

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 57-11622

Exam Date: 7/12/2012

1. Current Owner: DEBORAH S EDWARDS

And/Or

JOHN D EDWARDS
15804 TYSON RD
MURPHY ID 83650
(208)834-2080

2. Accompanied by: Doug Hipwell
Phone No: 208-834-2620
Address: same as above
Relationship to Permit Holder: Son-in-law/Farm Manager

3. **SOURCE**
SINKER CREEK

TRIBUTARY
SNAKE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 57-1B, 57-2236, 57-2295, 57-11621
2. Other water rights with the same point of diversion: 57-1B

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

SINKER CREEK L7 SE1/4NE1/4 Sec. 21, Twp 03S, Rge 01W, B.M. OWYHEE County

Method of Determination: GIS and visual inspection.

2. **PLACE OF USE:** IRRIGATION

TwpRge Sec	NE				NW				SW				SE				Totals
	<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>	
03S01W 14									5.9	30.0							35.9
03S01W 15												18.0	.6	1.3	37.0	39.0	
95.9																	
03S01W 22	29.0	32.0	4.3	10.0	30.0			.6									105.9
03S01W 23						15.0	8.9										23.9

Total Acres: 261.6

- **This right allows 17.6 acres within the above described PPU.**

Method of Determination: GIS and visual inspection.

3. X 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.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
A0016969	n/a	n/a	n/a	n/a	n/a
Booster Pump	Baldor	25	Z0410070041	JPM516T	3500 rpm
Booster Pump	Baldor	50	Z0404050127	JPM2542t	3500 rpm
Booster Pump	Baldor	50	Z0305120014	JPM2542t	3500 rpm

*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
Parshall Flume	9" Throat					

2. Measurements: Parshall flume measurement for 9 inch throat and 1.39 feet head = 5.08 cfs. Watermaster records for 2008 and 2009 confirm maximum diversion rate = 5.08 cfs. See attached sheets for water master records.

E. FLOW CALCULATIONS

Attached

 X Additional Computation Sheets

Measured Method: Visual

Parshall flume measurement = 5.08 cfs.

Watermaster records = 5.08 cfs.

17.6 acres x 0.02 cfs/acre = 0.35 cfs

17.6 acres where irrigated above the 244 acres allowed under Water Right 57-1B, therefore 17.6 acres can be recommended at a diversion rate of 1 inch per acre or 0.02 cfs per acre for a total of 0.35 cfs. When all rights for this property are combined, the diversion rate should be limited to 5.14 cfs as listed on Water Right 57-1B.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 17.6 \times 4.5 = \underline{79.2 \text{ AF}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = .35 \times 260 \times 1.9835 = \underline{180.5 \text{ AF}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{79.2 \text{ AF}}$$

No diversion rate per Craig Saxton.

2. Volume Calculations for Other Uses: N/A

*G.G.***G. NARRATIVE/REMARKS/COMMENTS**

This permit covers the surface water component of the system. The ground water component is covered under 57-11621.

Water is diverted from Sinker Creek and enters a canal to maintain elevation. A head gate is installed in the canal which is where I placed ID tag A0016969. Water follows the canal and passes through a Parshall Flume with a 9" throat. Excess water not going through the flume diverts back into Sinker Creek. After flowing through the Flume, water passes over a debris screen and into a buried pipe which takes the water to a holding tank located next to Well #1. Water can also go past the tank to concrete holding pit by Well #2. Excess water in the holding tank is diverted back into Sinker Creek.

(Additional groundwater from Well's #1 and #2 can be pumped into the holding tank. Groundwater is covered under permit 57-11621. I suggest licensing these two permits at the same time).

From the holding tank, three separate booster pumps supply water to different acres. Two of the booster pumps are 50 hp and the third is 25 hp. One 50 hp booster pump and the 25 hp booster pump feed the pivot and hand lines north of Sinker Creek. The second 50 hp booster pump feeds hand lines on the south side of Sinker Creek.

While doing the field exam, we discovered the maximum diversion rate through this system has been 5.08 cfs which was confirmed by the watermaster records. Water Right 57-1B allows a maximum diversion rate of 5.14 cfs for the same 304 acres described in permit 57-11622. No additional rate of diversion has been established.

Water Right 57-1B, 57-2236 and 57-2295 when combined did not allow irrigation of more than 244 acres. My field exam revealed that 261.6 acres were actually irrigated. Therefore, this permit can be licensed for 17.6 acres within the 261 acres PPU (261.6 - 244 = 17.6).

Have conditions of permit approval been met? X 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	.035 CFS	79.2 AF
	<u>Totals:</u>	0.35 CFS	79.2 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

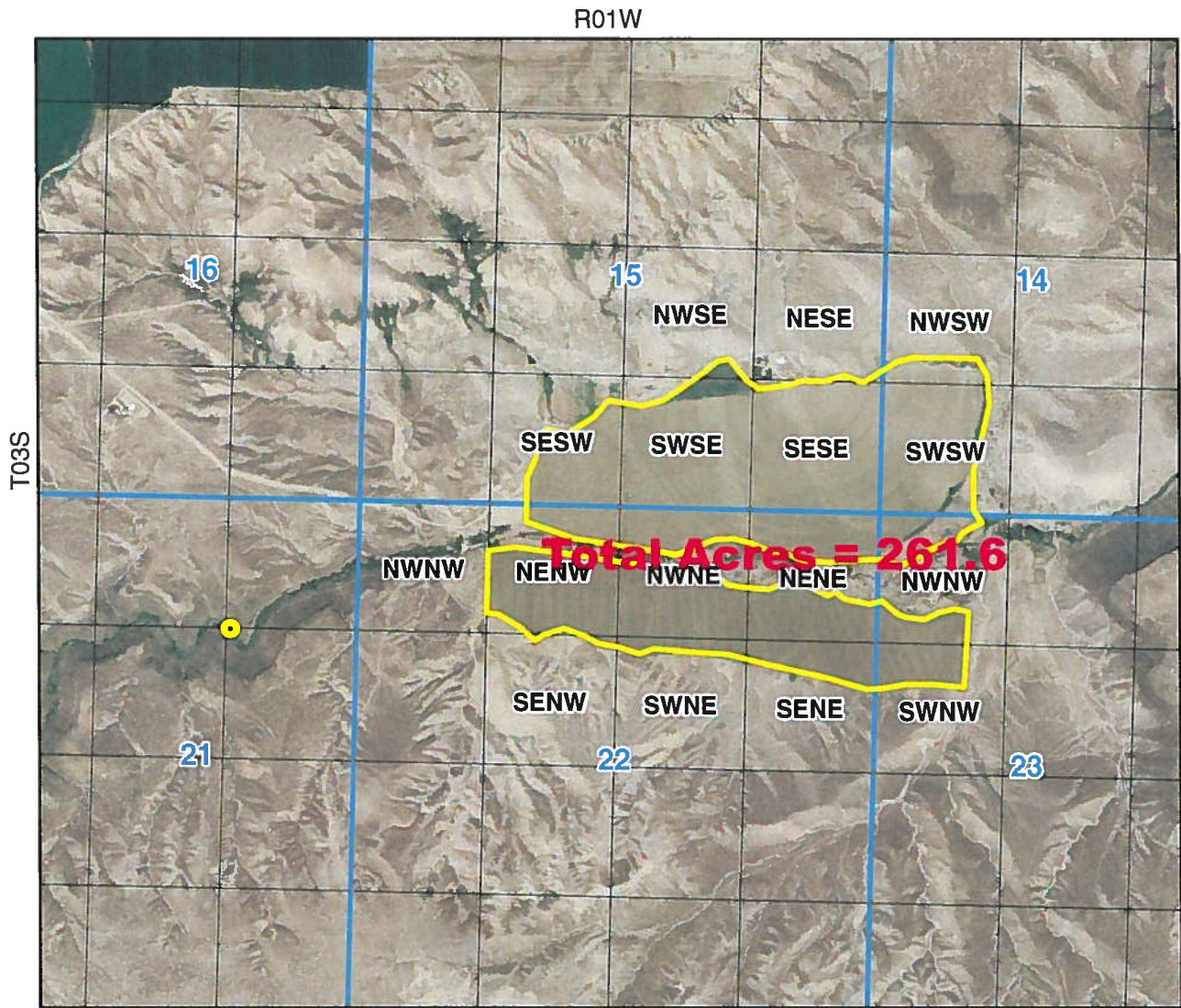
I. AUTHENTICATION

Field Examiner's Name Glen Sardin Date July 31, 2012

Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Water Right License
57-11622

Water Service Area Boundary for Deborah S Edwards

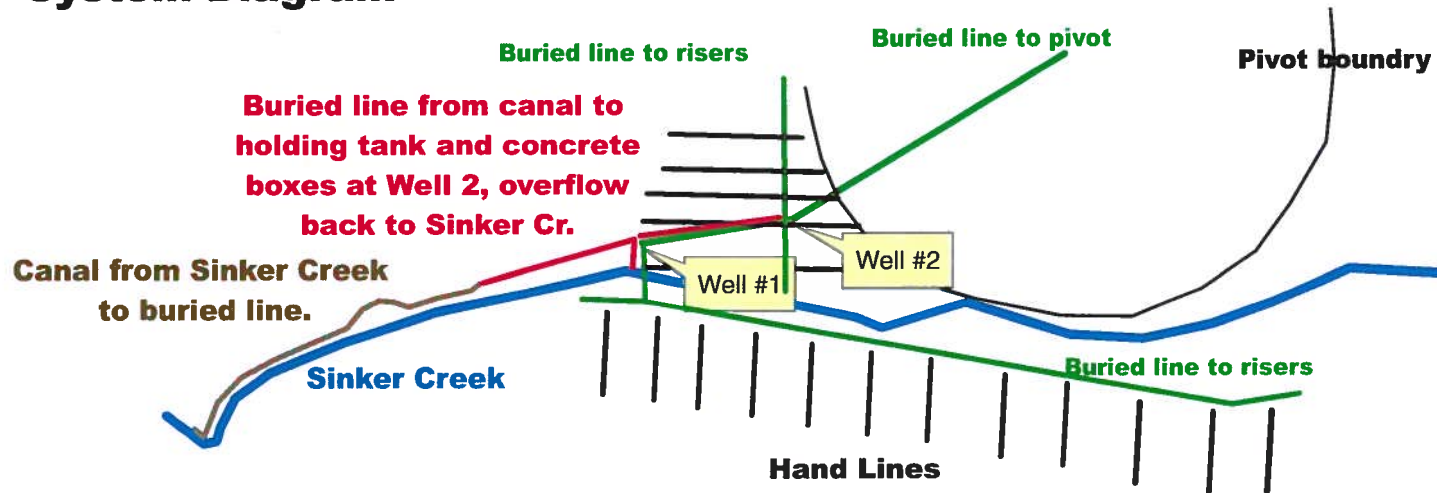


0 0.225 0.45 0.9 Miles

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



Field Exam Map for 57-11621 System Diagram



This permit covers the surface water component of the system (colors Brown, Red and Black). The ground water component is covered under 57-11621 (colors Green and Black).

Water is diverted from Sinker Creek and enters a canal to maintain elevation. There is a head gate installed in the canal which is where I placed ID tag A0016969. Water follows the canal and passes through a Partial Flume with a 9" throat. Excess water not going through the flume diverts back into Sinker Creek. Following the Flume, water passes through a debris screen and into a buried pipe which takes the water to a holding tank located next to Well #1. Water can also go past the tank to concrete holding cisterns by Well #2. Excess water in the holding tank is diverted back into Sinker Creek.

(Additional groundwater from Well's #1 and #2 can be pumped into the tank. Groundwater is covered under permit 57-11621. I suggest licensing these two permits at the same time).

From the holding tank, three separate booster pumps supply water to different acres. Two of the booster pumps are 50 hp and the third is 25 hp. One 50 hp booster pump and the 25 hp booster pump feed the pivot and hand lines north of Sinker Creek. The second 50 hp booster pump feeds hand lines on the south side of Sinker Creek.

Overlap Review

Basin	Sequence	Suffix	Basis	Draft	Priority Date	Rate	Acre Limit	rate/acre	Total Acres	Volume	Source List	Water Use List	Owner	Combined Use Limits					
														Acres	CFS	Vol	CFS	Vol	Acres
57	1	B	Decreed	N	4/1/1881	5.14	244.0	0.021	304.0	1,098.0	SINKER CREEK	IRRIGATION	EDWARDS	x	x	x	5.14	1098	244
57	2236		Decreed	N	12/11/1959	3.20	160.0	0.020	304.0	720.0	GROUND WATER	IRRIGATION	EDWARDS	x	x	x			
57	2295		Decreed	N	8/3/1966	0.62	31.0	0.020	304.0	139.5	GROUND WATER	IRRIGATION	EDWARDS	x	x	x			
						5.14	244.0	0.021	304.0	1,098.0									
57	11621		License	Y	10/22/2002	1.41	70.6	0.020	261.6	318.0	GROUND WATER	IRRIGATION, ST	EDWARDS	x	x	x			
57	11622		License	Y	10/22/2002	0.35	17.6	0.020	261.6	79.2	SINKER CREEK	IRRIGATION	EDWARDS	x	x	x			
						1.41	70.6	0.020	261.6										
Overall Total =						5.14	261.6	0.020	328.9	1,177.2									

Combined use limit on diversion rate for all rights dictated by permit conditions

Sinker Creek

57	1	B	Decreed	N	4/1/1881	5.14	244.0	0.021	304.0	1,098.0	SINKER CREEK	IRRIGATION	EDWARDS
57	11622		License	Y	10/22/2002	0.35	17.6	0.020	261.6	79.2	SINKER CREEK	IRRIGATION	EDWARDS
Totals =						5.14	261.6			1,177.2			

Combined use limit on diversion rate for only the Sinker Creek rights because the system is limited to

No combined use limit for acreage or volume for only the Sinker Creek rights as they are cumulative

Ground Water

57	2236		Decreed	N	12/11/1959	3.20	160.0	0.020	304.0	720.0	GROUND WATER	IRRIGATION	EDWARDS
57	2295		Decreed	N	8/3/1966	0.62	31.0	0.020	304.0	139.5	GROUND WATER	IRRIGATION	EDWARDS
57	11621		License	Y	10/22/2002	1.41	70.6	0.020	261.6	317.7	GROUND WATER	IRRIGATION, ST	EDWARDS
Totals =						5.14	261.6			1,177.2			

Combined use limit for rate dictated by permit conditions

No combined use limit for acreage or volume for only the ground water rights as they are cumulative

Month of _____ 20 _____

NOTE — Figures to be given in cubic feet per second for 24-hour periods, or 24-hour second feet. Give name of owner of water rights, not tenant.

Name of Preser Water Right Ow	26	27	28	29	30	31	Total in 24-hour Sec. Feet	REMARKS
Hulet (natural)		06			06			
Hulet (stored)		214			144			
Joyce Ranch (cn		842			763			5/10 - Mike had too much @ ponds
Joyce Ranch (c		74			723			5/16 - Reservoir @ 37.5 ft.
Edwards		508			508			- SDR res. full (2" above rebar)
SDR		354			354			5/19 - Reservoir @ 40ft. est. inlet 50 cfs
								- Mike had a pond break
								5/27 - reservoir @ 44.5 ft
								5/30 " @ 45.3 ft
miles		33			9			

57-D

NOTE — Figures to be given in cubic feet per second for 24-hour periods, or 24-hour second feet. Give name of owner of water rights, not tenant.

29 Days

Table 5 (Continued). Free flow through Parshall measuring flumes
in cubic feet per second.

Head		Throat width							
Feet	Inches (approx.)	3"	6"	9"	1'	1.5'	2'	3'	4'
(Flow in cubic feet per second)									
1.10	13-3/16		2.40	3.55	4.62	6.95	9.27	13.9	18.6
1.11	13-5/16		2.43	3.60	4.68	7.04	9.40	14.1	18.9
1.12	13-7/16		2.46	3.65	4.75	7.14	9.54	14.3	19.1
1.13	13-9/16		2.50	3.70	4.82	7.24	9.67	14.5	19.4
1.14	13-11/16		2.53	3.75	4.88	7.34	9.80	14.7	19.7
1.15	13-13/16		2.57	3.80	4.94	7.44	9.94	14.9	19.9
1.16	13-15/16		2.60	3.85	5.01	7.54	10.1	15.1	20.2
1.17	14-1/16		2.64	3.90	5.08	7.64	10.2	15.3	20.5
1.18	14-3/16		2.68	3.95	5.15	7.74	10.3	15.6	20.8
1.19	14-1/4		2.71	4.01	5.21	7.84	10.5	15.8	21.1
1.20	14-3/8		2.75	4.06	5.28	7.94	10.6	16.0	21.3
1.21	14-1/2		2.78	4.11	5.34	8.05	10.8	16.2	21.6
1.22	14-5/8		2.82	4.16	5.41	8.15	10.9	16.4	21.9
1.23	14-3/4		2.86	4.22	5.48	8.25	11.0	16.6	22.2
1.24	14-7/8		2.89	4.27	5.55	8.36	11.2	16.8	22.5
1.25	15			4.32	5.62	8.46	11.3	17.0	22.8
1.26	15-1/8			4.37	5.69	8.56	11.5	17.2	23.0
1.27	15-1/4			4.43	5.76	8.67	11.6	17.4	23.3
1.28	15-3/8			4.48	5.82	8.77	11.7	17.7	23.6
1.29	15-1/2			4.53	5.89	8.88	11.9	17.9	23.9
1.30	15-5/8			4.59	5.96	8.99	12.0	18.1	24.2
1.31	15-3/4			4.64	6.03	9.09	12.2	18.3	24.5
1.32	15-13/16			4.69	6.10	9.20	12.3	18.5	24.8
1.33	15-15/16			4.75	6.18	9.30	12.4	18.8	25.1
1.34	16-1/16			4.80	6.25	9.41	12.6	19.0	25.4
1.35	16-3/16			4.86	6.32	9.52	12.7	19.2	25.7
1.36	16-5/16			4.92	6.39	9.63	12.9	19.4	26.0
1.37	16-7/16			4.97	6.46	9.74	13.0	19.6	26.3
1.38	16-9/16			5.03	6.53	9.85	13.2	19.9	26.6
1.39	16-11/16			5.08	6.60	9.95	13.3	20.1	26.9
1.40	16-13/16				6.68	10.1	13.5	20.3	27.2
1.41	16-15/16				6.75	10.2	13.6	20.6	27.5
1.42	17-1/16				6.82	10.3	13.8	20.8	27.8
1.43	17-3/16				6.89	10.4	13.9	21.0	28.1
1.44	17-1/4				6.97	10.5	14.1	21.2	28.5
1.45	17-3/8				7.04	10.6	14.2	21.3	28.8
1.46	17-1/2				7.12	10.7	14.4	21.7	29.1
1.47	17-5/8				7.19	10.8	14.5	21.9	29.4
1.48	17-3/4				7.26	11.0	14.7	22.2	29.7
1.49	17-7/8				7.34	11.1	14.9	22.4	30.0
1.50	18				7.41	11.2	15.0	22.6	30.3

PHOTOGRAPHER AND DATE OF PHOTOS Glen Gardiner, July 12, 2012

FILE NUMBER 57-11622 Page 1



This photo shows the head gate to the canal.



This photo shows ID tag A0016969, placed on the head gate.

PHOTOGRAPHER AND DATE OF PHOTOS Glen Gardiner, July 12, 2012

FILE NUMBER 57-11622 Page 2



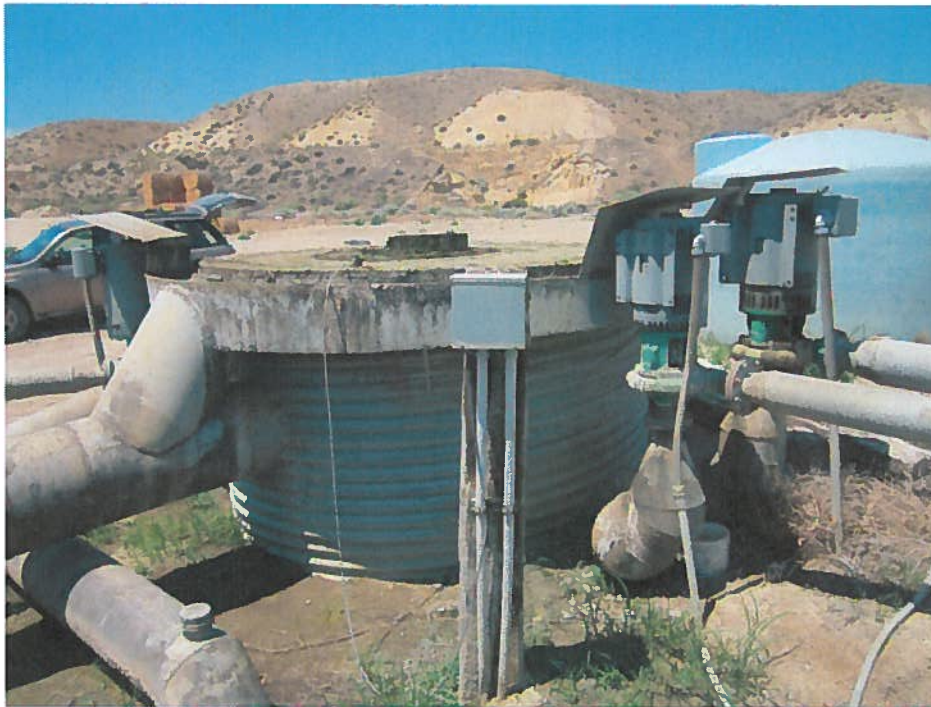
This photo shows the flume with the debris screen in the background. The buried pipe takes water down to the holding tank.



This photo shows the holding tank. The pipe coming out of the ground into the side of the tank comes from the canal. The 90 degree line out of the pipe continues between the holding tank and the men, on to the concrete cisterns by Well #2.

PHOTOGRAPHER AND DATE OF PHOTOS Glen Gardiner, July 12, 2012

FILE NUMBER 57-11622 Page 3



This photo shows the overflow pipes on the left. The booster pump on the left supplies water to fields south of Sinker Creek. The two booster pumps on the right supply water to the pivot and fields north of Sinker Creek.