

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

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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. 63-339521. Owner Snake River Dairies LLCPhone No. 208-495-2034Current address 15188 S Can-Ada Rd, Melba, ID 836412. Examiner's name Scott N. King, P.E. (Examiner No. 133)EXAM DATE July 6, 20173. Accompanied by Jerry Tlucek

Email _____

Address _____

Relationship to permit holder Owner

Phone No. _____

4. Source Ground Water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use Boise-Kuna Irrigation District rights, 63-116332. Other water rights with the same source and point of diversion 63-11633**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

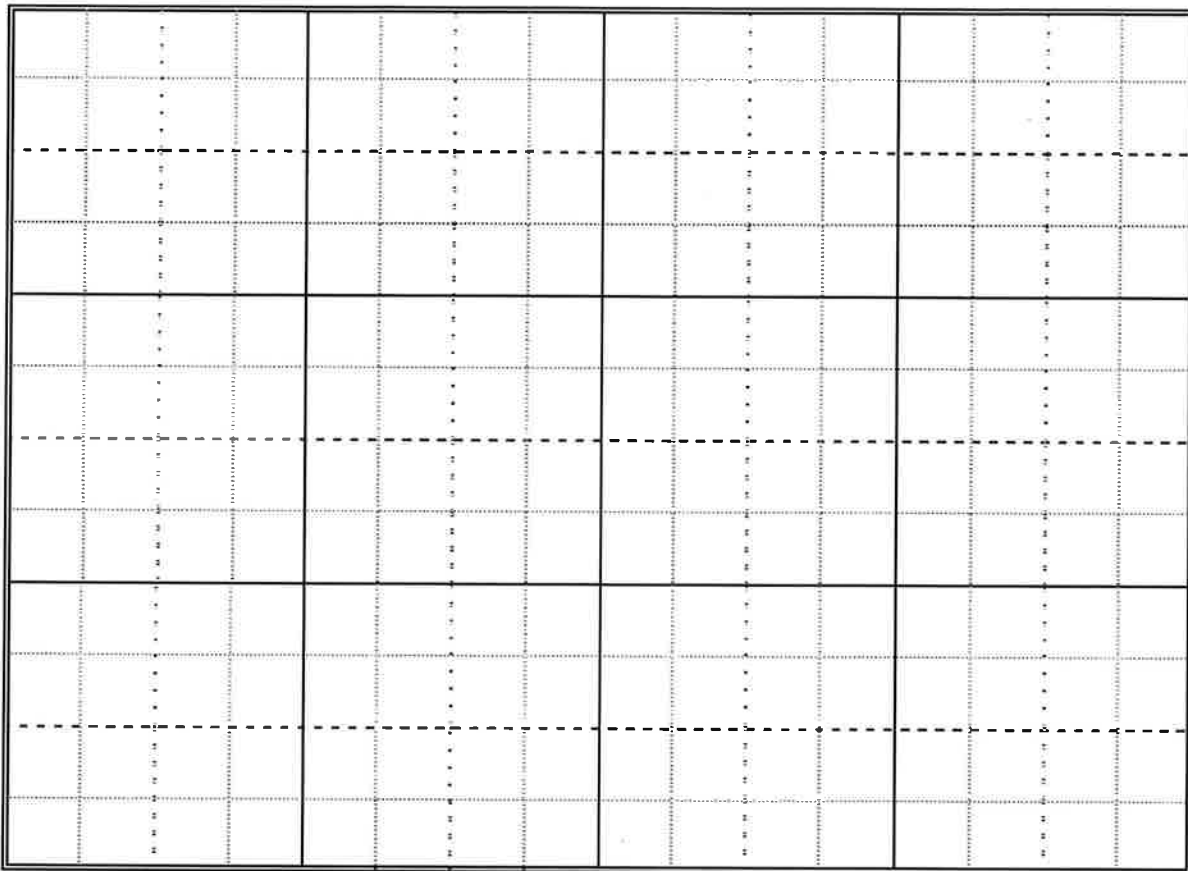
Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
1			NE	SE	24	1S	2W	Canyon	Field Exam, 2015 Aerial Photo, GPS

2. Place(s) of Use:

Method of determination Field Exam, 2015 Aerial 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	
1S	2W	24							40	30	39	39			2	6			156

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	Hitachi	25	7T 25-450		4-inch
The above motor information per the exam for 6311633. Motor information was not confirmed by this examiner.					

*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	3/27/2017

2. **Measurements:** _____

Examiner measured 0.95 cfs.

E. NARRATIVE/REMARKS/COMMENTS

The point of diversion is a well equipped with a submersible pump discharging through a 4-inch steel pipe into a larger corrugated metal pipe sump where the flow is then conveyed by gravity to pond A at NWNWSE Section 39 (see map). A pump at Pond A lifts water to nearby pond B on the east side of the large pivot at SESENE Section 39, where it subsequently gravity flows to pond C at SENESW Section 39. A set of pumps in pond C pressurize the water into the farm's distribution system including two small pivots, one large pivot, and around the perimeter to hand lines irrigating areas not under pivots. This permit, 63-33952, and licensed right 63-11633 are diverted from the same point of diversion and provide supplemental ground water for irrigation of 221 acres. Right 63-11633 is licensed for 65 acres, so 63-33952 is recommended for 156 acres. Both rights supplement primary surface water provided by Boise Kuna Irrigation District.

Water right 63-11633 is diverted from the same well and was licensed at 0.65 cfs based on a theoretically-calculated flow rate. The theoretical calculations included an assumed discharge pressure of 40 psi. However, this pump is open-discharging to the CMP sump so discharge pressure is only a few psi. A theoretical calculation based on low discharge pressure is consistent with the measured 0.95 cfs discharge:

Theoretical: $Q = (8.8) (0.7) (25) / [145 + (2.31 \times 5 \text{ psi})] = 0.98 \text{ cfs}$ (see 63-11633 exam for 40 psi calculation result).

Recommended Combined Use Limits: Rights 63-33952 and 63-11633 when combined should be limited to 0.95 cfs and 490 afa for the irrigation of 221 acres.

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:

Flow measured with ultrasonic meter = 0.95 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I,R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 156 \times 4.5 = 702 \text{ af}$$

$$V_{D,R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.95 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 489.9 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 489.9 \text{ af}$$

2. Volume Calculations for Other Uses:

None

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use From To		Rate of Diversion Q (cfs)	Annual Volume V (afa)
Irrigation	3 / 1	11 / 15	0.95 cfs	490 afa
Totals:			0.95 cfs	490 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

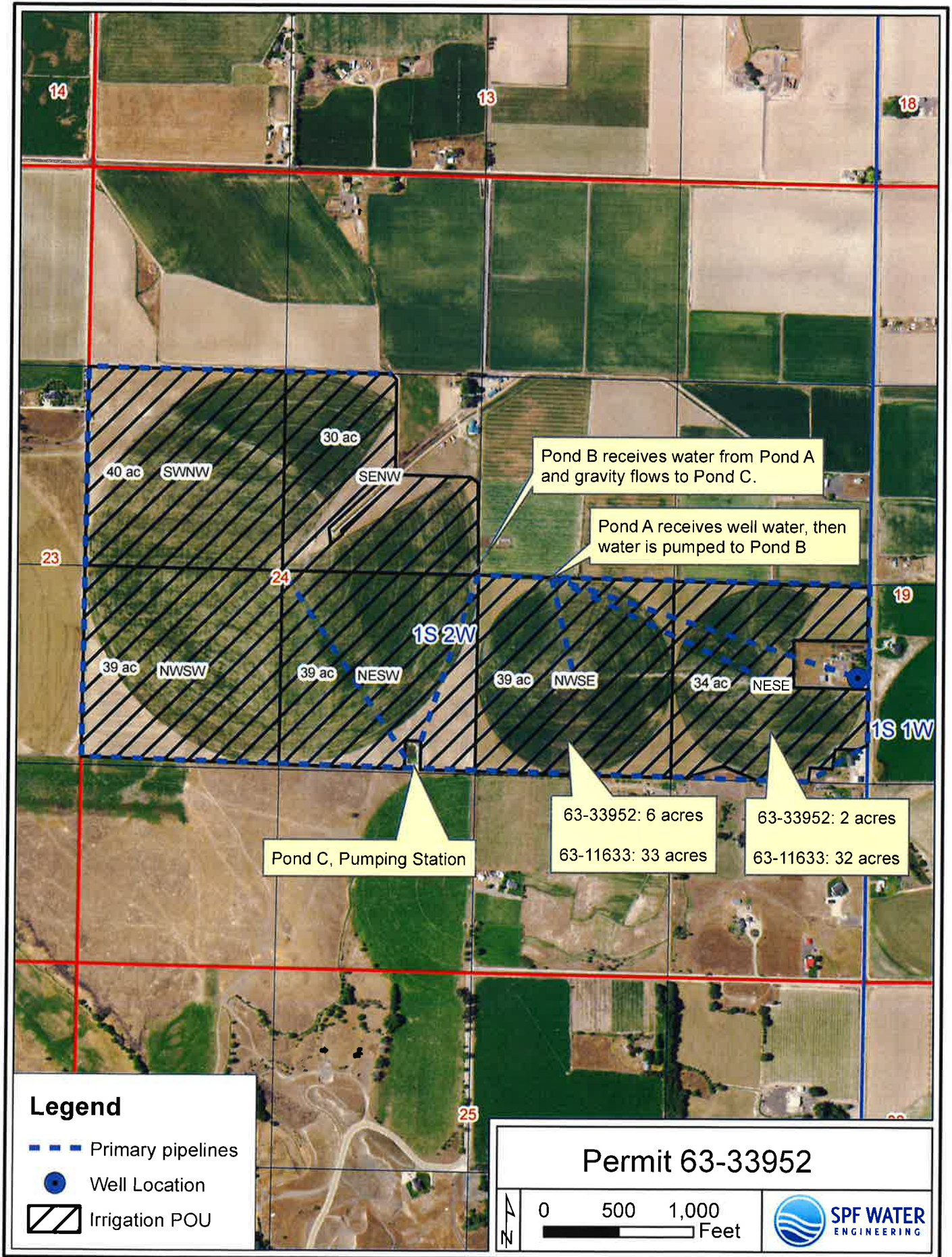
Date 11/27/2018

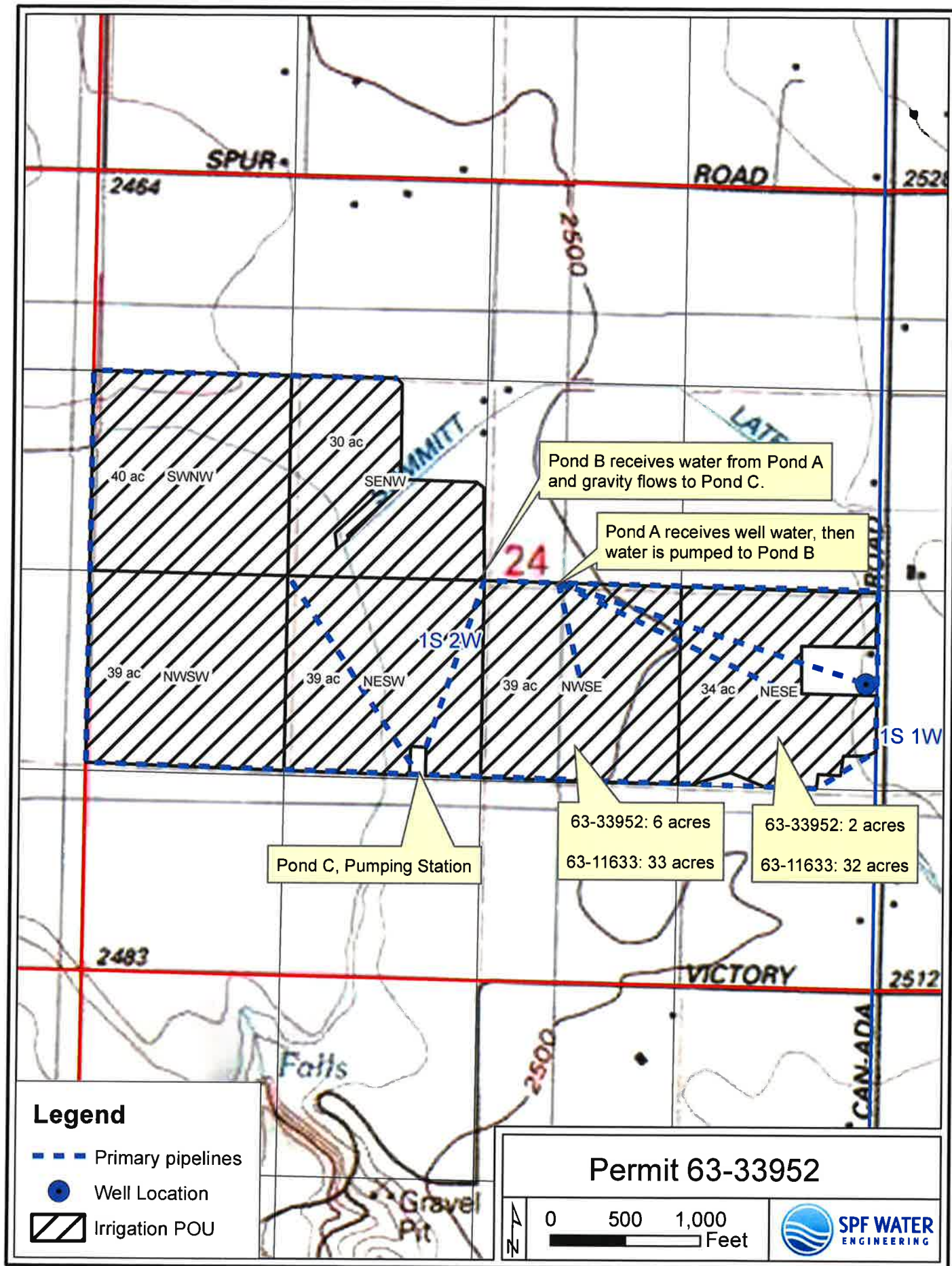
Reviewer

Date _____



Attachment A
Field Exam Map





Attachment B
System Components and Diagrams

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

USE TYPEWRITER OR
BALLPOINT PEN

State law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

WELL OWNER 495-2837
Name Robert Harris
Address 3601 Can-Am Rd. Melba, 83641
Drilling Permit No. 63-92-W-115
Water Right Permit No. 63-11633

7. WATER LEVEL

Static water level 142 feet below land surface.
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature 65 OF. Quality good
Describe artesian or temperature zones below.

8. NATURE OF WORK

- ☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as
materials, plug depths, etc. in lithologic log)

8. WELL TEST DATA

☒ Pump ☐ Bailor ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
500	147'	24

9. PROPOSED USE

- ☐ Domestic ☒ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

9. LITHOLOGIC LOG

Bore Diam.	Depth		Material	Water Yes No
	From	To		
16	0	2	Top Soil	
16	2	5	Lava Boulders & Dirt	
16	5	12	Basalt	
16	12	20	Black Cinders	
16	20	24	Big Basalt Boulders	
12	24	26	Big Basalt Boulders	
12	26	30	Basalt	
12	30	38	Basalt Boulders & Black Cinders	
10	38	40	Basalt Boulders & Black Cinders	
8	40	41	Basalt	
8	41	42	Black Cinders	
8	42	45	Basalt Boulders	
8	45	55	Broken Basalt	
8	55	58	Basalt	
8	58	59	Hard Basalt	
8	59	69	Basalt	
8	69	72	Soft Basalt	
8	72	75	Good Drilling Basalt	
8	75	77	Hard Basalt Boulders	
8	77	81	Firm Black Cinders	
8	81	93	Basalt	
8	93	95	Black Cinders	
8	95	98	Basalt	
8	98	99	Soft Cinders	
8	99	100	Basalt	
8	100	101	Soft Cinders	
8	101	115	Basalt	
8	115	116	Black Cinders	
8	116	117	Basalt	
8	117	118	Black Cinders	
8	118	119	Basalt	
8	119	122	Basalt Boulders	
8	122	145	Basalt	
8	145	150	Black Cinders Like Marbles	X
8	150	158	Basalt	
8	158	167	CINDERS LIKE MARBLES	X

10. METHOD DRILLED

- ☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☒ Cable ☐ Dug ☐ Other _____

11. WELL CONSTRUCTION

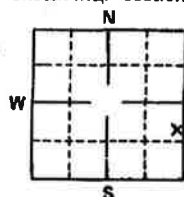
Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____
Thickness _____ Diameter _____ From _____ To _____
250 inches 10 inches + 2 feet 38 feet
_____ inches _____ inches _____ feet _____ feet
_____ inches _____ inches _____ feet _____ feet
_____ inches _____ inches _____ feet _____ feet
Was casing drive shoe used? ☐ Yes ☒ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation _____ inches by _____ inches
Number _____ From _____ To _____
_____ perforations _____ feet _____ feet
_____ perforations _____ feet _____ feet
_____ perforations _____ feet _____ feet
Well screen installed? ☐ Yes ☒ No
Manufacturer's name _____
Type _____ Model No. _____
Diameter _____ Slot size _____ Set from _____ feet to _____ feet
Diameter _____ Slot size _____ Set from _____ feet to _____ feet
Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet
Surface seal depth 38' Material used in seal: ☒ Cement grout
☐ Bentonite ☐ Puddling clay ☐ _____
Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing
☒ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent
Weld
☐ Cemented between struts.
Describe access port Plug in well cap

10.

Work started 3-10-92 finished 4-2-92

12. LOCATION OF WELL

Sketch map location must:



Feet	Feet	Feet	Feet
8	167	168	Basalt Boulders
8	168	172	Basalt
8	172	173	Black Cinders
8	173	180	Basalt Boulders
8	180	181	White Clay
8	181		Hard Basalt

WATER Yes No

13. LERS CERTIFICATION

certify that all minimum well construction standards were
led with at the time the rig was removed.

Name Johnston Drilling Firm No. 92

3795-C S.S. Rd. Melba, ID Date 4-6-92

(Firm Official)

and

(Operator)

County Canyon

NE 1/4 SE 1/4 Sec. 24, T. 1 S. R. 2 W. 1

Attachment C

Flow Rate and Volume Calculations

Permit: 63-33952
 Owner: Snake River Dairies
 Site Name: Well
 POD Location: 1S 2W 24 NESE
 Tag No: None
 Meter: GE TransPort PT878
 Type: Portable Ultrasonic Time Flight Liquid Flow Meter
 Serial Number: 7140
 Calibration Date: March 27, 2017
 Operator: Scott King

Date/Time	Volume (gal/m)	(+)Total (gal)	(-)Total (gal)	Error #
7/6/2017 10:55:03	431	8020	0	0
7/6/2017 10:56:02	423	8459	0	0
7/6/2017 10:57:03	425	8882	0	0
7/6/2017 10:58:02	424	9303	0	0
7/6/2017 10:59:02	427	9716	0	0
7/6/2017 11:00:02	423	10156	0	0
7/6/2017 11:01:02	429	10580	0	0
7/6/2017 11:02:02	429	11000	0	0
7/6/2017 11:03:03	425	11416	0	0
7/6/2017 11:04:02	427	11854	0	0
7/6/2017 11:05:02	427	12279	0	0

Time	10 minutes
Volume	4259 gallons
Rate	427 gpm
Rate	0.95 cfs

Attachment D
Exam Photos



Figure 1: Well is equipped with a submersible pump and 4-inch diameter steel discharge pipe.



Figure 2: Well discharges into a CMP sump where it then flows by gravity to Pond A (see map).

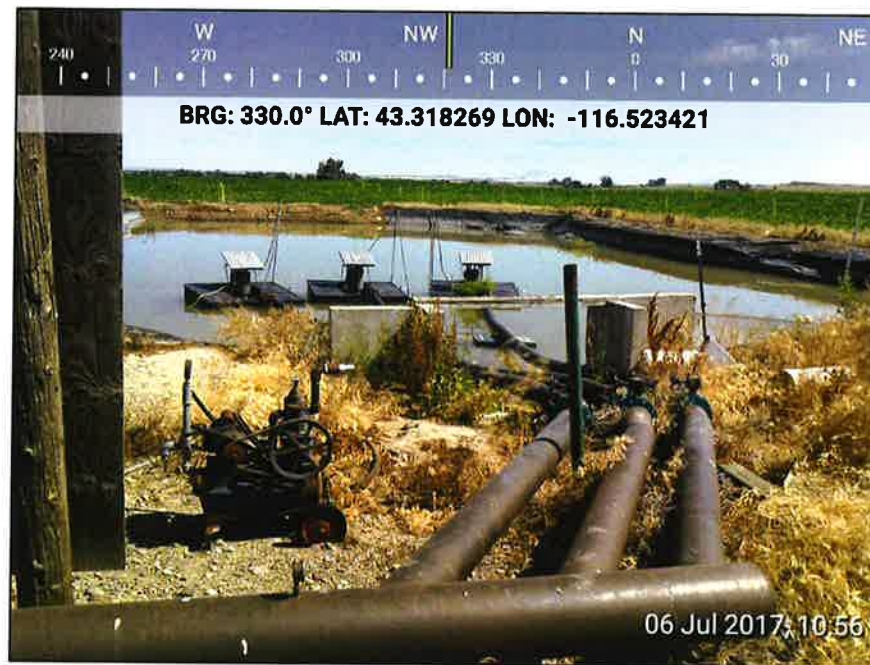


Figure 3: Pumping station at pond C pressurizes irrigation water into mainlines, then to pivots and hand lines.

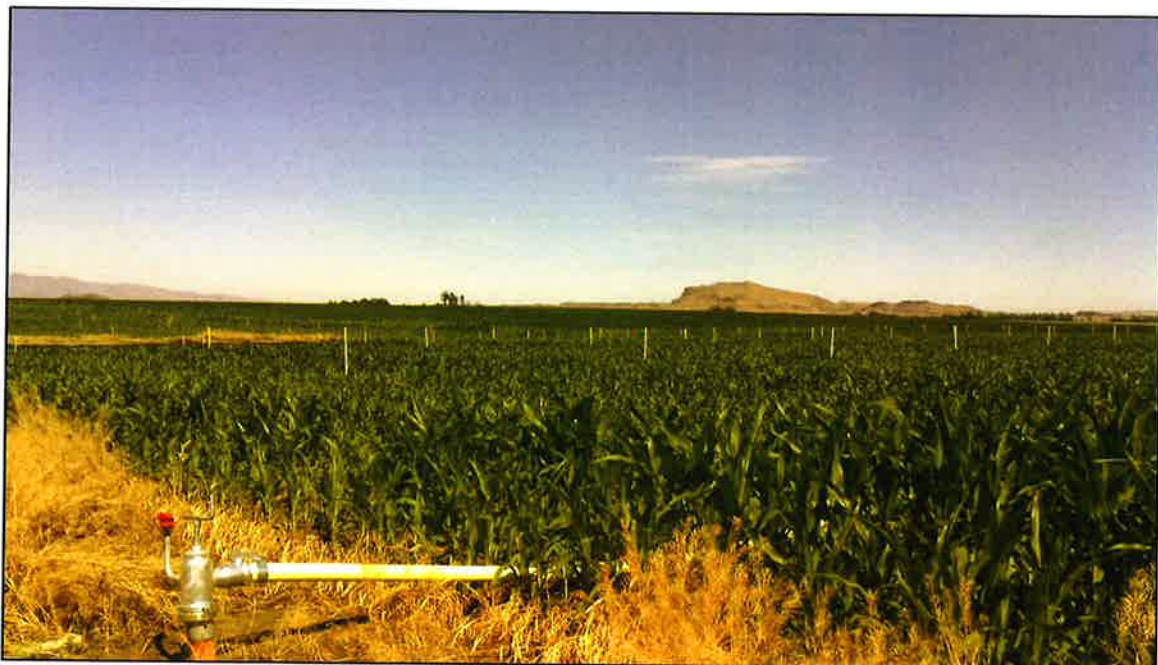


Figure 4: Solid-set handlines in a corner area.