

IN-OFFICE BENEFICIAL USE FIELD REPORT

Permit No. 63-33114 Date 11-17-16 Examiner: A. Grimm

Name/Address Same Taxlot / S.O.S. record: Taxlot
 Source Same Does change clarify original intended source? If not, void permit.
 Nature of Use Irrigation, domestic
 Season of Use 3/1 to 11/15, 1/1 to 12/31
 Point of Diversion T01N R01W Sec 5 Lt 2(NWNE)
 Place of Use T01N R01W Sec 5 Lt 2(NWNE) 0.7 ac & T01N R01W Sec 5 Lt 3(NENW) 1.9 ac

Overlap Review POD Right(s) 63-33111, 63-33112, 63-33114, 63-33645 (permit)Worksheet Attached ☐ POU Right(s) None. Other records different lots.

Diversion Rate Permitted Rate 0.11 cfs BU Standard Limit 0.08 cfs (2.6 ac x 0.03 cfs)
 BU Fee Limit 0.20 cfs Permit Combo Cond. Limit 0.08 cfs (2.6 ac x 0.029 cfs)
 Recommended Total Div Rate 0.08 cfs

Annual Volume

for Irrigation: 0.08 cfs x 1.9835 x 260 days = 41.3 af
2.6 acres x 4.5 af/ac (FHR) = 11.7 af
 Smaller of two volumes = 11.7 af

for other uses:

Domestic: No homes constructed or hook ups installed - only irrigation use is recommended for license.**Recommended Amounts**

Beneficial Use	Season of Use	Diversion Rate	Annual Volume
Irrigation	3/1 to 11/15	0.08 cfs	11.7 af
<u>Totals</u>		<u>0.08</u> cfs	<u>11.7</u> af

Amendments Required

☐ Change P.D. ☐ Add P.D. ☒ None
☐ Change P.U. ☐ Add P.U. ☐ Other: _____

Conditions:

Specific POU developed on Lot 10 & 11 Waldvogel Acres Subdivision (PPU permitted not developed - recommending a specific POU). Owner requested flexibility to move right anywhere within the 40 acre-tract. Considering this is allowed by statute, recommend removing condition X60 specifying POU lot and block information in case use is moved in the future. Permits 63-33111 thru 63-33114 included combined use limit condition and a condition limiting the total number of wells to be constructed to four. The individual uses recommended for licensing will not exceed the permit combined limits, therefore no combined use limit is recommended on the license. Only one well was constructed during the development period of the four permits. There is no administrative reason to carry forward a restriction on the number of wells authorized for construction. Recommend this condition is removed at licensing. Well upgrade fee received 9/8/16 (receipt W044604) for pod well D0069038.

Remarks:

Electricity meter #12 096 385. 63-33111 thru 63-33114 use same irrigation system. Irrigates with 4 lines at a time, one sprinkler head every 40 feet. Sprinklers are 30 WS 1/8 inch nozzles est. 60 psi. See exam in 63-33111 for system diagram. Sprinkler system est. total system flow rate 0.29 cfs. Well can pump 120 gpm (0.27 cfs) according to owner. Pump curve est. 100 gpm (0.22 cfs) capacity. HP equation (worksheet attached) est. 0.24 cfs capacity. Did not run the pump during exam because of electrical issue. Est. 20-

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40% grass cover on lots 10 & 11 during site visit, but taking info submitted with proof statement (receipts for seed & power records) into account, appears system operated a sufficient length of time to germinate seed and grow grass. If use system flow rate of 0.29 cfs for 11 acres irrigated under rights 63-33111 thru 63-33114, arrive at 0.026 cfs/ac which rounds up to 0.03 cfs (standard for irrigation less than 5 acres, which each right is). Likely each permit will use own well in future (according to owner). Considering each permit individually qualifies for no diversion rate measurement per IDAPA 37.03.02.035.r, could recommend 0.03 cfs/ac. However, need to take combined use limit condition into account as described above. Therefore, recommending 0.029 cfs/ac for total rate calculation on each permit. Recommending more acres in Lt 3(NENW) than on permit POU, but overall total acres not increasing and all 40 acre-tracts of recommending POU are on the permit. A licensing amendment is not required to re-arrange the number of acres within already described 40 acre-tracts.

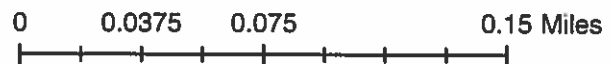
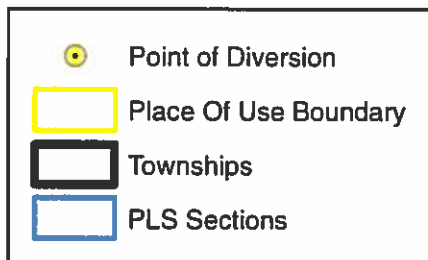
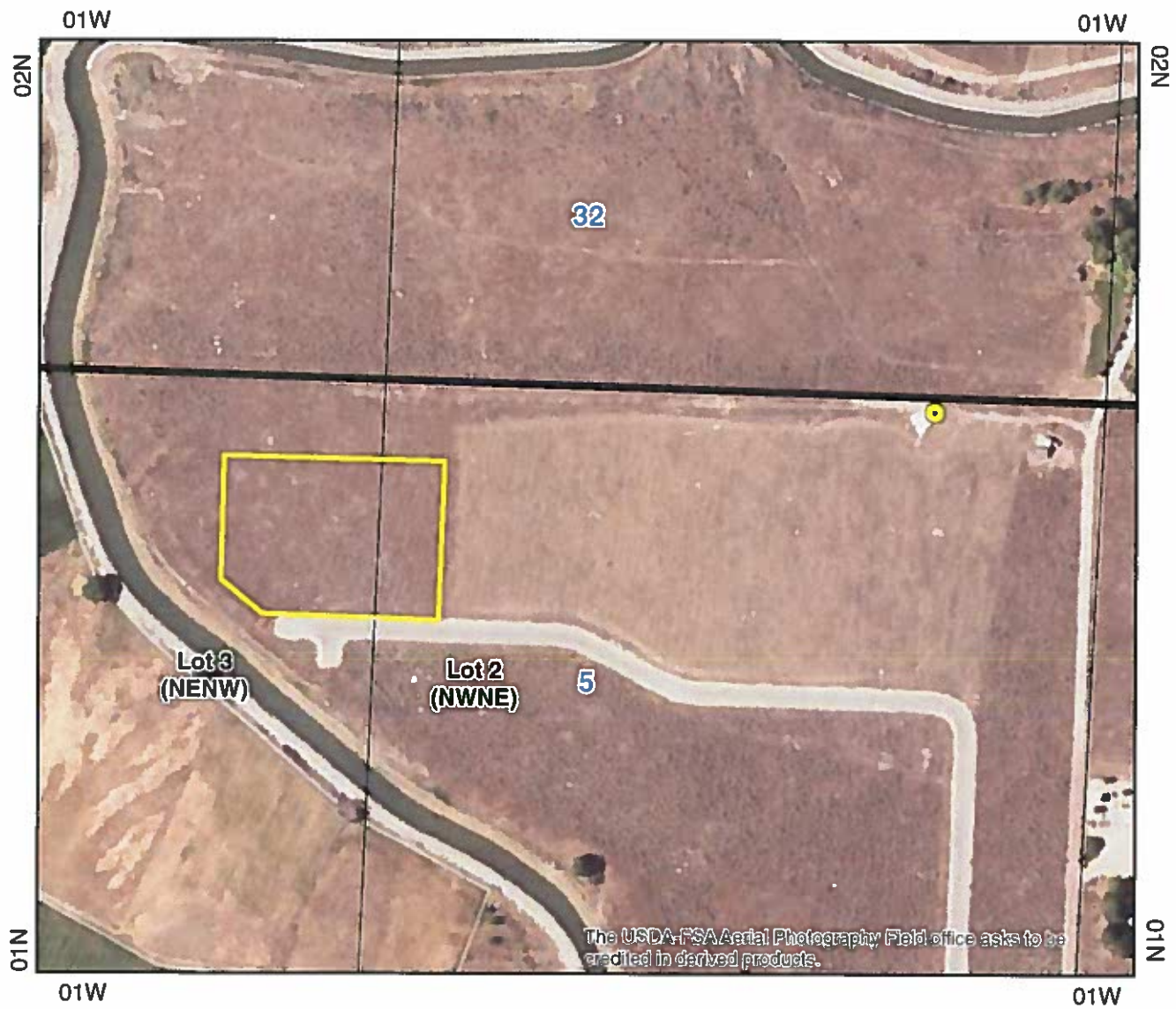
Workflow

Exam Date Entered X
POU/POD shapes X
Combined Rights Entry X
Wild & Scenic Entry N/A
Draft License and Map X
Other: _____

Supporting Documents

Historical Imagery N/A Well Log X
Photographs X Diagrams X
LandSat N/A Theoretical N/A
Other: See 63-33111 exam for photos & system diagram

State of Idaho
Department of Water Resources
Beneficial Use Field Report
63-33114



63-33112 thru 63-33114 Beneficial Use Field Report Imagery



63-33112 thru 63-33114 Field Exam: Google Earth April 2016 aerial image of POU.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-33111 thru 63-33114
 Examiner: Angie G. & Danie M.
 Date of Field Exam: 7/22/2016

P/D No.:	Option 1	OPTION 2	OPTION 3	
PUMP HORSEPOWER	15	15	15	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	255	255	255	
DISCHARGE PRESSURE	60	50	40	
FRICTION	0	8	8	
RATE OF FLOW (cfs)	0.23	0.24	0.26	AVE
(gpm)	105.4	109.6	116.7	0.25

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.

Examiners Notes:

Pump set at 270 ft. Static water level 240 ft.

SPRINKLER DISCHARGE IN GPM

NOZZLE SIZE (INCHES) & PRESSURE (PSI)

$$\text{GPM} = 29.82 \times \text{DIAMETER SQUARED} \times \text{SQUARE ROOT OF PRESSURE}$$

Table 1. Sprinkler discharge gpm (gallons per minute) for nozzle size (inches) and pressures (psi) (pounds per square inch).

psi	Nozzle Size (in)										
	3/32	7/64	1/8	9/64	5/32	11/64	3/16	13/64	7/32	15/64	1/4
20	1.17	1.60	2.09	2.65	3.26	3.92	4.69	5.51	6.37	7.32	8.34
25	1.31	1.78	2.34	2.96	3.64	4.38	5.25	6.16	7.13	8.19	9.32
30	1.44	1.95	2.56	3.26	4.01	4.83	5.75	6.80	7.86	8.97	10.21
35	1.55	2.11	2.77	3.50	4.31	5.18	6.21	7.30	8.43	9.69	11.03
40	1.66	2.26	2.96	3.74	4.61	5.54	6.64	7.80	9.02	10.35	11.79
45	1.76	2.39	3.13	3.99	4.91	5.91	7.03	8.30	9.60	10.99	12.50
50	1.85	2.52	3.30	4.18	5.15	6.19	7.41	8.71	10.10	11.58	13.18
55	1.94	2.64	3.46	4.37	5.39	6.48	7.77	9.12	10.50	12.15	13.82
60	2.03	2.76	3.62	4.50	5.65	6.80	8.12	9.56	11.05	12.68	14.44
65	2.11	2.88	3.77	4.76	5.87	7.06	8.45	9.92	11.45	13.21	15.03
70	2.19	2.99	3.91	4.96	6.10	7.34	8.78	10.32	11.95	13.70	15.59
75	2.27	3.09	4.05	5.12	6.30	7.58	9.08	10.66	12.32	14.19	16.14
80	2.35	3.19	4.18	5.29	6.52	7.84	9.39	11.02	12.74	14.64	16.67
85	2.42	3.29	4.31	5.45	6.71	8.07	9.67	11.35	13.11	15.10	17.18
90	2.49	3.38	4.43	5.61	6.91	8.31	9.95	11.69	13.51	15.53	17.68
100	2.62	3.57	4.67	5.91	7.29	8.76	10.50	12.32	14.23	16.37	18.64
110	2.75	3.74	4.89	6.19	7.63	9.24	11.00	12.90	14.97	17.17	19.55
120	2.87	3.91	5.10	6.46	7.97	9.65	11.48	13.47	15.63	17.93	20.42
130	2.99	4.07	5.31	6.72	8.30	10.04	11.95	14.02	16.27	18.66	21.25

Note: Figures given are approximate maximum discharge rates for given nozzle size and pressure.

- USE DRILL BITS OR TAPE MEASURE TO CHECK NOZZLE SIZE
- USE SPRINKLER GAGE TO CHECK PSI
- PSI FOR SPRINKLER LINE:
 - CHECK NEAR START, MID & END OF LINE, TAKE AVERAGE
 - OR -- CHECK 1 HEAD ABOUT 1/3 FROM START OF LINE

-FL 8/24/07
C560N "Sprinkler"

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 0069038

Drilling Permit No 9108900-874957
Water right or injection well # _____

2. OWNER

Name Flood, Robert
Address 126 W. Thornberry Ct
City Boise State ID Zip 83702

3. WELL LOCATION:

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

Gov't Lot _____ County Ada
Lat 43 ° 27.550 (Deg and Decimal minutes)
Long 116 ° 28.788 (Deg and Decimal minutes)
Address of Well Site 3/4 of Mile E. on Murphy Rd.
City Kuna

Lot 1 Blk 1 Sub Name _____

4. USE:

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

5. TYPE OF WORK check all that apply (Replacement etc.)

☒ 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 (lb or ft ³)	Placement method/procedure
Chips	0	50	1500 lbs	Poured

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
6"	+2	418	.250	Steel	☒	☐	☐	☒

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 418

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____
Manufactured screen ☒ Y ☐ N Type Johnson
Method of installation Washed in

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
420'	430'	.20		5"	Stainless	.304
430	440	.25		5"	Stainless	.304

Length of Headpipe 17' Length of Tailpipe Plate w/valve
Packer ☒ Y ☐ N Type Western Rubber fig. K double rubber

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lb or ft ³)	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) 230' Static water level (ft) 240'
Water temp (°F) 61 Bottom hole temp (°F) 61
Describe access port Sanitary Well Cap

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
410'	80	60	☐	☐	☒	☐

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
10"	0	2	Top Soil	X
10	2	5	Hard Pan	X
10	5	8	Clay	X
10	8	33	Lava Rock	X
10	33	36	Cinders	X
10	36	50	Lava Rock	X
8"	50	56	Soft Lava	X
8	56	102	Lava Rock	X
8	102	104	Soft Lava	X
8	104	140	Lava Rock	X
8	140	150	Cinders	X
8	150	165	Clay & Sandstone Strips	X
8	165	168	Cemented Gravel	X
6"	168	185	Cemented Gravel	X
6	185	215	Sticky Brown Clay	X
6	215	230	Sand/Strips of Clay	X
6	230	260	Sand/clay strips	X
6	260	320	Sand	X
6	320	325	Sticky Brown Clay	X
6	325	330	Coarse Sand	X
6	330	332	Sticky Clay	X
6	332	335	Sandstone	X
6	335	340	Coarse Sand	X
6	340	385	Sand & clay Strips	X
6	385	393	Sand 40 GPM	X
6	393	397	Brown Clay	X
6	397	405	Sand 60 GPM	X
6	405	407	Clay	X
6	407	410	Sand 70 GPM	X
6	410	420	Brown Clay	X
6	420	440	Sand/Screen 20 slot /25 slot 80 GPM	

Completed Depth (Measurable) 440'
Date Started 4/10/2015 Completed 5/5/2015

14. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Can-Ada Well Drilling & Pump Co No 304
*Principal Driller Earl Skinner Date 6/2/2015
*Driller _____ Date _____
*Operator II Brad Skinner Date 6/2/2015
Operator I _____ Date _____
* Signature of Principal Driller and rig operator are required

RECEIVED

JUN 08 2015

WATER RESOURCES
WESTERN REGION