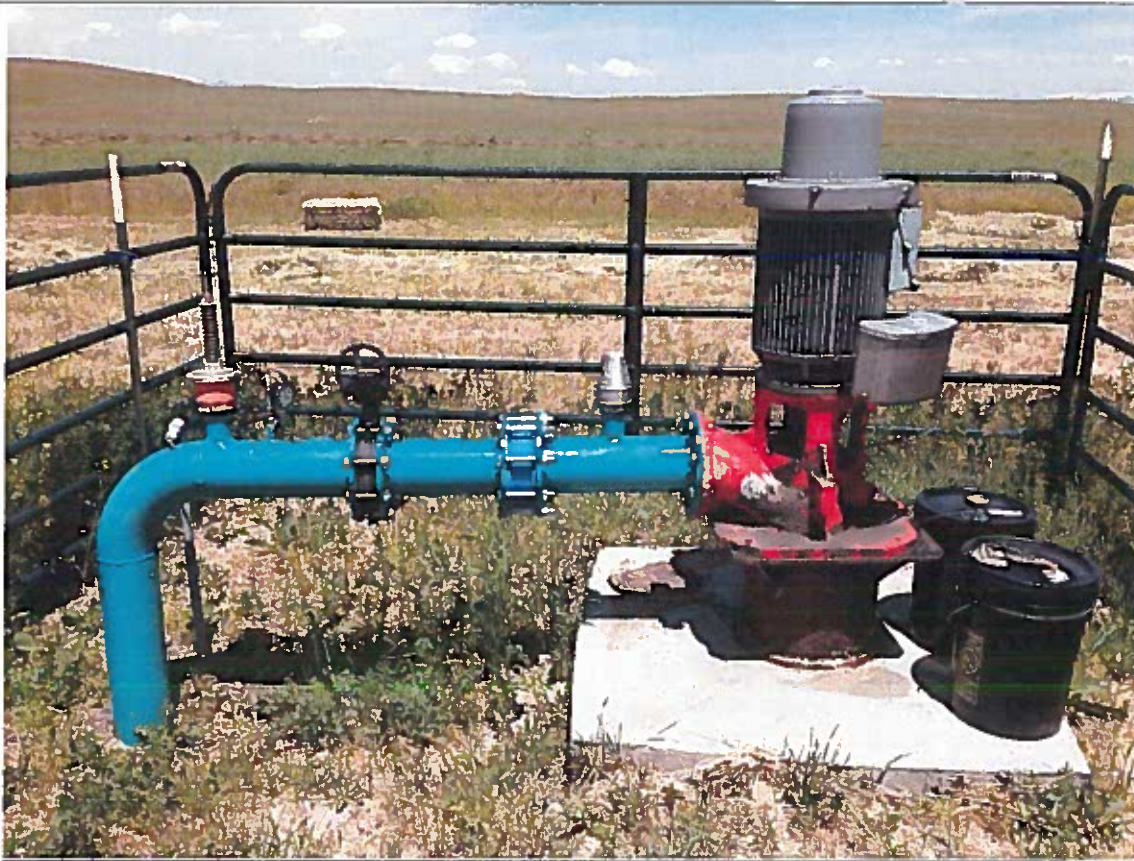
*Operator II

Date

Operator I

Date

* Signature of Principal Driller and rig operator are required.



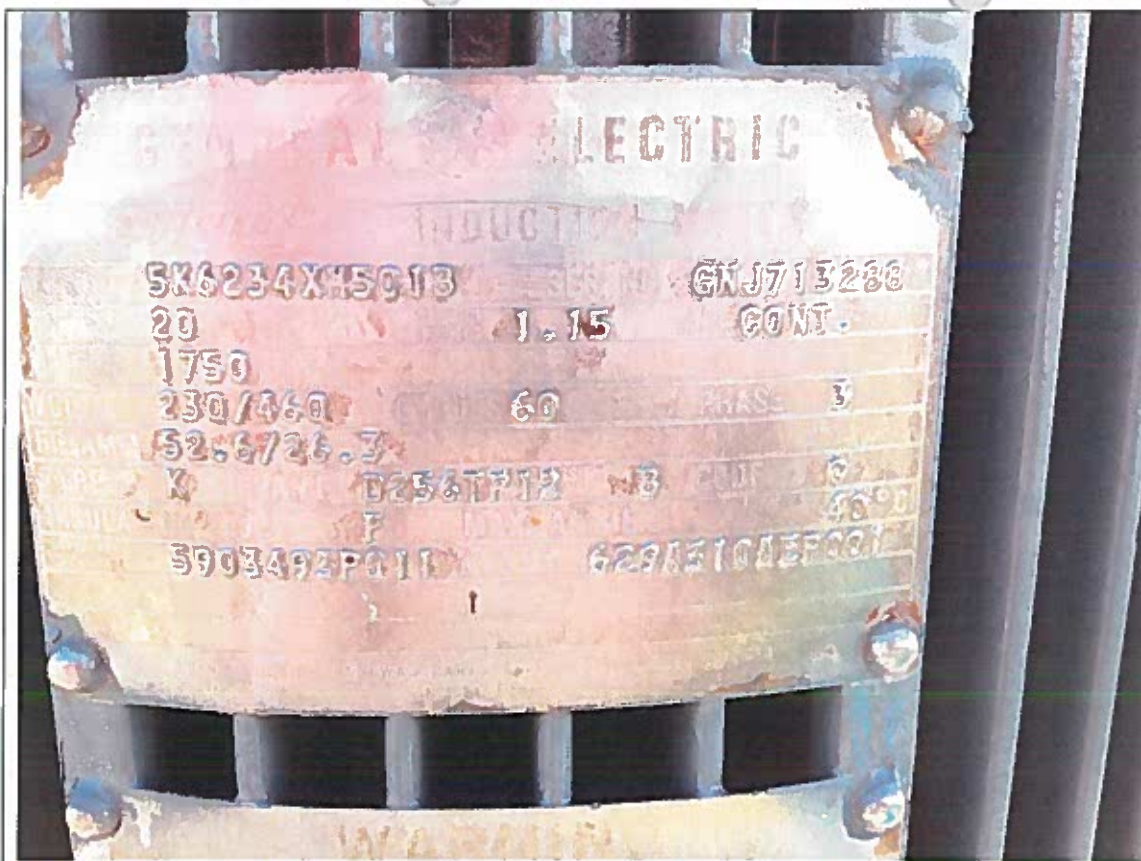
"New Well"

44d 24.265
-116d 38.327

Well is used to
deliver water to pivot
system.



New Well Tag:
D0070362



New Well Motor Plate.

GE 20 hp

Model:
5K6234XM501B

Serial:
GNJ713288

Phase: 3



"Old Well"

44d 24.266
-116d 38.348

No well tag or pump info available.

Drilled 1977.

Water from new well (blue pipe) enters system at old well site and is delivered to pivot system at the right. Old well services stock water primarily through pipe on left.

WISHNW-21202

PRECIPITATION CHART

JUNE 11, 2010

DEALER - AGRI LINES IRRIGATION

IRRIGATOR - JEFF MUSSER

TOTAL LENGTH PIPE = 602.20
 GPM UNDER PIPE = 100.88
 ACRES UNDER PIPE = 26.15
 RANGE OF ENDGUN = .00
 GPM OF ENDGUN = .00
 ACRES UNDER ENDGUN = .00

SYSTEM PRESSURE = 40 PSI
 TOTAL GPM = 100.88

MOTOR SIZE (HP) = 1/8
 LOADED MOTOR RPM = 1200
 CENTER GEAR BOX RATIO = 45
 WHEEL GEAR BOX RATIO = 50
 TIRE SIZE = 12 X 26
 LAST TOWER SPEED (FPM) = 6.20

PRECIPITATION BASED			1 TIMER BASED		
PRECIPITATION INCHES	% TIMER SETTING	TIME HOURS	% TIMER SETTING	PRECIPITATION INCHES	TIME HOURS
.08	100.00	9.83 - 590 min	100.00	.08	9.83 - 590 min
.10	83.78	11.73	90.00	.09	10.92
.20	41.89	23.47	80.00	.10	12.29
.25	33.51	29.33	70.00	.12	14.04
.30	27.93	35.20	60.00	.14	16.38
.40	20.94	46.93	50.00	.17	19.66
.50	16.76	58.67	45.00	.19	21.84
.60	13.96	70.40	40.00	.21	24.58
.70	11.97	82.14	35.00	.24	28.09
.75	11.17	88.00	30.00	.28	32.77
.80	10.47	93.87	25.00	.34	39.32
.90	9.31	105.60	20.00	.42	49.15
1.00	8.38	117.34	15.00	.56	65.53
1.25	6.70	146.67	10.00	.84	98.30
1.50	5.59	176.01	5.00	1.68	196.60

CAUTION: The relationship between precipitation rate, timer setting, and hours per revolution provided above are theoretical numbers based on the data list at the top of the page. Actual precipitation rates may vary due to the following field and machine conditions: wind drift; evaporation; tire slippage; tire loaded radius; drive train efficiency; elevation changes; soil type. Due to these varying field and machine conditions the above chart should be used as a guide only.

Precipitation Chart

Total length pipe:

602.2

GPM under pipe:

100.88

Acres under pipe:

26.15

System pressure:

40 psi

AGRI LINES IRRIGATION
 115 NORTH SECOND
 PARMA, IDAHO 83660

 JUNE 11, 2010
 WISHNW-21202
 JEFF MUSSER

 2010 LINDSAY GREENFIELD 896
 NELSON R3000 ROTATORS
 NELSON 15 & 20 PSI REGULATORS
 75 I.D. FLEXIBLE HOSE
 NO ENDGUN

Rotation time at 100% = 9.83 Hours Or 590 minutes

100 @ 40 PSI

Installation Chart

Page 1

Out #	Drop	Spk	Res	Reg	Out #	Drop	Spk	Res	Reg	Out #	Drop	Spk	Res	Reg
1	FLUO				1	FLUO				23	40	21	23	20LF
2	FLUO				2	FLUO				24	40	21	23	20LF
3	FLUO				3	FLUO				25	40	21	23	20LF
4	FLUO				4	FLUO				26	40	21	23	20LF
5	54	1	14	15LF	5	54	1	14	15LF	27	40	21	23	20LF
6	FLUO				6	FLUO				28	40	21	23	20LF
7	FLUO				7	FLUO				29	40	21	23	20LF
8	60	2	14	15LF	8	60	2	14	15LF	30	40	21	23	20LF
9	FLUO				9	FLUO				31	40	21	23	20LF
10	FLUO				10	FLUO				32	40	21	23	20LF
11	60	3	14	15LF	11	60	3	14	15LF	33	40	21	23	20LF
12	FLUO				12	FLUO				34	40	21	23	20LF
13	FLUO				13	FLUO				35	40	21	23	20LF
14	60	4	14	15LF	14	60	4	14	15LF	36	40	21	23	20LF
15	FLUO				15	FLUO				37	40	21	23	20LF
16	FLUO				16	FLUO				38	40	21	23	20LF
17	34	5	14	15LF	17	34	5	14	15LF	39	40	21	23	20LF
18	FLUO				18	FLUO				40	40	21	23	20LF
19	FLUO				19	FLUO				41	40	21	23	20LF
20	34	6	14	15LF	20	34	6	14	15LF	42	40	21	23	20LF
21	FLUO				21	FLUO				43	40	21	23	20LF
22	FLUO				22	FLUO				44	40	21	23	20LF
23	40	7	14	15LF	23	40	7	14	15LF	45	40	21	23	20LF
24	FLUO				24	FLUO				46	40	21	23	20LF
25	FLUO				25	FLUO				47	40	21	23	20LF
26	FLUO				26	FLUO				48	40	21	23	20LF
27	FLUO				27	FLUO				49	40	21	23	20LF
28	FLUO				28	FLUO				50	40	21	23	20LF
29	FLUO				29	FLUO				51	40	21	23	20LF
30	FLUO				30	FLUO				52	40	21	23	20LF
31	FLUO				31	FLUO				53	40	21	23	20LF
32	FLUO				32	FLUO				54	40	21	23	20LF
33	FLUO				33	FLUO				55	40	21	23	20LF
34	FLUO				34	FLUO				56	40	21	23	20LF
35	FLUO				35	FLUO				57	40	21	23	20LF
36	FLUO				36	FLUO				58	40	21	23	20LF
37	FLUO				37	FLUO				59	40	21	23	20LF
38	FLUO				38	FLUO				60	40	21	23	20LF
39	FLUO				39	FLUO				61	40	21	23	20LF
40	FLUO				40	FLUO				62	40	21	23	20LF
41	FLUO				41	FLUO				63	40	21	23	20LF
42	FLUO				42	FLUO				64	40	21	23	20LF
43	FLUO				43	FLUO				65	40	21	23	20LF
44	FLUO				44	FLUO				66	40	21	23	20LF
45	FLUO				45	FLUO				67	40	21	23	20LF
46	FLUO				46	FLUO				68	40	21	23	20LF
47	FLUO				47	FLUO				69	40	21	23	20LF
48	FLUO				48	FLUO				70	40	21	23	20LF
49	FLUO				49	FLUO				71	40	21	23	20LF
50	FLUO				50	FLUO				72	40	21	23	20LF
51	FLUO				51	FLUO				73	40	21	23	20LF
52	FLUO				52	FLUO				74	40	21	23	20LF
53	FLUO				53	FLUO				75	40	21	23	20LF
54	FLUO				54	FLUO				76	40	21	23	20LF
55	FLUO				55	FLUO				77	40	21	23	20LF
56	FLUO				56	FLUO				78	40	21	23	20LF
57	FLUO				57	FLUO				79	40	21	23	20LF
58	FLUO				58	FLUO				80	40	21	23	20LF
59	FLUO				59	FLUO				81	40	21	23	20LF
60	FLUO				60	FLUO				82	40	21	23	20LF
61	FLUO				61	FLUO				83	40	21	23	20LF
62	FLUO				62	FLUO				84	40	21	23	20LF
63	FLUO				63	FLUO				85	40	21	23	20LF
64	FLUO				64	FLUO				86	40	21	23	20LF
65	FLUO				65	FLUO				87	40	21	23	20LF
66	FLUO				66	FLUO				88	40	21	23	20LF
67	FLUO				67	FLUO				89	40	21	23	20LF
68	FLUO				68	FLUO				90	40	21	23	20LF
69	FLUO				69	FLUO				91	40	21	23	20LF
70	FLUO				70	FLUO				92	40	21	23	20LF
71	FLUO				71	FLUO				93	40	21	23	20LF
72	FLUO				72	FLUO				94	40	21	23	20LF
73	FLUO				73	FLUO				95	40	21	23	20LF
74	FLUO				74	FLUO				96	40	21	23	20LF
75	FLUO				75	FLUO				97	40	21	23	20LF
76	FLUO				76	FLUO				98	40	21	23	20LF
77	FLUO				77	FLUO				99	40	21	23	20LF
78	FLUO				78	FLUO				100	40	21	23	20LF

Installation Chart

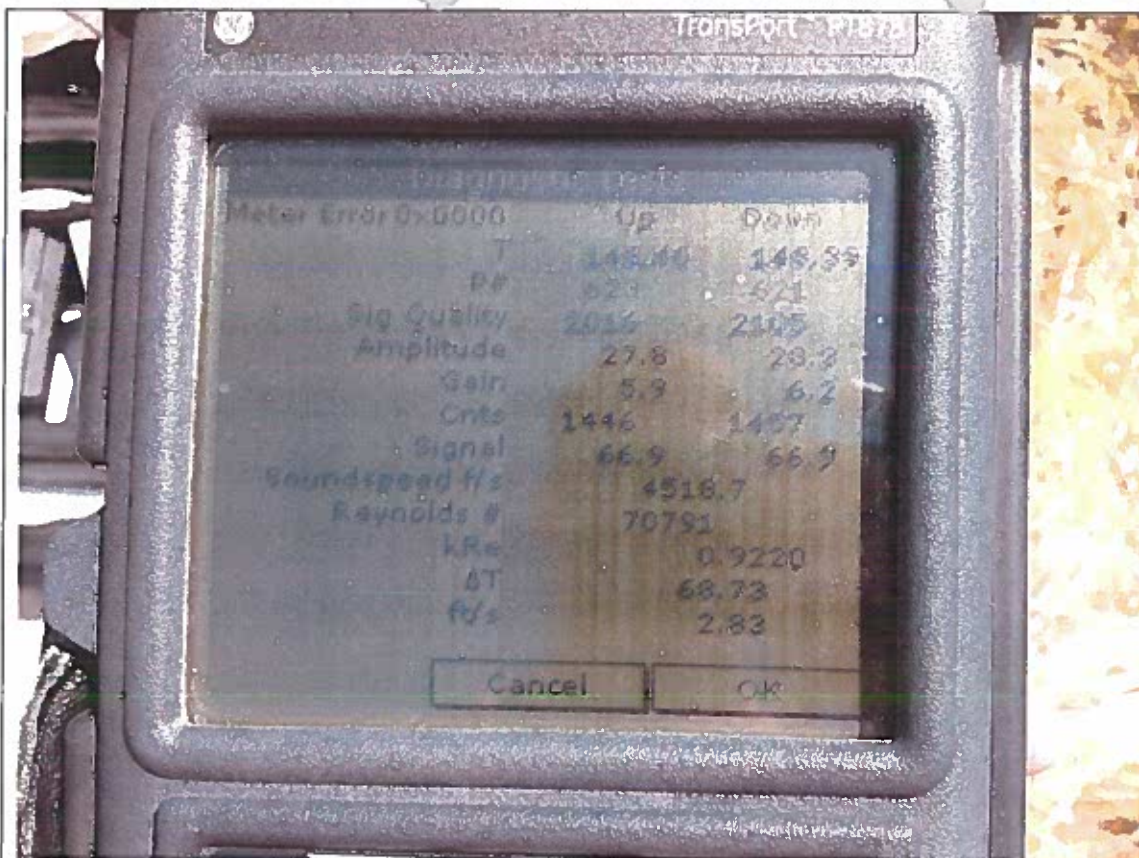
Nozzle size range:

14-24

100% Rotation:

9.83 hrs

No end gun



Flow diagnostics:
P#: 623
Sig Quality: 2000-2100
Amplitude: ~28
Signal: 66.9
Soundspeed: 4518.7



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

April 19, 2017

COPY

WILLIAM NECKELS
PO BOX 2
MIDVALE ID 83645

RE: Scheduling Field Exam for Water Right Permit No. 67-14757

Dear Permit Holder:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit this season. An examination is needed to verify the water use in order to issue a water right license.

The above-referenced permit authorizes 0.68 cfs of GROUND WATER for IRRIGATION use. If you have developed a beneficial use and still own the place of use property, please contact me at your earliest convenience to schedule an examination.

If you did not develop a beneficial use of water under the permit during the beneficial use period, a license cannot be issued and the permit should be relinquished. If that use was developed, but have ceased using the water and you currently carry no interest in it, please relinquish the permit by submitting the enclosed Relinquishment of Permit form (no fee required).

If you did develop a beneficial use of water under the permit, but you no longer own the place of use property identified in the permit, please submit the enclosed Assignment of Permit form with the applicable \$25 processing fee.

Please contact me within the next thirty (30) days at (208) 334-2190 to either schedule an examination or submit a relinquishment or assignment form. If you no longer own the place of use property and/or do not respond to this letter, the department will work with the current property owner to issue a license or void the permit.

Sincerely,

Patrick Kelly
Water Resource Agent, Sr.

Enclosures: Relinquishment of Permit form
Assignment of Permit form
Water Permit Report and Map