

[illegible]

PLACE OF USE: WILDLIFE

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
16S 21E 24												X					
16S 22E 19			X			X	L 1				X	L 4					
16S 22E 20					X				X								
16S 22E 29		X															

Method of Determination:

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.

<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>
N/A	N/A	N/A	N/A	N/A	N/A

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

D. FLOW MEASUREMENTS

1.

<u>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>
Theoretical	Hazen-Williams	N/A	N/A	N/A	N/A	N/A

2. Measurements: Theoretical

E. FLOW CALCULATIONS Additional Computation Sheets Attached

Measured Method: Theoretical

Hazen-Williams Formula

$$V = 1.318 \times C_h \times R^{0.63} \times S^{0.54}$$

V = Velocity (ft/s)

C_h = Hazen-Williams Friction Coefficient

R = Hydraulic Radius = Cross Sectional Area / Wetted Perimeter

S = h_f/L = Slope of Energy Grade LineFor 1.25" old/plastic pipe: C_h = 130; For Delivery System: S = 0.04 w/ R = 0.026 ; => V = 3.02 ft/s & Q = 0.03 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

2. Volume Calculations for Other Uses:

800 range cattle @ 12 gpd/head

$$(12 \text{ gpd/head} \times 800 \text{ head} \times 365 \text{ days}) \div 325,850 \text{ gal/ac-ft} = 10.8 \text{ ac-ft}$$

30 ungulates (wildlife) @ 12 gpd / ungulate

$$(12 \text{ gpd/head} \times 30 \text{ head} \times 365 \text{ days}) \div 325,850 \text{ gal/ac-ft} = 0.40 \text{ ac-ft}$$

$$\text{Total} = 10.8 + 0.4 = 11.2 \text{ ac-ft}$$

G. NARRATIVE/REMARKS/COMMENTS

No actual field visit was conducted for this particular licensing exam, 45-14234. Information was obtained from various sources including information provided by the BLM (permit holder), the 45-13402 licensing exam report performed by Jeff Cooper, and data and information obtained by Jana Reeder and Jeff Cooper during a site visit for a pre permit exam. Application for permit 45-14234 was filed to resolve a licensing issue with permit 45-14138 (see narrative in 45-14138 beneficial use field report for more information).

The system described by 45-14234 consists of a source (spring tributary to Birch Creek) that feeds a pipeline system that discharges into various stock water troughs. The source (spring tributary to Birch Creek) is locally known as North Worthington Spring &/or Fence Spring. In addition to the various troughs, this pipeline system also can discharge into a small reservoir located on an unnamed stream tributary to Goose Creek. The storage of water from the unnamed stream in this particular reservoir is described by SRBA decreed right 45-12924. Several other rights allow for diversion of water from the same source and different sources into the same pipeline system utilized by 45-14234. The diversion of water from an unnamed stream tributary to Birch Creek into the pipeline system is described by right 45-13402 (pending licensing at state office). The diversion of water from Worthington Spring tributary to sinks into the pipeline system is described by SRBA recommendation 45-2810A. Note that SRBA recommendation 45-2810B is diverted from the same Worthington Spring tributary to sinks source but is delivered to a separate independent trough. Also note that SRBA recommendation 45-10491 appears to be diverted from the same Worthington Spring tributary to sinks source and used in the same stock water system (same use as 45-2810A only claimed by individuals rather than the BLM). Right 45-14138 (pending license at state office) describes diversion of water from the same source (spring tributary to Birch Creek) as right 45-14234, but only covers the water storage in the small reservoir located on an unnamed stream tributary to Goose Creek from the three sources (spring tributary to Birch Creek, unnamed stream tributary to Birch Creek, and Worthington Spring tributary to sinks) used in the system.

It should be noted that rights 45-13402, 45-14138, and 45-14234 were processed and developed through the administrative process in the Eastern Snake River Plain moratorium area. Note that these applications would have been processed as "domestic" 42-111 type of applications and should have been limited to diversions not to exceed 13,000 gpd. In addition, 42-111 prevents "stacking" of "domestic" uses. Therefore, it appears that rights 45-13402, 45-14138, and 45-14234 should be limited to a diversion not to exceed 13,000 gpd both individually and when combined with the other rights in the system. The source described on the permit is surface water tributary to sources that are eventually tributary to the Snake River upstream of Milner Dam and is therefore a non trust water source. For this reason, license 45-14234 should not be identified as a trust water right, or include trust water conditions.

Have conditions of permit approval been met? X Yes _____ No

H. RECOMMENDATIONS**1. Recommended Amounts**

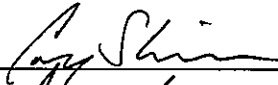
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER	01/01 to 12/31	0.020 CFS	10.80 AF
WILDLIFE	01/01 to 12/31	0.020 CFS	0.40 AF
	<u>Totals:</u>	0.020 CFS	11.20 AF

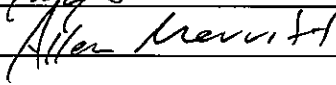
2. Recommended Amendments

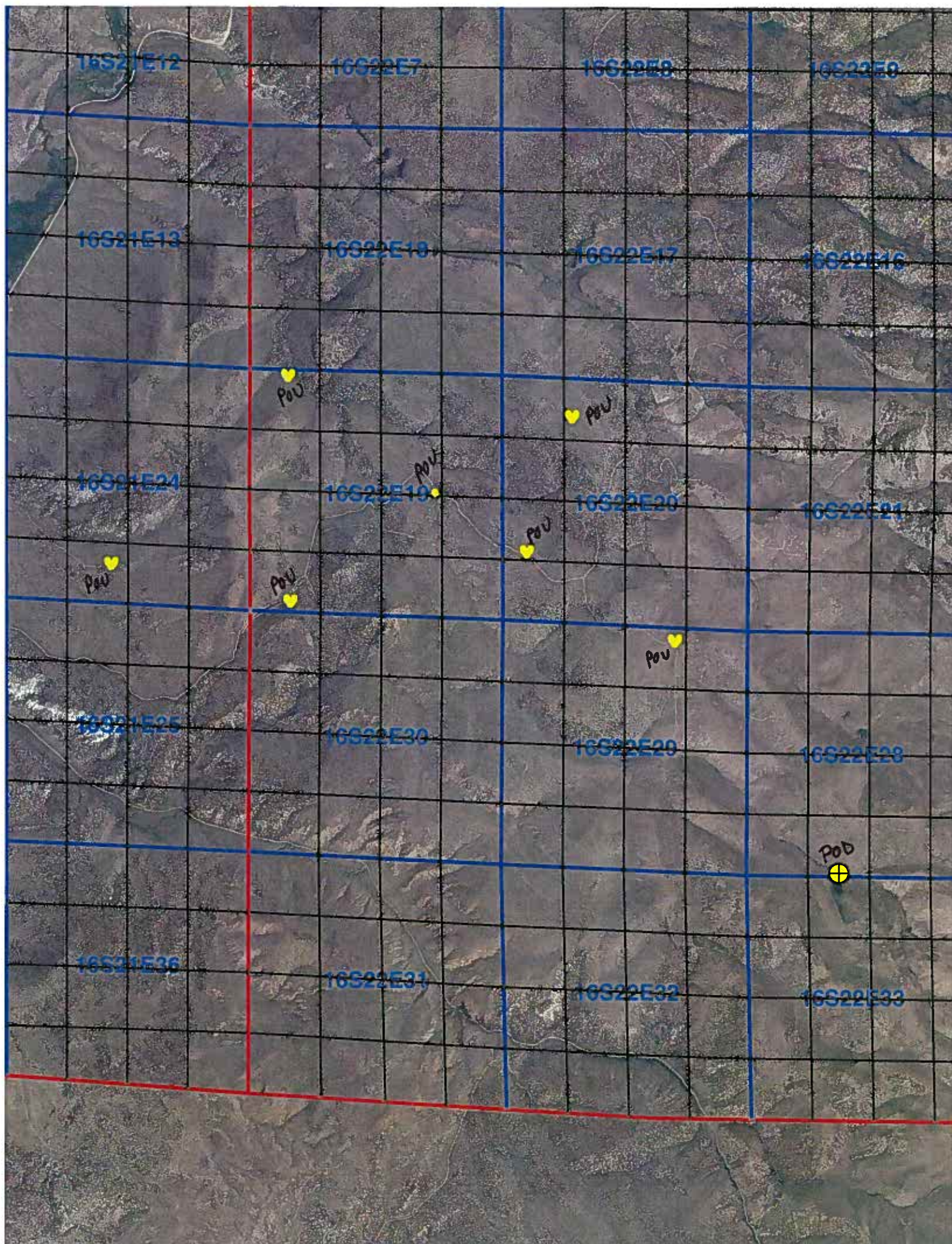
___ Change P.D. as reflected above ___ Add P.D. as reflected above X None

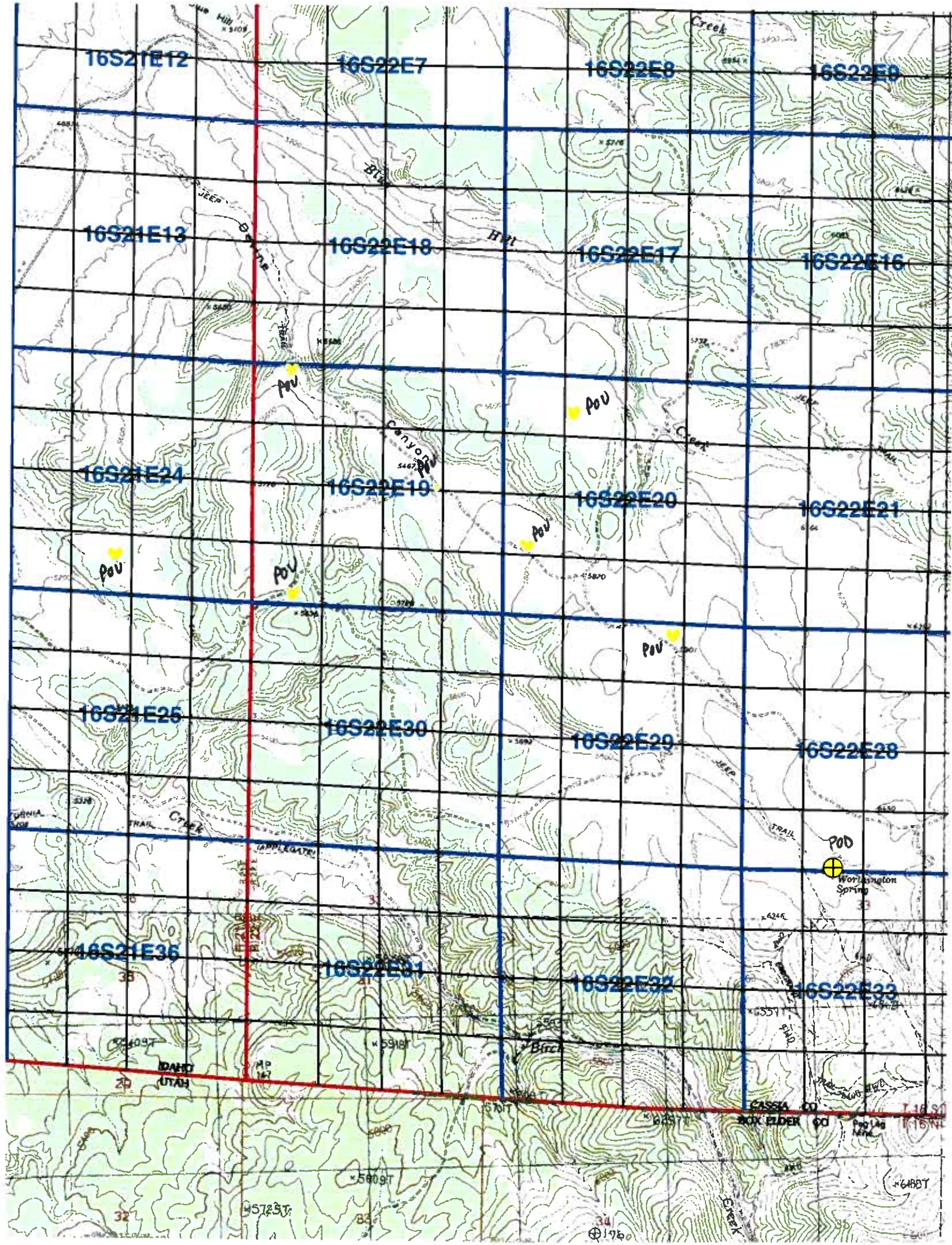
___ Change P.U. as reflected above ___ Add P.U. as reflected above ___ Other

I. AUTHENTICATION

Field Examiner's Name  Date 11/24/2009

Reviewer  Date 12/7/09





North Worthington Spring (also called Fence Spring) & Headbox
T165 R22E S28 SWSESW



Headbox For North Worthington Spring (also called Fence Spring)
T165 R22E S28 SWSESW

Troughs at 16S 22E S20 NW34



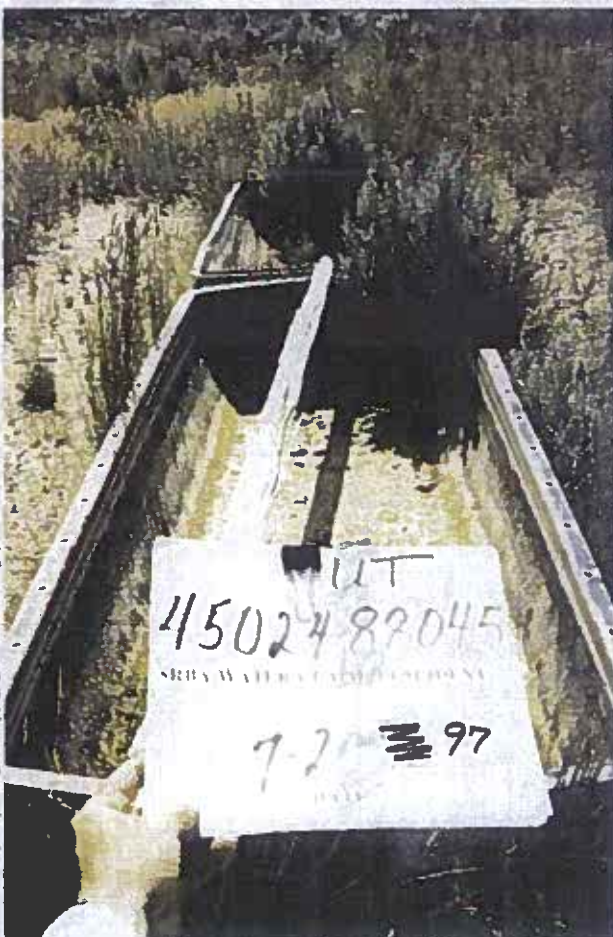
Troughs at 16S 22E S19 NW34



Troughs at 16S 22E S19 NW34



Troughs at 16S 22E S19 NW34



Troughs at 16S 22E S19 NW34



8/14/08



8-165 22E Sec. 20 NENW

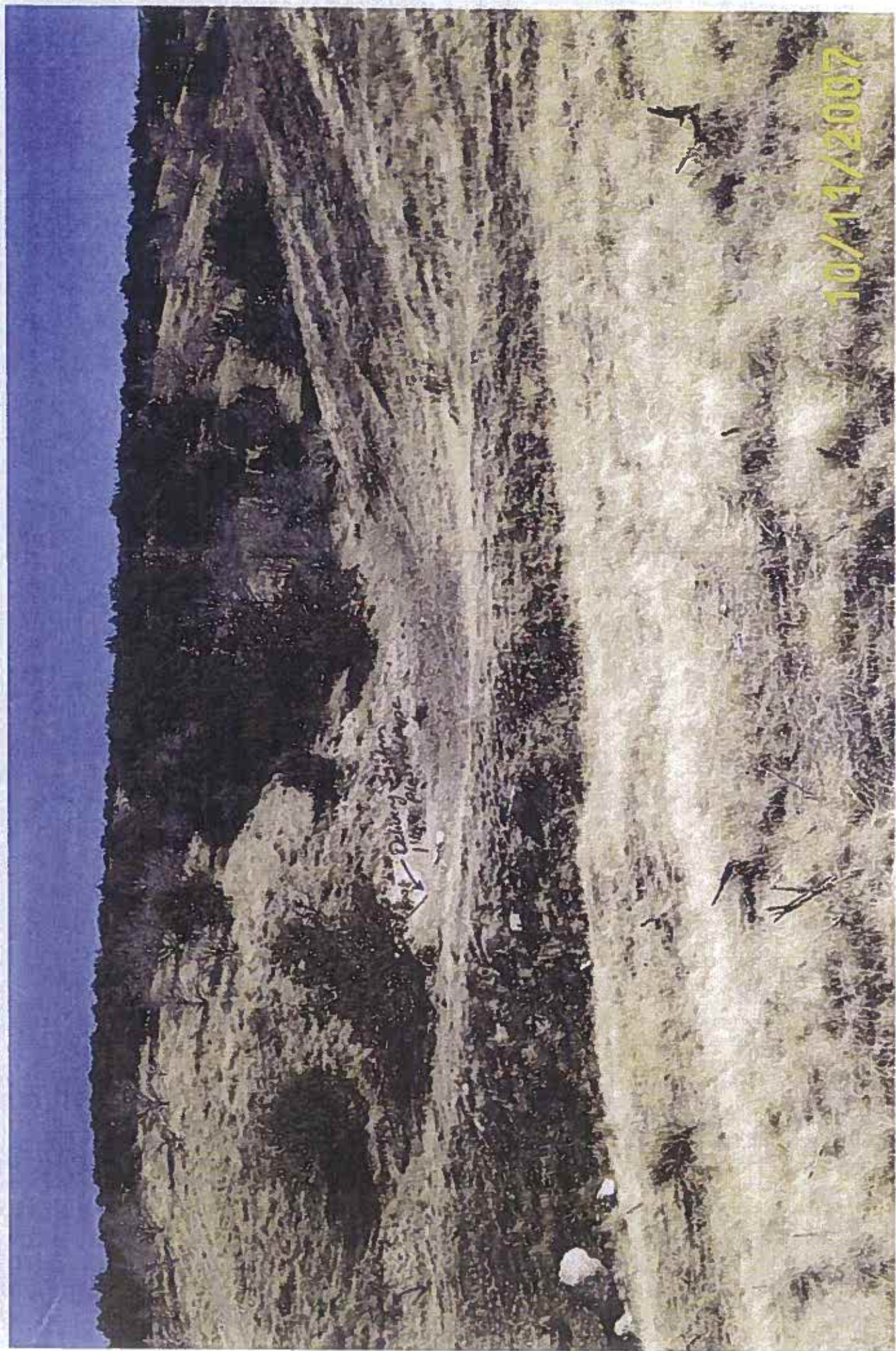


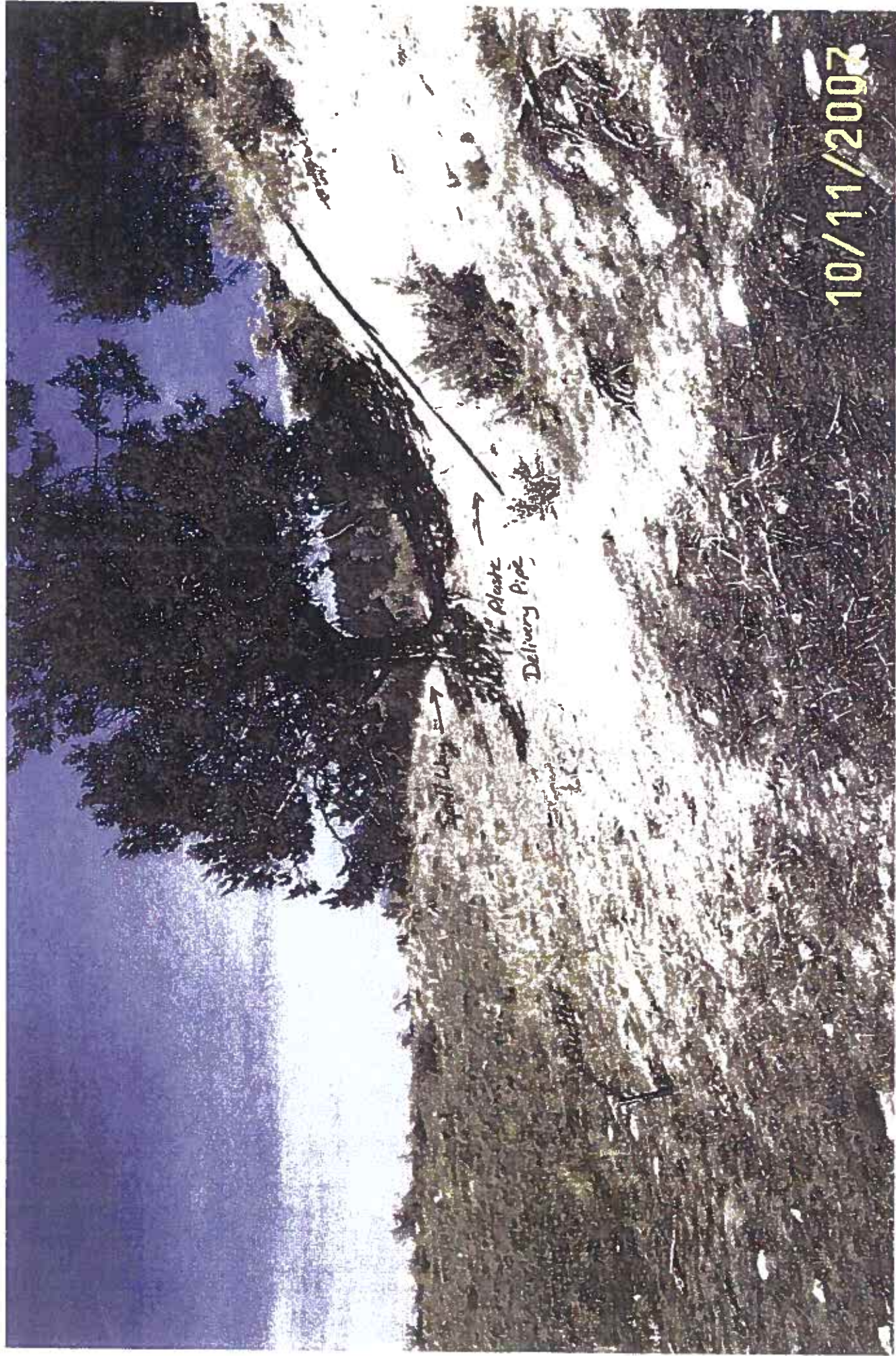


Small Dam in Devine Canyon (Looking Downstream)
T/6 S R22E S19 SWNE

Small Dam in Devine Canyon (Looking Upstream)
T165 R22E S19 SWNE

10/11/2007





Small Dam in Devine Canyon showing delivery system (as on map) and outlet
T16S R22E S19.5WNE