

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-12445

Exam Date: 9/27/2012

1. Current Owner: HARLIN C BALDWIN
124 FRITTS LN
MERIDIAN ID 83642
(208)888-4847

Or

ARLEEN J BALDWIN
124 FRITTS LN
MERIDIAN ID 83642
(208)888-4847

2. Accompanied by: Harlin Baldwin

Phone No:

Address:

Relationship to Permit Holder: same

3. SOURCE

TRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: none
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

SE1/4SW1/4

Sec. 10, Twp 03N, Rge 01W, B.M.

ADA County

Method of Determination: Garmin GPS 43.60594, -116.44716

2. PLACE OF USE: IRRIGATION

Twprge Sec	NE				NW				SW				SE				Totals
03N01W 10	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	1.0
																	1.0

Total Acres: 1

Method of Determination:

3. aerial 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

4.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
well <u> </u>	<u>Stayright ?</u>	<u>3/4</u>	<u>unknown</u>	<u>Stayright</u>	<u>unknown</u>

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

D. FLOW MEASUREMENTS

<u>1. Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
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2. Measurements: none taken

E. FLOW CALCULATIONS Additional Computation Sheets Attached

Measured Method:

1] Theoretical flow calculation: ¾ hp , 30 psi for small system, 70% efficiency, z = 90' pumping level – 10 ' for small system = 80 '

$$\frac{8.8 \times 0.75 \times 0.7}{80' + 2.31 \times 30} = \frac{4.62}{149.3} = 0.031 = 0.03 \text{ cfs}$$

2] IDWR standard flow rate for acreage less than 5 acres = 0.03 cfs per acre. X 1 acre = 0.03 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1 \times 45. \text{ Af} = 4.5 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \times 260 \times 1.9835 = 15.47 = 15.5 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 4.5 \text{ afa}$$

2. Volume Calculations for Other Uses: not applicable

G. NARRATIVE/REMARKS/COMMENTS

No fee was due because this permit was issued for 0.03 cfs. I was accompanied on the exam by Mr. Baldwin, the applicant. The permit was issued for 1 acre irrigation, and a diversion rate of 0.03 cfs, from a well. The water is first used in the house for an air to water heating system, so it is secondarily used to irrigate.

The point of diversion is a 120 foot deep, 6-inch diameter well with a ¾-horsepower Stayright submersible pump set at 90 feet. Water is pumped through a ¾ or 1 inch pipe to the air to water heating system, and then immediately out to the "irrigation well". The "irrigation well" is how the water use refers to it, however, it is a fully cased borehole used only to hold the water from the heating system. It is fitted with a 1-horsepower Gould submersible pump set at 38 feet.

The water is pumped to an underground sprinkler system that irrigates around the house and the adjacent field. A total of about 0.6 to 0.7 of an acre is irrigated.

Surface water from the Nampa-Meridian Irrigation District is appurtenant to the property. The ditch runs along the east side of the field. There is a concrete vault with 12-inch pipe and a valve that directs water from the ditch across the fence to the applicants vault with his 12-inch pipe. A length of gated pipe seen the day of the exam flood irrigates the field. Mr. Baldwin says the surface water supply has decreased over the years due to farmland be taken out of production and developed, so he is only able to use surface water to irrigate about 3 to 4 times a season.

I calculated flow using the theoretical flow equation with 30 psi for a small system, and a z value of 80 feet, which is 10 feet above where the pump is set. The result was 0.03 cfs, which is also the rate per acre for acreage less than 5 acres, and the permitted rate. So, 0.03 cfs is recommended for licensing. I recommend for licensing the annual volume of 4.5 af which is the lesser of the Vir and Vdr results.

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

H. RECOMMENDATIONS

1) Permit amount	<u>0.03</u> cfs
2) Beneficial use limit	<u>0.03</u> cfs
3) System measurement	<u>0.03</u> cfs
4) Proof fee amount	<u>0.04</u> cfs

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	0.030 CFS	4.5 AFA
	<u>Totals:</u>	0.030 CFS	4.5 AFA

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 ___ Other

I. AUTHENTICATION

Field Examiner's Name

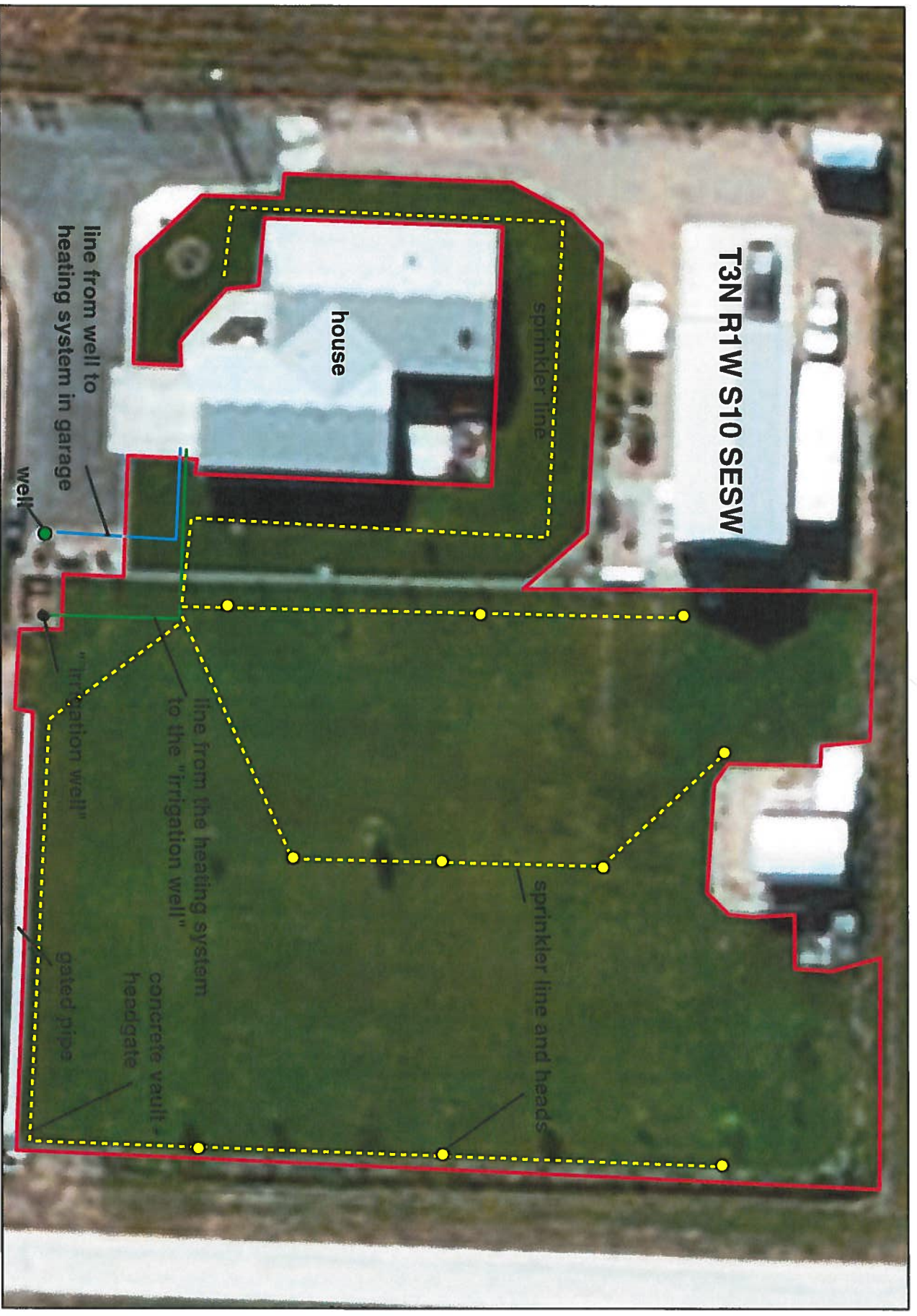


Date

10-23-12

Reviewer

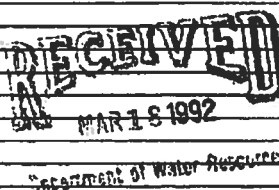
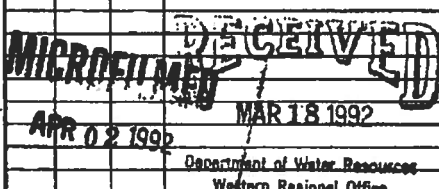
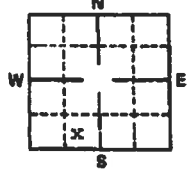
Date



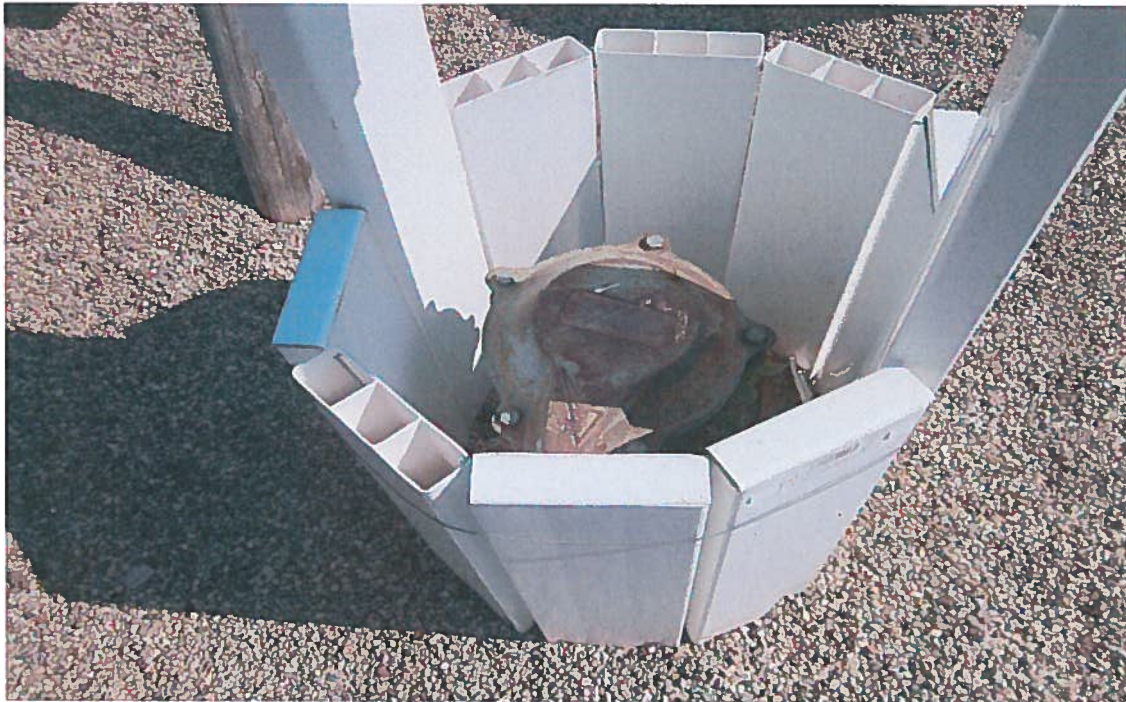
63-12445-- 2011 Bing photography. Place of use shown outlined in orange.

WELL DRILLER'S REPORT

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.

1. WELL OWNER Name <u>Harlan Baldwin-Jim Skunk</u> Address <u>Franklin Road</u> <u>Meridian, Idaho 83642</u> Drilling Permit No. <u>63-91-W-491</u> Water Right Permit No. _____	7. WATER LEVEL Static water level <u>3</u> feet below land surface. Flowing? ☐ Yes ☐ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F. Quality _____ Describe artesian or temperature zones below. _____																																																														
2. 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 ☐ Baller ☐ Air ☐ Other _____																																																														
3. PROPOSED USE ☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Discharge G.P.M.</th> <th style="width: 33%;">Pumping Level</th> <th style="width: 33%;">Hours Pumped</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Discharge G.P.M.	Pumping Level	Hours Pumped																																																											
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4. METHOD DRILLED ☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary ☐ Cable ☐ Dug ☐ Other _____	9. LITHOLOGIC LOG 072279 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Bore Diam.</th> <th colspan="2">Depth</th> <th rowspan="2">Material</th> <th rowspan="2">Water Yes No</th> </tr> <tr> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr><td>8</td><td>0</td><td>5</td><td>Top soil/hard pan</td><td>X</td></tr> <tr><td>5</td><td>5</td><td>37</td><td>Sand/gravel</td><td>X</td></tr> <tr><td>6</td><td>37</td><td>41</td><td>Hard clay</td><td>X</td></tr> <tr><td>41</td><td>41</td><td>79</td><td>Sand</td><td>X</td></tr> <tr><td>79</td><td>79</td><td>82</td><td>Sandy clay</td><td>X</td></tr> <tr><td>82</td><td>82</td><td>91</td><td>Sand</td><td>X</td></tr> <tr><td>91</td><td>91</td><td>96</td><td>Sand/joint clay</td><td>X</td></tr> <tr><td>96</td><td>96</td><td>107</td><td>Sand</td><td>X</td></tr> <tr><td>107</td><td>107</td><td>115</td><td>Hard clay</td><td>X</td></tr> <tr><td>115</td><td>115</td><td>120</td><td>Sandy clay</td><td>X</td></tr> <tr><td>120</td><td>120</td><td>122</td><td>Sand/joint clay</td><td>X</td></tr> </tbody> </table>  	Bore Diam.	Depth		Material	Water Yes No	From	To	8	0	5	Top soil/hard pan	X	5	5	37	Sand/gravel	X	6	37	41	Hard clay	X	41	41	79	Sand	X	79	79	82	Sandy clay	X	82	82	91	Sand	X	91	91	96	Sand/joint clay	X	96	96	107	Sand	X	107	107	115	Hard clay	X	115	115	120	Sandy clay	X	120	120	122	Sand/joint clay	X
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5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ <table style="width: 100%;"> <tr> <td>Thickness</td> <td>Diameter</td> <td>From</td> <td>To</td> </tr> <tr> <td><u>25</u> Inches</td> <td><u>6</u> Inches</td> <td><u>1 1/2</u> feet</td> <td><u>109</u> feet</td> </tr> <tr> <td>_____ Inches</td> <td>_____ Inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ Inches</td> <td>_____ Inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ Inches</td> <td>_____ Inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </table> 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 <u>20</u> 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 strata Describe access port _____ well seal	Thickness	Diameter	From	To	<u>25</u> Inches	<u>6</u> Inches	<u>1 1/2</u> feet	<u>109</u> feet	_____ Inches	_____ Inches	_____ feet	_____ feet	_____ Inches	_____ Inches	_____ feet	_____ feet	_____ Inches	_____ Inches	_____ feet	_____ feet	10. Work started <u>12/22/91</u> finished <u>12/25/91</u>																																										
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6. LOCATION OF WELL Sketch map location <u>must</u> agree with written location.  Subdivision Name _____ Lot No. _____ Block No. _____ County <u>Ada</u> SE % SW % Sec. <u>10</u> T. <u>3</u> N N ☐ S ☐ R. <u>1</u> W ☐ W ☐	11. DRILLERS CERTIFICATION I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>JACKS WELL & PUMP CO.</u> Firm No. <u>101</u> Address <u>1111 N. PITT LANE</u> <u>BOISE, IDAHO 83687</u> Date <u>1-10-91</u> Signed by (Firm Official) <u>Carson McElwain</u> and (Operator) <u>Chuck Elwain</u>																																																														

USE ADDITIONAL SHEETS IF NECESSARY -- FORWARD THE WHITE COPY TO THE DEPARTMENT



Domestic well, used for the home heating system, located southeast of the house.



The water user refers to this as the “irrigation well”, however, it is a cased hole with a submersible pump. Water is pumped here from the domestic heating system, then used for irrigation in a sprinkler system.



Looking northwest, from the “irrigation well” at the irrigated place of use around the house.



Looking north from the “irrigation well” at the place of use.



Nampa Meridian Irrigation District provides surface water to the field east of the house. Gated pipe seen. Ditch is at the far end— along the east side of the field. Looking east.



Concrete vault and headgate across fence is on the ditch. Water piped to water users headgate and to the gated pipe to flood irrigate the field.