

Skoro, Emily

From: Skoro, Emily
Sent: Friday, September 27, 2019 7:17 AM
To: 'V B'
Subject: RE: 63-34041 Field Exam Follow Up Questions

Vincent,

Thanks for your quick response. I appreciate your help. I will let you know if I have any additional questions.

Thanks,

Emily Skoro, PE

Staff Engineer
Idaho Department of Water Resources
Phone 208.287.4906
Fax 208.287.6700
Emily.Skoro@idwr.idaho.gov

From: V B [mailto:idahowest@yahoo.com]
Sent: Friday, September 27, 2019 6:52 AM
To: Skoro, Emily <Emily.Skoro@idwr.idaho.gov>
Subject: Re: 63-34041 Field Exam Follow Up Questions

Emily,

Thanks, for the site visit. The following are answers to your questions.

1. There is no municipal water service available for the property or in the area.
2. The pump lift height 250'.

Please contact me if you have any additional questions.

Thanks,

Vincent

On Wednesday, September 25, 2019, 9:03:28 AM MDT, Skoro, Emily <Emily.Skoro@idwr.idaho.gov> wrote:

Vincent,

Hi! Thanks for meeting with Wes and I last week to conduct the field exam. I had a few follow up questions for you.

1. Does your property have access to the City of Kuna municipal water system?
2. What is the pumping lift height in your well?

Thanks,

Emily Skoro, PE

Staff Engineer

Idaho Department of Water Resources

Phone 208.287.4906

Fax 208.287.6700

Emily.Skoro@idwr.idaho.gov

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-34041
Exam Date: 09/17/2019

1. Current Owner:
VINCENT BLOMMER PO BOX 130 KUNA ID 83634
ELISA BLOMMER PO BOX 130 KUNA ID 83634

2. Accompanied by:
Phone No:
Address:
Relationship to permit Holder:

3. **SOURCE:**
GROUND WATER

Method of Determination: Observation _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
Boise Kuna Irrigation District Rights			
Boise Board of Control Rights			

Comments: There are numerous water rights with overlapping places of use (POU) owned by the City of Kuna (municipal). The permit holder is not connected to the City of Kuna system so this is not applicable. The Boise Board of Control (irrigation) and Boise Kuna Irrigation District (irrigation) are direct overlaps to the POU. Therefore this permit is a supplemental water right to the Boise Kuna Irrigation District water. There is a domestic right 63-18897 that overlaps the POU but when reviewing 1987 aerial photography there is no home on this parcel but there is a home in the northeast corner of the 40-acre tract. Therefore, water right 63-18897 is not a direct overlap of this POU.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: There are no overlapping points of diversion.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SW $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 33, Twp 02N, Rge 01W, B.M. ADA County

Method of Determination:

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
02N	01W	33											11						11

Total Acres: 11

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
02N	01W	33											X						

Method of Determination:

3.

X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable (See Appendix A)

X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater (See Appendix A)

X Aerial Photo Attached (required for irrigation of 10+ acres) (See Appendix A)

X Photo of Diversion and System Attached (See Appendix B)

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
00071709	Grundfos	20	62737SE	Grundfos	1505200-9

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Existing Flow Meter	Octave – Sound of Science	Model # 3" AWWA C750 175 psi		173054056 Safe Max Flow 400 gpm	3"	

2. Measurements:

Max Flow = 38 – 40 psi and 89 - 90 gpm

90 GPM $\approx$ 0.2 cfs

See Appendix B for photos of flow rate

We checked the flow meter measurements by performing a sprinkler test on the low flow conditions on the northern field. We measured the pressure of three of the 9 nozzles throughout the system. We concluded that at the specific nozzle size and pressure, the flow rate shown on the flow meter was within a reasonable range of the flow meter (within 2-3 gpm). Therefore, we believe the installed flow meter is measuring the flow rate accurately.

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method: Flow Meter

Measured Flow Rate = 90 gpm/448.8 = 0.20 cfs

Irrigation Flow Rate

Permit Allows = 0.26 cfs

Irrigated Area = 11 acres

Calculated Flow Rate = 11 acres x 0.02 cfs/acre = 0.22 cfs

Domestic Flow Rate

Permit Allows = 0.04 cfs

Recommended License Flow Rates

Irrigation Flow Rate = 0.20 cfs (This is the capacity of the system.)

Domestic Flow Rate = 0.04 cfs

Total Diversion Flow Rate = 0.20 cfs

I recommend that the permit be licensed for 0.20 cfs, since that is the capacity of the system.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 11 \text{ acres} \times 4.5 \text{ afa/acre} = 49.5 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.20 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 103.1 \text{ afa} \approx 103.1 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 49.5 \text{ afa}$$

*Please note that a volume isn't required for supplemental uses.

2. Volume Calculations for Other Uses:

Domestic Use - According to Administrative Processing Memorandum #22, domestic uses are limited to 0.6 af for in-house use only.

G. NARRATIVE/REMARKS/COMMENTS

Vincent and Elisa Blommer have a water permit for a total of 0.30 cfs which includes 0.26 cfs for an irrigation beneficial use and 0.04 cfs for a domestic beneficial use. The property location is at 4555 W. Green Lane, Kuna Idaho. The owners live in a house on the property. The permit specifies an irrigated area of approximately 13 acres. The owner's primary irrigation water source is surface water from Boise Kuna Irrigation District. The surface water's pump is located on the north side of the property adjacent to Green Lane (see Appendix A). The permitted irrigation water is for a supplemental use when surface water is not available. The permit POD is located west of the house near the center of the property (see Appendix A). There are two irrigated fields on the property. Both of the fields are irrigated by wheel lines. The north field has 9 sprinkler heads with a sprinkler size of 9/64. The south field has 15 sprinkler heads with a sprinkler size of 9/64. The flow meter was checked by a sprinkler test performed on the north field. It was found that the meter appeared to be operating correctly. The meter also appeared to be operating correctly when both fields were in operation. The pump can feed the residential home, yard irrigation, orchard irrigation, and both fields (north and south). The owner installed an Octave – Sound of Science 3" AWWA C750 flow meter that was used during the field exam. We recorded the flow rate on the flow meter with the north and south field running simultaneously. The pressure on the pump was approximately 40 psi and was difficult to get the entire system pressurized which suggests that the pump was operating at maximum capacity.

After the field exam was completed, it was determined that approximately 11 acres are being irrigated from the well. Therefore, the acreage number was updated. Based on the flow meter, the flow rate was updated to 0.20 cfs for the irrigation portion, 0.04 cfs for the domestic portion, and a total flow rate of 0.20 cfs.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	
IRRIGATION	03/01 to 11/15	0.20 CFS	
DOMESTIC	01/01 to 12/31	0.04 CFS	

Totals: 0.20 CFS

Please Note: No volume will be recorded for the irrigation right because it is a supplemental water right. The 0.6 af of volume for the domestic portion of this right will be addressed in conditions to avoid the appearance that the permit is limited to 0.6 af.

2. Recommended Amendments

____ Change P.D. as reflected above ____ Add P.D. as reflected above X None

____ Change P.U. as reflected above ____ Add P.U. as reflected above X None

I. AUTHENTICATION Emily Skoro - Engineer, Staff

Field Examiner's Name Emily Skoro Date 12/27/19

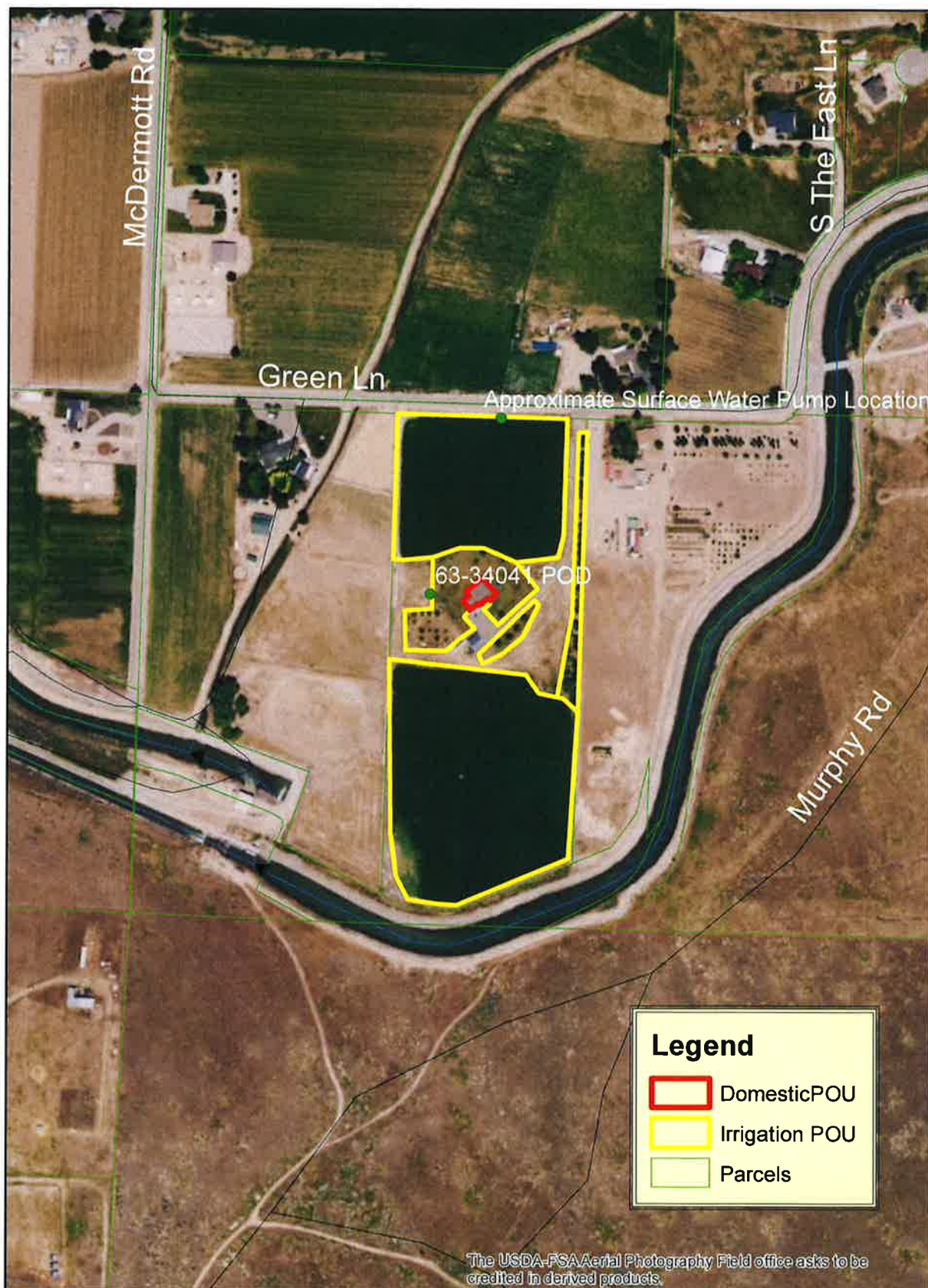
Reviewer Angeli M. Gunn Date 1/7/2020

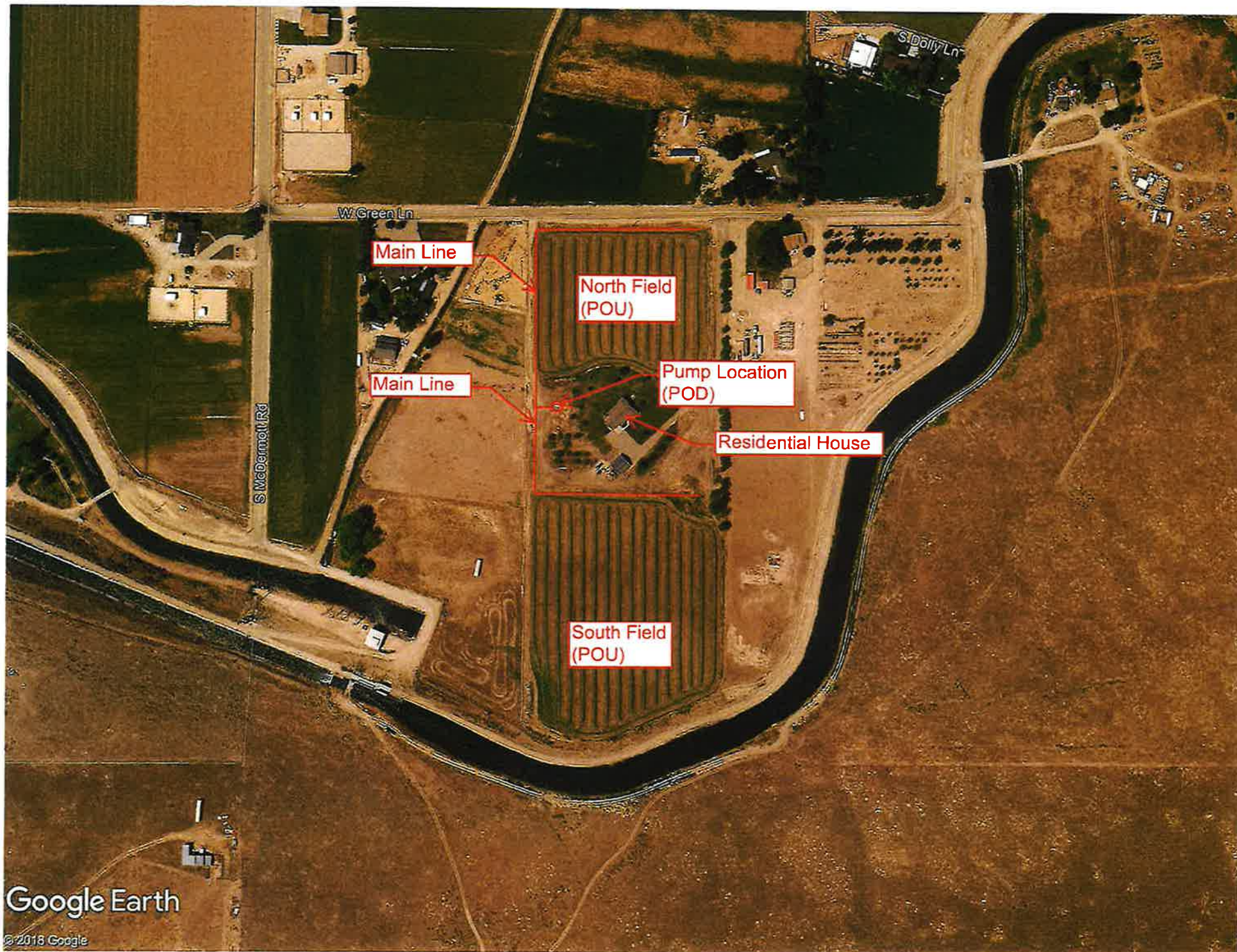
Appendix A

Site Maps

Appendix A

Site Maps

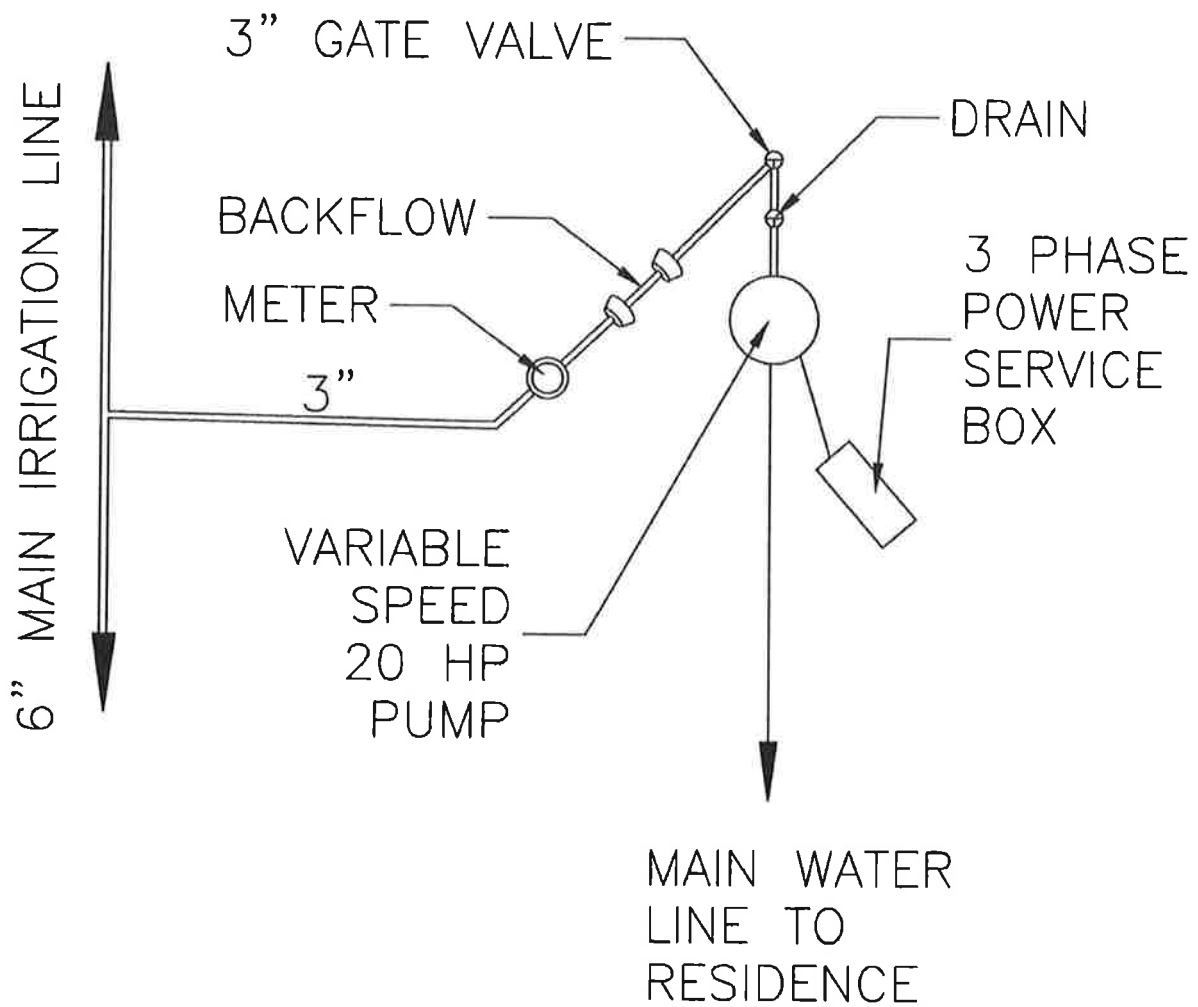




Google Earth

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PERMIT NUMBER 63-34041
4555 W GREEN LANE
KUNA ID 83634



Appendix B
Field Exam Site Photos



Photo #1 – Well and Flow Meter



Photo #2 – Max Flow Rate in GPM



Photo #3 – Max System Pressure

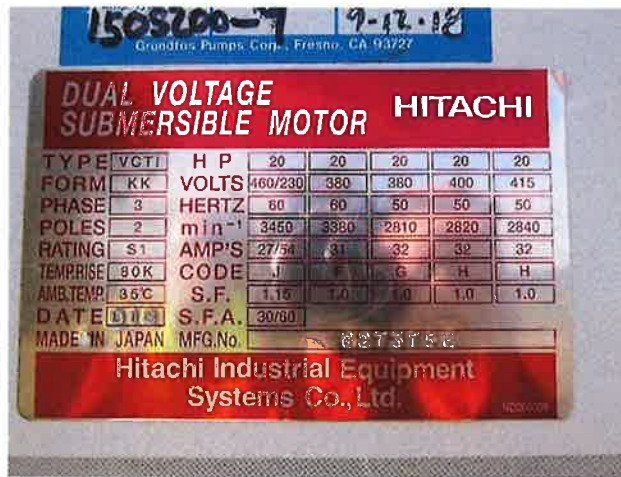


Photo #4 – Pump Motor Information



Photo #5 – Northern Field



Photo #6 – Southern Field