

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED
AUG 16 2005
DEPARTMENT OF WATER RESOURCES

A. GENERAL INFORMATION

Permit No. 67-2365
1. Owner: FRANK AND/OR TREVA LAND Phone No. 355-2487
Current Address: 3430 BIG FLAT RD. MIDVALE, ID. 83645
2. Accompanied by: FRANK LAND EXAM. DATE: 7-17-89
Address: _____ Phone No. _____
Relationship to Permit Holder: OWNER

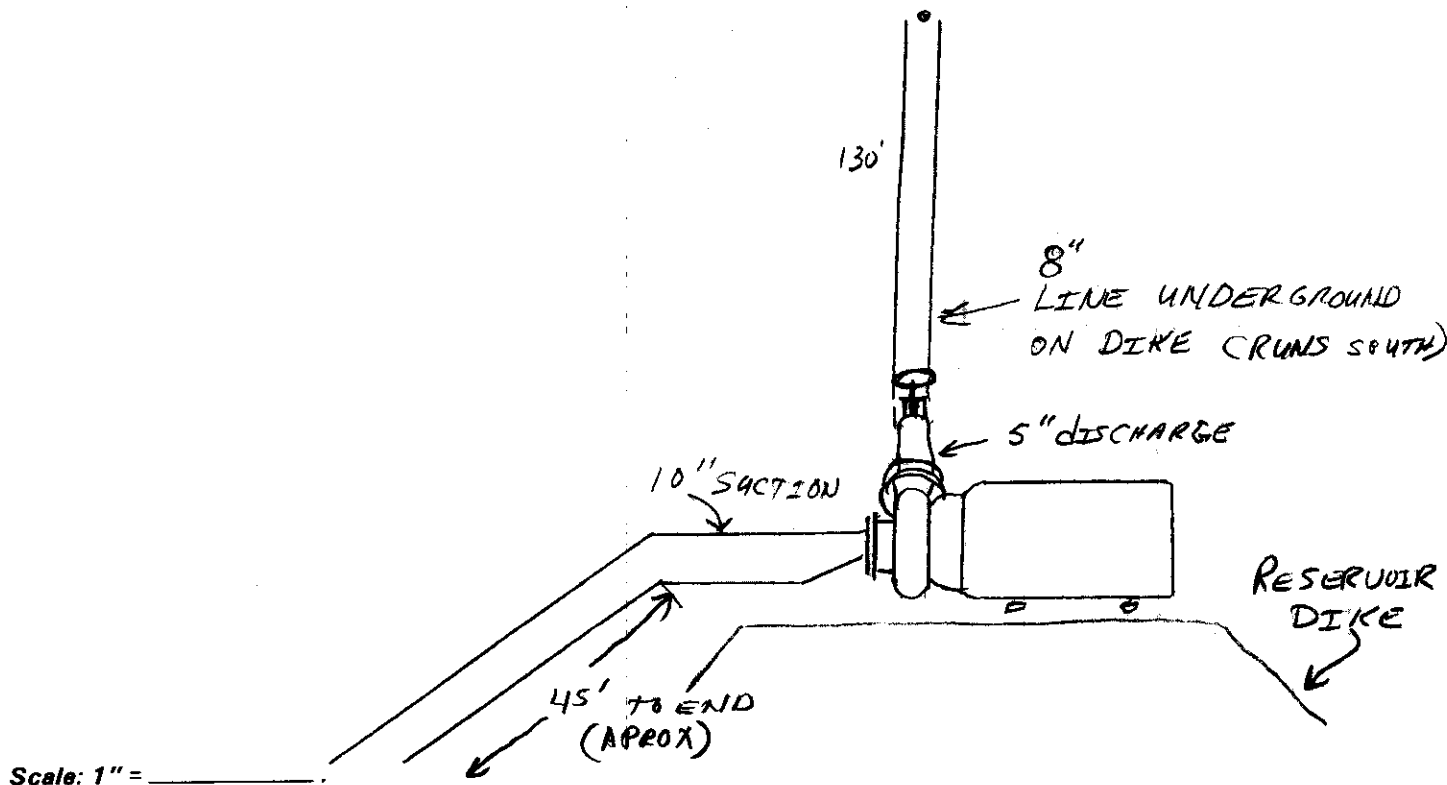
3. Source: UNNAMED SPRINGS tributary to TENNISON CREEK
67-7281 - ADDING STORAGE TO THE SYSTEM
67-7292 - ADDING A SECOND SOURCE, PH

B. OVERLAP REVIEW

1. Other water rights with same place of use: 67-7281 (A PERMIT FOR DIVERSION OF AN UNNAMED STREAM INTO SAME RESERVOIR. 67-7292 (EXPANSION OF 7281)) ☐ 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



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).

- THE SYSTEM IS A SERIES OF SPRINGS FEEDING A RESERVOIR AND A PUMP (CENTRIFUGAL) DELIVERING WATER TO P/U VIA AN 8" BURIED MAINLINE. THE DIVERSION WORKS IS THE DIKE. THE SPRINGS ARE ALL WITHIN THE SAME DRAINAGE AS THE RESERVOIR THEREFORE THIS IS AN INSTREAM STORAGE RIGHT ^{COVERED BY 64-7281} AS WELL AS THE AN IRRIGATION RIGHT. THE SPRINGS ARE A SERIES OF SEAPS ALONG AN APPROXIMATE 1000 FT SECTION OF THE

☐ See Remarks on page 4 for continuation

- | Well or Diversion Identification No.* | Motor Make | Hp | Motor Serial No. | Pump Make | Pump Serial No. or Discharge Size |
|---------------------------------------|------------|----|------------------|-----------|-----------------------------------|
| | GE | 60 | GJ 6284016 | CORNELL | 4" FLAIED TO 8" |
| | | | | | |
| | | | | | |
| | | | | | |

5. Point(s) of Diversion:

[illegible]

- Indicate Method of Determination**

[illegible]

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D. FLOW MEASUREMENTS

☐ Additional Data Sheets Attached

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
ANNUBAR				91414	8"	
MANOMETER				2	4'	

2. Measurements:

MEASURED 2.10 CFS
(SEE SUPPLEMENTAL MEASUREMENT SHEET)

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

1. Measured Method:

2. Alternate Method for Checking Purposes:

$$\frac{60 \times 8.8 \times .8}{15 \times (2.3 \times 80)} = 2.12 \text{ CFS}$$

F. PUMP EFFICIENCY DATA (Optional)

(^{plus 15 instead of x15} 8/24/89)

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:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 120 \times 4.0 = 480$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 2.00 \times 245 \times 1.9835 = 972$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 480$$

2. Volume Calculations for Other Uses:

YEAR ROUND USE
LIVESTOCK (RANGE Cows) 600 to 700 HEAD → 637 cattle & horses
0.16 CFS AND 9.4 AFA.

$$\frac{(637)(12)(365)}{325,850} = 8.58 = 8.6 \text{ cfs} \quad \text{v.} \quad (.16)(365)(1.9835) = 115.8 \text{ gpm}$$

SL 8/24/89

H. REMARKS AND OVERLAP REVIEW ANALYSIS

DRAINAGE. ^{ADDITIONAL KRC} NO WATER WAS ENTERING THE DRAINAGE AT EXAM TIME (SEE PHOTO # 6.) PHOTO # 8 SHOWS THE ACCUMULATION OF WATER AT THE UPPER END OF THE RESERVOIR. THE P/U IS IRRIGATED WITH AN ASSORTMENT OF HANDLINES AND WHEEL LINES. AN 8" BURIED MAIN LINE RUNS SOUTH EAST FROM THE P/D TO THE N/W CORNER OF THE LAST FIELD. THE LAWN IS ALSO IRRIGATED VIA THIS P/D. OVER LAP INCLUDES TWO PERMITS ^{ONE KRC} FOR DIVERSION OF AN UNNAMED STREAM TO THE RESERVOIR FOR STORAGE PERMIT 67-7292 & ONE TO ADD STORAGE TO THIS ^{KRC} PERMIT. THIS PERMIT IS FOR FEES PAID: FOUND: ^{SYSTEM 67-7381} IRRIGATION OF 322 ACRES 120 ACRES AND AND 6.46 CFS 2.00 CFS MAX. 2.10 CFS 90 AF STORAGE LEGAL LIMIT 625 COWS 120 ACRES @ 0.02 = 2.40 CFS 12 HORSES

I. RECOMMENDATIONS

1. Recommended Amounts

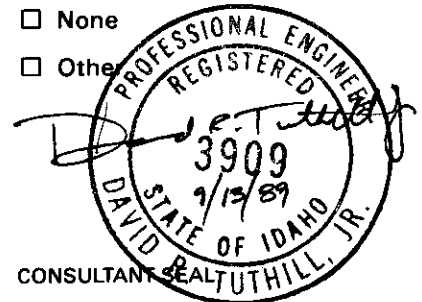
Beneficial Use	Period of Use From	To	Rate of Diversion Q (cfs)	Annual Volume V (afa)
^{KRC} ~~STORAGE FOR IRRIGATION~~	~~1-1~~	~~12-31~~		~~90 AF~~
~~IRRIGATION FROM STORAGE~~	~~3-15~~	~~11-15~~		~~90 AF~~
IRRIGATION	3-15	11-15	2.00 CFS	480 AF
STOCK WATER	1-1	12-31	0.16 CFS	8.6 ~~24~~ AF *
Totals:			2.00	488.6 *

2. Recommended Amendments

- ☒ Change P.D. as reflected above ☐ Add P.D. as reflected above
☒ Change P.U. as reflected above ☐ Add P.U. as reflected above

J. AUTHENTICATION

Field Examiner's Name KELLY K. CHRISTENSEN
 Signature Kelly K. Christensen
 Certification Date _____
 Field Report Preparation Date 8-23-89



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

FOUND ACRES IN

NW/SE

SW/SE OF SEC 2 NOT ON PERMIT.

SE/SW

* 82 8/24/89

Rec'd of for stockwater based on 637 h¹ cattle & horses

ANALYSIS OF PERMITS 67-02365, 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> ,
	unnamed stream
	<u>P/D location</u> , 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.

ATTACHMENT - A

	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	67-2365		11N	2W	1						40		40	40	40							160
FOUND	Q/N EXAM			1 ^①						.5	31		14	22	105		.5	1.5			80	
OVERLAP	RKC EXAM			1						31	2 ^②		15	16	9		1 ^②	3 ^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	67-2365		11N	2W	2	41	41	40	40		40		40	40	40							162.88
FOUND	Q/N EXAM			2 ^①	2	1	8	36									2				49	
OVERLAP	RKC EXAM			2		4	7	32													43 ^③	
DIFFERENCE																						

TOTAL 120^③ 322.88

I. RECOMMENDATIONS (PERMIT 67-2365)

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

	Acres	Rate	Homes	Rate	Category	Rate
Permit-Irrigation	322.88	6.45 CFS	Dom		Other	
Found at exam	120	2.10 CFS				
Fees Paid For	--	--	--	--	--	2.00 CFS Max
Legal Limit for	120	Acres (found) * 0.02 Cfs/Acre =				2.40 CFS

2. Recommended Amounts

Beneficial Use	Period of Use	Q-- Rate of	V-- Annual
	From To	Diversion	Volume
IRRIGATION	4-1 10-31	2.00 CFS	480 AF
STOCK WATER	1-1 12-31	0.16 CFS	8.6 AF
	Totals	2.00 CFS	488.6 AFA

①. SECTION NUMBERS ARE REVERSED FROM FIELD REPORT

②. ACRES IN Q-Qs REQUIRING AN AMENDMENT

③. ACRES RECOMMENDED FOR LICENSING.

State of Idaho
DEPARTMENT OF WATER RESOURCES
SUPPLEMENTAL FIELD REPORT FOR ANNUBAR MEASUREMENT

Measured by: KELLY K. CHRISTENSEN Date 7-17-89
Owner: FRANK LAND Permit No. 67-2365

Description of well &/or measuring site
- Include any clarifications of the sketch
- Include legal description if more than one p.d. is described in the Field Report

MEASURED INSIDE PIPE DIAMETER IN INCHES (ID)
CIR = Pipe Circumference in Inches = _____
T = Pipe Thickness in Inches = _____
ID = 2 [(0.1592 X CIR) - T] = ... 8" DIRECT MEASUREMENT

ANNUBAR DESCRIPTION & CONSTANT (C)
Size Used in Test 8"
State ID No. 91414
Select C based on size from Table below.

Nominal Pipe Size	C
4"	4.23
6"	3.75
8"	3.87 ✓
10"	3.94
12"	3.99
14"- 16"	4.01
18"- 24"	4.02
30" or larger	4.03

C selected 3.87

DIFFERENTIAL PRESSURE READING IN INCHES OF H₂O (H)
High Reading = 37.5
Low Reading = 23
High - Low = H = ... 14.5

CALCULATION OF DISCHARGE IN CFS (Q)
$$Q = \frac{(ID)^2 \cdot (\sqrt{H}) \cdot (C)}{448.8}$$

$$Q = \frac{(8)^2 \cdot (\sqrt{14.5}) \cdot (3.87)}{448.8} = \underline{2.10} \text{ cfs}$$

SKETCH (If not shown on Field Report)

67-02365

ADDENDUM

8/24/89 S. Lester

Re: Source

The permit describes source as springs trib. to Tannison 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 Tannison 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



MEMORANDUM

FROM: Peter Chamberlin

Date: August 10, 1976

TO: File 67-7281

RE: Pre-permit examination

On August 8, 1976, I met Frank Land on his ranch 26 miles east of Midvale. Mr. Land plans to expand an existing reservoir to store spring runoff. The source of water is an intermittent unnamed stream which is a tributary of Tonnison Creek.

Mr. Land already has flow rights from the reservoir based upon permit 67-2365. This new application will be for storage rights for irrigation and stockwater. Permit 67-2365 does not appear to have been assigned to Mr. Land. Proof is due on the permit in October of 1977.

Since Crane Creek is decreed there is some questions as to whether application 67-7281 should grant a year round storage right.

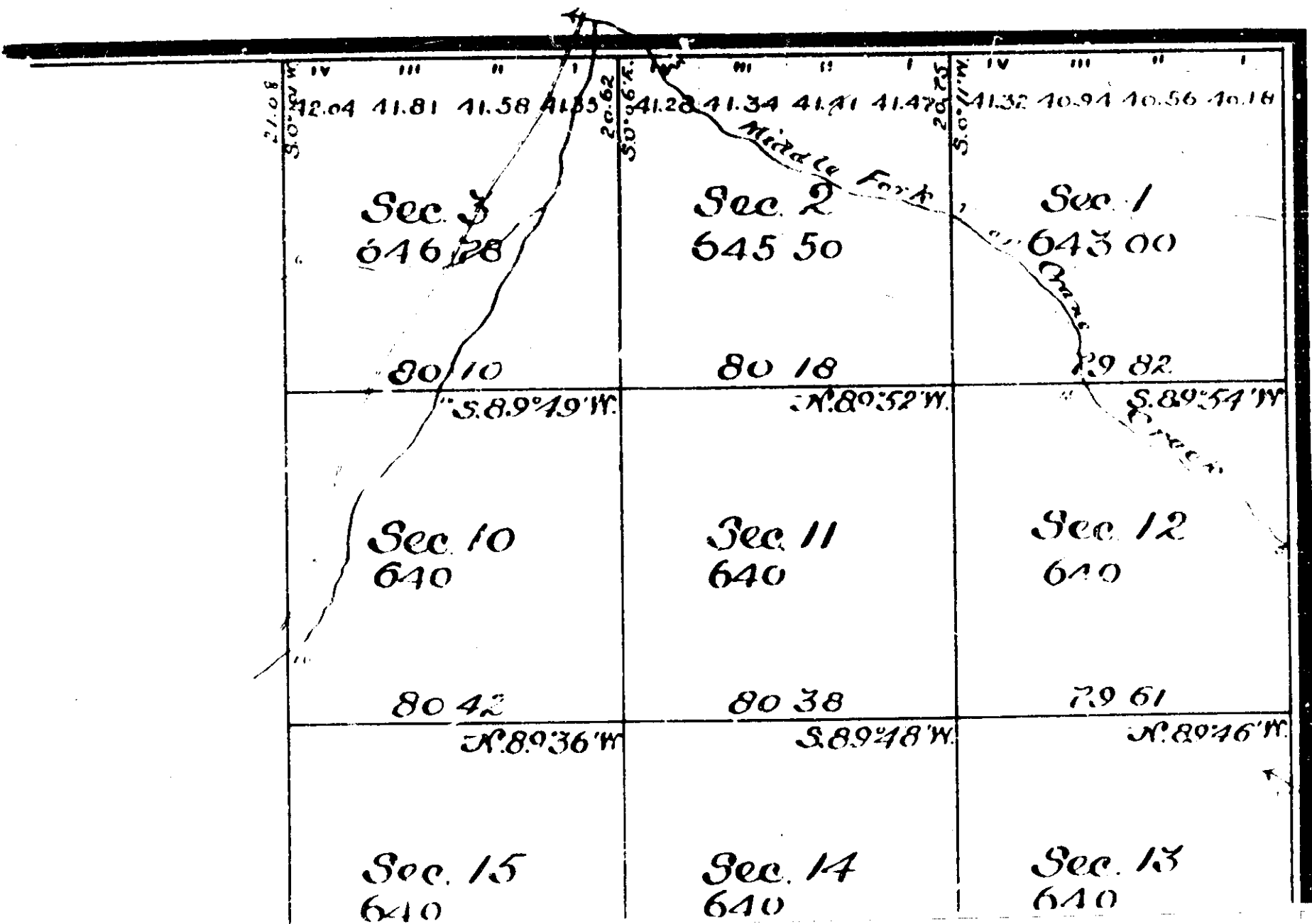
RECOMMENDATIONS

1. Approve permit.
2. Change application to show source of water as unnamed stream.
3. Contact applicant to determine if permit 67-2365 has been assigned to him. (Applicant has not yet been advised.)

~~4. Alter application to show storage for non irrigation season~~

TH, RANGE N° 2 WEST, BOISE MERIDIAN.

Gov Lots



INVENTORY OF DAMS BY DAM NUMBER

14-Jul-1988
Page 13

DAM NUMBER																
NAME OF DAM																
NAME OF OWNER																
COUNTY																
STREAM																
INSPECT-DATE																
LOCATION																

SIZE	PURPOSE	RISK	DAM TYPE	STORAGE CAPACITY	HEIGHT FT	DRAINAGE SQ MI	RES AREA ACRES	YEAR COMP	CREST LENGTH	-----SPILLWAY-----			IDF	COND	CERT EXPIR	

D67-7277																
3	I	2	EARTH													
				CLAUDE GANN	20	16.0	1.9	3	1977	270	TR-MONROE CREEK	GLHOLE	3.5	60	Q100	34-12N-05W GD 1189
D67-7281																
3	J	2	EARTH													
				FRANK D LAND	90	12.0	.1	12	1976	2750	TR-TENNISON CREEK (OS)	GLHOLE	3.0	19	Q100	02-11N-02W FR 1188
D67-7293																
3	I	2	EARTH													
				H-J-H CO	90	16.0	13.2	14	1977	3450	SCOTT CREEK	RPCHAN	5.5	427	Q100	11-11N-06W GD 1190
D67-7333																
3	I	3	EARTH													
				LAVELLE CRAIG	68	14.5	1.1	13	1978	800	TENNISON CREEK (OS)	ERCHAN	4.5	165	Q50	02-11N-02W GD 1188
D67-7361																
3	J	2	EARTH													
				JOSEPH W SUMRALL SR	10	12.0	2.0	2	1978	165	TR-MONROE CREEK	GLHOLE	3.5	49	Q100	34-12N-05W GD 1189
D67-7446																
2	I	2	EARTH													
				FRANK V CHANDLER	35	23.0	.3	4	1980	330	SHEEP CREEK (OS)	ERCHAN	5.0	142	Q500	33-12N-05W GD 1190
D67-7451																
2	J	2	EARTH													
				LAURENCE L BRUCE	280	18.0	2.3	52	1980	800	TR-HOG CREEK	GLHOLE	4.7	130	Q500	26-13N-02W GD 1188
D67-7470																
3	J	2	EARTH													
				E C DEMOSS AND SONS	35	18.0	.3	6	1980	450	TR-DIXIE CREEK	ERCHAN	4.0	66	Q100	15-13N-02W GD 1190
D67-7471																
3	I	3	EARTH													
				E C DEMOSS AND SONS	19	20.0	.2	3	1980	300	DIXIE CREEK	ERCHAN	4.0	66	Q50	15-13N-02W GD 1190
D67-7680																
2	I	2	EARTH													
				VIRGIL FAIRCHILD	87	29.5	1.6	12	WASHINGTON PROP	865	TR-WEISER RIVER	GLHOLE	5.5	33	Q500	34-14N-03W UF XXXX
D67-7704																
3	I	3	EARTH													
				KERMIT L WIGGINS	60	20.0	.1	6	1985	600	RUSH CREEK (OS)	GLHOLE	4.0	20	Q50	10-15N-03W GD 1189
D67-7723																
3	I	3	EARTH													
				KERMIT L WIGGINS	9	11	.1	3	1987	385	RUSH CREEK	CMP	3.5		1287 Q50	10-15N-03W NA 0000
D67-7732																
3	IS	2	EARTH													
				ARTHUR FAIRCHILD	42	19.0	.8	6	1988	500	SAGE CREEK (OS)	RKCHAN	2		588 Q100	14-13N-04W UN 0000
D67-XX01																
2	I	2	EARTH													
				L C CHENEY	650	15.0	.1	8	1972	3000	WEISER RIVER (OS)	OVFL	3.0	3	Q500	13-11N-06W GD 1191
D67-XX06A1																
2	I	2	EARTH													
				PHIL SOULEN	630	16.0	1.7	113	1935	650	S FK CRANE CREEK	CHNAFD	2.0	0	Q500	34-11N-02W GD 1189

P/D _____

LOOKING SOUTH

Picture # 1



STORAGE RESERVOIR AND
PUMPING POINT

LOOKING WEST

Picture # 2



LOOKING WEST
PICTURE SHOWS RISER AT THE END OF
THE BRANCH LINE.

Picture #3



LOOKING NORTH EAST
SHOWS END OF IRRIGATION

Picture #4



P/u

LOOKING NORTH WEST

Picture # 5

LAND ON FAR SIDE OF FENCE NOT IRRIGATED.



Picture # _____

Picture#6



THE HEAD OF THE DRAINAGE
SHOWING NO WATER FLOWING
AT THIS POINT.

(LOOKING SOUTH EAST)

MIDWAY DOWN CHANNEL SHOWING
THE ACCUMULATION OF WATER.
(LOOKING EAST SOUTH EAST)

Picture#7



Picture#8



PICTURE SHOWS SPRING WATER
ACCUMULATION AND ONE OF
THE SEEPS.

PICTURE SHOWS GROUND SLOUGH
WHERE ANOTHER SERIES OF SEEPS
ARE FOUND.

(LOOKING NORTH)

Picture#9

