

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-8683

Exam Date: 5/20/2013

1. Current Owner: CAROLYN A GIBSON
19500 HWY 20/26
CALDWELL ID 83605
(208)375-1553

And

DANIEL G GIBSON JR
19500 HWY 20/26
CALDWELL ID 83605
(208)375-1553

And

NORTHWEST FARM CREDIT SERVICES FLCA
16034 EQUINE DR
NAMPA ID 83687
(208) 468-1600

2. Accompanied by: **Daniel Gibson**

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: **Black Canyon and Farmers Co-op surface water shares**
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

NW1/4SE1/4

Sec. 35, Twp 05N, Rge 04W, B.M.

CANYON County

Method of Determination: **Garmin GPS: N 43.72658, W -116.77962**

2.

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	
04N	04W	2		11.0															11.0
05N	04W	35							38.0							35.0	18.0		91.0

Total Acres: 102

Method of Determination: **2011 BING AERIAL PHOTOGRAPHY**

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.

Well or Diversion

<u>ID No.*</u>	<u>Motor Make - PTO</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
WELL	AMARILLO GEAR CO.	40	id # sl408, 113564		

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

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>
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2. Measurements: **NONE TAKEN****E. FLOW CALCULATIONS** ☐ Additional Computation Sheets Attached

Theoretical calculation: PTO is 40 hp, assume 10 psi for open discharge, 70% efficiency, assume total head at 10' above screen interval = 40 ft

$$\frac{8.8 \times .7 \times 40 \text{ hp}}{40 \text{ ft} + [10 \text{ psi} \times 2.31]} = \frac{246.4}{63.1} = 3.9 \text{ cfs}$$

Measured Method:

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 102 \text{ acres} \times 4.5 \text{ afa} = 459 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 2.04 \text{ cfs} \times 1.9835 \times 260 \text{ days in irrigation season} = 1052 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 459 \text{ af}$$

2. Volume Calculations for Other Uses: **not applicable**

G. NARRATIVE/REMARKS/COMMENTS

The applicant, Daniel Gibson, accompanied me on the field exam. The permit was issued for 2.62 cfs from ground water for the supplemental irrigation of 131 acres. The Black Canyon Irrigation District and Farmers Cooperative Ditch Co. provide surface water. There are no other overlapping rights. The permit lapsed, was reinstated, and the priority date advanced.

The water is pumped via a tractor PTO, through a 12" steel and PVC pipe to a corrugated metal pipe, about 36" in diameter. The surface water also enters this metal pipe. From there, the water is delivered to a pump and power station through 12" PVC pipe, and is then distributed to pivots, hand lines and wheel lines.

The permit was issued for 131 acres. When the prior owner filed an SRBA claim [which was rejected], he claimed 108 acres irrigated and in the proof of b/u, he state 100 were developed. I found 102 irrigated acres during my licensing review. The majority of the acres not being irrigated, [22 acres] are in the SWSE of Section 35 - 7 acres in the area of the house and pump station, and 15 acres east of the pump station that do not appear to have been historically irrigated with surface water, based on a review of aerial photos from 1987 to 2011.

I calculated the flow using the theoretical flow equation and the result was 3.9 cfs. Based on the field exam, I recommend licensing 102 acres, 2.04 cfs based on the IDWR standard of 0.02 cfs per acre, and 459 af, the lesser of the Vr and Vd calculations.

The season of use permitted was 4/1 – 10/31. The season of use standard has changed in the over 30 years since the application was filed. I recommend the season of use be changed to the current standard of 3/1 – 11/15.

IDWR policy regarding measuring devices has changed since the 1980s when the application was filed. The permit was issued in 1982 with a condition that required a measuring device, and then the language changed, and at some point, was taken off of the permit in the IDWR database. The current measuring device condition should be added as indicated below.

Also, the current supplemental use conditions should be added as indicated below.

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

Add 01M - After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to use power records to determine the amount of water diverted and shall annually report the information to the Department.

Add 065 - The right holder shall make full beneficial use of all surface water rights available to the right holder for irrigation of the lands authorized to be irrigated under this right. The right holder shall limit the diversion of ground water under this right to those times when the surface water supply is not available or the surface water supply is not reasonably sufficient to irrigate the place of use authorized under this right.

Add 104 - If the surface water right(s) appurtenant to the place of use is abandoned, forfeited, sold, transferred, leased or used on any other place of use, this right to divert ground water shall not be used without an approved transfer pursuant to Section 42-222, Idaho Code, or approval of the Department if a transfer is not required.

H. RECOMMENDATIONS

- | | |
|-------------------------|------------|
| 1) Permit amount | _2.62_ cfs |
| 2) Beneficial use limit | _2.62_ cfs |
| 3) System measurement | _2.04_ cfs |
| 4) Proof fee amount | _3___ 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	2.040 CFS	459.00 AF
	<u>Totals:</u>	2.040 CFS	459.00 AF

2. Recommended Amendments

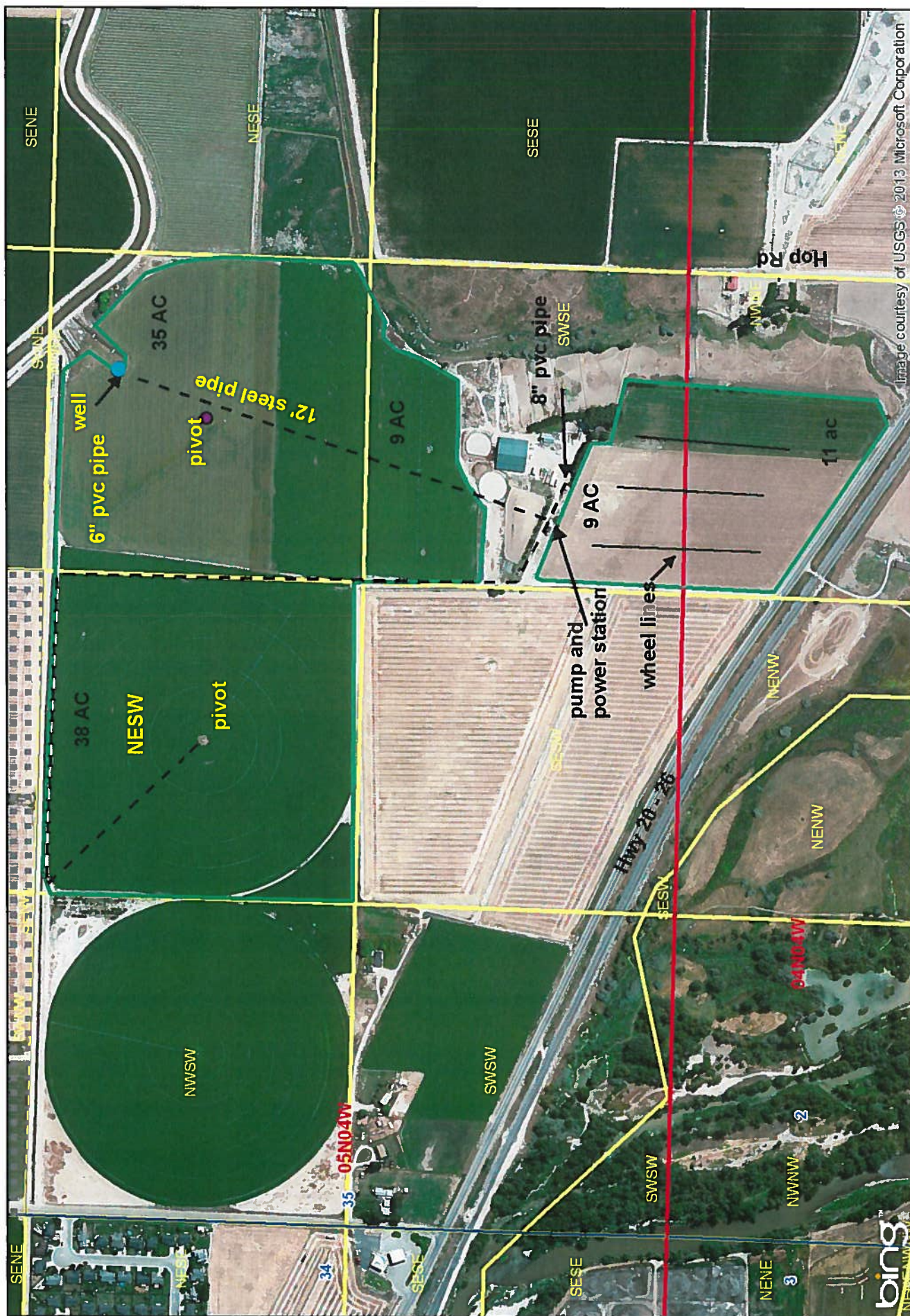
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

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

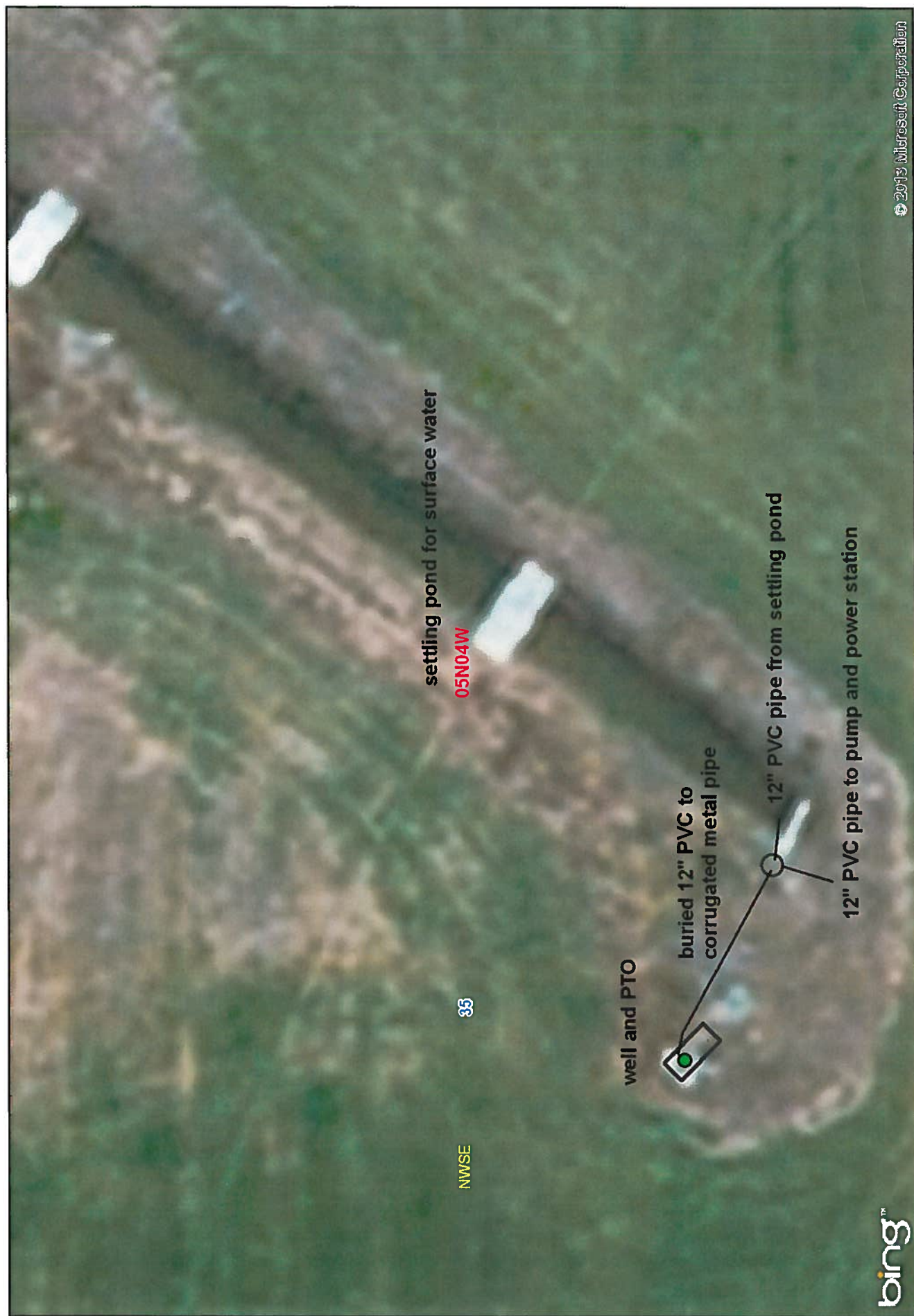
I. AUTHENTICATION

Field Examiner's Name Wesley Umic Date 6-5-13

Reviewer _____ Date _____



63-8683 - Gibson - POD is well. POU outlined in blue.
2011 Bing photography.



63-8683 - Gibson - close up of well and part of delivery system.

WELL DRILLER'S REPORT

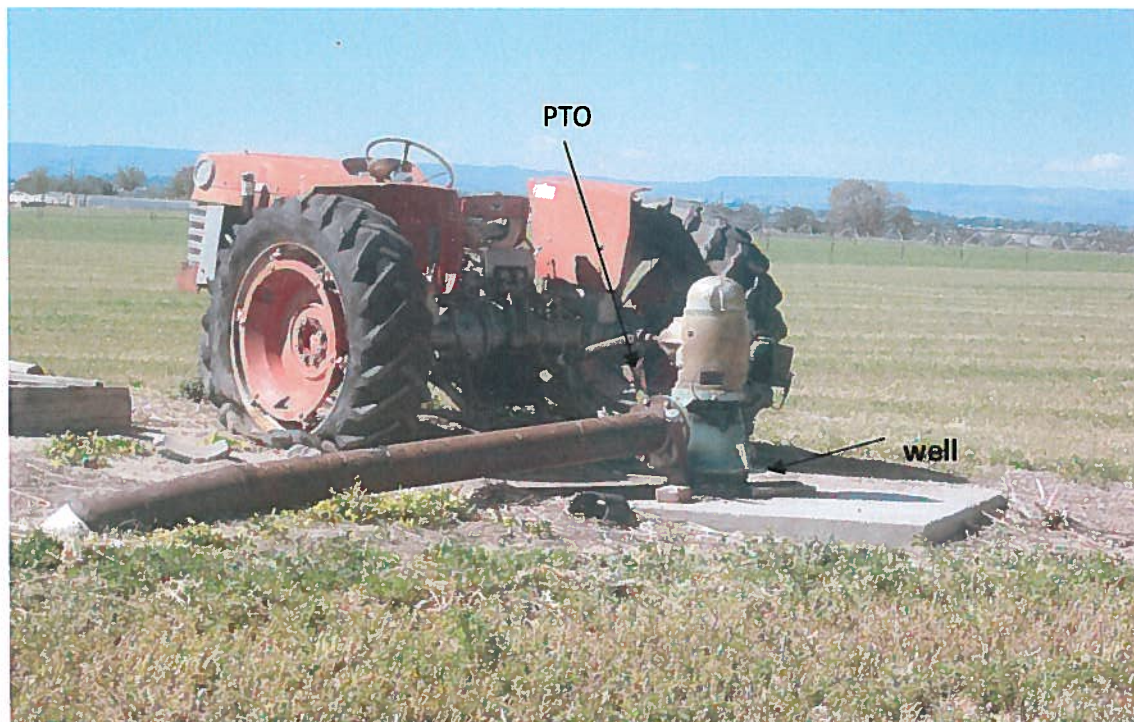
State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

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[illegible]

63-8683 - Field exam photographs



POD in the NWSE Section 35, T5N R4W



Well, PTO drive, steel pipe from well to buried 12" PVC pipe that goes to the corrugated metal pipe, see in left background.



POU – looking north from Hwy 20-26 at wheel lines.



POU – looking south from the well