

[illegible]

Method of Determination:

This permit was issued in 2000 based on an enlargement of water right 41-7063. Nothing has changed in the system other than a smaller horsepower pump was installed in about 2007. The HP was 7.5 and was replaced with a 5 HP. Refer to the Water Right License 41-7063 for photos, and diagram of the system on this small acreage place of use for pasture around Greg's home. Stock water rights are attached to 41-7063.

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.

<u>Well or Diversion 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 Size</u>
A0011355	Unknown	5		Submersible	

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

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Calib. Date</u>
GE Panametrics	Ultrasonic	PT868	4139	3/27/2012

2. Measurements:

Measurement was done using 2 Mhz transducers on a 2 inch discharge line just off the well head in the pump house. Good diagnostics included 4793 feet per second sound speed for 60 degree water for a To Check value of 99.97%. Measurement was ran for ten minute average and determined by average rate of flow over that ten minute run. This measurement was rated as excellent ($\pm 2\%$) based on the system setup and good diagnostics from the flow meter used to determine the rate of flow. The rate of flow during the measurement was 55 GPM or .125 cfs. Based on the system setup and the number of acres determined under the system I am recommending limiting this system to the following:

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

Cfs limit per acre= 0.03 (cfs)(number of acres)= (.03*3.6)= .108 or .11 cfs
 Number of acres= 4.6
 Total rate in cfs = 0.11

Domestic use-

Limit of 0.04 cfs under 42-111

Applicant asked for .08 cfs

Number of homes = 3

 $0.04 \times 3 = .12$ cfs

Limited rate under application to .08 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (3.6) \times (4) = 14.4$$

$$V_{D.R.} = [.11 \times (184) \times 1.9835] = 40.15$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = I.R. \text{ of } 14.4$$

2. Volume Calculations for Other Uses:

Domestic use for three homes

0.6 for in house use for each home

$$3 \times 0.6 = 1.8 \text{ AF/Ann}$$

G. NARRATIVE/REMARKS/COMMENTS

The original water right permit that was licensed in the early 90's was limited to 1 acre. The applicant only asked for 1 acre when there was about 4.5 acres being irrigated. 41-7096 water right permit was an additional right needed as an expansion of the original right 41-7063. Field exam for 41-7096 found that this system had not changed much since the original licensing exam was completed but a smaller horse power pump was installed in the time frame between the two licensing exams. No physical measurement of the system was conducted under the older right but I was able to complete the measurement and determine some additional information about the system. Currently this water right is not in any water district and has no measuring device installed on the diversion works.

The system consists of portable 3 inch hand line that is moved on twenty four hour sets. Typical operation of the system includes 50 psi at the pump and with 12-15 11/64 inch nozzle birds running at one time. The system is set up on 40 X60 spacing with 60 feet between the risers and 40 feet between the birds. There is some topographic relief in the area and some large trees in the pastures as well. Head requirements would be different north of the pump house then they would be on the South West portion of the property likely allowing the pump to pump at higher rates.

Acres irrigated were re-drawn using ArcMap and I feel is a better representation of the actual acres being irrigated. Stockwater was not included under this right but additional volume is identified under 41-7063 for this use.

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	04/01 to 10/31	0.110 CFS	14.40 AF
DOMESTIC	01/01 to 12/31	0.080 CFS	1.80 AF
<u>Totals:</u>		0.110 CFS	16.20 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

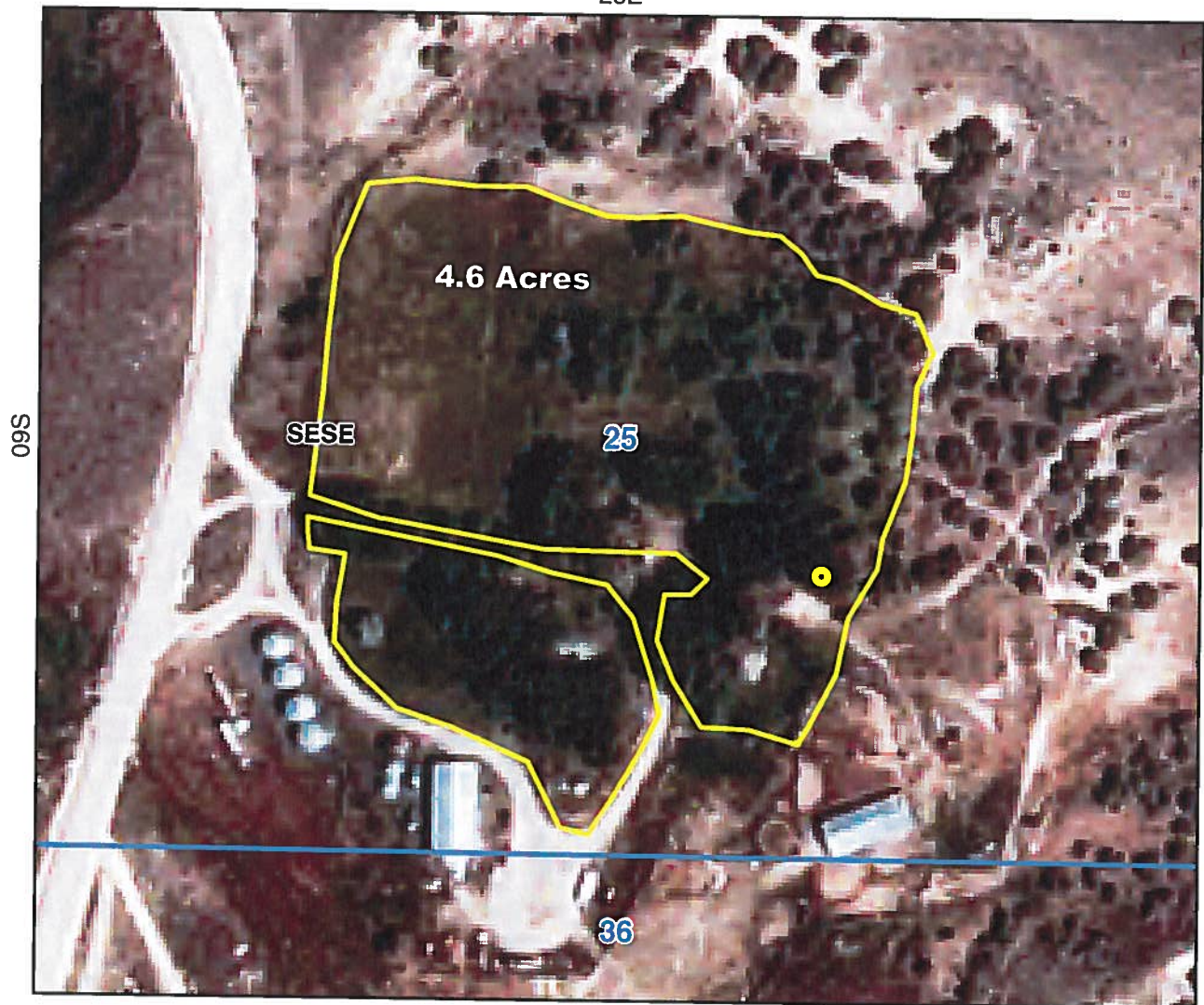
Field Examiner's Name C. [Signature] Date 2/5/13

Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Field Exam Map
41-7096

This map depicts the IRRIGATION 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.

28E



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

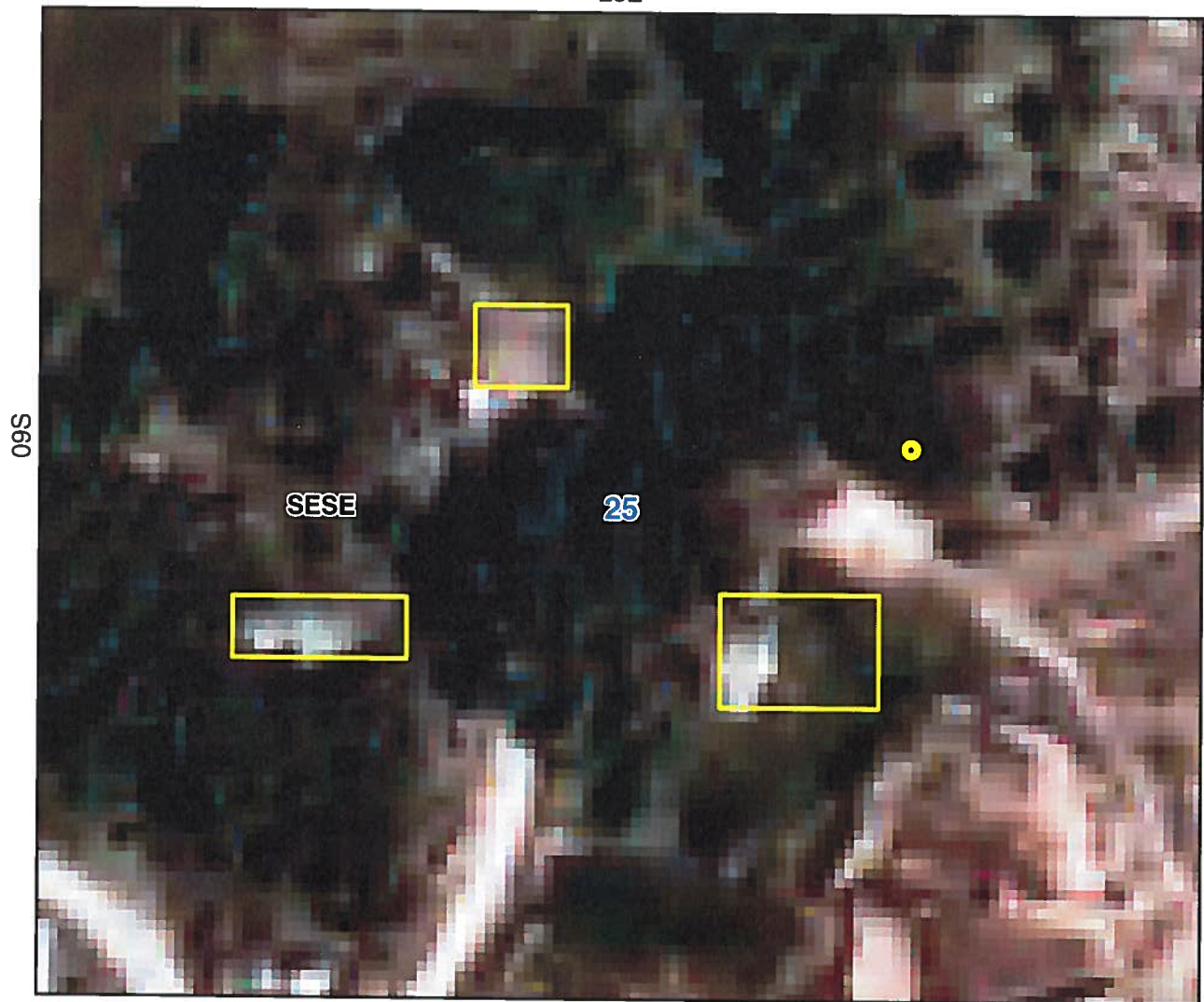
0 0.0175 0.035 0.07 Miles



State of Idaho
Department of Water Resources
Field Exam Map
41-7096

This map depicts the DOMESTIC 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.

28E



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

0 0.0075 0.015 0.03 Miles



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

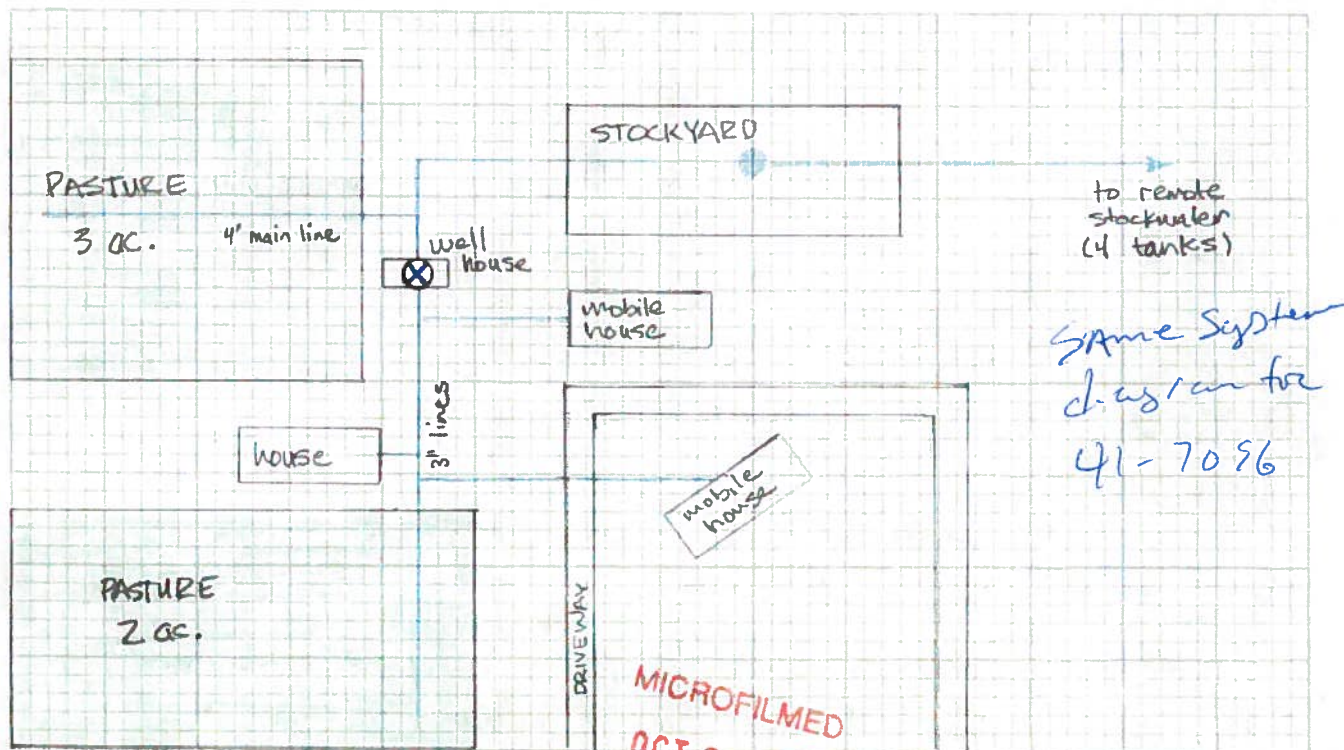
1. Owner: Barkdull Ranches Permit No. 41-7063
Current Address: 646 Reed St. Am Falls, ID 83211 Phone No. 226-5817
2. Accompanied by: Carl Barkdull EXAM. DATE: 6/13/91
Address: Am. Falls, ID 83211 Phone No. _____
Relationship to Permit Holder: Trustee
3. Source: groundwater tributary to _____
Laynes Gulch Creek Snake River

B. OVERLAP REVIEW

1. Other water rights with same place of use: none ☐ Copies Attached
2. Other water rights with same point of diversion: none ☐ Copies Attached ☐ Copies of Field Exam's Attached

C. SYSTEM DESCRIPTION

1. **Diversion System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable. ☐ Alternative diagram attached



Scale: 1" = approx 50'

2. ☒ Copy of U.S.G.S. Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required). ☐ Aerial Photo Attached (required for irrigation of 10 acres or more).
☒ Photo of Diversion and System Attached (required for all but single household domestic groundwater, and stockwater).

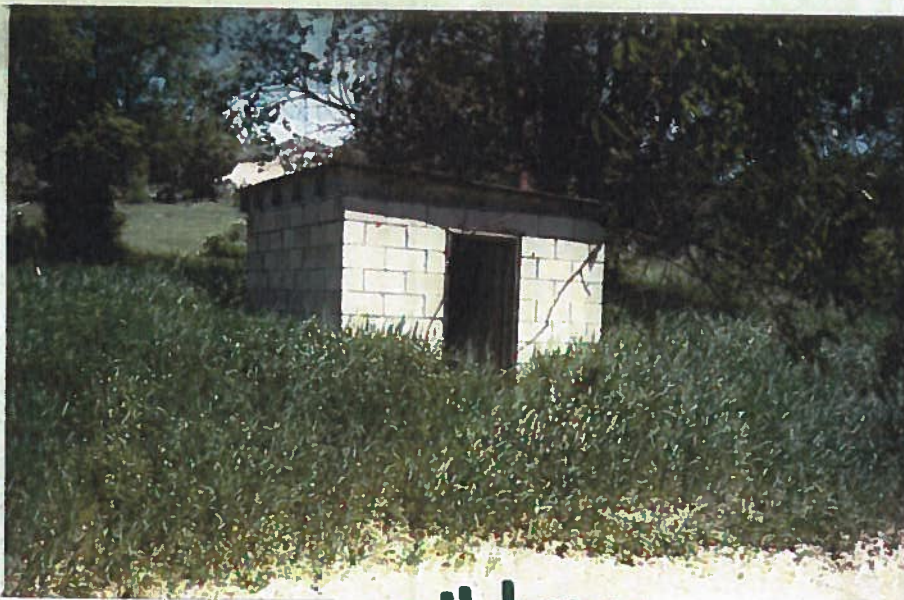


photo looking n'ly

well house

pump house here



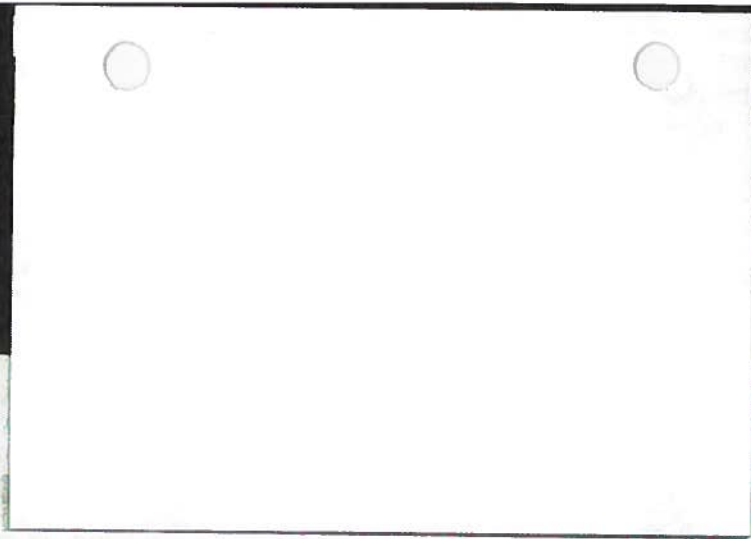
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photo looking sw'ly



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P/W

pump house here

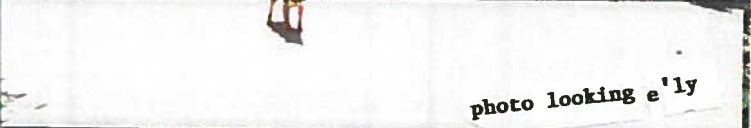
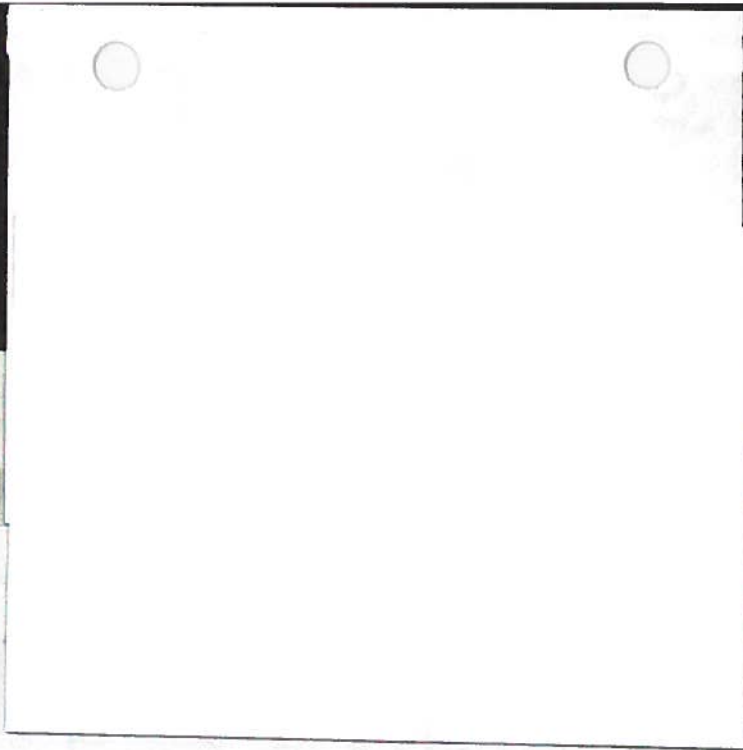


photo looking e'ly



photo looking sw'ly

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OCT 23 2000



pump house here



photo looking e'ly



photo looking sw'ly

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pump house here



photo looking e'ly



photo looking sw'ly

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pump house here

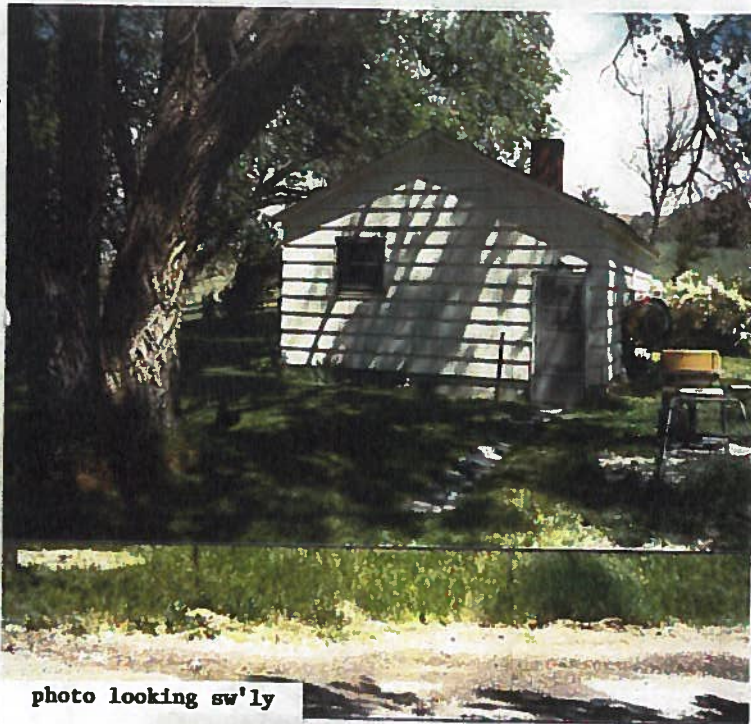


photo looking sw'ly

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OCT 23 2000

pump house here

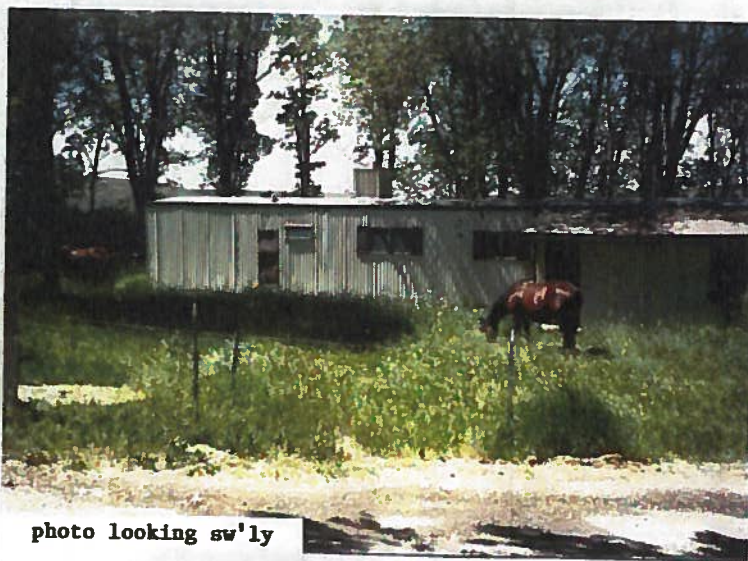


photo looking sw'ly

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OCT 23 2000