

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED
JUL 14 2014
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. 63-12207

1. Owner Layne Thornton Phone No. 208-922-4658
Current address 3224 Swan Falls Rd, Kuna, ID 83634-1732
2. Examiner's name Scott N. King, P.E. (Examiner No. 133) EXAM DATE 6/26/2014
3. Accompanied by Lavar Thornton Email _____
Address 2800 Forrey Rd, Kuna ID 83634
Relationship to permit holder Father Phone No. 208-922-5779
4. Source Ground Water tributary to _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use Boise-Kuna Irrigation District water
2. Other water rights with the same source and point of diversion 63-11631 from Well 2. None from Well 1.

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
Well 1			NE	NE	28	2N	1W	Ada	Exam, 2013 Photo, GPS
Well 2			NE	NW	28	2N	1W	Ada	Exam, 2013 Photo, GPS

2. Place(s) of Use: Method of determination Exam, 2013 Photo

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
2N	1W	21															40	34	74
		28	14	37															51
																	total		125

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	unknown	40	unknown	Goulds	Model 11CHC (2 stage)
2	Westinghouse	50	7706	Unknown	8-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
Portable Flowmeter	Ultrasonic	GE	PT878	7140	various	March 17, 2014

2. **Measurements:** _____

Examiner measured 2.06 cfs from Well #1.

IDWR determined capacity of Well #2 is 1.66 cfs (see 63-11631 beneficial use exam).

E. NARRATIVE/REMARKS/COMMENTS

Well #1 pump discharges to pipelines conveying water to concrete ditches at several locations for gravity irrigation and can provide water to the complete 125-acre place of use identified in item C.2. and the attached exam maps (Section 21 SWSE, SESE and Section 28 NENE, NWNE). Diversions from Well #1 were measured at the time of the site visit. Well #2 discharges to the southern concrete field ditch and supplies fields in Section 28 NENE & NWNE. Well #2 discharge was not measured during this exam, but was previously determined to have a capacity of 1.66 cfs (see the 63-11631 beneficial use exam report). Combined capacity is 3.72 cfs. The standard duty of 0.02 cfs per acre for 125 acres is 2.5 cfs. 63-11631 is licensed at 1.5 cfs. Examiner recommends that this permit, 63-12207, be licensed for 2.5 cfs. When 63-12207 and 63-11631 are combined, they are together limited to 3.72 cfs.

Ground water is supplemental to Boise-Kuna Irrigation District supplies.

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:

Discharge was measured at 2.06 cfs from Well #1.

Discharge capacity was determined to be 1.66 cfs from Well #2 (see 63-11631).

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 125 \times 4.5 = 562.5 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 2.06 \times 260 \times 1.9835 = 1062.4 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 562.5 \text{ afa}$$

2. Volume Calculations for Other Uses:

none

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Irrigation	3/1	11/15	2.06 cfs	562.5 afa
Totals:			2.06 cfs	562.5 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**

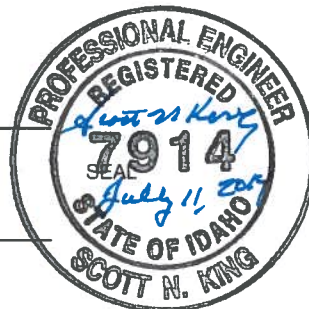
Field Examiner's Signature

Scott N. King

Date July 11, 2014

Reviewer

Date



ATTACHMENT A

PERMIT RECORD AND PROOF OF BENEFICIAL USE

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-12207

Priority: May 08, 1995

Maximum Diversion Rate: 2.76 CFS

This is to certify, that LAYNE THORNTON
3224 SWAN FALLS RD
KUNA ID 83634

has applied for a permit to appropriate water from:

Source: GROUND WATER

and a permit is APPROVED for development of water as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
IRRIGATION	03/01 to 11/15	2.76 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER NE1/4NE1/4 Sec. 28, Twp 02N, Rge 01W, B.M., ADA County

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	
02N 01W 21															68.0	X	68.0
02N 01W 28	70.0	X															70.0

Total Acres: 138

CONDITIONS OF APPROVAL

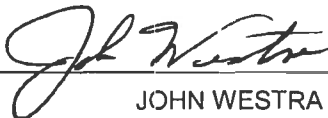
1. Proof of application of water to beneficial use shall be submitted on or before **September 01, 2011**.
2. Subject to all prior water rights.
3. Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which the permit holder had no control.
4. This right when combined with all other rights shall provide no more than 0.02 cfs per acre nor exceed a combined annual maximum diversion volume of 621 af at the field headgate for the lands above.
5. This right when combined with all other rights shall provide no more than 4.5 afa per acre at the field headgate for irrigation of the lands above.
6. Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-12207

7. After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to use power records to determine the amount of water diverted and shall annually report the information to the Department.
8. The right holder shall make full beneficial use of all surface water rights available to the right holder for irrigation of the lands authorized to be irrigated under this right. The right holder shall limit the diversion of ground water under this right to those times when the surface water supply is not available or the surface water supply is not reasonably sufficient to irrigate the place of use authorized under this right.
9. If the surface water right(s) appurtenant to the place of use is abandoned, forfeited, sold, transferred, leased or used on any other place of use, this right to divert ground water shall not be used without an approved transfer pursuant to Section 42-222, Idaho Code, or approval of the Department if a transfer is not required.
10. This right does not grant any right-of-way or easement across the land of another.
11. This right does not authorize the irrigation of land not previously irrigated.
12. The Director retains jurisdiction to require the right holder to provide purchased or leased natural flow or stored water to offset depletion of Lower Snake River flows if needed for salmon migration purposes. The amount of water required to be released into the Snake River or a tributary, if needed for this purpose, will be determined by the Director based upon the reduction in flow caused by the use of water pursuant to this permit.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Boise, this 2nd day of September, 20 08.



JOHN WESTRA
WESTERN REGIONAL MANAGER

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
STATEMENT OF COMPLETION
FOR SUBMITTING PROOF OF BENEFICIAL USE

FOR OFFICE USE ONLY

Amt. of Fee \$: _____
Receipt No. _____
Receipt By: _____
Date Received: _____

The Idaho Department of Water Resources considers this form a statement by the permit holder(s) that development of a water right has been completed and that water has been applied to beneficial use to the extent described below. **This form must be accompanied by an examination fee, when necessary, or by a completed Beneficial Use Field Report prepared by a certified water right examiner.** Please refer to the instructions and fee schedule for this form. If ownership of the permit has changed, please contact any Department office or visit the Department's website at: www.idwr.idaho.gov for an *Assignment of Permit* form. If you wish to relinquish your permit because you have not established the authorized use of the water and are not applying for an extension, please notify the Department in writing.

1. Permit No.: 63-12207 Telephone No.: 208-922-4658

2. Name of Permit Holder(s): Layne Thornton

3. Mailing Address: 3224 Swan Falls Rd City: Kuna

State: ID Zip: 83634-1732 Email: _____

4. Source of Water: Ground Water If **GROUND WATER** (well), Date Drilled: mo. 11 / yr. 2009

Well Driller: Johnston Drilling No. 92 Drilling Permit Number: 908528-857085

5. Extent of use(s) completed (as authorized by the water right permit):

Domestic (No. of households): _____ Stockwater (No. and type of stock): _____

Irrigation (No. of acres): 138 Other: _____

6. Total rate of diversion or storage volume for which proof is submitted: 2.76 cfs OR _____ acre-feet.

7. Compliance with a measuring device requirement, lockable controlling device requirement, and/or other conditions of permit: **Refer to the approval conditions on your permit and respond accordingly. The Department will not issue a license if permit conditions are not met.**

Measuring Device: Is a measuring device required?

If yes, has the measuring device been installed?

Yes ☐	No ☒
Yes ☐	No ☐

Lockable Controlling Device: Is a lockable device required to control the diversion?

If yes, has the lockable device been installed?

Yes ☐	No ☒
Yes ☐	No ☐

Other Conditions of Permit: Do the approval conditions on your permit require you to submit additional information in connection with your proof of beneficial use? If yes, list the conditions below and attach documents with the required information.

_____ Completed?

Yes ☐	No ☒
------------------------------	--

8. Fee Enclosed: \$ n/a See fee schedule on back of the instructions for filing proof of beneficial use. Proofs filed without an appropriate fee, will be considered incomplete.

9. Person to contact to accompany the Department representative during field examination of the water system.

Name: _____ Telephone Number: _____

Mailing Address: _____ City: _____

State: _____ Zip: _____ Email: _____

The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted and applied to a beneficial use. I understand that any undeveloped portion of the permit is relinquished to the State of Idaho.

Signature of permit holder: _____

(Include your title, if on behalf of company or organization)

Date: 6-30-14

Mail to: Idaho Department of Water Resources, PO Box 83720, Boise, ID 83720-0098

ATTACHMENT B

WELL DRILLERS REPORT AND PUMP CURVE

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

857085

1. WELL TAG NO. D 0055841Drilling Permit No. 908528-857085Water right or Injection well # 63-122072. OWNER: Layne ThorntonName Layne ThorntonAddress 3224 Susan Falls RdCity Kuna State ID Zip 83634

3. WELL LOCATION:

Twp. 2 North ☒ or South ☐ Rge. 1 East ☐ or West ☒Sec. 28 NW 1/4 NE 1/4 NE 1/4Gov't Lot _____ County ADALat. 43 ° 29 286 (Deg. and Decimal minutes)Long. 116 ° 27 446 (Deg. and Decimal minutes)Address of Well Site 1/4 mi. west of intersection of Kuna Rd and Blackfoot Rd. City Kuna
(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 _____

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
<u>Benitite</u>	<u>0</u>	<u>60</u>	<u>5000 lbs.</u>	<u>overlure - dry pour</u>
<u>5/8 chip</u>				

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
<u>12</u>	<u>+2</u>	<u>250</u>	<u>1/4</u>	<u>steel</u>	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 250

9. PERFORATIONS/SCREENS:

Perforations ☒ Y ☐ N Method Factory slotManufactured screen ☐ Y ☒ N Type _____Method of installation Drilled

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
<u>100</u>	<u>250</u>	<u>1/2 x 3</u>	<u>3600</u>	<u>12</u>	<u>steel</u>	<u>1/4</u>

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

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) 90 Static water level (ft) 90Water temp. (°F) 61 Bottom hole temp. (°F) 61Describe access port 2" pipe well into casing

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
<u>50</u>	<u>900</u>	<u>120</u>

Test method:

Pump ☒ Bailer ☐ Air ☐ Flowing artesian ☐Water quality test or comments: GOOD

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
<u>20</u>	<u>0</u>	<u>8</u>	<u>TOPSOIL</u>		
<u>20</u>	<u>8</u>	<u>13</u>	<u>BASALT - Broken</u>		
<u>20</u>	<u>13</u>	<u>30</u>	<u>BASALT SOLID</u>		
<u>20</u>	<u>30</u>	<u>35</u>	<u>BINDERS - BLACK ? ORANGE</u>		
<u>20</u>	<u>35</u>	<u>40</u>	<u>BASALT - SOLID</u>		
<u>16</u>	<u>40</u>	<u>110</u>	<u>BASALT - SOLID</u>	☒	
<u>16</u>	<u>110</u>	<u>121</u>	<u>TAN CINDERS / ASH</u>	☒	
<u>12</u>	<u>121</u>	<u>145</u>	<u>PEA GRAVEL - DIRTY</u>	☒	
	<u>145</u>	<u>155</u>	<u>GRAVEL - smaller - SAND CHASE</u>	☒	
	<u>155</u>	<u>165</u>	<u>SAND - CLEAN #250</u>	☒	
	<u>165</u>	<u>180</u>	<u>SAND - CLEAN #040</u>	☒	
	<u>180</u>	<u>196</u>	<u>SAND BROWN HEAVY</u>	☒	
	<u>196</u>	<u>202</u>	<u>TAN YEL-WH CLAY</u>	☒	
	<u>202</u>	<u>210</u>	<u>SAND BROWN #025</u>	☒	
	<u>210</u>	<u>221</u>	<u>SAND - WHITE some gravel</u>	☒	
	<u>221</u>	<u>235</u>	<u>SAND BROWN - SILTY</u>	☒	
	<u>235</u>	<u>250</u>	<u>CLAY WHITE</u>	☒	
	<u>250</u>	<u>-</u>	<u>SAND #040</u>	☒	

2 BAGS CEMENT PLACED
IN BOTTOM

RECEIVED

DEC 09 2009

WATER RESOURCES
WESTERN REGIONCompleted Depth (Measurable): 240Date Started: 9/7/09Date Completed: 11/10/09

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 Johnston Drilling Co. No. 92*Principal Driller [Signature] Date 12/5/09*Driller [Signature] Date 12/5/09

*Operator II _____ Date _____

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

PUMP DATA SHEET Turbine 60 Hz

Company: Layne of Idaho, Inc.
Name: Steve Cook
Date: 08/26/11

Customer: Layne Thornton
Order No: 0310-032



Pump:

Size: 11CHC (2 stages)

Type: Lineshaft
Synch speed: 1800 rpm

Curve: E3141-2

Specific Speeds:

Dimensions:

Vertical Turbine:

Speed: 1770 rpm
Dia: 8.125 in

Impeller:

Ns: 2130

Nss: ---

Suction: --- in

Discharge: --- in

Bowl size: 11 in
Max lateral: 0.75 in
Thrust K factor: 7 lb/ft

Search Criteria:

Flow: 900 US gpm

Head: 132 ft

Fluid:

Water

SG: 1

Viscosity: 1.105 cP

NPSHa: --- ft

Temperature: 60 °F

Vapor pressure: 0.2563 psi a

Atm pressure: 14.7 psi a

Motor:

Standard: NEMA

Enclosure: WPI

Size: 40 hp

Speed: 1800

Frame: 324

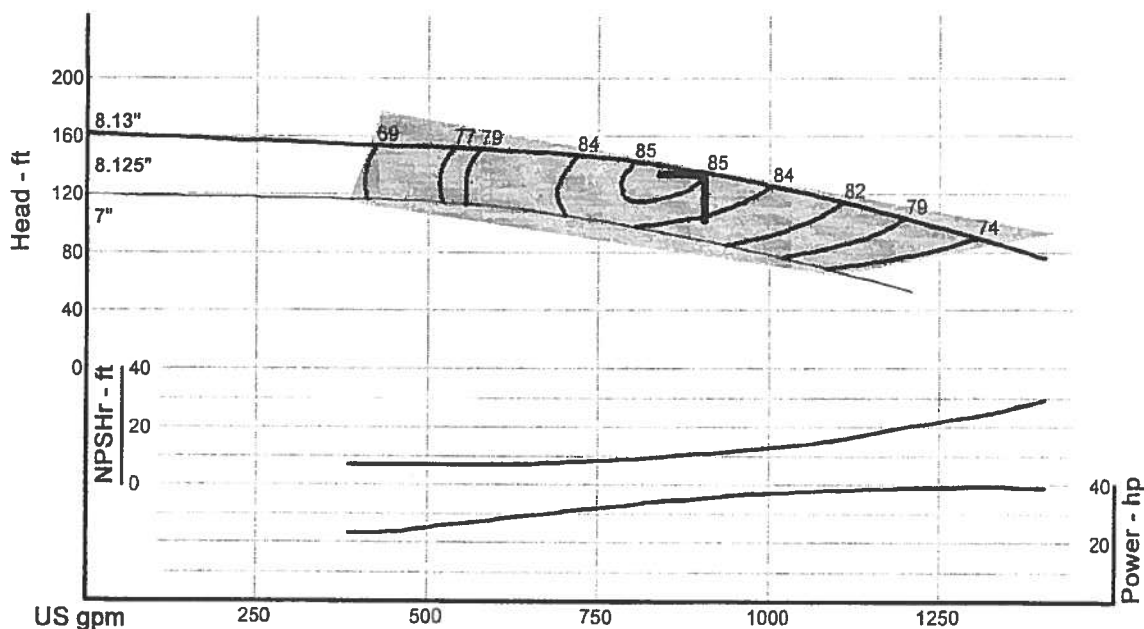
Sizing criteria: Max Power on Design Curve

Pump Limits:

Temperature: 120 °F
Pressure: 380 psi g
Sphere size: 0.68 in

Power: --- hp
Eye area: --- in²

--- Data Point ---	
Flow: 900 US gpm	
Head: 134 ft	
Eff: 85%	
Power: 35.6 hp	
NPSHr: 10.9 ft	
--- Design Curve ---	
Shutoff Head: 161 ft	
Shutoff dP: 69.5 psi	
Min Flow: --- US gpm	
BEP: 85.1% eff	
@ 853 US gpm	
NOL Pwr: 39.4 hp	
@ 1299 US gpm	
--- Max Curve ---	
Max Pwr: 39.5 hp	
@ 1300 US gpm	



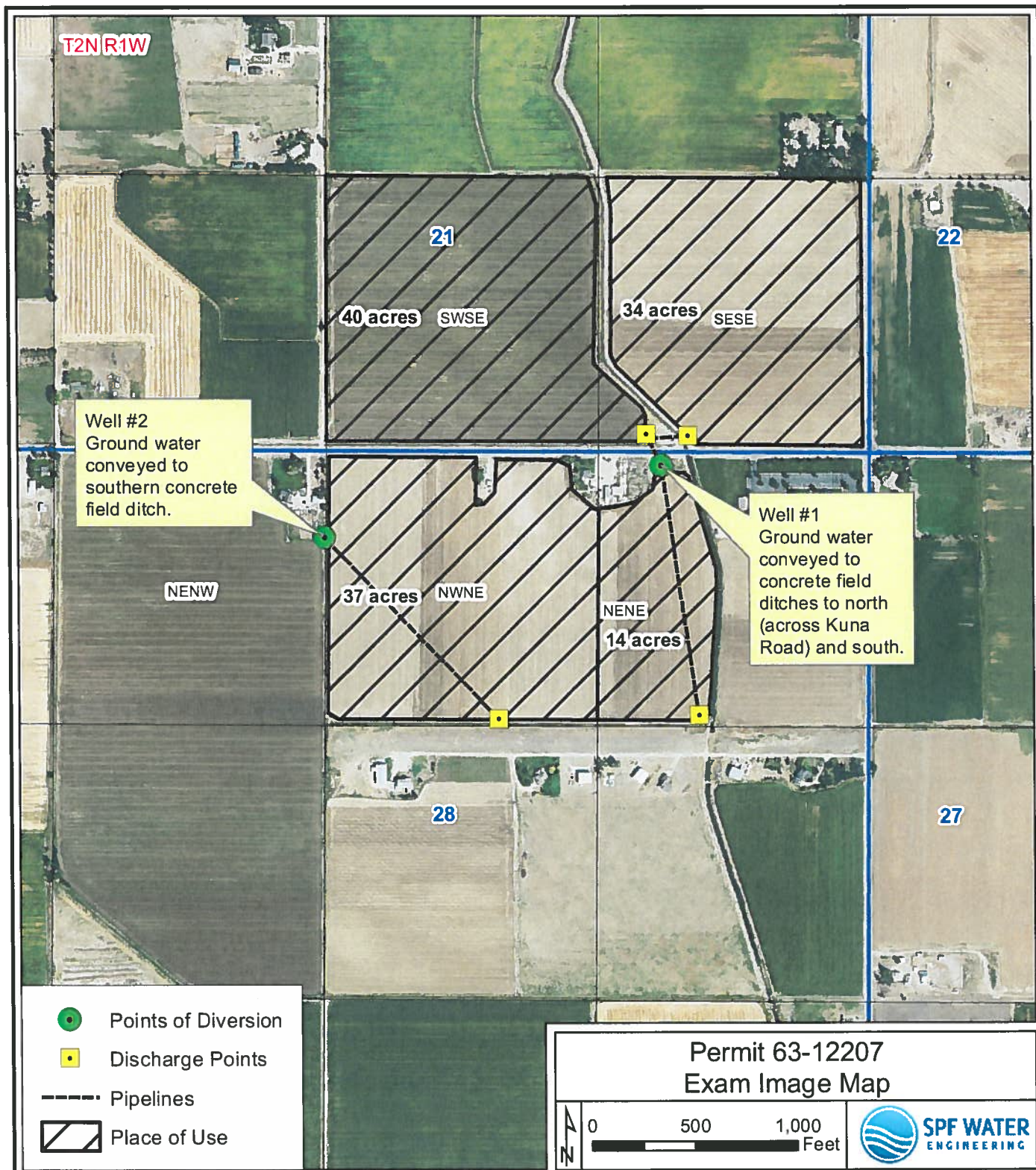
Suction Size-8" Discharge Sizes-6",8". Curves are certified for water at 60°F only. Consult factory for performance with any other fluid.

Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Pump %eff	Power hp	NPSHr ft
1080	1770	116	82.5	38.1	15.3
900	1770	134	85	35.6	10.9
720	1770	145	84	31.4	8.03
540	1770	151	77.2	26.6	7
360	1770	---	---	---	---

ATTACHMENT C

2013 AERIAL PHOTO AND TOPO MAP



T2N R1W

BENTON

21

22

40 acres SWSE

34 acres SESE

2684

Well #2
Ground water
conveyed to
southern concrete
field ditch.

NENW

37 acres NWNE

NENE
14 acres

Well #1
Ground water
conveyed to
concrete field
ditches to north
(across Kuna
Road) and south.

28

27

LATERAL



Points of Diversion



Discharge Points

--- Pipelines



Place of Use

Permit 63-12207
Exam Topo Map



0 500 1,000
Feet



SPF WATER
ENGINEERING

ATTACHMENT D
PHOTOS



Figure 1: Well #1 facing easterly. Pipeline on right conveys flow to south end of farm and the near pipeline conveys flow across Kuna Road to the north.



Figure 2: Well facing southerly showing place of use.



Figure 3: Southern discharge point. Photo facing west showing place of use.



Figure 4: Northeast discharge point. Photo facing southeasterly including place of use.



Figure 5: Northeast discharge point facing northerly showing place of use.



Figure 6: Northwest discharge point facing south, towards point of diversion.



Figure 7: At northwest discharge point facing northerly showing place of use.



Figure 8: Lavar Thornton's hand on the top of Well #2 motor (main photo of the motor did not turn out).



Figure 9: Well #2 motor nameplate.



Figure 10: Well #2 discharge plumbing.



Figure 11: Well #2 discharge to concrete ditch. Photo facing west.



Figure 12: Well #2 discharge pipe to concrete ditch. Photo facing east.

ATTACHMENT E
FLOW MEASUREMENTS

Permit: 63-12207
 Owner: Layne Thornton
 Site Name: Well 1
 POD Location: T2N R1W Section 28 NENE
 Tag No:
 Meter: GE TransPort PT878
 Type: Portable Ultrasonic Time Flight Liquid Flow Meter
 Serial Number: 7140
 Calibration Date: March 17, 2014
 Operator: Scott King

Date/Time	Volume (gal/m)	(+)Total (gal)	(-)Total (gal)	Error #
6/26/2014 10:26:01	923	586	0	0
6/26/2014 10:27:01	922	1528	0	0
6/26/2014 10:28:01	920	2454	0	0
6/26/2014 10:29:01	919	3378	0	0
6/26/2014 10:30:01	914	4313	0	0
6/26/2014 10:31:01	918	5189	0	0
6/26/2014 10:32:02	922	6158	0	0
6/26/2014 10:33:01	919	7038	0	0
6/26/2014 10:34:03	922	8016	0	0
6/26/2014 10:35:01	918	8896	0	0

Time	9 minutes
Volume	8310 gallons
Rate	923 gpm
Rate	2.06 cfs

[illegible]

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

SEE ATTACHED CFSA PHOTO.

Y Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

Y Aerial Photo Attached (required for irrigation of 10+ acres).

Y 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
	US	40	R-6229-05-390, R1002399 M		

*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: Theoretical

E. NARRATIVE/REMARKS/COMMENTS

A 12" well equipped with a 40 hp pump supplies water to 75 acres via cement ditch and siphon tubes. Applicant has agreed to use power records for determination of water use. Applicant is required to use all his surface water from Boise/Kuna Irrigation District in conjunction with use of water under this permit for irrigation of the 75 acres. Applicant has 75 shares district water which enters the property from the East in the NESENW, S28. No other rights are used

Have conditions of permit approval been met? X yes ___ no

F. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

$$\frac{40 \times 8.8 \times .7}{125 + 10 \times 2.31} = 1.66 \text{ cfs (allow 1.5 cfs per permit)}$$

NOTE: Riverside installed the pump but could not locate records for information.

Dynami head per well log estimate

PSI based on open discharge irrigation system

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 75 \times 4.5 = 337.5$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 1.5 \times 246 \times 1.9835 = 731.9$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 337.5$$

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	3/15	11/15	1.5	337.5
Totals:			1.5	337.5

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

Lori Graves –Senior Agent

Field Examiner's Name Lori Graves Date 11/3/99

Reviewer _____ Date _____

SEAL