

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 36-7967
Exam Date: 11/15/2012

1. Current Owner: BLIND CANYON AQUA RANCH INC
2775 S 1050 E
HAGERMAN ID 83332
(208)837-4806
2. Accompanied by: Gary Lemmon
Phone No: 208-280-4808
Address: Same as above
Relationship to Permit Holder: Permit Holder

3. SOURCE TRIBUTARY
WASTE WATER SNAKE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 36-4026
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

WASTE WATER NW1/4NE1/4 Sec. 17, Twp 08S, Rge 14E, B.M.
GOODING County

Method of Determination: Map

2.
PLACE OF USE: POWER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
08S	14E	17		X															

Method of Determination: Map

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.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
A0017842	On inlet pipe near wellhead				

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

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Flowmeter	Sonic	Fuji				

2. Measurements: Ran a ten minute flow check on the incoming waterline with Fuji flowmeter.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

Ten minute run yielded an average flow of 622.4 gpm or 1.39 cfs.

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

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

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

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

2. Volume Calculations for Other Uses:

$$1.39 \text{ cfs} \times 1.9835 \text{ AF/day} \times 365 \text{ days} = 1006.3 \text{ AF}$$

G. NARRATIVE/REMARKS/COMMENTS

Water is diverted from the hatchery outflow stream into a 14 inch diameter steel pipe. This pipe heads in a southwesterly direction to a point near the canyon edge, where it pours into an injection well. As the water drops into the well, in a four inch diameter pipe, it draws air along with it. The air mixes with the water as it encounters the water column in the bottom of the well.

The air separates back out and is captured between the inner delivery pipe and the well casing where it is forced back to the hatchery raceways via a 4 inch pipeline, under 3 to 4 psi of pressure. The air aids in oxygenating the fish raceways.

According to Gary Lemmon, the reason the permit was not pursued in its original form, to produce electricity by diverting the hatchery wastewater into wells and turning turbines in reverse, was twofold. First, in drilling the well, an ash layer was encountered and it was caving into the well. Mr. Lemmon's father feared the large quantity of water forced into the hole could cause slumping of the area around the fish farm. Secondly, the well would not accept more than 1.0 to 1.5 cfs of flow without backing up in the hole.

Although a measuring device was not installed, a long section of pipe was left exposed to accept a device if it was needed.

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>
POWER	01/01 to 12/31	1.390 CFS	1,006.30 AF
<u>Totals:</u>		1.390 CFS	1,006.30 AF

2. Recommended Amendments

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

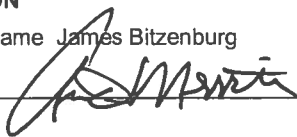
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name James Bitzenburg

Date 11-15-2012

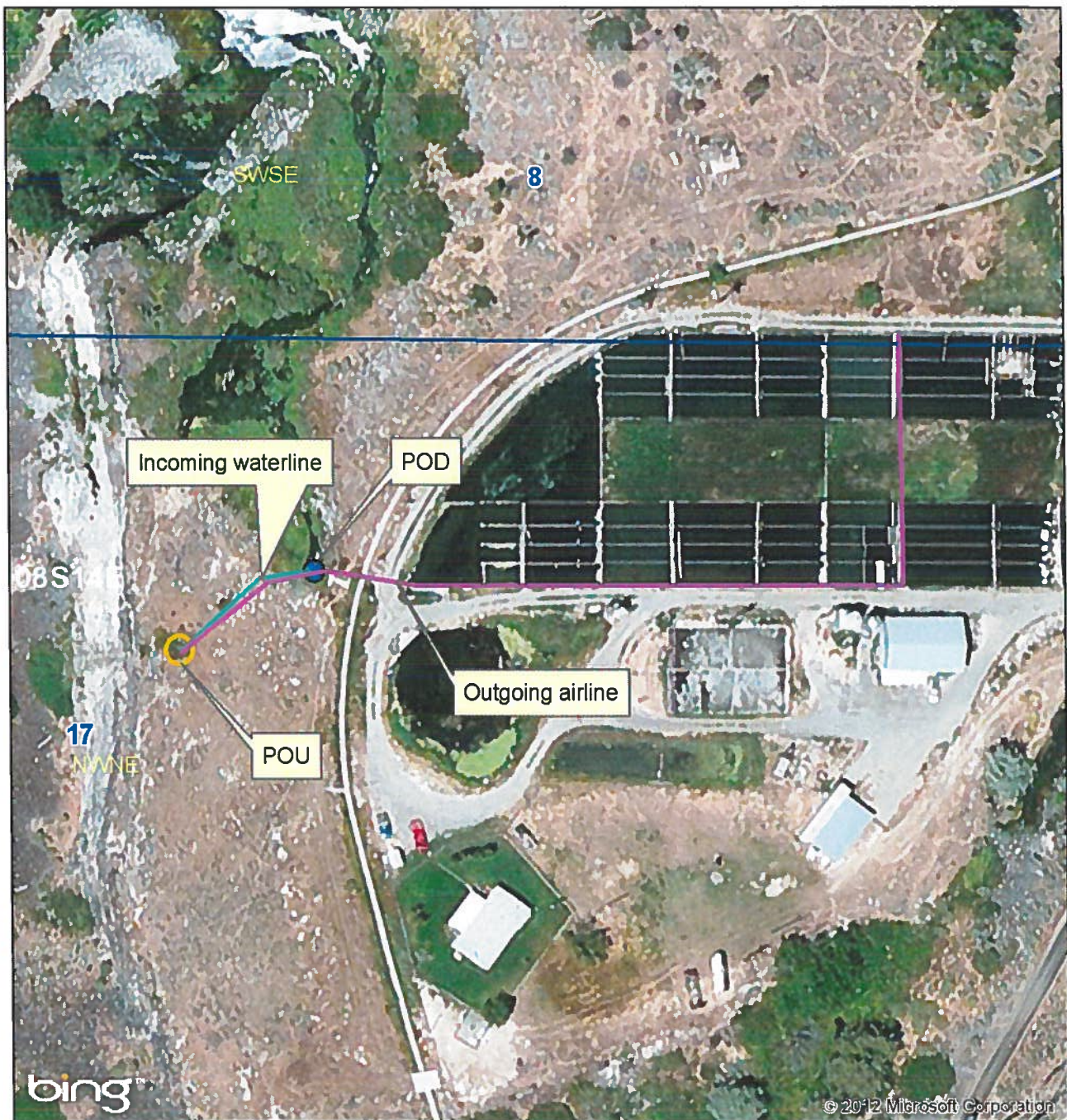
Reviewer



Date

8/12/13

Idaho Department of Water Resources



36-7967
Blind Canyon Aqua Ranch

Legend

-  Township/Range
-  Sections
-  QQ

0 0.01 0.02 0.04 Miles



11-15-12

Injection Well

GASL. Diverts from the wastewater stream flowing out of hatchery into 14" steel pipe. Dumps into well via a 4" vertical pipe and sucks air into well. Air mixes with water column and separates out between casing & inner pipe $\Rightarrow$ back to fish runs in 4" pipe.
 $\approx$ 3-4 psi pressure.

Well diameter is 16"

Attached IDWR tag A00 17842 on horizontal pipe near well head.

FUSI - 240385

Spacing = 10.75 w/ FLG15

SS = 4 sound Vel. 4760 = 97%

10 min run. Totalized 6244.0 gal 624.4 gpm
1.39 cfs.

BLIND CANYON AQUARANCH - AIR COMPRESSION POWER PROJECT

Measurement by: CYenter, JBitzenburg
11.15.2012

LOG NAME:10SPR
START :11-15 15:56
END :11-15 16:06
INTERVAL:00:01:00

11/15/2012 15:56
+1.334E+0 ft/s
+6.268E+2 gal/m
+TOTAL 0000000 gal
NORMAL

11/15/2012 16:02
+1.296E+0 ft/s
+6.087E+2 gal/m
+TOTAL 0003748 gal
NORMAL

11/15/2012 15:57
+1.327E+0 ft/s
+6.232E+2 gal/m
+TOTAL 0000620 gal
NORMAL

11/15/2012 16:03
+1.299E+0 ft/s
+6.101E+2 gal/m
+TOTAL 0004367 gal
NORMAL

11/15/2012 15:58
+1.308E+0 ft/s
+6.146E+2 gal/m
+TOTAL 0001245 gal
NORMAL

11/15/2012 16:04
+1.324E+0 ft/s
+6.218E+2 gal/m
+TOTAL 0004990 gal
NORMAL

11/15/2012 15:59
+1.346E+0 ft/s
+6.322E+2 gal/m
+TOTAL 0001871 gal
NORMAL

11/15/2012 16:05
+1.339E+0 ft/s
+6.288E+2 gal/m
+TOTAL 0005612 gal
NORMAL

11/15/2012 16:00
+1.333E+0 ft/s
+6.259E+2 gal/m
+TOTAL 0002491 gal
NORMAL

11/15/2012 16:06
+1.297E+0 ft/s
+6.091E+2 gal/m
+TOTAL 0006224 gal
NORMAL

11/15/2012 16:01
+1.340E+0 ft/s
+6.293E+2 gal/m
+TOTAL 0003120 gal
NORMAL

622.4 GPM
1.39 CFS

ANDREW
23-2544

ANDREW WELL DRILLING

VERL J. ANDREW
Phone 522-2823

Contractors

Phone 522-2794

1268 E. 17th St., Idaho Falls, Idaho

Pump and Well Drilling Equipment Installed

PURE DRINKING WATER IS THE ESSENCE OF LIFE, LET US DRILL YOUR WELL, AND YOU WILL BE SATISFIED.

Customer: George H. Lemmon
RANCH EQUIPMENT
Address: Heppnerman, Idaho.
Feet to water: 140

DRILLER: Dale

RIG NO. 2L3 Domestic ☐ Industrial ☒ Municipal ☐

Irrigation ☐ Test ☐ Other ☐

Location: _____

Description: _____

RIG TIME:

REMARKS:

FOOTAGE:

FORMATION:

14-54 MOVED RIG & EQUIPMENT
SET UP

5-54 STARTED DRILLING

0-4 CLAY

4-10. GRAY BASALT FIRM

10-16 " " "

16-24 BROKEN GRAY "

24-30 FIRM " "

30-33 " " "

33-40 " " "

40-46 " " "

46-50 BROKEN " "

50-52 " " "

52-60 FIRM " "

60-65 " " "

65-70 " " "

70-74 " " "

74-80 BROKEN " "

80-85 " " "

85-90 " " "

90-96 " " "

96-100 BROKEN " "

CR: RANGE EQU.

DRILLER: DAVE

PAGE # 2

E:

RIG TIME:

REMARKS:

FOOTAGE:

FORMATION:

13.

SPRING ~~BEING~~ MUDED
UP @ ABOUT 140

WATER

"

PAVEING 17AL

6-18-84

100-108	"	"	"
109-115	FIRM	GRAY	"
115-120	"	"	"
120-125	"	"	"
125-131	BROKEN	"	"
131-135	FIRM	"	"
135-140	"	"	"
141-150	BROKEN	"	"
155-158	FIRM	"	"
158-161	"	"	"
161-170	CINDERS		
170-176	CLAY		
176-180	CINDERS		
180-185	"	"	"
185-188	"	"	"
188-190	FIRM		

Memorandum

To: File: 36-8299

From: Tim Luke

Date: May 17, 2002

Re: Ground Water as Source of Water

This water right made a list of ground water rights in the Thousand Springs GWMA for review of potential curtailment due to location within the GWMA 10K impact area and because ground water is listed as a source of water. It is my opinion that ground water should not be included as a source but rather the source is limited to springs. I base this opinion on my past inspections of the hatchery and diversion source in addition to review of this permit.

I believe there may have been some confusion about use of ground water since a ground water well was proposed in connection with the hydropower use that was sought under the original application. Hydropower use has since been withdrawn. There may be further confusion due to reference of an existing well used for injection of wastewater from the hatchery. I checked the injection well permit 36-w-151 on this date and found that the well is only used to receive water from the hatchery settling pond for purpose of generating compressed air that is then transferred to hatchery raceways. The injection well and permit may have an additional benefit of bringing the facility into compliance with NPDES permits.

MICROFILMED

JUN 19 2002



Point of Diversion- Note compressed air pipeline returning to hatchery(Arrow)



Injection Wellhead – Air is drawn into well at points shown by arrows

Incoming waterline(left) and outgoing compressed air pipeline(right)

