

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 2-10460
Exam Date: 10/1/2015

1. Current Owner: A D CATTLE CO INC PO BOX 1582 BOISE ID 83701 (208)342-6524
2. Accompanied by: Craig Castigneto
Phone No: 208-250-7148
Address:
Relationship to Permit Holder: Farm Manager for Allen Noble

3. SOURCE

Snake River

TRIBUTARY

Columbia River

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 2-2160B
2. Other water rights with the same point of diversion: 2-2160A, 2-2160B, 2-2171, 2-2162, 2-2170, 2-2167, 2-2198
Permits: 2-10461, 2-10463, 2-10464

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

SNAKE RIVER L5(SENW) Sec. 22, Twp 01N, Rge 03W, CANYON County

Method of Determination: ArcMap tools using PLSS maps and GPS coordinates collected on site.

2. PLACE OF USE:

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	
01N	03W	14	40.0	40.0	40.0	40.0									40.0	40.0	40.0	40.0	320.0

Total Acres: 320

Method of Determination: POU defined using ArcMap tools and verified using recent aerial imagery. Shape drawn to match overlapping water right 2-2160B.

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.

Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
1	US Motors	150	1263850		
2	US Motors	150	1257485		
3	US Motors	150	1207695		
4	US Motors	150	1263849		
5	US Motors	200	1217728		
6	US Motors	200	1319346		
8	US Motors	300	1280354		
9	US Motors	300	1266433		
10	GE	300	ENJ511127		

*Code to correspond with No. on diagram

Pump House Diagram:

8	9	10	NORTH ↓
3	4	5	
1	2	6	

D. FLOW MEASUREMENTS

1.Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Open Channel	Acoustic Doppler Current Profiler	Teledyne	StreamPro	432	2,000 kHz	
Open Channel	Acoustic Doppler Velocimeter	SonTek	FlowTracker	P4553		

2. Measurements: Collected on-site during field exam.**E. FLOW CALCULATIONS**☒ Additional Computation Sheets AttachedMeasured Method: Acoustic Doppler Velocimeter

See attached flow measurements

Permit	1.88 cfs
2-2160B (overlap)	4.52 cfs
B.U. Standard Allowance	6.40 cfs
B. U. Proof Fee	\$125 → 1.01 to 2.00 cfs
Measurement or Theoretical Rate	5.30 cfs
License Recommendation	0.78 cfs (additional B.U.)

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

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 320 \times 4.5 = 1440 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.78 \times 260 \times 1.9835 = 402.3 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 402.3 \text{ af}$$

2. Volume Calculations for Other Uses: None**G. NARRATIVE/REMARKS/COMMENTS**

The initial field exam was conducted on October 1, 2015. A memo dated 10/2/2015 describing the visit and measurements collected is attached to this report. In short, A D Cattle operate pumps labeled 1 & 2. Permit 2-10460 owned by A D Cattle Co Inc sought to add 1.88 cfs to existing rights 2-2160B which allows the appropriation of 4.52 cfs on a total of 320 acres. Measurements taken by Angie in 2015 found a total discharge of 3.38 cfs coming from the two pumps. No additional water had been appropriated by A D Cattle Co Inc. The user was granted an opportunity to service the pumps, and paid additional Beneficial Use fees to re-measure the system. A final measurement was completed March 31, 2017.

The last measurement taken on the system using the Flow Tracker found pumps 1 & 2 produced a diversion of 5.30 cfs. The data of the test is included in this report. If we subtract the 4.52 cfs associated with 2-2160B from this flow, we get an additional beneficial use of 0.78 cfs. River sources do not identify a maximum diversion volume.

Combined use limits will be placed on the rights in terms of total acres. By only licensing the additional beneficial use, we do not need to add a limit for diversion rate.

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>
Irrigation	03/01 to 11/15	0.78 cfs	
<u>Totals:</u>		0.78 cfs	

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 Patricia Kelly Date 4-3-2017

Reviewer _____ Date _____

Discharge Measurement Summary

Date Generated: Fri Mar 31 2017

File Information

File Name ADC.WAD
Start Date and Time 2017/03/31 12:30:40

Site Details

Site Name
Operator(s) JS

System Information

Sensor Type FlowTracker
Serial # P4553
CPU Firmware Version 3.7
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	0.3%	1.8%
Velocity	0.8%	1.9%
Width	0.1%	0.1%
Method	2.2%	-
# Stations	3.3%	-
Overall	4.2%	2.8%

Summary

Averaging Int.	20	# Stations	15
Start Edge	LEW	Total Width	4.700
Mean SNR	42.2 dB	Total Area	3.442
Mean Temp	47.58 °F	Mean Depth	0.732
Disch. Equation	Mid-Section	Mean Velocity	1.5390
		Total Discharge	5.2976

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	12:30	7.30	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	12:30	6.90	0.6	0.450	0.6	0.180	0.8038	1.00	0.8038	0.158	0.1266	2.4
2	12:32	6.60	0.6	0.600	0.6	0.240	1.4049	1.00	1.4049	0.180	0.2528	4.8
3	12:34	6.30	0.6	0.800	0.6	0.320	1.5030	1.00	1.5030	0.240	0.3605	6.8
4	12:36	6.00	0.6	0.920	0.6	0.368	1.5531	1.00	1.5531	0.276	0.4285	8.1
5	12:37	5.70	0.6	1.050	0.6	0.420	1.6939	1.00	1.6939	0.315	0.5333	10.1
6	12:39	5.40	0.6	1.150	0.6	0.460	1.5804	1.00	1.5804	0.345	0.5450	10.3
7	12:40	5.10	0.6	1.150	0.6	0.460	1.7287	1.00	1.7287	0.345	0.5961	11.3
8	12:42	4.80	0.6	1.200	0.6	0.480	1.7638	1.00	1.7638	0.360	0.6348	12.0
9	12:43	4.50	0.6	1.050	0.6	0.420	1.5676	1.00	1.5676	0.315	0.4935	9.3
10	12:45	4.20	0.6	0.900	0.6	0.360	1.6132	1.00	1.6132	0.270	0.4353	8.2
11	12:48	3.90	0.6	0.800	0.6	0.320	1.4364	1.00	1.4364	0.240	0.3445	6.5
12	12:50	3.60	0.6	0.500	0.6	0.200	1.2621	1.00	1.2621	0.150	0.1892	3.6
13	12:51	3.30	0.6	0.500	0.6	0.200	1.4285	1.00	1.4285	0.250	0.3576	6.7
14	12:51	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

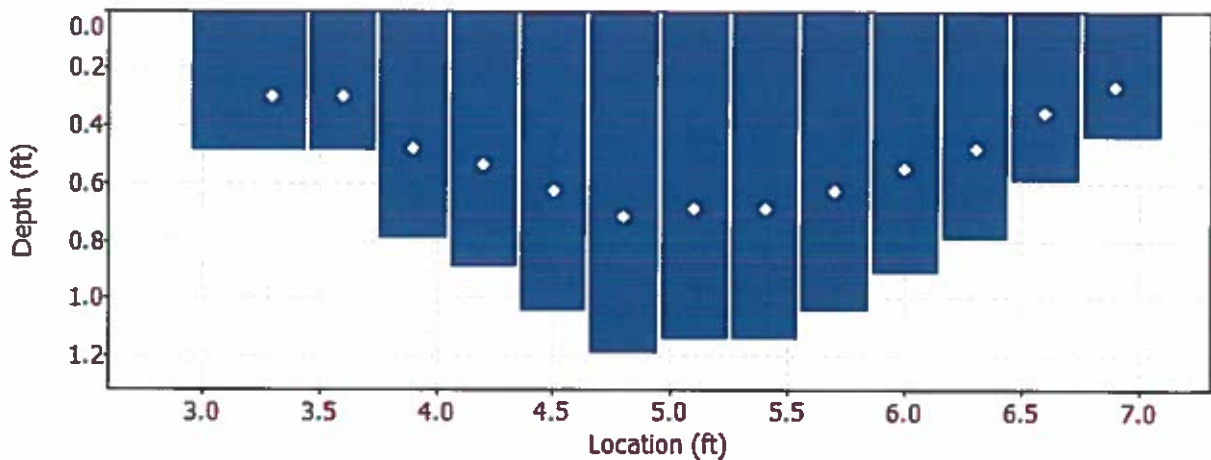
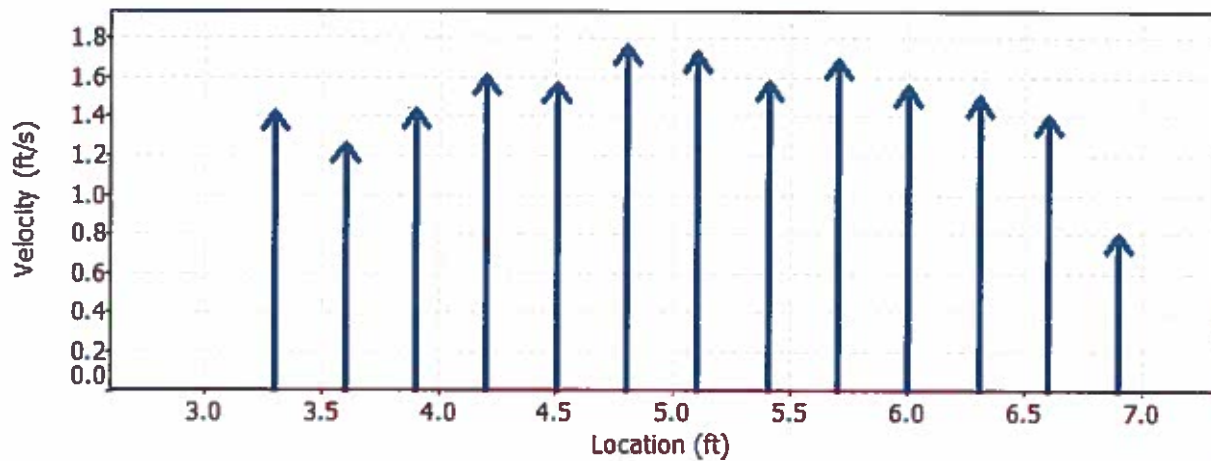
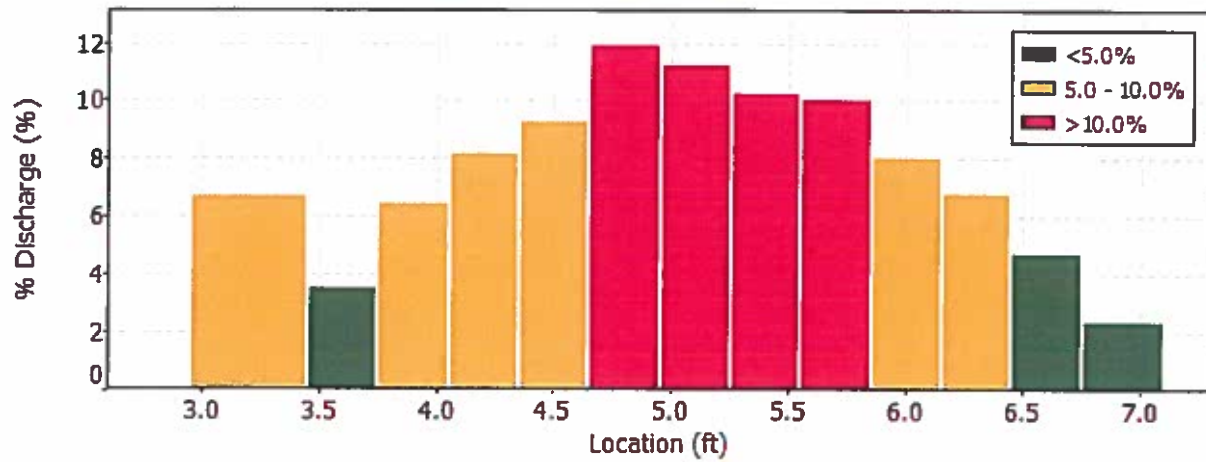
Date Generated: Fri Mar 31 2017

File Information

File Name ADC.WAD
Start Date and Time 2017/03/31 12:30:40

Site Details

Site Name
Operator(s) JS



Discharge Measurement Summary

Date Generated: Fri Mar 31 2017

File Information

File Name ADC.WAD
Start Date and Time 2017/03/31 12:30:40

Site Details

Site Name
Operator(s) JS

Quality Control

St	Loc	%Dep	Message
1	6.90	0.6	Boundary QC is Fair; possible boundary interference

MEMORANDUM

TO: Water Right File 2-10463
FROM: Patrick Kelly
DATE: 10/2/2015
SUBJECT: Field Exam Memo

The field exam was conducted by Corbin Knowles, Angie Grimm, Dennis Owsley and Patrick Kelly on October 1, 2015. Craig Castigneto of Allen Noble Farms escorted our group about the properties and ran the pump operations.

The purpose of the four permits filed on this system is to bring the diversion rate up to an inch per acre on the 1,623 acres already covered by existing water rights. The four permits total an extra diversion rate of 8.83 cfs. There is an existing 23.63 cfs authorized under active water rights. The goal of the field exam was to measure a maximum diversion rate of 32.46 cfs.

There is a pump station located on the north shore of the Snake River that pumps water roughly 500 feet up the ridge to a ditch. There are a total of nine pumps that are owned by several parties. A total of three pumping ponds exist on the ditch where booster pumps feed pivots and wheel lines. These pumping ponds and booster stations are privately owned and operated by individual users on the ditch.

Open channel measurements were completed by Dennis Owsley using a Teledyne Acoustic Doppler Current Profiler, (aka "the boat") and Angie Grimm using the Handheld ADV (FlowTracker). At the start of the test, all pumps were running. A flow reading of 22.7 cfs was recorded by Dennis while Angie measured 22.9 cfs. This was significantly lower than the 32.46 cfs target. This began the question of which pumps were delivering their share of the water. It was decided that the pumps would be shut down, and restarted in groups by which they serve an individual user.

Run 2 consisted of pumps labeled 8, 9 & 10, owned by Allen Noble Farms Inc. Permit 2-10461 owned by Allen Noble Farms Inc sought to add 3.76 cfs to existing rights 2-2171 and 2-2160A which each allows the appropriation of 4.52 cfs on a total of 640 acres. $4.52 + 4.52 = 9.04$ cfs. Measurements taken by Dennis found a total discharge of 12.7 cfs coming from the three pumps. This means an additional 3.66 cfs has been additionally appropriated by Allen Noble Farms Inc.

Run 3 consisted of pumps labeled 3, 4 & 5, owned by Catherine, Steven and Donald Vander Stelt. Permit 2-10464 owned by the Vander Stelt's sought to add 2.25 cfs to existing rights 2-2167 and 2-21698 which allows the appropriation of 4.77 and 2.38 cfs respectively on a total of 315 acres. $4.77 + 2.38 = 7.15$ cfs. Measurements taken by Dennis found a total discharge of 8.06 cfs coming from the three pumps. This means an additional 0.91 cfs has been additionally appropriated by the Vander Stelt's.

Run 4 consisted of pumps labeled 1 & 2, owned by A D Cattle Co Inc. Permit 2-10460 owned by the A D Cattle Co Inc sought to add 1.88 cfs to existing rights 2-2160B which allows the appropriation of 4.52 cfs on a total of 320 acres. Measurements taken by Angie found a total discharge of 3.38 cfs coming from the two pumps. No additional water has been appropriated by A D Cattle Co Inc.

Run 5 consisted of pump labeled 6, owned by Bigfoot Farms LLC. Permit 2-10463 owned by the Bigfoot Farms LLC sought to add 0.94 cfs to existing rights 2-2162 and 2-2170 which allows the appropriation of 2.38 and 0.54 cfs respectively on a total of 193 acres. $2.38 + 0.54 = 2.92$ cfs. Measurements taken by Angie found a total discharge of 2.08 cfs coming from the pump. No additional water has been appropriated by Bigfoot Farms LLC.

The system seems to operate more efficiently when all nine pumps are not running at once. When each individual run is added, a total of 26.17 cfs is measured. However, a significant drop in flow rate is found when all nine pumps run together.

Because no additional beneficial use was found for 2-10463, a notice of intent to void will be sent, granting Bigfoot Farms 30 days to inspect their system and request another test.



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

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

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

December 23, 2016

COPY

A D CATTLE CO INC
PO BOX 1582
BOISE ID 83701

RE: Scheduling Field Exam for Water Permit No. 2-10460

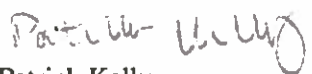
Dear Permit Holder:

The Idaho Department of Water Resources (IDWR) conducted a second field exam on November 4, 2016. Information about that exam indicates that measurements collected during this exam may have been compromised by faulty electrical connections. An examination is needed to verify water use(s) developed under the permit in order to issue a water right license. To complete another measurement of the system, the department requires a beneficial use examination fee of \$125 associated with a 1.88 cfs permit. Payment must be received before an examination can occur.

Please contact me at your earliest convenience, but no later than April 1, 2017 to schedule an examination. If no exam is scheduled by this date, no additional beneficial use is found and the department will void the permit.

Please call me at 208-334-2190 if you have any questions. I appreciate your attention to this matter and look forward to hearing from you.

Sincerely,


Patrick Kelly
Water Resource Agent, Sr.

RECEIVED

DEC 09 2016

WATER RESOURCES
WESTERN REGION

TO: PATRICK KELLY - Water Resource Agent, Sr.
Idaho Dept. of Water Resources

FROM: CRAIG CASTAGNETO

DATE: Dec 8, 2016

SUBJECT: WATER Permit No. 2-10463
WATER Permit No. 2-10464
WATER Permit No. 2-10460

Per our last visit in your office when I related to you the electrical malfunctions we experienced at the river station during our last field exam, I'm writing to accept your offer to do a re-exam this coming spring. In response to the electrical malfunctions with the river station pumps, our man at the river used combinations of pumps that were other than those specified.

Thank you - Craig Castagneto

Idaho Department of Water Resources Receipt

Receipt ID: W044506

Payment Amount \$125.00 Date Received 8/12/2016 12:34 PM Region WESTERN
Payment Type Check Check Number 6896
Payer A-D CATTLE COMPANY
Comments BENEFICIAL USE EXAMINATION FEE FOR A D CATTLE CO INC FOR WR# 2-10460

Fee Details

Amount	Description	PCA	Fund	Fund Detail	Subsidiary	Object
\$125.00	BENEFICIAL USE	62104	0229	21		1155



Signature Line (Department Representative)



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

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

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

July 25, 2016

COPY

A D CATTLE CO INC
PO BOX 1582
BOISE ID 83701

RE: Scheduling Field Exam for Water Permit No. 2-10460

Dear Permit Holder:

The Idaho Department of Water Resources (IDWR) issued an order granting petition for reconsideration on July 8, 2016. The order requires you to make your system available for another examination during the 2016 irrigation season. An examination is needed to verify water use(s) developed under the permit in order to issue a water right license. To complete another measurement of the system, the department requires a beneficial use examination fee of \$125 associated with a 1.88 cfs permit. Payment must be received before an examination can occur.

Please contact me at your earliest convenience, but no later than November 15, 2016 to schedule an examination. If no exam is scheduled by the end of the 2016 irrigation season, no additional beneficial use is found and the department will void the permit.

Please call me at 208-334-2190 if you have any questions. I appreciate your attention to this matter and look forward to hearing from you.

Sincerely,

Patrick Kelly
Water Resource Agent, Sr.