

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 85-15391

Exam Date: 9/5/2012

1. Current Owner: COTTONWOOD JOINT SCHOOL DISTRICT #242
PO BOX 158
COTTONWOOD ID 83522
(208)962-3971

2. Accompanied by: Jake Forsmann

Phone No: 553-8737

Relationship to Permit Holder: operator

3. SOURCE

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: City of Cottonwood—school uses municipal water for domestic use, no irrigation

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

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SW1/4NW1/4 Sec. 4, Twp 31N, Rge 01E, B.M. IDAHO County

Method of Determination: GPS (46.058345, -116.3556)

2.

<u>PLACE OF USE:</u>			<u>IRRIGATION</u>																	
<u>Twp</u>	<u>Rge</u>	<u>Sec</u>	<u>NE</u>				<u>NW</u>				<u>SW</u>				<u>SE</u>				<u>Totals</u>	
31N	01E	4	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>		
								2.7	2.3										5.0	
								L 4												

Total Acres: 5

Method of Determination: Field visit and statement by operator

3. ☒ Delivery System Diagram Attached (required).
☒ Map 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.

<u>Well or Diversion</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
D0033497		20			

D. FLOW MEASUREMENTS**1. Measurement**

<u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Pitot tube and pressure gage						

2. Measurements:

I took two pressure measurements at the football field. The first measurement was taken at a sprinkler closest to the well and registered 35 psi. The other measurement was taken near the end of the line and got a measurement of 30 psi. The pressure at the well read 55 psi when the system is on and 75 when the system is off.

E. FLOW CALCULATIONS

Measured Method:

HP Theoretical

$H_p = 20$
 $8.8 \times 20 \times 0.7 / 525' + (2.31 \times 55) = 123.2/652.1 = \mathbf{0.18 \text{ cfs}}$
 Pressure = 55 psi
 Depth to water = 525' based on well driller's report

Diversion Rate Based on Irrigation Practices

Football has 7 circuits w/ 8 sprinklers each. The sprinklers are Nelson 7005 and vary in nozzle size throughout the field that run ~5 gpm. Two zones run at one time → 16 sprinklers x 5 gpm = **0.18 cfs**

Duty of water for public turf areas = 0.06 cfs/acre or **0.30 cfs total for 5 acres** (per admin processing memo #60)

Conclusion: The license will be issued with the permitted rate of 0.18 cfs total

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5 \text{ acres} \times 3 \text{ af} = 15 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.18 \text{ cfs} \times 1.9835 \times 246 = 88 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 15 \text{ AFA}$$

2. Volume Calculations for Other Uses: NA

G. NARRATIVE/REMARKS/COMMENTS

The playground, directly south of the school, and the baseball field are also irrigated under this right.

There are 8 circuits w/ 25-30 sprinklers each (maxipaws). The total area that is being irrigated is 6.2 acres as the area around the school is also being irrigated. I will license this permit with the 5 acres that were permitted (proof designates the football, baseball fields, and playground) and will include language on their licensing cover letter that they are short.

The PLSS is shifted to the west at the POU. The POU should be within the NWNW and SWNW only.

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	03/15 to 11/15	0.180 CFS	15.00 af
	<u>Totals:</u>	0.180 CFS	15.00 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

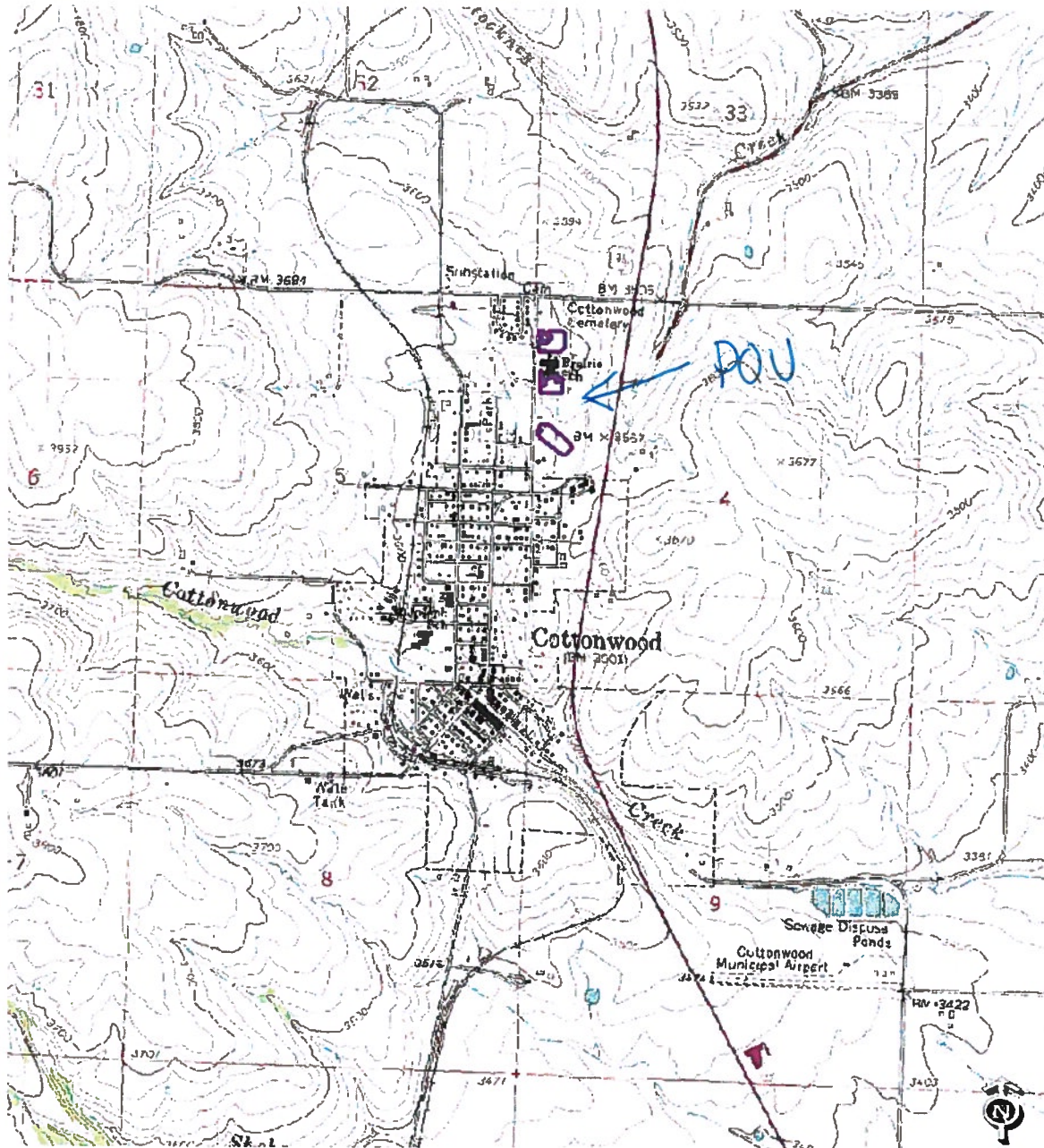
☒ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Cherie Palmer Date 3/7/13

Reviewer _____ Date _____







Well



View of well
looking south



Control
Panels



Sprinkler
Controls



Sprinklers psi
measured



view of
football field
looking NE

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lat _____ Long _____

1. WELL TAG NO. D D0033497

DRILLING PERMIT NO. 810198

Other IDWR No. _____

RECEIVED

JAN 21 2004

2. OWNER

Name Cottonwood School District #242

IDWR/North

Address P O Box 158

City Cottonwood

State ID Zip 83522

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N				
	X			
S				

Twp. 31 North ☒ or South ☐
Rge. 1 East ☒ or West ☐
Sec. 4 SW 1/4 NW 1/4 1/4
Govt-Lot _____ County Idaho
Lat _____ Long _____

Address of Well Site Football Field

City Cottonwood

Li. _____ Blk. _____ Sub. Name _____

4. USE:

- ☐ Domestic ☐ Municipal ☐ Monitor ☒ Irrigation
☐ Thermal ☐ Injection ☐ Other _____

5. TYPE OF WORK check all that apply

(Replacement etc.)

- ☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD

- ☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEA/FILTER PACK	AMOUNT		METHOD
	From	To	
Bentonite Granulars	0	46	12S Bentonite Slurry

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 98'

Was drive shoe seal tested? ☒ Y ☐ N How? Air Test

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8	+2	98	250	Steel	☒	☐	☐	☐
6	-18	585	160	PVC	☐	☒	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

- X Perforations Method Saw Cut
Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
525	585	1/8x6	100	6	PVC	☐	☒

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

370 ft. below ground Artesian pressure _____ lb.

Depth flow encountered 418 ft. Describe access port or control devices: Well Cap

11. WELL TESTS:

- ☐ Pump ☐ Bailor

- ☒ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
100			4 hours

Water Temp. 52

Bottom hole temp. _____

Water Quality test or comments: Cool & Clear

Depth first Water Encounter 418

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
12	0	6	Broken Basalt		X
12	6	15	Brown Clay		X
12	15	40	Broken Basalt with Clay Seams		X
10	40	48	Broken Basalt		X
10	48	90	Tan Clay		X
10	90	98	Basalt		X
8	98	145	Basalt		X
8	145	146	Gray Shale		X
8	146	155	Basalt		X
8	155	158	Brown Clay		X
8	158	218	Basalt		X
8	218	221	Gray Shale		X
8	221	418	Basalt		X
8	418	425	Fractured Basalt 5 gpm	X	
8	425	480	Basalt		X
8	480	498	Fractured Basalt 20 gpm	X	
8	498	540	Basalt		X
8	540	545	Fractured Basalt 75 gpm	X	
8	545	585	Basalt		X

Completed Depth 585 (Measurable)

Date: Started 1/13/04 Completed 1/16/04

13. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Stuvenga Vessey Drilling Firm No. 545

Firm Official _____ Date 1-14-04

and _____
Driller or Operator _____ Date 1-19-04

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

3 IN IE 4