

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 51-7319

Exam Date: 4/27/18 and 6/7/18

1. Current Owner:

ACE BLACK RANCHES 28892 HOT SPRINGS RD BRUNEAU ID 83604-5007 (208) 845-2601

2. Accompanied by: Terry BlackPhone No: (208) 845-2601Address: 28892 Hot Springs Road, Bruneau, ID 83604Relationship to Permit Holder: Registered agent of Ace Black Ranches

3. SOURCE:

UNNAMED DRAIN

TRIBUTARY:

BRUNEAU RIVER

B. OVERLAP REVIEW

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

Water Right No.	Owner	Source	Use	NENW	NWNW
51-10271	BRUNEAU BUCKAROOO COOP DITCH CO	BRUNEAU RIVER	IRRIGATION	X	X
51-10350	BRUNEAU BUCKAROOO COOP DITCH CO	BRUNEAU RIVER	IRRIGATION	X	X
51-10351	BRUNEAU BUCKAROOO COOP DITCH CO	BRUNEAU RIVER	IRRIGATION	X	X
51-2	BRUNEAU BUCKAROOO COOP DITCH CO	BRUNEAU RIVER	IRRIGATION	X	X
51-3	BRUNEAU BUCKAROOO COOP DITCH CO	BRUNEAU RIVER	IRRIGATION	X	X
51-5	BRUNEAU BUCKAROOO COOP DITCH CO	BRUNEAU RIVER	IRRIGATION	X	X

Comments: Overlapping irrigation water rights with Bruneau Buckaroo Coop Ditch Co (BBCDC) exist at the place of use.

Currently, canal shares are only used on the upper fields closer to Hot Springs Road and are not used at the place of use for water right 51-7319; however, wastewater from BBCDB irrigation water is comingled with this water right to irrigate the place of use. The license will be conditioned to address this overlap (condition WB7).

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

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

UNNAMED DRAIN NW¼NE¼ Sec. 31, Twp 06S, Rge 06E, B.M. OWYHEE County

Method of Determination: Field exam, GPS, aerial imagery2. **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	
06S	06E	31		0.3			11.0												11.3

Total Acres: 11.3

Method of Determination: Field exam, aerial imagery

3. MAPS

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

 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.

 X

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

 X

Photo of Diversion and System Attached

 X

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
N/A					

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Serial No.	Calib. Date
FlowTracker	P4554	Unknown

 X

Additional Computation Sheets Attached

2. Measurements:

Discharge: **0.04 cfs**

E. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 11.3 \text{ acres} \times 4 \text{ af/a/yr} = 45.2 \text{ af/yr}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.04 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 20.6 \text{ af/yr}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \mathbf{20.6 \text{ af/yr}}$$

F. NARRATIVE/REMARKS/COMMENTS**History:**

Water permit 51-7319 was issued in December 2014 and authorized the use of spring water, tributary to the Bruneau River for irrigation. An application was filed for this right in 1989 and a pre-permit field examination was completed by IDWR in November of that year to determine the source of water and to estimate flow rates. During the pre-permit field examination, the flow rate was measured on the crest of a portable 2' Cipoletti weir. A flow rate of 0.28 cubic feet per second of flow was measured at that time.

The permit application was held by IDWR and was not processed until 1993 due to property's location within the Swan Falls Trust Water Area and subsequent moratorium on new consumptive uses of public water. An updated Application for Permit was submitted in 1993. The application was still pending at IDWR in 2014. A second pre-permit site visit was conducted in October of 2014 to determine the water source for both this permit and permit 51-7318. At that time, springs were determined to be the water source. A diversion rate of 0.28 cfs was issued for the permit based on the flow rate that was measured during the pre-permitting exam in 1989.

Dan Nelson and I visited Ace Black Ranches for the licensing field exam on April 27, 2018. At that time, there was some flow from 51-7319; however, the owner said the flow increases over time during the summer as the fields are irrigated. The water source for this permit is a drainage ditch running east-west between two fields. After the point of diversion for this permit, a waste ditch from the south joins the drainage ditch bringing in wastewater from the fields that are irrigated with Bruneau Buckaroo Coop Ditch Company (BBCDC) water. The south drain then continues on collecting some additional wastewater from the field to the north that is irrigated with BBCDC. Water is later diverted from the ditch at the place of use for irrigation. The place of use is irrigated in combination with wastewater from the fields to the east.

After consultation with Department staff, based on the fact that the flow increases over the summer as the fields are irrigated and there is minimal flow during the non-irrigation season, it was advised that the source of water for this license be defined as an unnamed drain tributary to the Bruneau River.

A second site visit was conducted on June 7, 2018 in order to measure the flow at a time where flows are typical for the irrigation season. A flow rate of 0.04 cfs was measured using a FlowTracker.

System Description:

The water for this permit is diverted from the unnamed drain (called "South Drain" on the attached system diagram map) between the two fields. Originally BBCDC water was diverted through a ditch at the top of the field to the north of the drain and all of the wastewater in that field was diverted into the drain and delivered to the point of diversion. Currently the field to the north is irrigated with a sprinkler system, so there is very little wastewater from the field. The 1980 aerial photos suggests that there was a ditch that ran across the north end of the field and then discharged into a second ditch that flowed to the point of diversion. This ditch discharged into the northwest corner of the place of use. The 2013 aerial photo also suggests that this ditch is still in use, but it discharges now into another drain that is delivered to the drain in northwest side of the place of use. The lower end of the field can be irrigated from this drain. The main source of water used to irrigate this field is the unnamed drain associated with this permit and wastewater coming from the farm to the south of the property. The farm to the south was historically owned by Ace Ranches, but it has recently been sold to a relative. The wastewater from this farm is still used, and an application for permit has been filed to cover the water use for this permit.

Points of Diversion:

The point of diversion is located in the unnamed drain just before the waste ditch joins the drain from the south (see map). This location is consistent with the application which sought a water right for the unnamed drain in the field (which at the time described springs arising from the field) rather than the waste ditch from the south. A GPS waypoint was taken at the point of diversion at the time of the field exam. It appears as though the permitted point of diversion was incorrect as the permitted section is 30, even though the permit's map shows section 31. Section 31 is the accurate section where the point of diversion is located. Also, the point of diversion is located in the NWNE quarter-quarter rather than the SENE as permitted. An amendment will needed to address these changes.

Place of Use:

According to available tax parcel data, Ace Black Ranches is the owner of the place of use. The water is used to flood irrigate approximately 11.3 acres. The place of use for the permit only included the NWNE of Section 31 and did not include the NENW where the water is actually used so an amendment will be needed for the place of use.

Diversion Rate:

A flow rate of 0.04 cfs was measured using the FlowTracker and will be recommended for the license.

Diversion Volume:

Diversion volume was calculated in Section E of this report based on the number of acres irrigated at the place of use and the irrigation requirement in the place of use location. The calculated value of 20.6 afa will be recommended for the license.

Overlap:

Bruneau Buckaroo Coop Ditch Company water rights overlap the place of use and additional wastewater is combined with water for this water right to irrigate the place of use including the waste ditch from the south which connects in to the drain after the POD for this permit, and additional seepage into the drain from the surrounding fields. The license will be conditioned to address the overlap with BBCDC water rights and the applicant is in the process of applying for permits for these additional sources of water.

Ownership:

The owner of permit 51-7319 is Ace Black Ranches and this reflects current ownership.

Conditions:

Conditions 3 (01M), 4 (R64) 5 (004), and 8 will be carried over to the license. Condition WB7 will be added to address combined limits.

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

G. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/01 to 11/15	0.04 CFS	20.6 AFA

2. Recommended Amendments

☒ Change POD as reflected above ☐ Add POD as reflected above ☐ None

☒ Change POU as reflected above ☐ Add POU as reflected above ☐ None

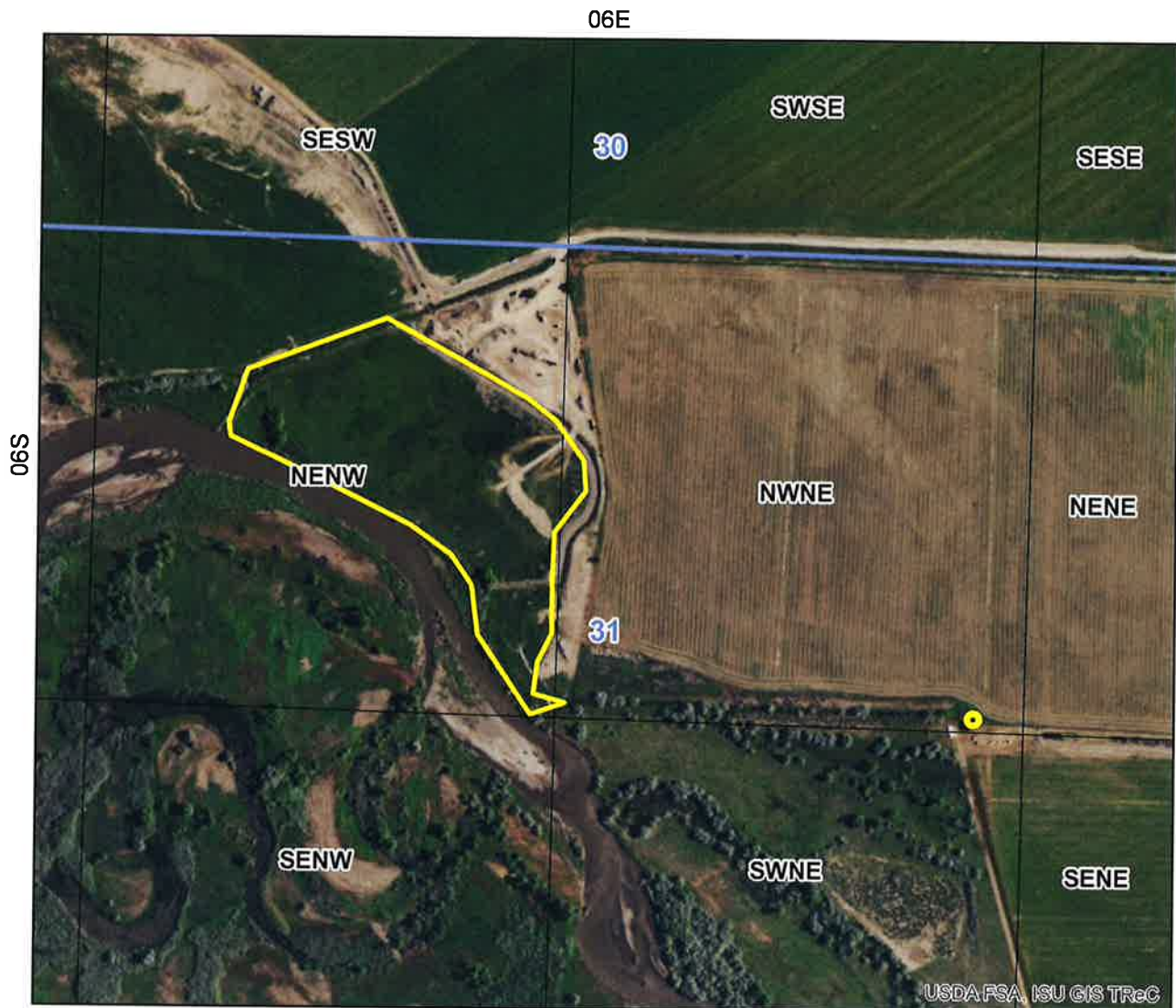
H. AUTHENTICATION – Rachael Smith, Sr. Water Resource Agent

Field Examiner's Name *Rachael Smith* Date 6/20/18

Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Attachment to Field Exam
51-7319

This map depicts the IRRIGATION place of use boundary for this water right
and is attached solely for illustrative purposes.

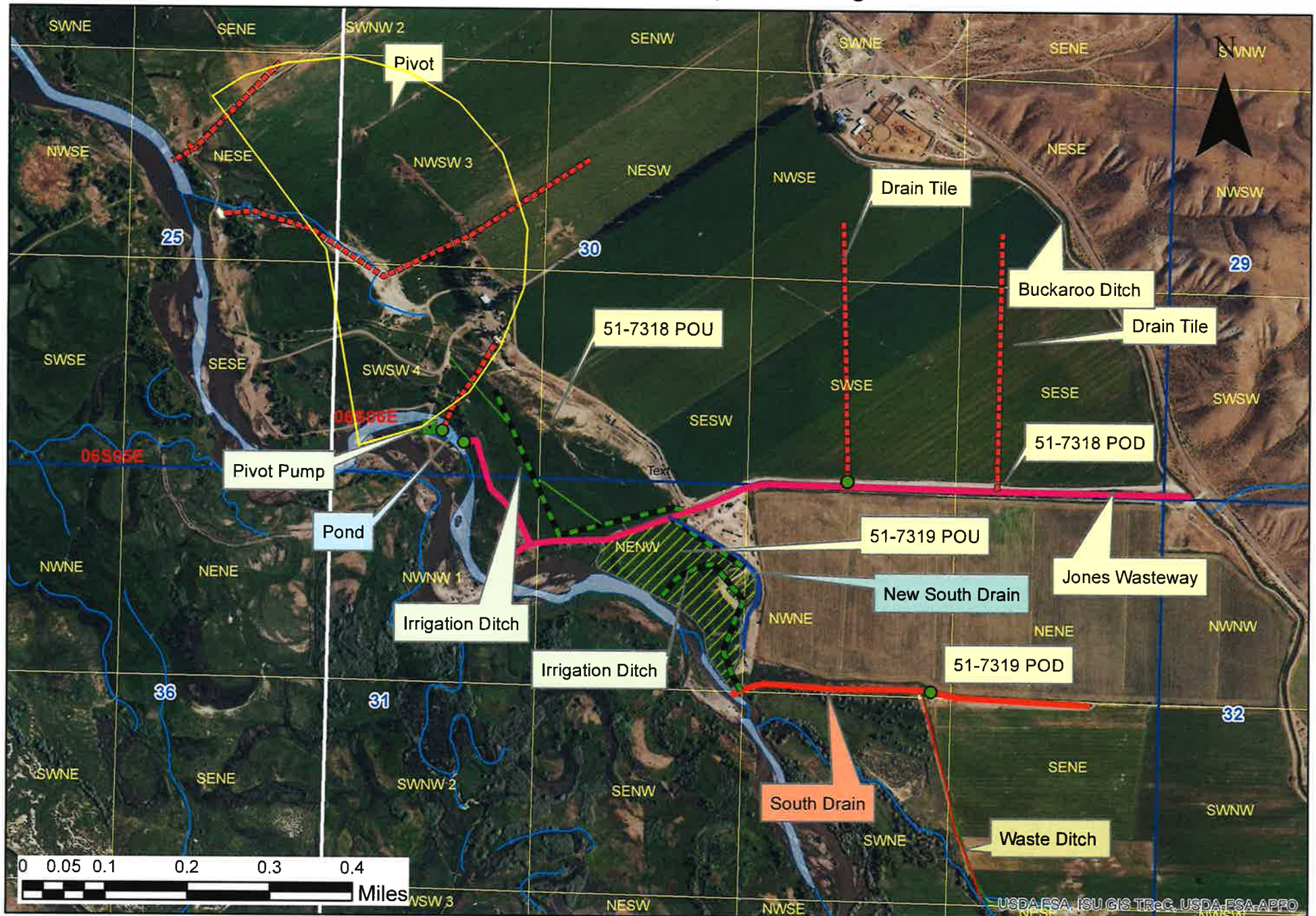


-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections



0 0.05 0.1 0.2 Miles

Water Right 51-7319 System Diagram



Field exam completed 4/27/18 and 6/7/18

Discharge Measurement Summary

Date Generated: Mon Jun 11 2018

File Information

File Name 53-7319.WAD
Start Date and Time 2018/06/07 09:24:10

Site Details

Site Name
Operator(s) DO

System Information

Sensor Type FlowTracker
Serial # P4554
CPU Firmware Version 3.9
Software Ver 2.30
Mounting Correction 0.0%

Units (English Units)

Distance ft
Velocity ft/s
Area ft²
Discharge cfs

Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	1.1%	0.0%
Velocity	4.1%	0.0%
Width	0.4%	0.4%
Method	5.5%	-
# Stations	17.4%	-
Overall	18.8%	1.0%

Summary

Averaging Int.	40	# Stations	4
Start Edge	LEW	Total Width	1.300
Mean SNR	44.0 dB	Total Area	0.075
Mean Temp	60.21 °F	Mean Depth	0.058
Disch. Equation	Mid-Section	Mean Velocity	0.5683
		Total Discharge	0.0427

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	09:24	1.30	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	09:31	1.50	0.6	0.100	0.6	0.040	0.7497	1.00	0.7497	0.020	0.0150	35.2
2	09:33	1.70	0.6	0.100	0.6	0.040	0.5023	1.00	0.5023	0.055	0.0276	64.8
3	09:33	2.60	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

Discharge Measurement Summary

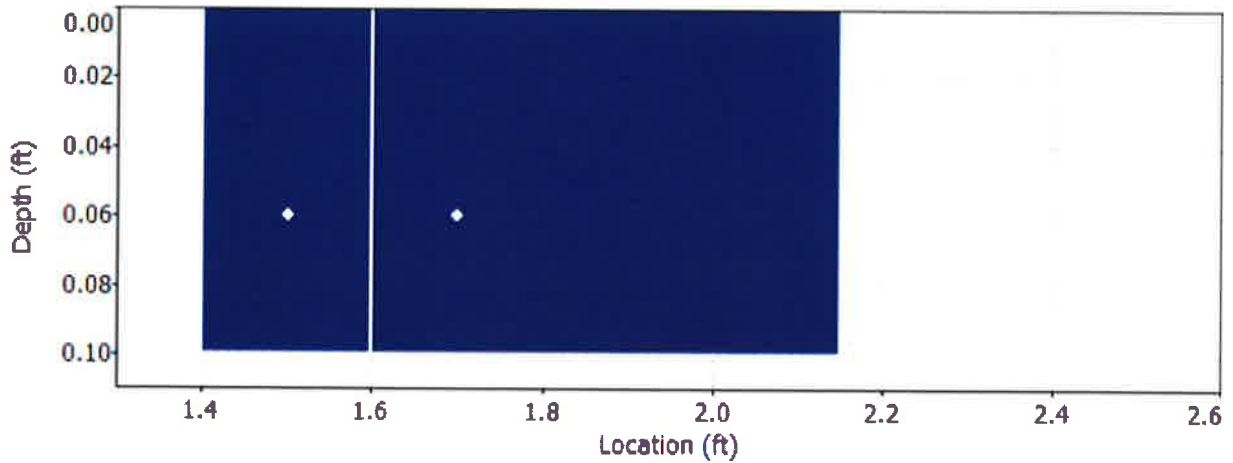
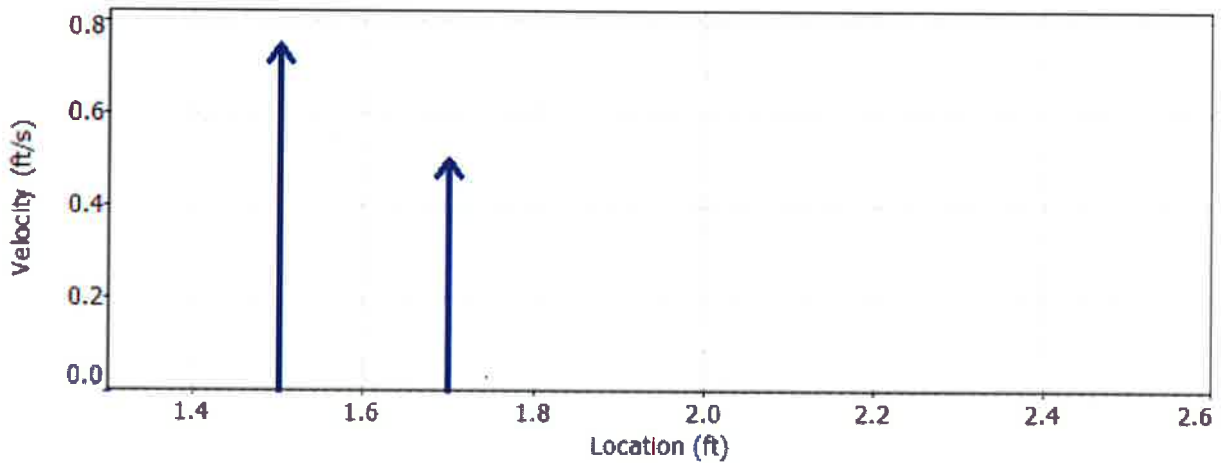
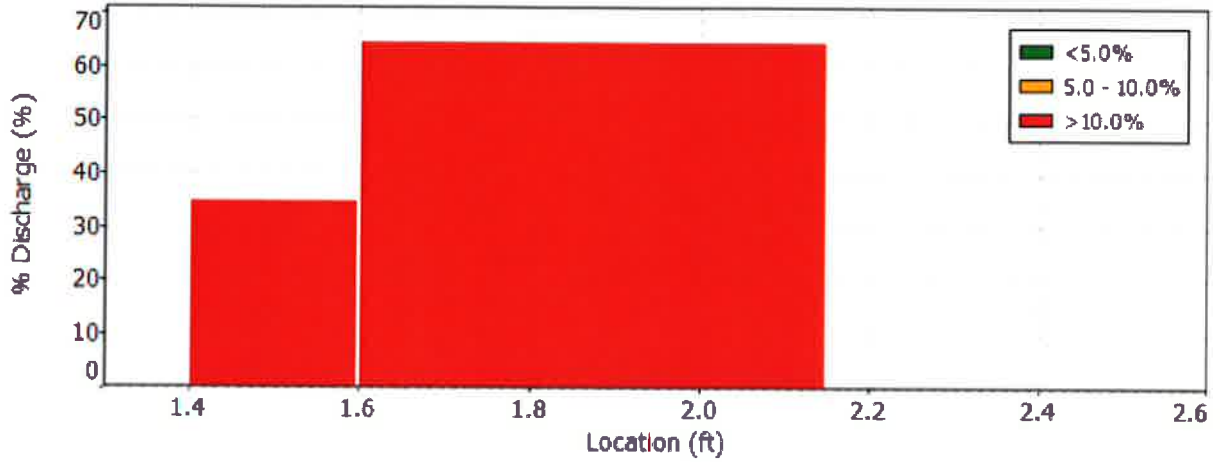
Date Generated: Mon Jun 11 2018

File Information

File Name 53-7319.WAD
Start Date and Time 2018/06/07 09:24:10

Site Details

Site Name
Operator(s) DO



Discharge Measurement Summary

Date Generated: Mon Jun 11 2018

File Information

File Name 53-7319.WAD
Start Date and Time 2018/06/07 09:24:10

Site Details

Site Name
Operator(s) DO

Quality Control

St	Loc	%Dep	Message
2	1.70	0.6	High standard error: 0.031

Discharge Measurement Summary

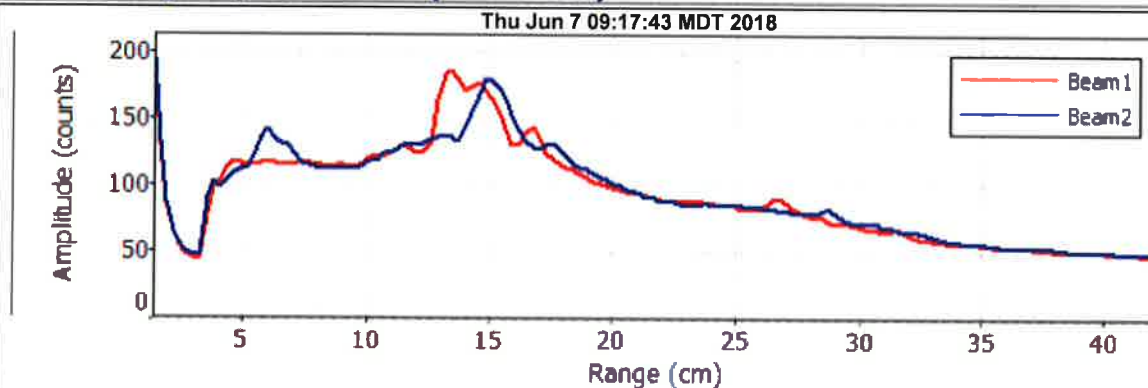
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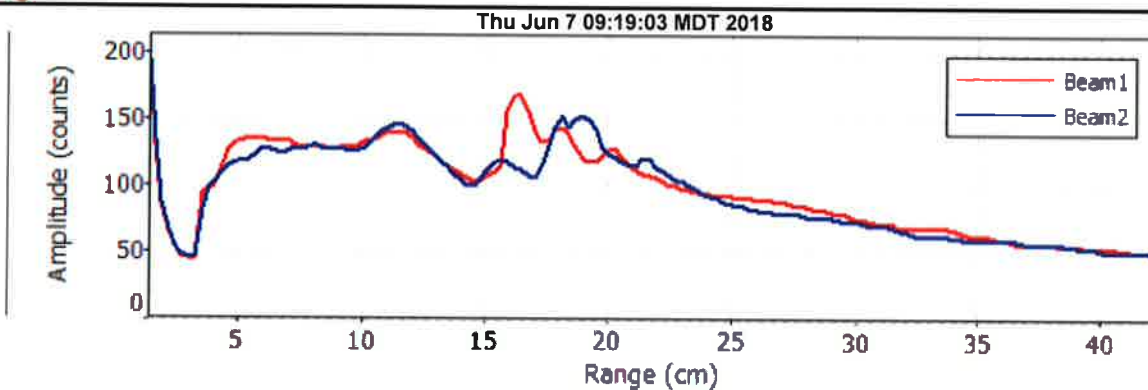
File Name 53-7319.WAD
Start Date and Time 2018/06/07 09:24:10

Site Details

Site Name
Operator(s) DO

Automatic Quality Control Test (BeamCheck)

- ✓ Noise level check - Pass
- ✓ SNR check - Pass
- ✗ Peak location check - Fail
- ✗ Peak shape check - Fail



- ✓ Noise level check - Pass
- ✓ SNR check - Pass
- ✓ Peak location check - Pass
- ✓ Peak shape check - Pass

Ace Black Ranches

Water Right 51-7319

Field exam completed April 27, 2018 and June 7, 2018



"South drain" looking east



Downstream of the point of diversion for water right 51-7319 where the waste ditch from the south joins the "south drain"



"South drain" upstream of the point of diversion where flow was measured



Aerial imagery of the place of use