

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 57-11590

Exam Date: 7/6/2012

1. Current Owner: Linda Keppler
28164 River Road
2. Accompanied by: Linda Keppler
Phone No: 208.834.2082
Address: 28164 River Road
Grand View, ID 83624
Relationship to Permit Holder: Owner
3. **SOURCE** **TRIBUTARY**
Groundwater

B. OVERLAP REVIEW

1. Other water rights with the same place of use: none
2. Other water rights with the same point of diversion: 75-10902

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

WELL SW1/4SW1/4 Sec. 30, Twp05S, Rge 04E, OWHYEE County

Method of Determination: GPS and Visual Inspection.

2.

<u>PLACE OF USE:</u>			WILDLIFE and WILDLIFE STORAGE																
<u>Twp</u>	<u>Rge</u>	<u>Sec</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>	<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>Totals</u>
05S	04E	30											X						0.61

Total Acres: 0.61

Method of Determination: GIS Mapping and Visual Inspection.

3. YES Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- YES Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- YES Aerial Photo Attached
- YES Photo of Diversion and System Attached

D. FLOW MEASUREMENTS**1. Measurements:**

Polysonic flow meter used to measure the well. A 10 minute average yielded 114.17 gallons per minute.

Average 114.17 gallons per minutes X 0.00223 = 0.25 cfs

The tape from the Thyme Flyte is attached

Recommended diversion rate for wildlife: 0.25 cfs

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

None

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: NONE

2. Volume Calculations for Other Uses:

Wildlife: The irrigation season of use for this place of use is 260 days. The artesian well flows year around. During the irrigation season they irrigate the field to the northeast of the well. During the non irrigation season they divert to the pond.

365 – 260 = 105 days.

(0.25) X (105) X (1.9835) = 52.1 AFA

Wildlife Storage:

5 feet average depth X 0.61 acres = 3.05 AF

Evaporation Loss Calculation: 1.87 AFA

(see attached sheet)

Seepage Loss Calculation 334.0 AFA

(see attached sheet)

3.05 (pond volume) + 1.87 (precipitation loss) + 334 (seepage loss) = 338 AFA

Permit volume 1.0 AF

Total Recommended acre feet per year is 1.0 AF per year

G. NARRATIVE/REMARKS/COMMENTS

An uncontrolled artesian well in T5S R4E Section 30 SW1/4 SW1/4, provides irrigation water during the irrigation season to the field north of the well. During the non-irrigation season the water flows into a pond. Water is piped approximately 0.08 miles along the southwest side of a field and during the irrigation season the gated pipe is open to the field. There is no pump and flow relies entirely on the pressure from the well. During the non-irrigation season, the water is allowed to flow from the end of the pipe into an open ditch, where it flows approximately 0.03 miles down hill to the northeast into a large depression. The pond at the bottom of the depression fills to between approximately 8 and 10 feet deep and has a possible surface area of 0.6 acres.

A Department memo dated September 14, 2001, provides the details of the beneficial use options for the pond. In the memo the Kepplers were given two options to address allowing the continuous flow of water during the non-irrigation season. They could adjust the annual storage volume to reflect an amount of water limited to the non-irrigation season or they could add a live flow component for Wildlife beneficial use. The live flow would be 0.25 cfs. the same as the flow for the irrigation season. The Kepplers chose to add the Wildlife flow of 0.32 cfs.

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>
Wildlife	01/01 to 12/31	0.25 CFS	52.1 AF
Wildlife Storage			1.0 AF
Diversion to Storage		0.25 CFS	
	<u>Totals:</u>	0.25 CFS	1.0 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 Sandra Thiel Date _____
Reviewer _____ Date _____

Precipitation Loss Calculation

Date: April 7, 2012
Prepared by: Sandra Thiel
Water Right No: 57-11590

P = Precipitation
ET= Evapotranspiration
 P_d = Precipitation deficit
 P_d = P- ET

P_d

Found at: <http://www.kimberly.uidaho.edu/ETIdaho/>

P_d = convert to AFA: (mm/yr) / (convert to feet) x # acres =

935		304.8		0.61	
(From ET Idaho)					

P_d = 1.87 AFA

* Use the Precipitation Deficit for 'P' value

<http://data.kimberly.uidaho.edu/ETIdaho/stcврstats.py?station=5&cover=57&stats=Deficit>

FILE NUMBER: 57-11590
REVIEWER: Sandra Thiel
DATE: 10/31/2012

MAXIMUM DAILY WATER USE FOR DOMESTIC PURPOSES

<u>INPUTS</u>	<u>POND</u>	<u>NOTES/SUGGESTED VA RESULTS</u>	<u>FORMULAS</u>
SURFACE AREA (SQFT) -----	26572		
SEEPAGE RATE (FT/DAY) -----	1.50	SUGGESTED VALUES FOR DIFFERENT SOIL TYPES: 0 = NATURALLY FILLED FROM GW, OR LINED 0.5 = CLAY SOILS 1.5 = LOAMS 3.0 = GRAVELS	CONVERT TO GPD ----- 298133 GPD FORMULA: SA * SEEPAGE LOSS = POND SEEPAGE (CUFT/D) CONVERSION: 1 CUFT = 7.48 G NOTE: ASSUMES CONTINUOUS REPLACEMENT RATE
TOTAL Seepage Loss (AFA) -----	334.0 AFA		TOTAL = FILL RATE + EVAP + SEEPAGE + FLOW THROUGH

OUTER DIAMETER
2.0000 IN

6" diameter
PVC

POOR QUALITY ORIGINAL
150203

WALL THICKNESS
0.1400 IN

INNER LINING
? NO LING.

KIND OF FLUID
? WATER

SENSOR MOUNTING
? U

TYPE OF SENSOR
? SMALL

DATA CHANGE
? NO

SPACING
3.942 IN U

07-06 11:1000 *R
-000000 *10 G

0214.0 MMSEC
100.15 % T0

07-06 11:1000 *R
-000000 *10 G

07-06 11:1200 *R
+002.90 % AI2

0214.0 MMSEC
100.16 % T0

11:29-110.159E 06GPM 00R
+000000 *10 G 00R
-000000 *10 G 00R

11:30-114.650E 06GPM 00R
+000000 *10 G 00R
-000011 *10 G 00R

11:31-110.688E 06GPM 00R
+000000 *10 G 00R
-000022 *10 G 00R

11:32-115.179E 06GPM 00R
+000000 *10 G 00R
-000033 *10 G 00R

11:33-115.707E 06GPM 00R
+000000 *10 G 00R
-000044 *10 G 00R

11:34-113.594E 06GPM 00R
+000000 *10 G 00R
-000056 *10 G 00R

11:35-115.179E 06GPM 00R
+000000 *10 G 00R
-000067 *10 G 00R

11:36-113.594E 06GPM 00R
+000000 *10 G 00R
-000078 *10 G 00R

11:37-116.764E 06GPM 00R
+000000 *10 G 00R
-000089 *10 G 00R

11:38-118.613E 06GPM 00R
+000000 *10 G 00R
-001000 *10 G 00R

11:39-111.744E 06GPM 00R
+000000 *10 G 00R
-00112 *10 G 00R

OUTER DIAMETER
2.0000 IN

6" diameter
PVC

WALL THICKNESS
0.1400 IN

INNER LINING
? NO LING.

KIND OF FLUID
? WATER

SENSOR MOUNTING
? U

TYPE OF SENSOR
? SMALL

DATA CHANGE
? NO

SPACING
3.942 IN U

07-06 11:1000 *R
-000000 *10 G

0214.0 MMSEC
100.15 % T0

07-06 11:1000 *R
-000000 *10 G

07-06 11:1200 *R
+002.90 % AI2

0214.0 MMSEC
100.16 % T0

11:29-110.159E 06GPM 00R
+000000 *10 G 00R
-000000 *10 G 00R

11:30-114.650E 06GPM 00R
+000000 *10 G 00R
-000011 *10 G 00R

11:31-110.688E 06GPM 00R
+000000 *10 G 00R
-000022 *10 G 00R

11:32-115.179E 06GPM 00R
+000000 *10 G 00R
-000033 *10 G 00R

11:33-115.707E 06GPM 00R
+000000 *10 G 00R
-000044 *10 G 00R

11:34-113.594E 06GPM 00R
+000000 *10 G 00R
-000056 *10 G 00R

11:35-115.179E 06GPM 00R
+000000 *10 G 00R
-000067 *10 G 00R

11:36-113.594E 06GPM 00R
+000000 *10 G 00R
-000078 *10 G 00R

11:37-116.764E 06GPM 00R
+000000 *10 G 00R
-000089 *10 G 00R

11:38-118.613E 06GPM 00R
+000000 *10 G 00R
-001000 *10 G 00R

11:39-111.744E 06GPM 00R
+000000 *10 G 00R
-00112 *10 G 00R

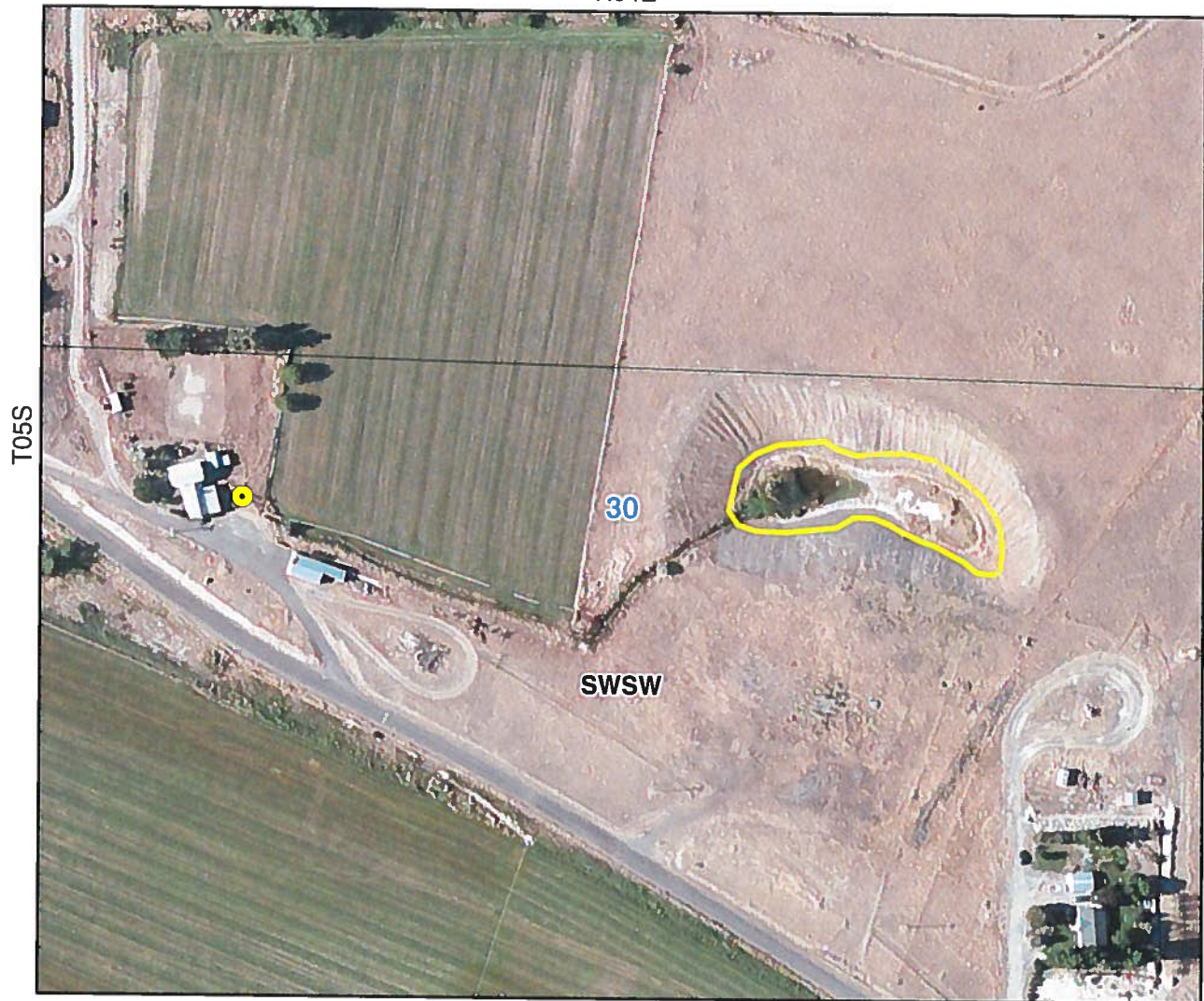
Average for 11-
114.17

POOR QUALITY ORIGINAL
150203

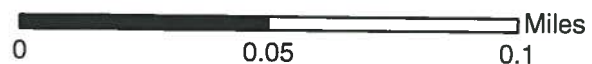
State of Idaho
Department of Water Resources
Attachment To Water Right License
57-11590

This map depicts the DIVERSION TO STORAGE place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

R04E



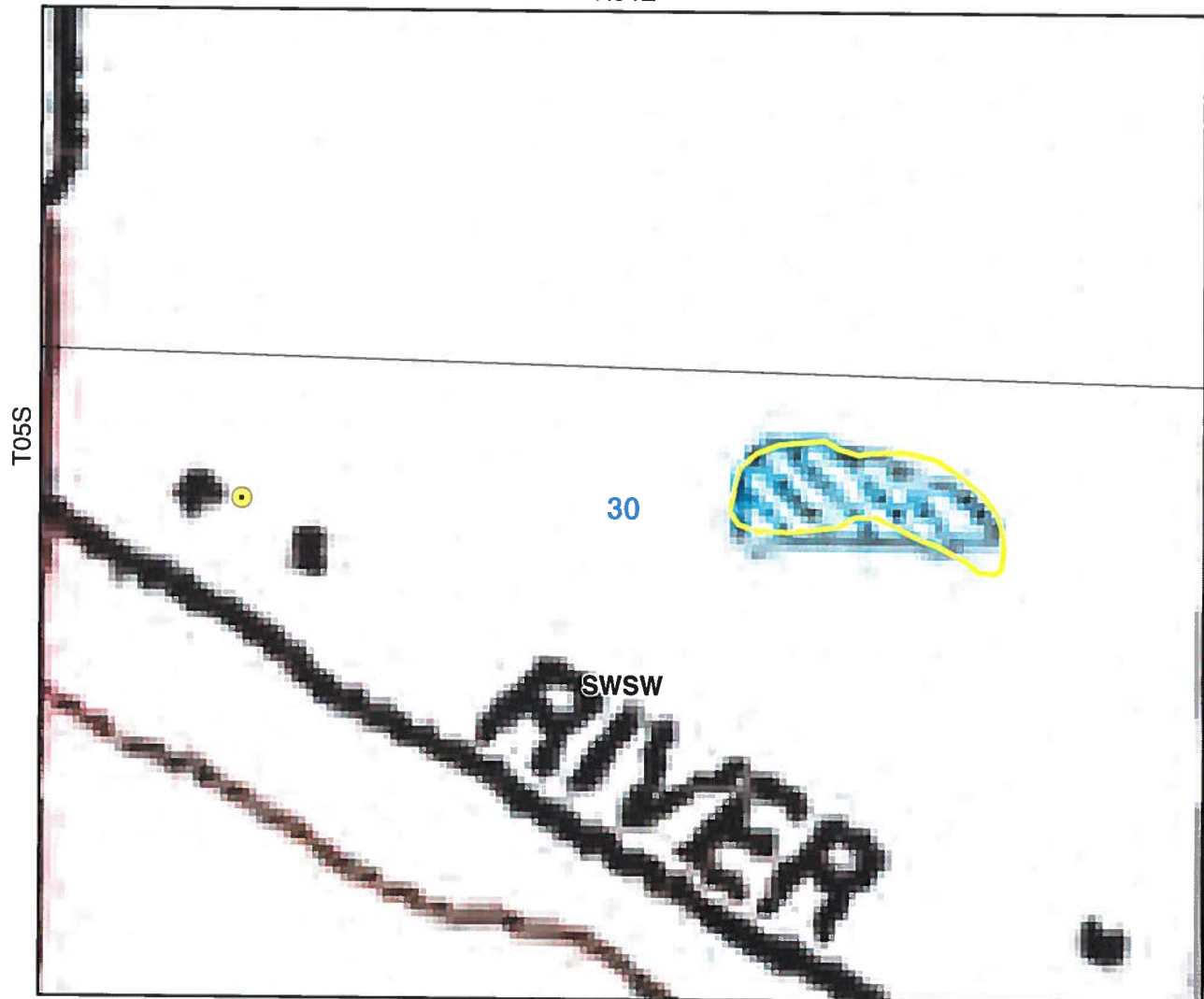
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters



State of Idaho
Department of Water Resources
Attachment To Water Right License
57-11590

This map depicts the DIVERSION TO STORAGE place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

R04E



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



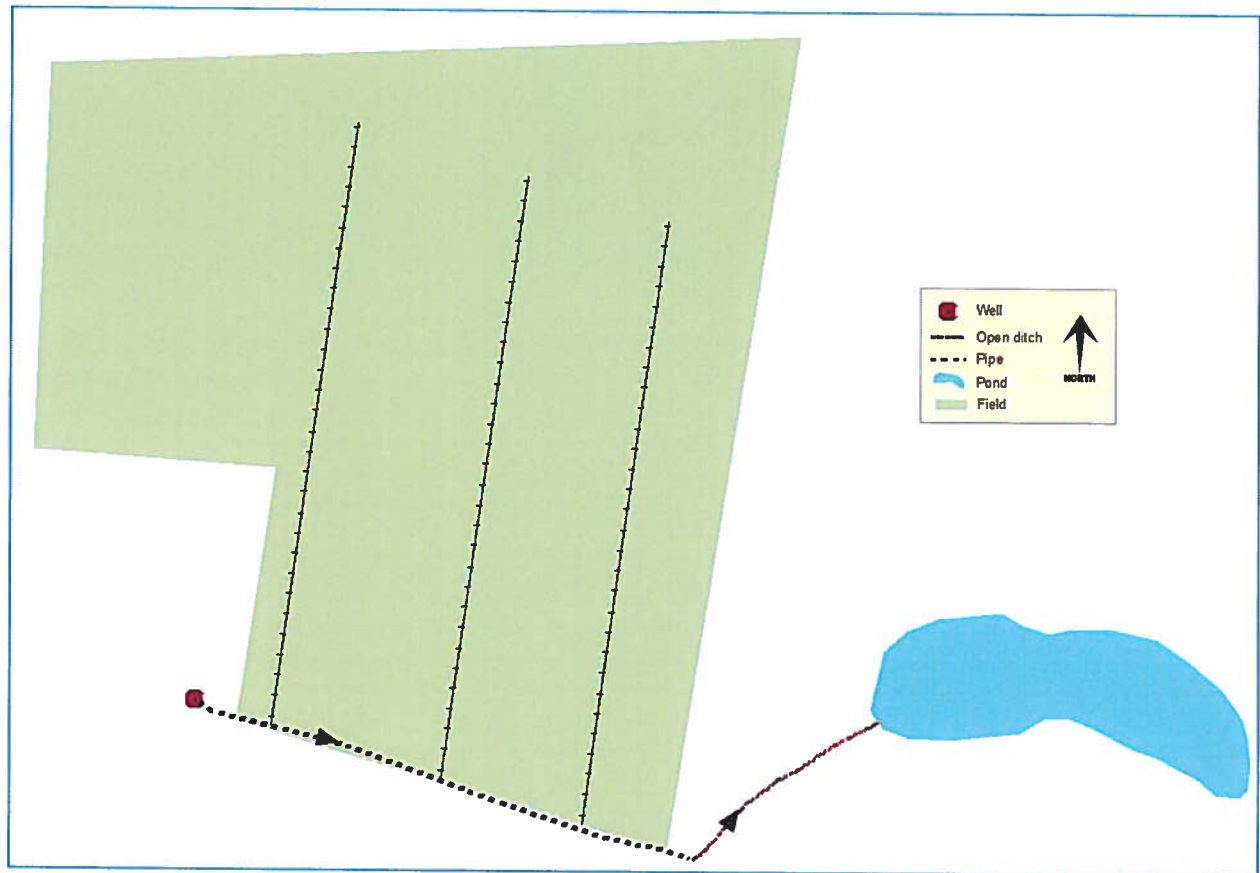
0 0.05 0.1 Miles

Water Distribution System Water Right 57-11590



An uncontrolled artesian well in T5S R4E Section 30 SW1/4 SW1/4, shown above as a red dot provides irrigation water during the irrigation season to the field north of the well. During the non-irrigation season the water flows into a pond. Water is piped approximately 0.08 miles along the southwest side of a field and during the irrigation season the gated pipe is open to the field. There is no pump and flow relies entirely on the pressure from the well. During the non-irrigation season, the water is allowed to flow from the end of the pipe into an open ditch, where it flows approximately 0.03 miles down hill to the northeast into a large depression. The pond at the bottom of the depression fills to between approximately 8 and 10 feet deep and has a possible surface area of 0.6 acres.

Water Distribution System Water Right 57-11590



An uncontrolled artesian well in T5S R4E Section 30 SW1/4 SW1/4, shown above as a red dot provides irrigation water during the irrigation season to the field north of the well. During the non-irrigation season the water flows into a pond. Water is piped approximately 0.08 miles along the southwest side of a field and during the irrigation season the gated pipe is open to the field. There is no pump and flow relies entirely on the pressure from the well. During the non-irrigation season, the water is allowed to flow from the end of the pipe into an open ditch, where it flows approximately 0.03 miles down hill to the northeast into a large depression. The pond at the bottom of the depression fills to between approximately 8 and 10 feet deep and has a possible surface area of 0.6 acres.

PHOTOGRAPHER AND DATE OF PHOTOS: Sandy Thiel, July 3, 2012

FILE NUMBER 57-11590



This photo shows the location of the artesian well, on the east side of the house.



A pipe carries water east. During the summer the field in the upper left is irrigated with water from the well.



This photo shows the opening of the pipe east of the irrigated field. The well is on the photographers side of the house



This is the ditch bank looking south, southwest



This picture shows the ditch that carries water into the pond, looking up from the bottom of the pond. The ditch flows from the southwest to the northeast.



The pond is in the center of the photograph. The high water line can be seen several feet above the water in the photo. The ditch that carries water to the pond is in the lower left.