

MEMORANDUM

TO: PERMIT FILE 67-2365

FROM: DANIEL A. NELSON

Daniel A. Nelson
8-3-05

DATE: 8/3/05

SUBJECT: FIELD EXAM FOR PERMIT 67-2365

I reviewed this field exam and agreed with the rate of diversion and location of the place of use. However, with new mapping technology and rounding procedures I disagreed with the land being irrigated. This is the third review of this field exam, and everyone disagrees slightly over the lands irrigated. Quentin Nesbitt conducted a field exam in 1988 and found 129 acres and Kelley Christensen re-examined this permit in 1990 and found 120 acres. The ASCS map included with the file showed 125.9 acres when the ½ acre yard was included. When I calculated the acres using ArcView I discovered 126.6 acres. The proof of beneficial use only listed 100 acres and 100 cattle, but the fee was based on the rate of diversion not the number of acres irrigated or livestock, so the acres and cattle numbers shouldn't be limited by the proof of beneficial use form. Whereas the determination of actual irrigated acres was so close, I data entered the acres I found, since this is the shape file that will be entered into the database. Please see enclosed map.

The second issue is whether or not this source is a series of springs or an unnamed stream. Several department personnel have discussed this, and Steve Lester has written a summary on whether the reservoir is on the springs or unnamed stream. After reviewing the maps, it seems to me as though the source for this right should be an unnamed stream. The 1987 aerial map show that the springs are on the east side of the reservoir, and when the reservoir is low, there is a definite stream channel into the reservoir. Therefore, I agree with Steve Lester's comments and have named it an unnamed stream, since the springs were not developed, but a reservoir was developed downstream of the springs in the unnamed stream's channel.

The field exam of Kelly Christensen, is satisfactory for licensing of this permit. I have included this memo with this file, because this permit will affect two other permits that have not been submitted to the state office staff, 67-7281 and 67-7292. The following is my recommendation of the source, flow rate, volume, and acres:

3. SOURCE
UNNAMED STREAM

TRIBUTARY
TENNISON CREEK

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 10/31	2.00 CFS	506.4 AF
STOCKWATER	01/01 to 12/31	0.16 CFS	8.6 AF
	Totals:	2.00 CFS	515 AF

IRRIGATION = 126.6 ac X 4.0 = 506.4 afa for irrigation.

Stockwater calculated on exam at 8.6 afa ($637 \times 12 \times 365 / 325850 = 8.56$ afa)

Diversion rate limited by fees paid for by the proof for a maximum of 2.00 cfs for irrigation and stockwater.

[illegible]

Topographic map showing a section of land in T11N R02W S2 and S1. The map includes contour lines, a red grid, and labels for sections 1, 2, 8, and 9. A road labeled 'Tennison' runs through the center. A well is marked with a black dot in the NWNE quarter of the S2 section. A yellow callout points to a 'SPRING LOCATION' in the NWNE quarter of the S2 section.

Key features and labels:

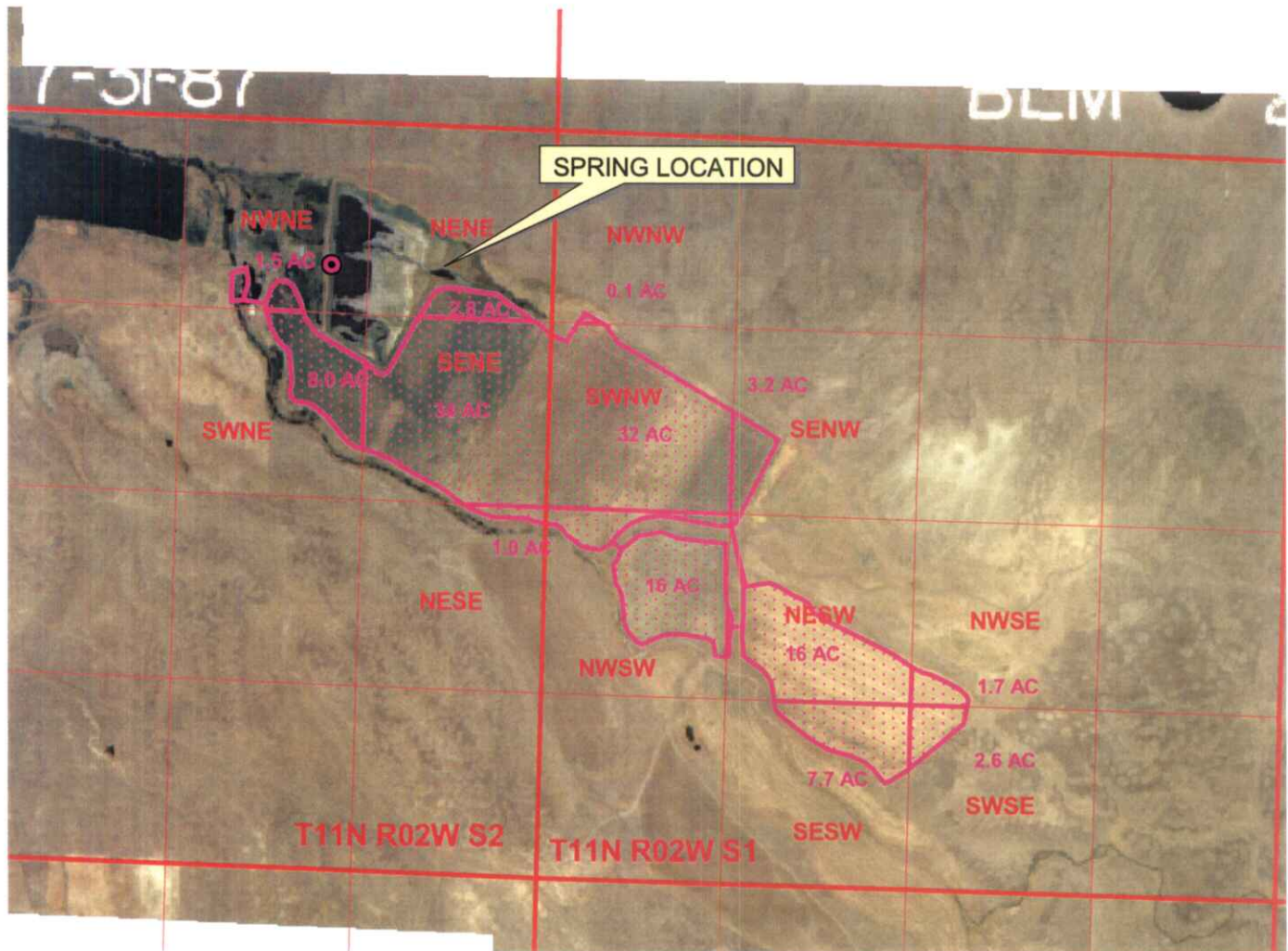
- Section 1:** NESE (1.0 AC), NENE (2.8 AC), NWNW (0.1 AC), SENW (3.2 AC), NWSE (1.7 AC), SWSE (2.6 AC), SESW (7.7 AC).
- Section 2:** NWNE (1.5 AC), SWNE (1.8 AC), SENE (34.4 AC), SWNW (32 AC).
- Section 8:** NWNE (1.5 AC), SWNE (1.8 AC), SENE (34.4 AC), SWNW (32 AC).
- Section 9:** NWNE (1.5 AC), SWNE (1.8 AC), SENE (34.4 AC), SWNW (32 AC).
- Other labels:** 3250 T, 3279 T, 3321 T, 3300, 3400, 3500, 4000, 4500, 5000, 5500, 6000, 6500, 7000, 7500, 8000, 8500, 9000, 9500, 10000, 10500, 11000, 11500, 12000, 12500, 13000, 13500, 14000, 14500, 15000, 15500, 16000, 16500, 17000, 17500, 18000, 18500, 19000, 19500, 20000, 20500, 21000, 21500, 22000, 22500, 23000, 23500, 24000, 24500, 25000, 25500, 26000, 26500, 27000, 27500, 28000, 28500, 29000, 29500, 30000, 30500, 31000, 31500, 32000, 32500, 33000, 33500, 34000, 34500, 35000, 35500, 36000, 36500, 37000, 37500, 38000, 38500, 39000, 39500, 40000, 40500, 41000, 41500, 42000, 42500, 43000, 43500, 44000, 44500, 45000, 45500, 46000, 46500, 47000, 47500, 48000, 48500, 49000, 49500, 50000, 50500, 51000, 51500, 52000, 52500, 53000, 53500, 54000, 54500, 55000, 55500, 56000, 56500, 57000, 57500, 58000, 58500, 59000, 59500, 60000, 60500, 61000, 61500, 62000, 62500, 63000, 63500, 64000, 64500, 65000, 65500, 66000, 66500, 67000, 67500, 68000, 68500, 69000, 69500, 70000, 70500, 71000, 71500, 72000, 72500, 73000, 73500, 74000, 74500, 75000, 75500, 76000, 76500, 77000, 77500, 78000, 78500, 79000, 79500, 80000, 80500, 81000, 81500, 82000, 82500, 83000, 83500, 84000, 84500, 85000, 85500, 86000, 86500, 87000, 87500, 88000, 88500, 89000, 89500, 90000, 90500, 91000, 91500, 92000, 92500, 93000, 93500, 94000, 94500, 95000, 95500, 96000, 96500, 97000, 97500, 98000, 98500, 99000, 99500, 100000.

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Field outlines and place of use were taken from maps of field exam by Kelley Christensen.

ARCVIEW SHAPE FIELD EXAM 67-2365 BY DAN NELSON



● Point of diversion 2365.shp

Place of use 2365.shp

PLSS Section Lines

T11n02w.shp



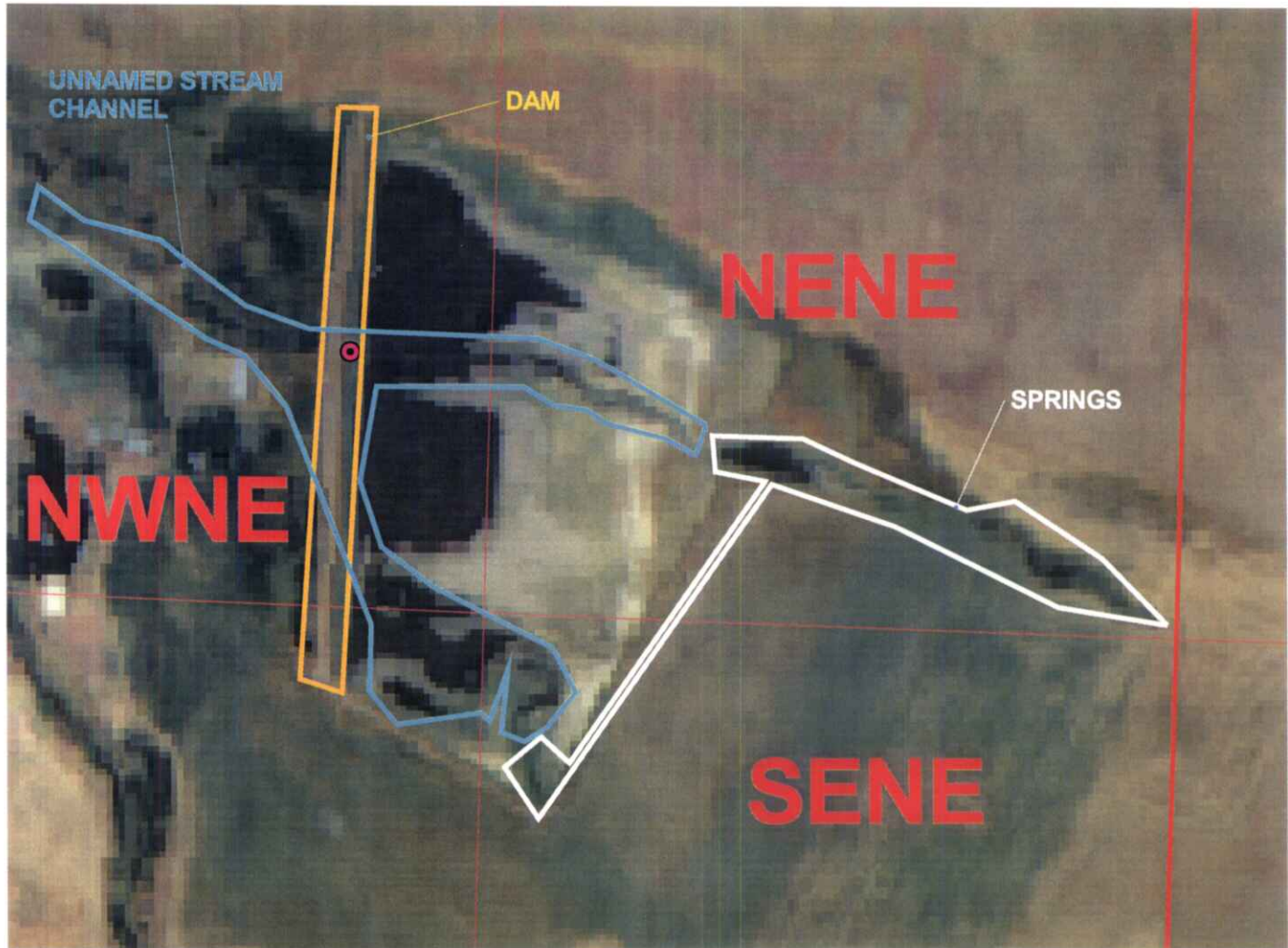
PLEASE NOTE:

Field outlines and place of use were taken from maps of field exam by Kelley Christensen.

FIELD EXAM 67-2365

SYSTEM DIAGRAM

BY DAN NELSON



0.1 0 0.1 0.2 Miles

● POINT OF DIVERSION

▭ SECTION LINES

▭ 1/4 1/4 LINES



PLEASE NOTE:

The springs are located on the east side (back end) of the reservoir. The stream channel goes through the reservoir and comes out the other side of the dam. Therefore, the dam has been built on the unnamed stream from the springs and not on the springs themselves.