

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No. 63-33084

1. Owner: Kimberly Bailey Phone No. (208) 585-3598

Current Address: 8982 Reflections Ln., Middleton ID 83644

2. Accompanied by: Chris Bailey EXAM DATE: 8/28/2009

Address: same as above Phone No. same as above

Relationship to Permit Holder: husband

3. Source: ground water tributary to Boise River

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Canyon Co. Ditch Co. shares

2. Other water rights with the same point of diversion: None

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
				SW NW	10	4N	2W	Canyon	Field exam

2. Place(s) of Use:

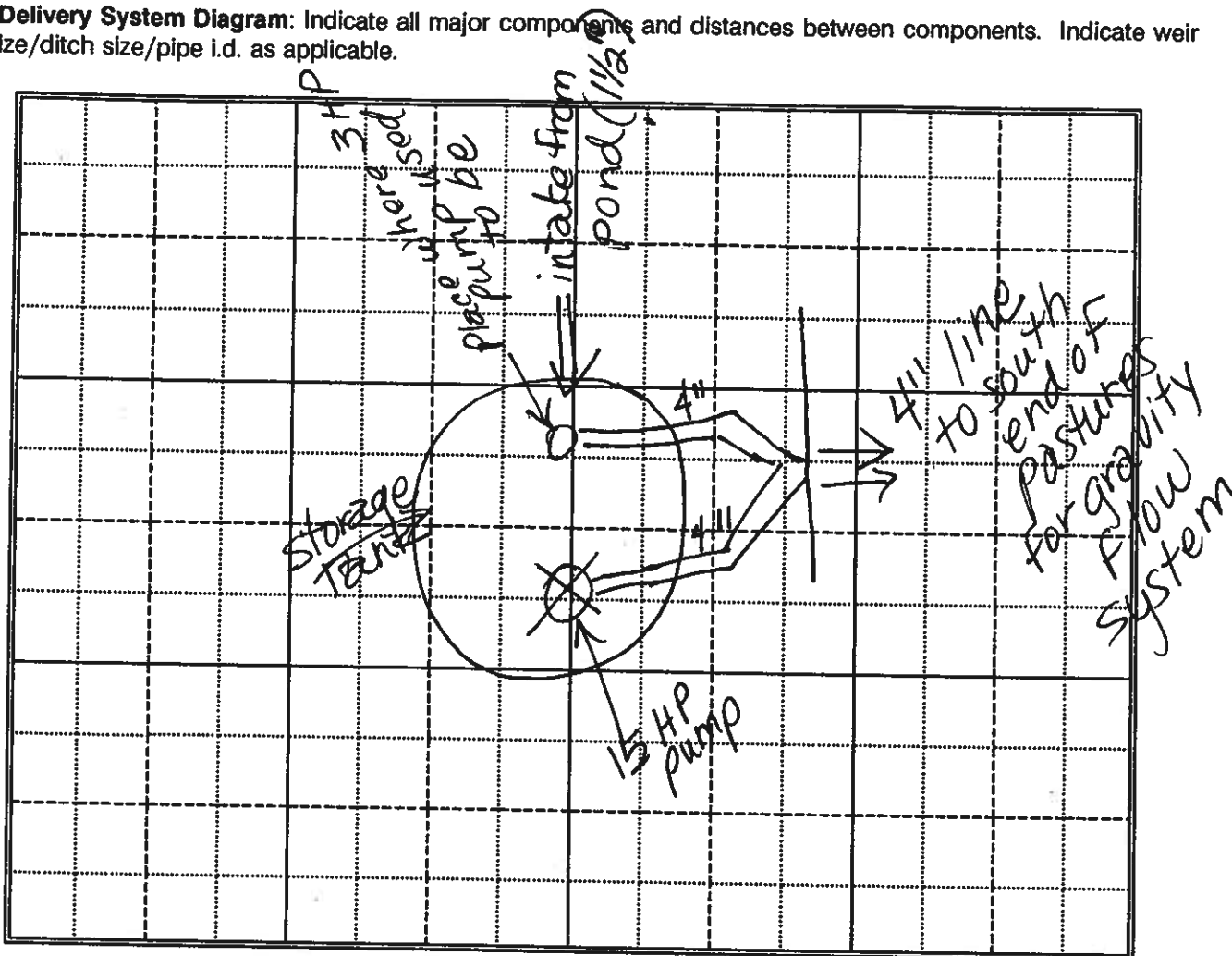
Indicate Method of Determination

Indicate Method of Determination

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	2W	10							1.0 1.2										1.2
"	"	"							X (aesthetic storage)									1.0	

Permit limits to 1.0 acre - sent letter advising of this

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



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
	Franklin	15	2366039020	Submersible	

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

D. FLOW MEASUREMENTS *see theoretical on page 4*

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: 1.5" intake pipe approximately 5' from surface to holding tank.

E. NARRATIVE/REMARKS/COMMENTS

Right is used for irrigation of pastures south of house & pond for aesthetic storage purposes. Irrigation of lawn area around home is from domestic well. Rt. holder intends to irrigate land around pond in future. Will fill an additional water right for land over the 1 acre covered under this permit.

Pond is about 110' diameter and 15' deep per right holder. Pond used to be V shaped; now circular. 1 1/2" intake pipe to storage tank & pump in ~~the~~ pump house. Distributes water to field with 15 HP pump & 4" output pipes to gravity flow on fields. Each field has a valve to open up for flood irrigation.

Pump power motor # 40183905
04N02W 1001 on side of pumphouse.

Mr. Bailey stated pump had been installed by Burgess Pump in Middleton but they had no records of this. Rex Han @ Burgess, a system like this would put out about 300 gpm. This figure is very close to the amount I found in theoretical calculation.

Tax lot = 3.4 acres total. Parcel # R2393401600.

Have conditions of permit approval been met? ☒ yes ☐ no

Pumphouse could be locked to prevent use.

F. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method:

Theoretical:

$$\frac{15 \text{ HP} \times 8.814 \times .70}{5 + (2.31 \times 60)} = 0.64 \text{ cfs}$$

*assume 5' lift
permit holder stated
60 psi when system
was running*

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1 \times 4.5 = 4.5$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.03 \times 260 \times 1.9835 = 15.5$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 4.5$$

2. Volume Calculations for Other Uses:

$$\text{Pond} = \text{area} \times \text{depth} = \pi r^2 \times 15$$

$$= 3.1416 (50)^2 \times 15 = 117810 \text{ ft}^3 = 2.7 \text{ AF capacity}$$

$$\text{refill-evaporation} = \frac{43560 \text{ ft}^3/\text{AF}}{43560 \text{ ft}^3/\text{AC}} = 1 \text{ acre}$$

$$A = \pi r^2 = \frac{(3.1416)(50)^2}{43560} = 0.18 \text{ acre} \approx 0.2 \text{ AC}$$

evap @ site =

H. RECOMMENDATIONS

$$0.2 \times (45/2) = 0.75 \approx 0.8 \text{ AF}$$

$$2.7 + 0.8 = 3.5 \text{ AF}$$

1. Recommended Amounts

Beneficial Use

Period of Use

Rate of Diversion

Annual Volume

Aesthetic Storage

From

To

Q (cfs)

V (afa)

Irrigation

1/1

12/31

—

3.5 AF

3/1

11/15

0.03

4.5 AF

Totals:

0.03

8.0 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

Kay Walker

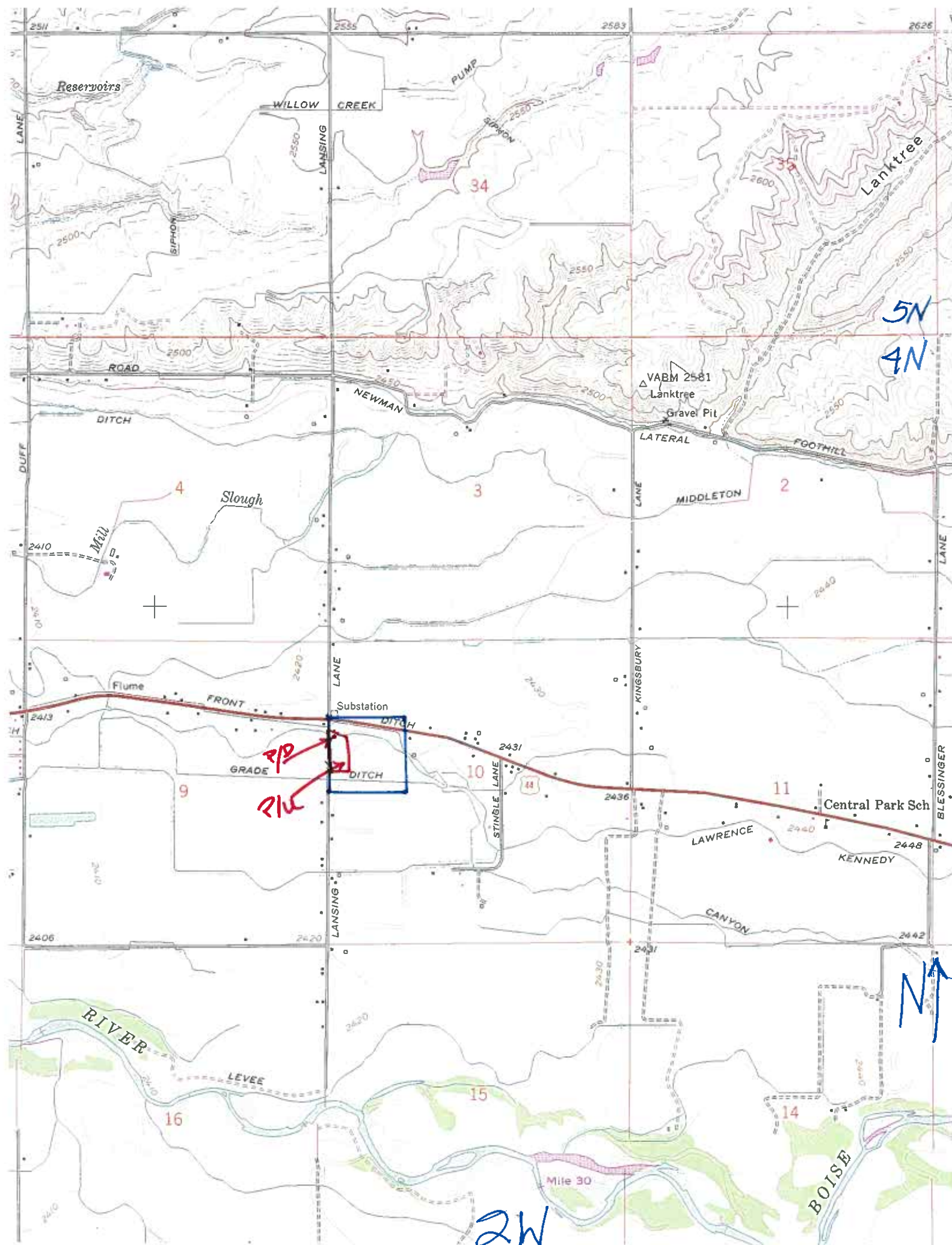
Date

4/1/2010

Reviewer

Date

SEAL





04N02W10SWNW

04N02W9SENE

Pump house

≈ 135'
0.8
≈ 260'

≈ 95'
0.4
≈ 190'

Domestic well
used here



2006 aerial



Picture of pond and aerator

Pond is approximately 110' in diameter and 15' deep. Less than $\frac{1}{2}$ acre surface area so a storage component is not required.

Pond is filled with shallow ground water and water is then distributed to pipeline for irrigation purposes.



Pump and storage tank located in pump house on west side of pond.

Exam 8/28/2009 – Permit 63-33084

Photos taken by Kay Walker



Specs on motor located in pump house.



Pasture on west side of driveway

Exam 8/28/2009 – Permit 63-33084
Photos taken by Kay Walker



Water being distributed to pasture on west side of driveway for flood irrigation



Pasture on east side of driveway

Exam 8/28/2009 – Permit 63-33084
Photos taken by Kay Walker



Pasture on east side of driveway showing flow when valve opened for flood irrigation

Exam 8/28/2009 – Permit 63-33084
Photos taken by Kay Walker

63-33084



2004 aerial



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

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

April 1, 2010

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

CHRIS AND KIMBERLY BAILEY
8982 REFLECTIONS LN
MIDDLETON ID 83644

RE: Water Rights for Irrigation

Dear Mr. and Mrs. Bailey:

Pursuant to the information gathered at the time of our field investigation of Permit 63-33084, and as we discussed, we have determined that you need to file an additional application for permit to cover irrigation of land over the 1 acre covered under the permit. We determined at time of the field examination that you had developed an irrigation use for 1.2 acres but the permit only covered 1 acre. It was also discussed that you wished to irrigate the land around the pond which was not included in the 1.2 acres found. We have done some calculations and find that you should file on 1.1 additional acres to cover your proposed use. This amount was determined as follows:

Pond = 0.3 acre

Driveway/House/Lawn (watered from domestic well) = 1.0 acre

Irrigation under Permit = 1.0 acre

Tax lot = 3.4 acres

Remainder of lot = 1.1 acre

In order to cover any use over the 1.0 acre under the permit you should file on an additional 1.1 acres. Enclosed is a partially completed application use for your convenience which reflects the 1.1 acre increase. If there is any chance that you might irrigate your lawn with the water from this system, in the future, you may want to increase the application to 1.5 acres and 0.05 cfs so that this increase would not require another application. Please complete the form and return it with a \$100.00 filing fee. If you have any questions in this matter, please do not hesitate to contact me at 334-2190.

Sincerely,

KAY WALKER

Sr. Water Resource Agent

Enclosure