

RECEIVED
AUG 16 2005
Page 1
DEPARTMENT OF WATER RESOURCES

[illegible]

PLACE OF USE: IRRIGATION FROM STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
11N	02W	1						.1	32.0	3.2	16.0	16.0		7.7		1.7	2.6		79.3
								L 4											
11N	02W	2	2.8	1.5	8.0	34.0									1.0				47.3
			L 1	L 2															

Total Acres: 126.6

PLACE OF USE: STOCKWATER FROM STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
11N	02W	1						X	X	X	X	X		X		X	X		
								L 4											
11N	02W	2	X	X	X	X									X				
			L 1	L 2															

PLACE OF USE: STOCKWATER STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
11N	02W	2	X	X	X	X													
			L 1	L 2															

Method of Determination: AERIAL PHOTOGRAPHY

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 (required for irrigation of 10+ acres).

YES Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
RELIFT PUMP	GENERAL ELECTRIC	60 Hp	GJ6284016	CORNELL	17686

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

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
N/A						

2. Measurements: Measurements of the reservoir were acquired from the dam safety files. No further measurement of the system was required. The previous agent did do a sprinkler measurement for the re-lift pump. He measured 50 psi average on 6 lines with 33 sprinklers per line. The average flow per nozzle was 6.01 gpm. 6.01 gpm X 33 heads X 6 lines = 2.65 cfs. A theoretical was also done on the pump (60Hp X 8.8 X.8) / [10 +(2.31 X 50)] = 3.36 cfs. Therefore, the irrigation system capacity would be 2.58 cfs.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method:

No flow rate is required for this type of water right. The irrigation system capacity is approximately 2.58 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:
- N/A

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

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

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

2. Volume Calculations for Other Uses:

Volume not required, only the volume of the reservoir is needed. Please see enclosed dam safety report for reservoir capacity.

G. NARRATIVE/REMARKS/COMMENTS**DAN NELSON'S NARRATIVE:**

Quentin Nesbitt performed the exam for this right in 1988. The exam has been held for several years and hasn't been completed. I have reviewed this exam and finalized the field report. Kelly Christensen also reviewed this exam and made some corrections to the original field report. The original field report was corrected and changed, therefore, I re-wrote the field report to make it more understandable. I have included the original field report in the file for reference.

My review this field exam showed that Mr. Nesbitt was correct in limiting the total volume to 75 afa as permitted, and changing the source from springs to unnamed stream. The permit limits the volume of this right to 75 acre feet, even though dam safety records show that the reservoir has the capacity to hold 90 acre feet of water. Therefore, 75 acre feet of water should be volume allowed under this permit.

With new mapping technology and rounding procedures I disagreed with the land being irrigated. Mr. Nesbitt's 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. 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 maps.

The stockwater was listed as 2.7 afa, which is sufficient for 200 head of range cattle. The field exam for 67-2365 showed that over 600 head were at this farm, but the permit should be limiting factor. Therefore, the stockwater storage should be limited to 2.7 afa.

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 shows that the springs are on the east side of the reservoir, and when the water level is low in the reservoir, there is a definite stream channel into and out of the reservoir. Earlier orthophoto quad maps also show a distinct stream channel flowing through the middle of 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.

Water right 67-2365 allows direct irrigation and stockwater from the unnamed stream that feeds this reservoir. This permit was filed to allow water to be stored in the reservoir, and to irrigate and supply stockwater from the reservoir. A second water right, 67-7292 was filed for an unnamed stream to fill the reservoir. This right is for a completely different unnamed stream, and shouldn't affect this permit. 67-7292 does request the full capacity of the reservoir of 90 acre-feet.

I have included Quentin Nesbitt's narrative from the original field exam for reference.

QUENTIN NESBITT NARRATIVE:

The reservoir was built below where large springs were dug out and water flows from the spring and collects in the reservoir. Also in the draw to the south of the reservoir, there is an unnamed stream which water is diverted to the reservoir (67-7292). The reservoir has a storage capacity of 90 acre-feet. A 60 Hp centrifugal pump sets on the dam of the reservoir and pumps into a 8 inch buried mainline, which reduces to both 6-inch and 4-inch mainlines. Both handlines and wheel lines are used to irrigate the land.

This permit overlaps with 67-7292 and 67-2365. It is the same spring as 67-2365 and is the same reservoir as in 67-7292, and is used for the same place of use as both. I recommend an amendment be made to include the place of use not included on the permit.

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 STORAGE	01/01 to 12/31		75.00 AF
IRRIGATION FROM STORAGE	04/01 to 10/31		75.00 AF
STOCKWATER FROM STORAGE	01/01 to 12/31		2.70 AF
STOCKWATER STORAGE	01/01 to 12/31		2.70 AF
<u>Totals:</u>			75.00 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

DANIEL A. NELSON -- SENIOR AGENT

Field Examiner's Name Daniel A. Nelson Date 8-4-05

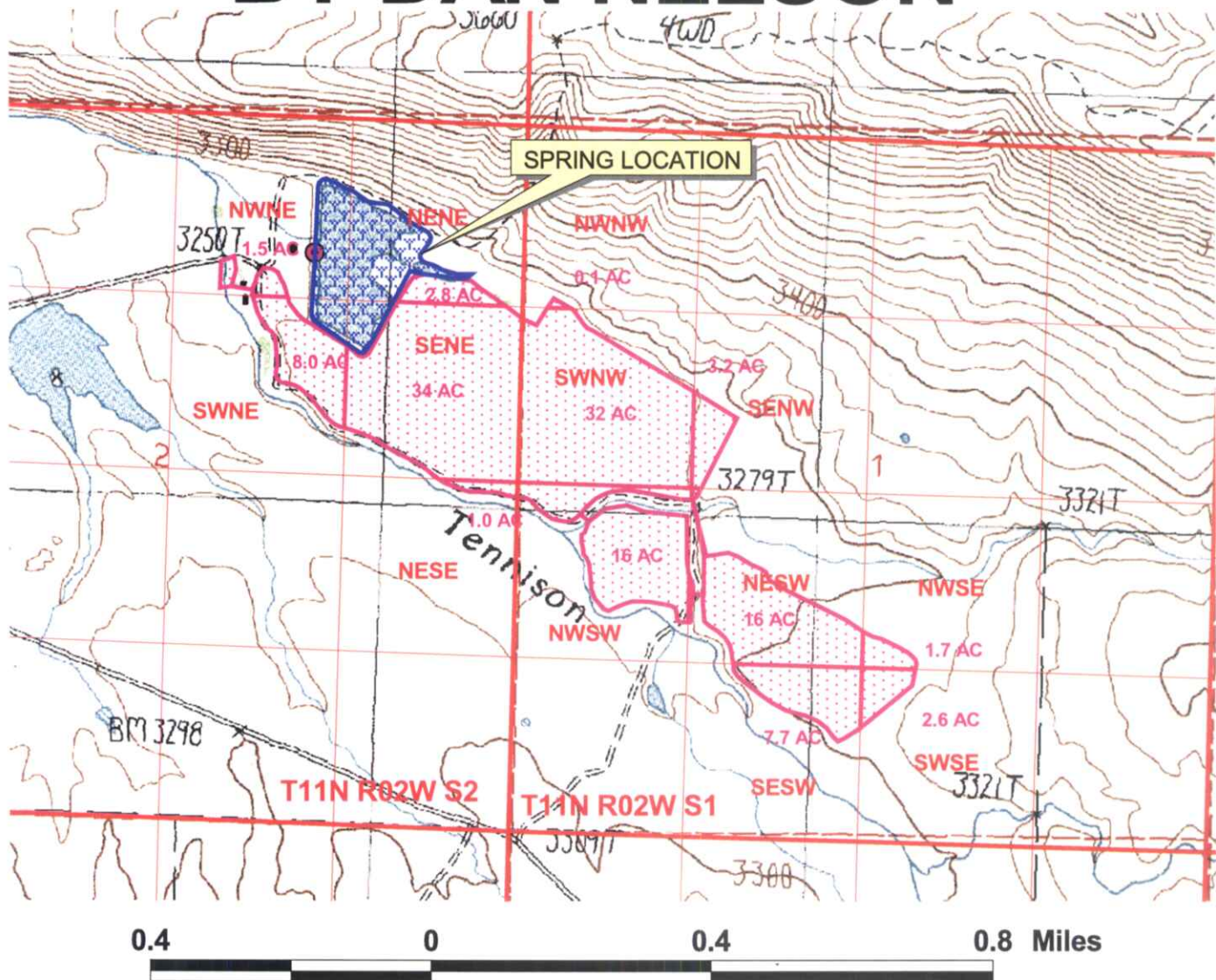
Reviewer _____ Date _____

SEAL

FIELD EXAM 67-7281

QUADRANGLE MAP

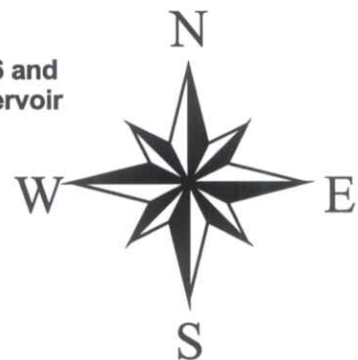
BY DAN NELSON



-  RESERVOIR
-  POINT OF DIVERSION
-  PLACE OF USE
-  SECTION LINES
-  1/4 1/4 LINES

PLEASE NOTE:

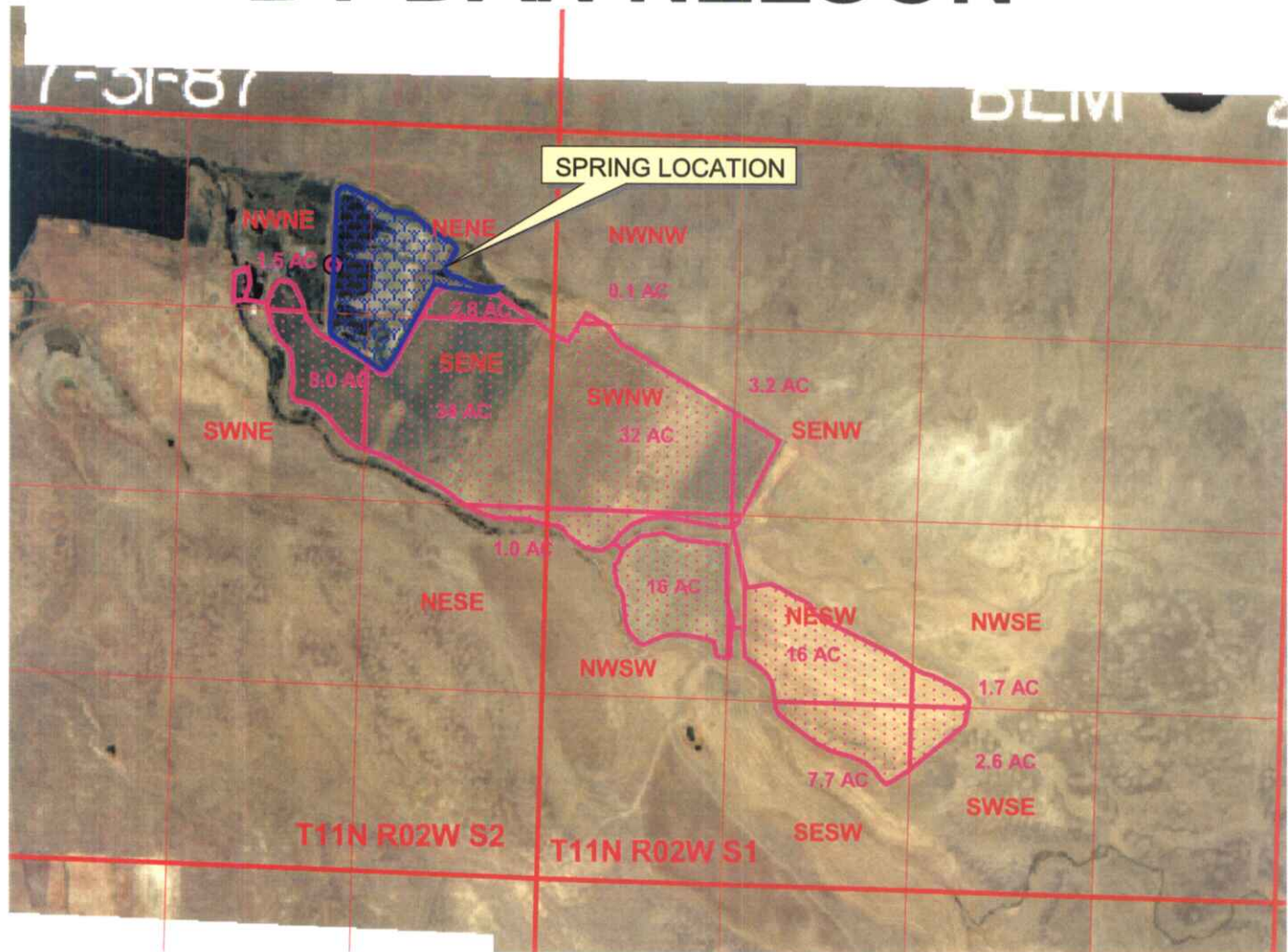
The place of use is the same as 67-2036 and 67-7292. The reservoir is the same reservoir described in 67-7292.



FIELD EXAM 67-7281

PLACE OF USE

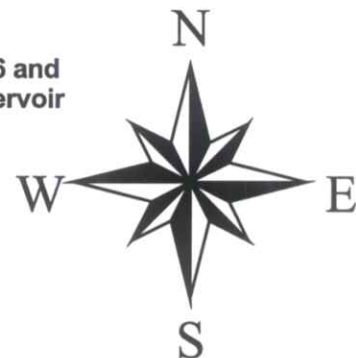
BY DAN NELSON



-  RESERVOIR
-  POINT OF DIVERSION
-  PLACE OF USE
-  SECTION LINES
-  1/4 1/4 LINES

PLEASE NOTE:

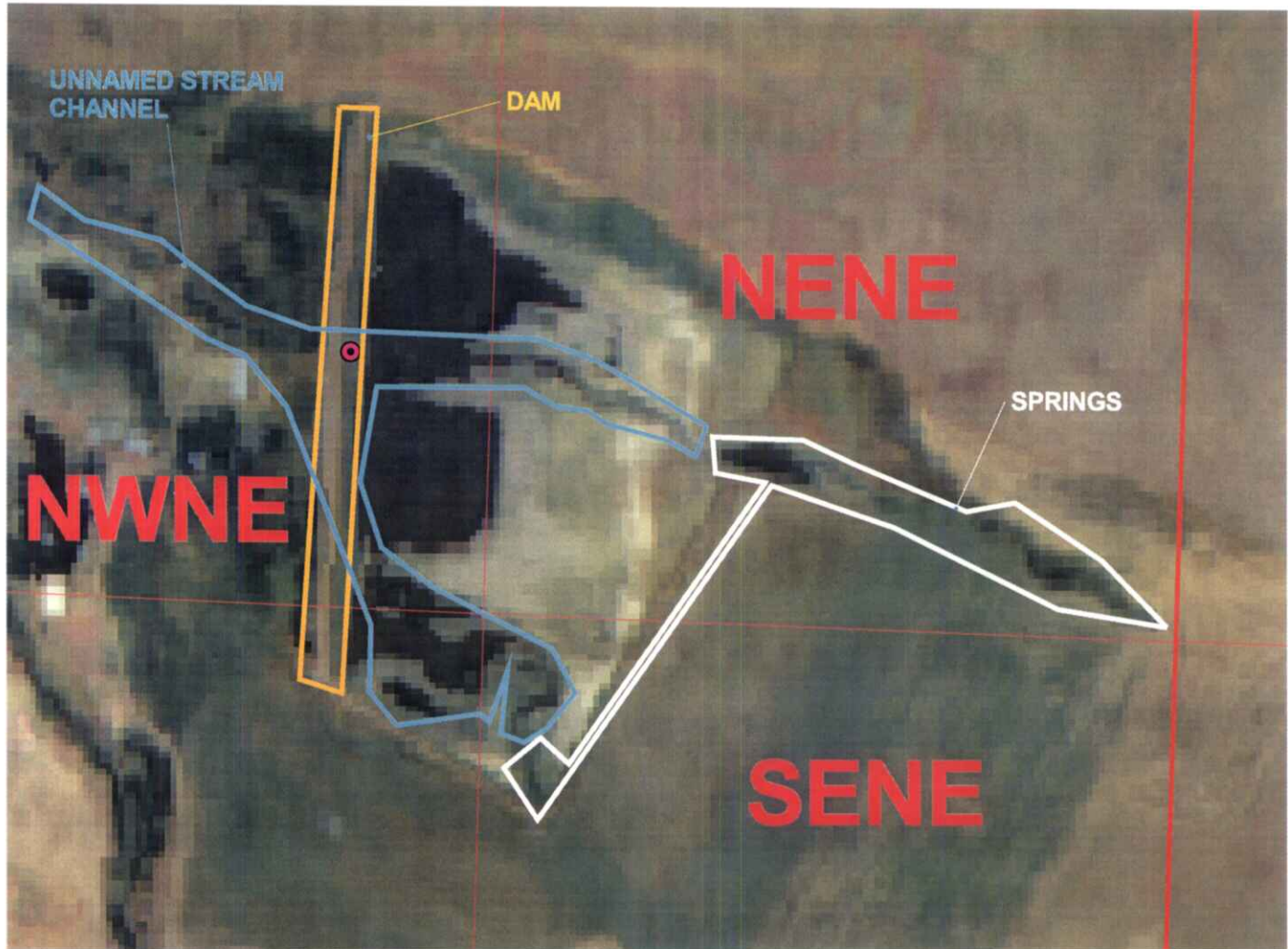
The place of use is the same as 67-2036 and 67-7292. The reservoir is the same reservoir described in 67-7292.



FIELD EXAM 67-7281

SYSTEM DIAGRAM

BY DAN NELSON



● 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.







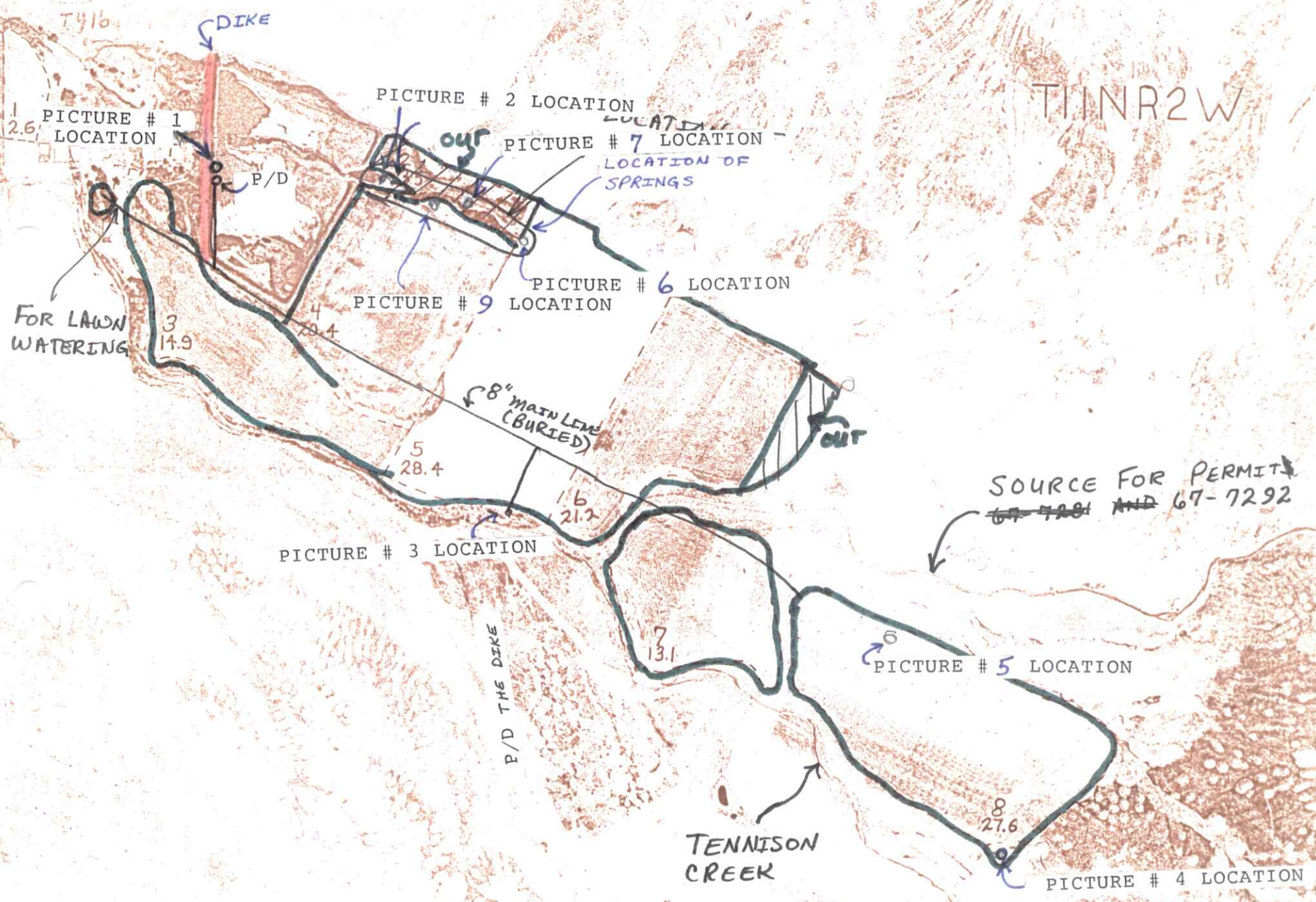
TI
TI

11W
2W

1979
FLIGHT

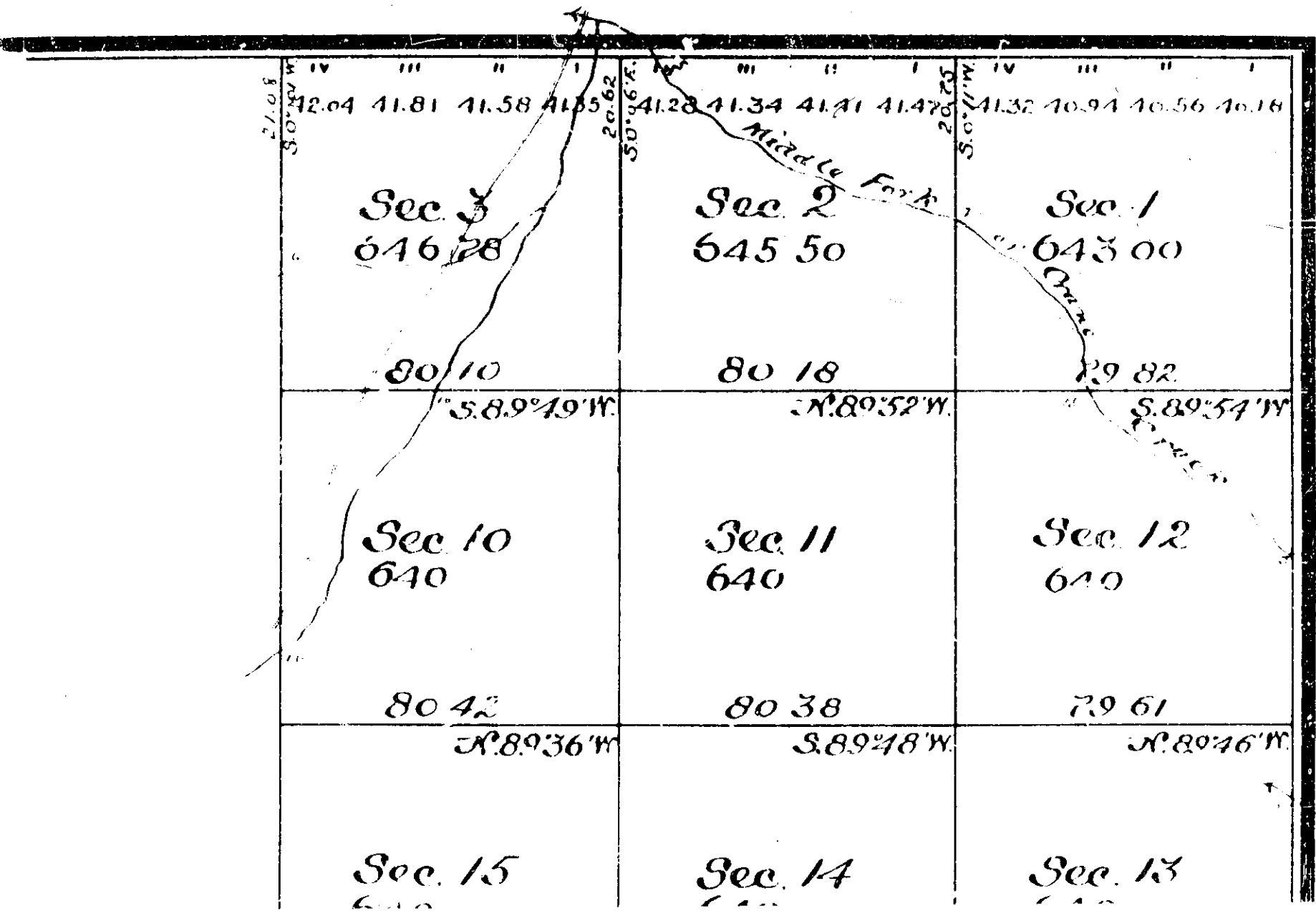
35	36
2	1

T11NR2W



TH, RANGE N° 2 WEST, BOISE MERIDIAN.

Gov Lots



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
RECORD OF INSPECTION OF DAM

Name of Dam: LAND
Name of Owner: FRANK LAND

Stream: TENNISON CREEK
Location: 11N-2W-2

☒ Offstream

Individuals Accompanying Inspector: NO ONE

Reservoir Characteristics: Dam Height : 13 FT

Surface Area: 12 AC

Storage Capacity: 90 AC-FT

Hazard Classification: 2-NO CHANGE

Photographs : YES

CONDITION OF EMBANKMENT OR STRUCTURE : ☐ - Poor ☐ - Fair ☒ - Good ☐ - Excellent

TYPE : ☒ - Earth ☐ - Rockfill ☐ - Conc. Arch ☐ - Conc. Gravity ☐ - Timber Crib ☐ - Other _____

	UPSTREAM SLOPE	CREST	DOWNSTREAM SLOPE	TOE AREA
SURFACE COVER MATERIAL	EARTH/RIPRAP	EARTH	EARTH	EARTH
GROWTH	WEEDS	PASTURE GRASSES	PASTURE	CATTAILS, A FEW SMALL WILLOWS
SETTLEMENT Or CRACKS	NONE	CRACKS-GONE	NONE	NONE
SURFACE EROSION	NONE	NONE	NONE	NONE
DEBRIS	NONE	NONE	NONE	NONE
ANIMAL BURROWS	NO NEW MUSKRAT ACTIVITY NOTED	NONE	NONE	NONE
CREST WIDTH AND SLOPE MEASUREMENTS	3:1	20 FT	2:1	FLAT

CONDITION OF OUTLET WORKS ; ☒ - Poor ☐ - Fair ☐ - Good ☐ - Excellent

Location ; ☐ - Left Side ☒ - Center ☐ - Right Side ☐ - Other _____

Description and Condition:

12" DIA CONCRETE PIPE THRU THE DAM, OUTLET GATE CATWALK AND CONTROL STEM ARE GONE, OUTLET IS NOT OPERATIONAL.

IRRIGATION PUMP ON THE DAM CREST-OPERATING

Gate Hoist : ☒ - Manual ☐ - Electric ☐ - Other _____

Stem : ☐ - Inclined from entrance to crest ☐ - Vertical on tower at entrance

☐ - Vertical through dam crest ☐ - Downstream valve

Entrance ; GATE FRAME EXPOSED.

Outlet : LAST PIPE SECTION DISPLACED-NO CHANGE

CONDITION of SPILLWAY : ☐ - Poor ☐ - Fair ☒ - Good ☐ - Excellent

-SERVICE SPILLWAY-3.5 FT. DIA DROP INLET AT OUTLET PIPE

Location : ☐ - Left abutment ☒ - Right abutment ☐ - Away from dam ☐ - Other _____

Base width : 8 FT Freeboard at crest : 1.7 FT Sideslope : 3:1 Channel slope : MILD

Over flow channel : ☒ - Well defined ☒ - Flow directed away from toe ☐ - Flow could reach toe

Erosion control present : EARTHEN CHANNEL

Erosion present : NONE

Maintenance condition : Debris SMALL DRIFTWOOD

Growth PASTURE

SEEPAGE:

Reservoir level during inspection : LOW, < 1/3 STORAGE-RESERVOIR BEING DRAFTED FOR IRRIGATION

	TOE AREA	DOWNSTREAM SLOPE	ABUTMENTS	OTHER
Piping of material Evident (Est. G.P.M.)	NONE	NONE	NONE	
Flowing water (Est. G.P.M.)	NONE	NONE	NONE	
Marshy or Standing water	DRY	NONE	NONE	
Damp	DRY	NONE	NONE	
Evident from Growth present	CATTAILS	NONE	NONE	

GENERAL CONDITION AND DESCRIPTION OF DAM :

FAIR-GOOD, NO CHANGE IN THE OUTLET WORKS SINCE THE PREVIOUS INSPECTION.
GATE STEM AND CATWALK ARE STILL MISSING. IRRIGATION PUMP IS AVAILABLE FOR DRAFTING DOWN THE RESERVOIR IF NEEDED.

RODENTS AND GROWTH ARE CONTROLLED.

INSTRUMENT READINGS (Piezometer, Seepage measurements, Alignment, Elevation, etc.)

NONE TAKEN

RECOMMENDATIONS :

ISSUE A GENERAL STORAGE CERTIFICATE; AUTHORIZE STORAGE UNTIL NOVEMBER 1, 2005
-RETAIN 2 FT MINIMUM FREEBOARD AND 1 FT/DAY RESERVOIR FILLING CONDITIONS

MAINTENANCE/REPAIR

-REPLACE GATE STEM AND CATWALK SO OUTLET IS OPERATIONAL.
-CONTINUE TO CONTROL RODENTS AND WOODY GROWTH ON THE EMBANKMENT.

DATE : 7/10/03

INSPECTED BY : J. WESTRA, WESTERN REG.



Photo #1: South dike upstream slope- good.

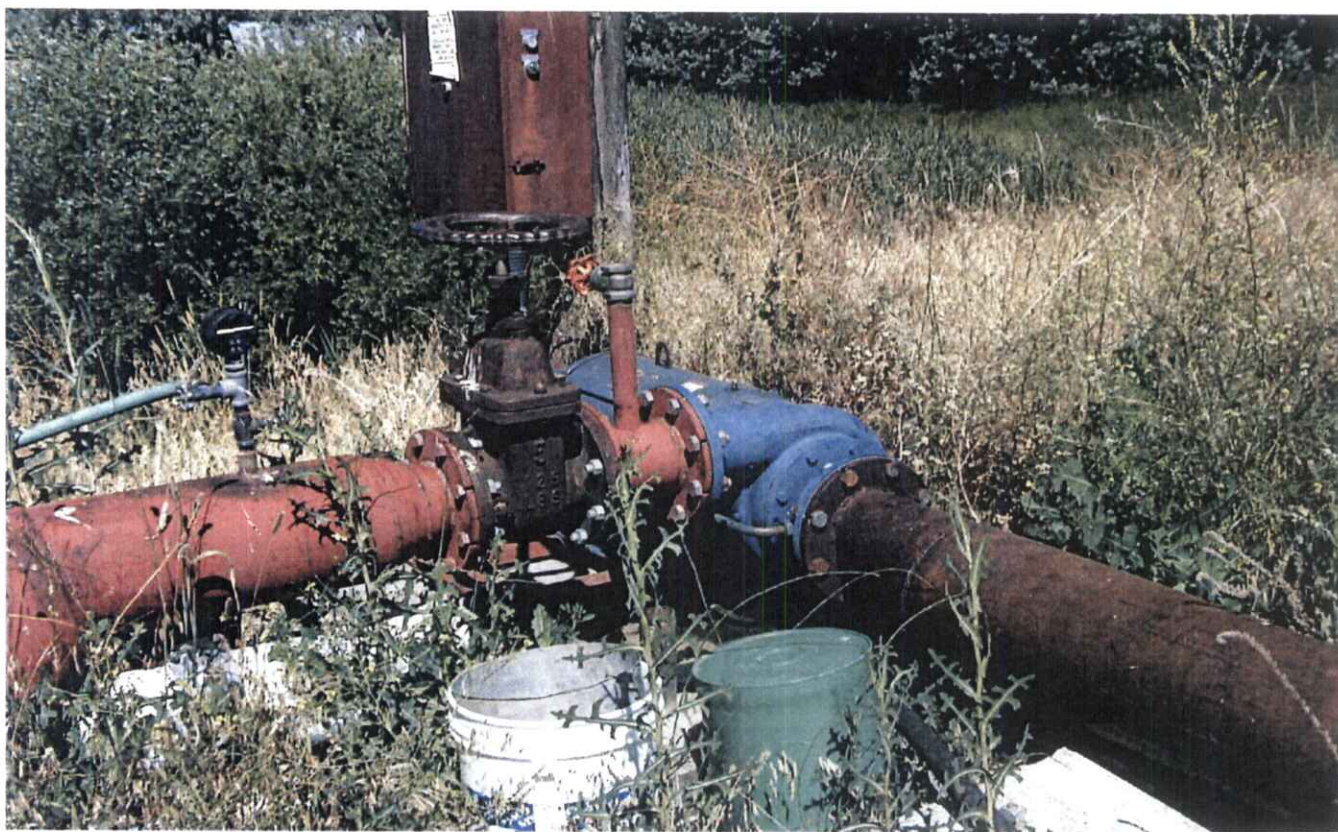


Photo #2: Irrigation pump center portion of the main embankment- pump is on.



Photo #3:Downstream slope and toe of the main embankment, from the south.



Photo #4:Main embankment crest and upstream slope, good.



Photo #5: Spillway channel looking downstream.



Photo #6: Gate frame sticking up in the reservoir.

ANALYSIS OF PERMITS 67-02365, ^{KKC}67-07281, AND 67-07292

DATE: 03-09-90
FROM: KELLY K. CHRISTENSEN
TO: ALL THREE FILES

RE: REANALYSIS OF THE PERMITS FOLLOWING A SECOND EXAM ON 7-17-89

On 8-03-88 Quentin Nesbitt conducted a field examination for each of the three exams. His completed exams were all placed in one file for review and 67-02365 was inadvertently left on the "Permits Requiring Field Exams" list. I reexamined permit 67-02365 on 7-17-89.

Although the findings for both examinations were essentially the same the interpretation of the findings and the recommendations are different.

This report is to integrate the two findings and submit a final recommendation for licensing.

67-02365 is analyzed first, Per priority date

The permit

irrigation of 322.88 acres @ 6.46 cfs; the system, ponds, pump, and sprinkler
the source, springs
P/D, spring location

Quentin found

irrigation of 129 acres @ 2.70 cfs; the system, 90 af pond, pump and sprinklers
the source, springs
P/D, spring location

I found

irrigation of 120 acres @ 2.00 cfs; the system, 90 af pond, pump and sprinklers
the source, unnamed stream
P/D, reservoir dike

Analysis of Acreage

The discrepancy in acreage is from field boundary interpretation and I stand by my recommendations. The primary difference was a small area between two fields that Quentin included and I excluded. In Quentin's field report he reversed the section numbers for the acreages listed for all three field exams. Attachment A compares the permitted acres, acres found by Quentin (with the section numbers corrected), and acres found by me.

Analysis of Diversion Rate

The difference in the diversion rate recommendations is based upon the fees paid schedule. The fee submitted was for a maximum of 2.00 cfs and/or 200 af. I found a diversion rate of 2.10 cfs but the limiting factor for this permit was found to be the fees paid, therefore the license should reflect the 2.00 cfs rate.

Analysis of System and Source

The system description on the original permit indicates a pond or ponds retaining water and then pumped to the P/U via a portable pump. Both Quentin and I found a 90af reservoir with a pump installed on the reservoir dike with a pipe line distributing the water to the place of use. The pond mentioned in the original report was identified in both field examinations as a small pond (with the dike breached) located between the entrance of the now existing 90af reservoir and the springs. The permit intent was for an irrigation right with a small pond as a part of the diversion works rather than for storage. This is reflected in the recommendation for an irrigation right and no storage (Quentin's recommendation includes 75af of storage).

The source analysis and recommendations are analyzed by an addendum to my field report for permit 67-02364, dated 8-24-89 by S. Lester,. The original pumping station was located at the original pond but as this pond was breached before the field exam and the new pumping station was installed on the dike of the new reservoir this is interpreted as the proper location for the P/D. This places the legal description for the P/D into a different Q-Q than listed on the permit and Quentin's field examination. I recommend that the P/D be amended to reflect the pumping station on the now existing reservoir.

Summary for 67-02365

120 acres recommended for licensing @ 2.00 cfs; <u>the system</u> ,	pump on dike and
(an irrigation right)	sprinkler system
	<u>the source</u> ,
	<u>P/D location</u> ,
	unnamed stream
	reservoir dike

67-7281 analysis, Second in priority

This permit was filed to just add the reservoir to the system described for permit 67-02365 therefore all acre, source, P/D, and system descriptions will remain the same.

The permit lists 75af, fees paid cover 100af maximum, and 90af were found therefore the permitted af is the limiting factor.

67-07292, Third in priority

This right is a diversion-to-storage right for 95af that utilizes the same storage reservoir and pumping system. The source is a new unnamed stream that flows just south of the unnamed stream in which the springs are located. Quentin's measurement was a sprinkler gauge measurement of the re-diversion from the reservoir rather than at the diversion to storage. As no physical description of the ditch exists in the field report to calculate a possible flow rate via the Manning equation, I recommend this permit for re-examination to measure the diversion to storage rate.

For PERMIT 67-7281

	NUMBER	TNS	RNG	SEC	NE				NW				SW				SE				TOTAL	SYSTEM TOTAL
					NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE		
PERMIT	67-7281	11N	2W	1					3	36	6	11	37	30	33							156
FOUND	Q ^N EXAM			①	-				.5	31		14	22	105		.5	45				80	
OVERLAP	KKC EXAM			1					3	2	15	16	9			②	②				77 ^③	
NEW ACRES																						

	NUMBER	TNS	RNG	SEC	NE				NW				SW				SE				TOTAL	SYSTEM TOTAL
					NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE		
PERMIT	67-7281	11N	2W	2	8	4	10	34														59
FOUND	Q ^N EXAM			2 ^①	2	1	8	36									2				49	
OVERLAP	KKC EXAM					4	7	32													43 ^③	
DIFFERENCE																						

11N 2W 12 - NO ACRES IRRIGATED

35A.

I. RECOMMENDATIONS (FOR PERMIT 67-7281)

1. "Comparisons of Permit, Fees Paid, Found, and Legal Limit

	Acres	Rate	Homes	Rate	Category	Rate
Permit-Irrigation	250	75AF	Dom		Other STOCK WATER	2.7AF
Found at exam	120	90AF				
Fees Paid For	--	--	--	--	--	100AF CFS Max
Legal Limit for	Acres (found)	* 0.02 Cfs/Acre =				CFS

2. Recommended Amounts

Beneficial Use	Period of Use		Q-- Rate of	V-- Annual
	From	To	Diversion	Volume
STORAGE FOR IRRIGATION	1-1	12-31		75AF
IRRIGATION FROM STORAGE	4-1	10-31		75AF
STOCK WATER				2.7AF
		Totals	CFS	77.7 AFA

- ① SECTION NUMBERS ARE REVERSED FROM FIELD REPORT
- ② ACRES IN THESE Q-QS REQUIRE AN AMENDMENT
- ③ ACRES RECOMMENDED FOR LICENSING

67-02365

ADDENDUM

8/24/89 S. Lester

Re: Source

The permit describes source as springs trib. to Tannin Creek. The examiner found a series of springs in the $S\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ S. 2 (Lot 1). Development of diversion works does not occur at the springs. Instead, a dike was built to impound this water and water from another source.

The springs are the source but the dike is the diversion as the examiner correctly stated. However, as the attached orthophoto shows, the springs fall within an unnamed stream drainage. One could argue that the source is this unnamed stream and that the springs are part of the stream. This interpretation ~~fits~~ allows a broader definition of the source (stream & its springs v. just the springs).

I would argue that the source should be interpreted differently than the record shows. An amendment could allow the source as unnamed stream trib. to Tannin Creek with p.o.d. at dike-stream intersection. This change of source simply reinterprets the system and could be allowed.

I recommend leaving the field report as is and letting the S.O. make the final decision. ✓ Out



RESERVOIR



P.U.

QUENTIN NESBITT 8-3-88
67-7281

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No. 67-7281

1. Owner: FRANK D &/OR TREVA LAND

Phone No. 355-2487

Current Address: 3430 BIG FLAT RD. MIDVALE ID. 83645

2. Accompanied by: FRANK LAND

EXAM. DATE: 8-3-88

Address: SAME

Phone No. _____

Relationship to Permit Holder: OWNER

3. Source: SPRINGS tributary to TENNIS CREEK
UNNAMED STREAM (SEE ATTACHMENTS
KKC'S & S. LESTER'S)

B. OVERLAP REVIEW

1. Other water rights with same place of use: 67-7292, 2365

☐ Copies Attached

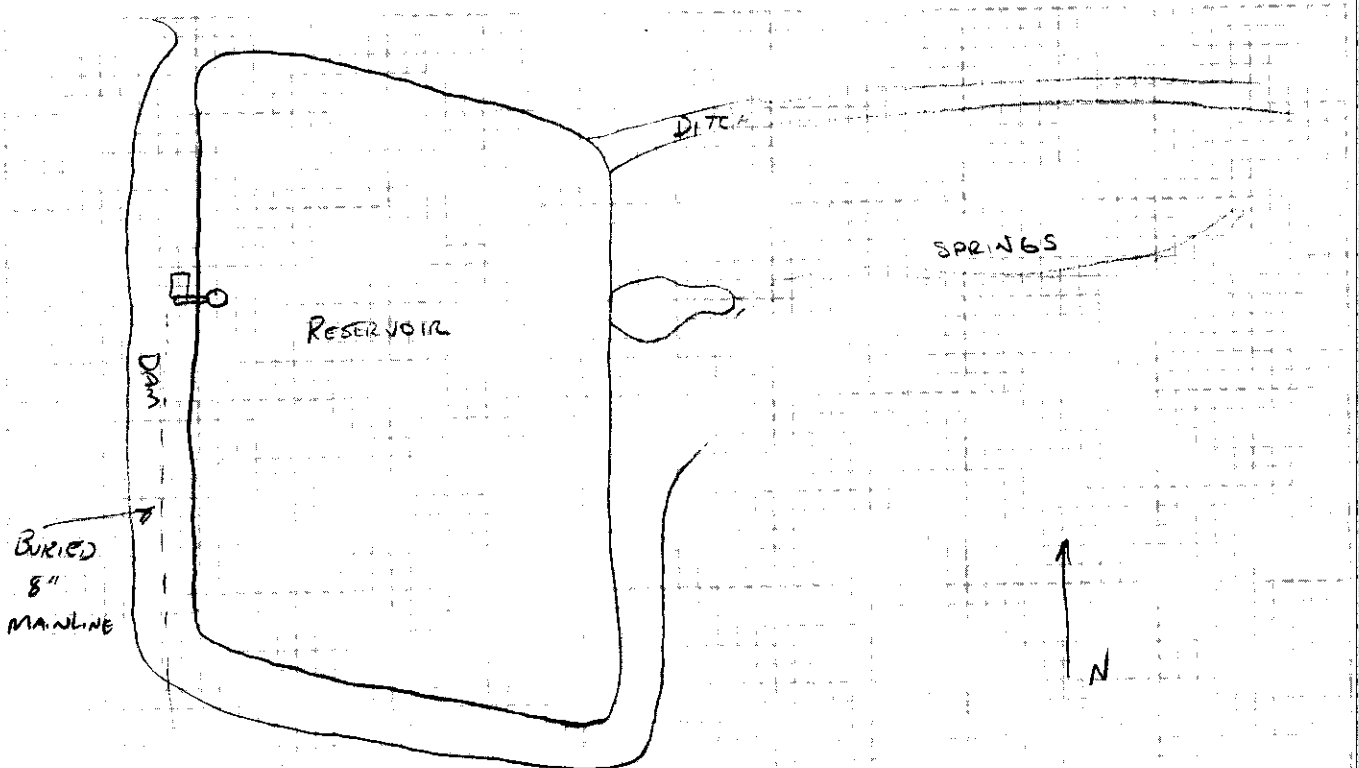
2. Other water rights with same point of diversion: 67-2365

☐ 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 - DAM SAFETY FILE COPIES



Scale: 1" = NO SCALE

2. ☒ Copy of U.S.G.S. Quadrangle Attached
Showing location(s) of point(s) of diversion and
place(s) of use (required).

- ☒ Photo of Diversion and System Attached
(required for all but single household domestic groundwater, and stockwater.

- ☐ Aerial Photo Attached
(required for irrigation of 10 acres or more).

System Description (continued)

3. Narrative: Description (As operating at time of measurement. Indicate pressure, number of sprinklers, etc.)

THE RESERVOIR WAS BUILT BELOW WHERE LARGE SPRINGS WERE DUG OUT AND WATER FLOWS FROM THE SPRING AND COLLECTS IN THE RESERVOIR. ALSO, IN THE DRAW TO THE SOUTH OF THE RESERVOIR, THERE IS AN UNAMED STREAM WHICH WATER IS DIVERTED TO RESERVOIR (67-7292). THE RESERVOIR HAS A STORAGE CAPACITY OF 90 ac-ft. A 60 HP CENTRICAL PUMP SETS ON THE DAM OF THE RESERVOIR AND PUMPS INTO A 8" BURIED MAINLINE

See Remarks on page 4 for continuation

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	G.E.	60	GJ6284016	CORNELL	17686

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

5. Point(s) of Diversion:

Ident. No.	Gov't. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
	2		NE	NE	2	11N	2W	WASHINGTON	USGS QUAD & AERIAL PHOTO

6. Place(s) of Use:

Indicate Method of Determination AERIAL PHOTO

Twp.	Rge.	Sec.	NE 1/4				NW 1/4				SW 1/4				SE 1/4				Totals
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
11N	2W	1	2	1	8	36									2				49
		2							31		14	22	105		.5	1.5			80
																			3 = 124 ac.
11N	2W	1						31	2	15	16		9		1*	2*			77
		2		4	7	32													43
																		TOTAL	120

* REQ AMENDMENT

Do not use this space

Do not use this space

D. FLOW MEASUREMENTS

☐ Additional Data Sheets Attached

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
SPRINKLER						
GAGE						

2. Measurements:

4 WHEELINES + 2 HANDLINES 50 PSI. 33 HEADS/LINE
 1 1/4" + 5/32"
 6.01 G.P.M. X 33 HEADS X 6 LINES = 2.65 cfs

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

1. Measured Method:

SPRINKLER: 2.65 cfs

129 ac x .02 cfs/ac = 2.58 cfs

2. Alternate Method for Checking Purposes:

THEORETICAL: $\frac{60 \text{ HP} \times 7.7 \times 1.8}{(231 \times 50) + 10} = 3.36 \text{ cfs} > 2.58 \text{ cfs}$
 O.K. ✓

F. PUMP EFFICIENCY DATA (Optional)

Discharge Pressure: _____ psi x 2.31 = _____ ft (1); Dynamic pumping level: _____ ft (2)

Total Head: (1) + (2) = _____ (3)

; Flow rate: _____ cfs (4)

Water HP: (3) x (4) ÷ 8.8 = _____ (5)

Meter Input KW: 3.6 x _____ KH x _____ CTR or _____ MULT x _____ PTR x _____ N/ _____ T = _____ (6)

Meter Input HP: (6) x 1.34 = _____ (7)

Panel Input KW: _____ Ave PF x _____ Ave Volts x _____ Ave Amps x .001732 = _____ (6)

Panel Input HP: (6) x 1.34 = _____ (7) Efficiency: (5)/(7) x 100 = _____ %

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$ 75 ac PERMIT

2. Volume Calculations for Other Uses:

H. REMARKS AND OVERLAP REVIEW ANALYSIS

WHICH REDUCES TO BOTH 6" + 4" MAINLINES. BOTH HANDLINES AND WHEELINES ARE USED TO IRRIGATE LAND.

- THIS PERMIT OVERLAPS WITH 67-7292 + 67-2365. IT IS THE SAME SPRING AS 67-2365 AND IS THE RESERVOIR AS IN 67-7292 AND IS USED FOR SAME P.U. AS BOTH.

- I RECOMMEND AN AMENDMENT BE MADE TO INCLUDE THE P.U. NOT INCLUDED ON THE PERMIT.

I. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
STORAGE FOR IRRIGATION	1-1	12-31		75 a/a
IRRIGATION	4-1	10-31		75 a/a
2.7 a/a STOCK WATER	1-1	12-31		2.7 a/a
Totals:				75 a/a

77.7 KAF

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 |

J. AUTHENTICATION

Field Examiner's Name QUENTIN NESBITT
Signature Quentin Nesbitt
Certification Date _____
Field Report Preparation Date 7-27-88

CONSULTANT SEAL

- K. Licensing recommendation shall be prepared by an Idaho Department of Water Resources employee on a computer printout attached hereto.