

NOV 29 1990

Department of Water Resources
Eastern District Office

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO,
IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM.

CIVIL CASE NUMBER: 39576

Ident. Number: A29-10280

Date Received: 1/31/1990

Receipt No: E011914 E022784

Received By: AT

AMENDED

NOTICE OF CLAIM TO A WATER RIGHT
ACQUIRED UNDER STATE LAW

AMENDED

1. Name: JUDY NEWPORT 208-335-2281
Address: 4798 BAILEY RD
ARBON ID 83212

OR

Name: JOHN NEWPORT 208-335-2281
Address: 4798 BAILEY RD
ARBON ID 83212

2. Date of Priority: JUL 24, 1897

3. Source: KNOX CANYON CREEK Trib. to: BANNOCK CREEK

4. Point of Diversion:

Township	Range	Section	1/4 of	1/4 of	1/4	Lot	County
10S	32E	36	NW	SE	SE		POWER

5. Description of diverting works:

HEADBOX IN STREAM TO GRAVITY FLOW PIPELINE/FLOOD & SPRINKLE

6. Water is used for the following purposes:

Purpose	From	To	C.F.S.	(or)	A.F.A.
IRRIGATION	03/15	11/15	15.480		

7. Total Quantity Appropriated is:

15.480 C.F.S. (and/or) A.F.A.

8. Total consumptive use is 2322.0 Acre Feet Per Annum.

9. Non-irrigation uses:

10. Place of Use:

Township	Range	Section	1/4 of	1/4	Lot	Use	Acres
10S	33E	22	NE	SE		IRR	40.0

10. Place of Use: Continued

Township	Range	Section	1/4 of	1/4	Lot	Use	Acres
10S	33E	22	NW	SE		IRR	40.0
			SW	SE		IRR	40.0
			SE	SE		IRR	40.0
						Section Acres	160.0
		23	SW	NW		IRR	40.0
			NW	SW		IRR	40.0
			SW	SW		IRR	40.0
						Section Acres	120.0
		28	SW	SW		IRR	12.0
			SE	SW		IRR	30.0
			NE	SE		IRR	39.0
			NW	SE		IRR	15.0
			SW	SE		IRR	40.0
			SE	SE		IRR	40.0
						Section Acres	176.0
		33	NE	NE		IRR	40.0
			NW	NE		IRR	40.0
			SW	NE		IRR	40.0
			SE	NE		IRR	40.0
			NE	NW		IRR	40.0
			NW	NW		IRR	38.0
			SW	NW		IRR	40.0
			SE	NW		IRR	40.0
						Section Acres	318.0
						Total Acres	774.0

11. Place of use in counties: POWER

12. Do you own the property listed above as place of use? YES

13. Other Water Rights Used:

14. Remarks:

BASED UPON DECREE ISSUED IN CASE NO. 6428 I THE 6TH JUDICAIL DIST COURT, POWER COUNTY, JOHN & JUDY NEWPORT, ET AL VS. JOHN & JOY MCNABB ON MARCH 3, 1981. RIGHT WAS NOT FOUND RECORDED IN IDWR RECORDS AT TIME FILING WAS MADE.

14. Remarks: Continued

*PLACE OF USE FOR THIS CLAIM WAS AMENDED FROM 96 ACRES TO
774 ACRES. ADDITIONAL ACREAGE PAID FOR UNDER RECEIPT # E072784.
DIVERSION RATE WAS ALSO AMENDED TO 1"/ACRE. GJT 11-21-96.

15. Basis of Claim: DECREED

Case Number: 6428

Court : 6TH

Decree date: 3/ 9/1981

NEWPORT, ET AL

Decree Plaintiff

MCNABB

vs

Decree Defendant

16. Signature(s)

(a.) By signing below, I/We acknowledge that I/We have received, read and understand the form entitled "How you will receive notice in the Snake River Basin Adjudication." (b.) I/We do _____ do not X wish to receive and pay a small annual fee for monthly copies of the docket sheet.

Number of attachments: _____

For Individuals:

I/We do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

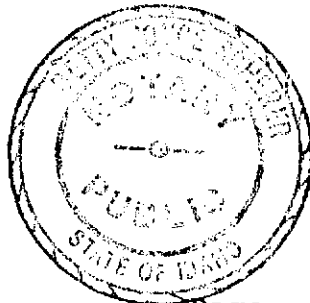
Signature of Claimant(s): Judy Newport Date: 11-26-96
John Newport Date: 11-26-96

State of Idaho)
County of Power) SS.

Subscribed and sworn (or affirmed) before me this 26 day
of November 19 96

Betty Joyce Scherer
Notary Public

Seal



Residing at Am Falls ID

My Commission Expires 12-12-2000

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO,
IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM.

CIVIL CASE NUMBER: 39576

Ident. Number: A29-10280
Date Received: 1/31/1990
Receipt No: 601917
Received By: BA

NOTICE OF CLAIM TO A WATER RIGHT
ACQUIRED UNDER STATE LAW

1. Name: JOHN NEWPORT 208-335-2281
Address: 4798 BAILEY RD.
ARBON, ID 83212

OR

Name: JUDY NEWPORT 208-335-2281
Address: 4798 BAILEY RD.
ARBON, ID 83212

2. Date of Priority: JUL 24, 1897

3. Source: KNOX CANYON CREEK Trib. to: BANNOCK CREEK

4. Point of Diversion:

Township	Range	Section	1/4 of	1/4 of	1/4	Lot	County
10S	32E	36	NW	SE	SE		POWER

5. Description of diverting works:
HEADBOX IN STREAM TO GRAVITY FLOW PIPELINE/FLOOD & SPRINKLE

6. Water is used for the following purposes:

Purpose	From	To	C.F.S	(or)	A.F.A.
IRRIGATION	03/15	11/15	1.920		

7. Total Quantity Appropriated is:
1.920 C.F.S. (and/or) A.F.A.

8. Total consumptive use is 288.0 Acre Feet Per Annum.

9. Non-irrigation uses:
NONE

10. Place of Use:

Township	Range	Section	1/4	of	1/4	Lot	Use	Acres
10S	33E	22	NE		SE		IRR	8.0
			SW		SE		IRR	16.0
			SE		SE		IRR	20.0
			Section Acres					44.0
		23	NW		SW		IRR	22.0
			SW		SW		IRR	2.0
			Section Acres					24.0
		28	SW		SW		IRR	5.0
			SE		SW		IRR	6.0
			NE		SE		IRR	8.0
			NW		SE		IRR	4.0
			Section Acres					23.0
		33	NE		NW		IRR	5.0
			Section Acres					5.0
			Total Acres					96.0

11. Place of use in counties: POWER

12. Do you own the property listed above as place of use? YES

13. Other Water Rights Used:
NONE

14. Remarks:
BASED UPON DECREE ISSUED IN CASE NO. 6428 I THE 6TH JUDICAIL DIST COURT, POWER COUNTY, JOHN & JUDY NEWPORT, ET AL VS. JOHN & JOY MCNABB ON MARCH 3, 1981. RIGHT WAS NOT FOUND RECORDED IN IDWR RECORDS AT TIME FILING WAS MADE.

15. Basis of Claim: DECREED
Case Number: 6428
Court : 6TH
Decree date: 3/09/1981

NEWPORT, ET AL
Decree Plaintiff

MCNABB
Decree Defendant

16. Signature(s)

(a.) By signing below, I/We acknowledge that I/We have received, read and understand the form entitled "How you will receive notice in the Snake River Basin Adjudication." (b.) I/We do _____ do not x wish to receive and pay a small annual fee for monthly copies of the docket sheet.

Number of attachments: 7

For Individuals:

I/We do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

Signature of Claimant(s): John Newport Date: 1-31-90
Date: _____

State of Idaho)
County of Bonneville) SS.

Subscribed and sworn (or affirmed) before me this 31 day
of January 19 90
Seal

[Signature]
Notary Public

Residing at Idaho Falls, Id.
My Commission Expires 22 Aug 1994

A29-10280

16

15

T

10

5

R 33E

Storage
Bin

Storage
Bin

Green
River

39

40

40

40

40

40

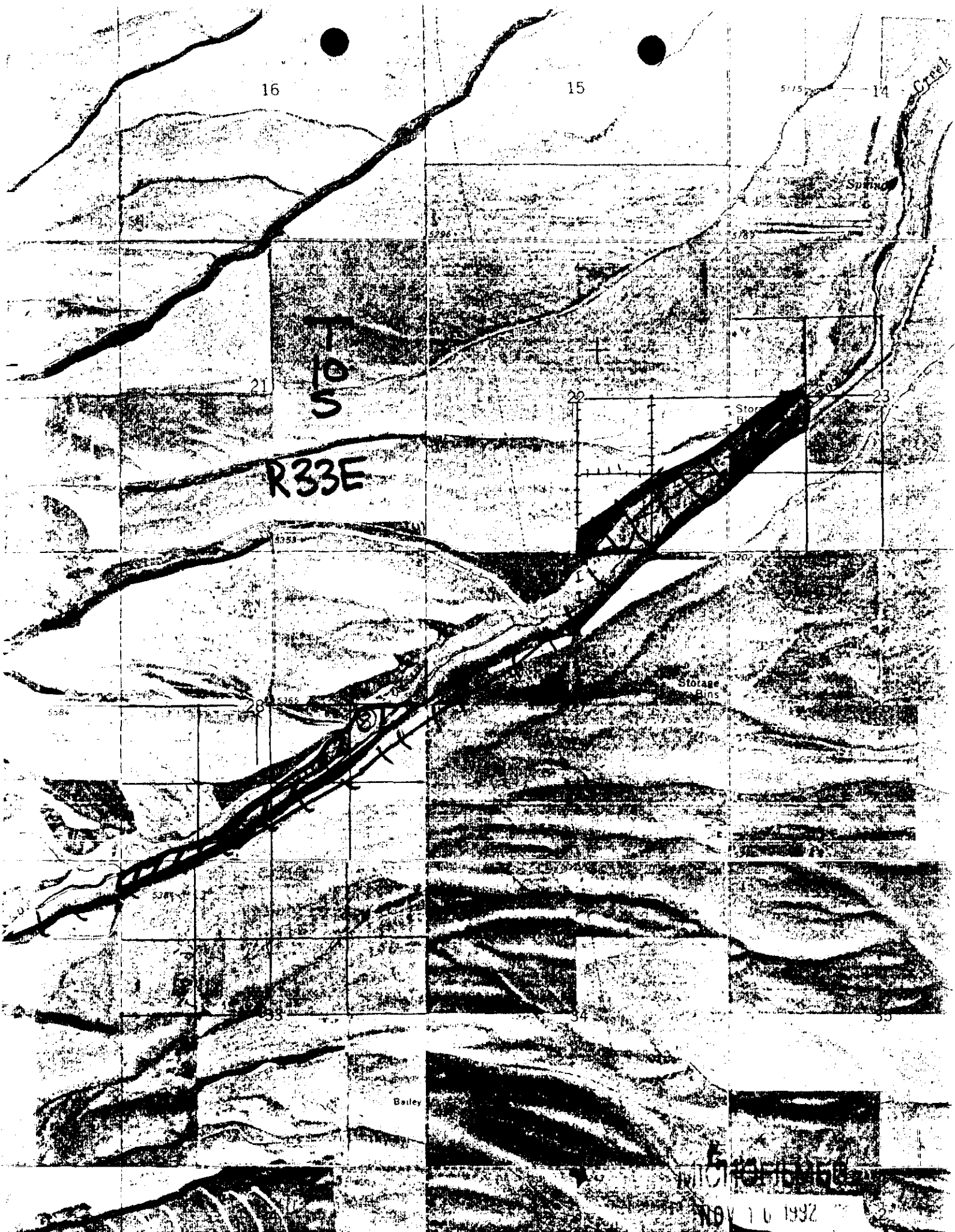
40

40

Bailey

Not To Scale

43
910



A29-10286

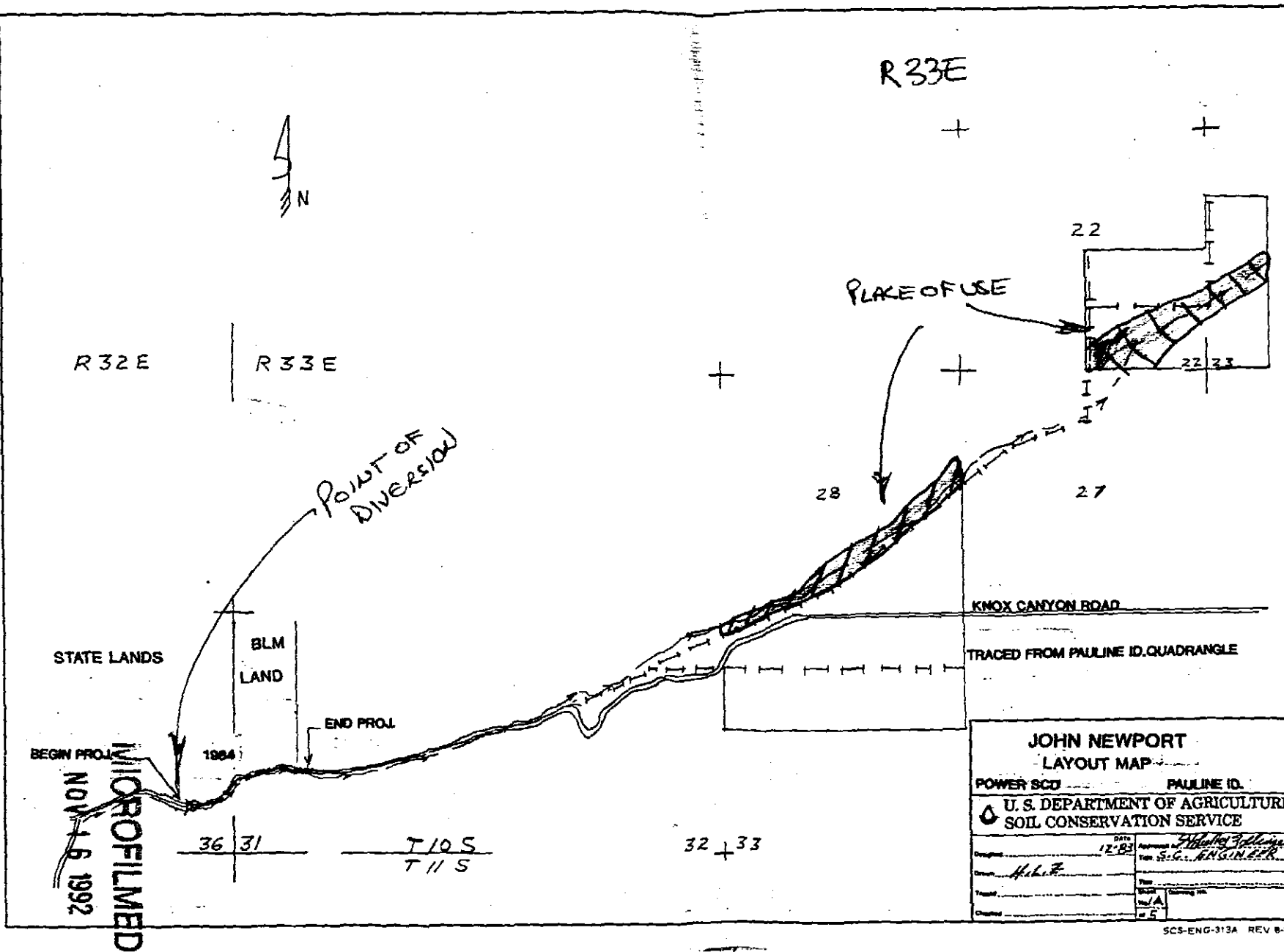


A29-10280

MICROFILMED

NOV 16 1992

REF ID: A66577 U-20
INFORMED R





State of Idaho

DEPARTMENT OF WATER RESOURCES

900 N. Skyline Dr., Suite A, Idaho Falls, Idaho 83402-1718 - (208) 525-7161- Fax (208) 525-7177

EASTERN REGION

John or Judy Newport
4798 Bailey Road
Arbon, Idaho 83212

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

Re: Adjudication Claim 29-10280

Dear Water Users:

In 1990 you filed an adjudication claim for a water right on Knox Canyon Creek in Power county. A copy is attached for your convenience. My job now is to review this claim and others in the area, and make recommendations to the Snake River Basin Adjudication Court.

Your claim was based on a 1981 court decree issued by Justice Arthur P. Oliver. The decree adopted a stipulated agreement that had been reached between the parties. It is valuable evidence that helps define your water right in relationship to the water rights of the other parties.

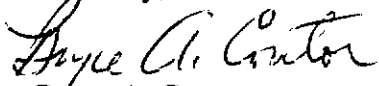
The decree, however, was not a "general" decree. I did not include all the water users on Knox Canyon Creek, nor all the users on Bannock Creek to which Knox Canyon Creek is tributary. Because of this, it cannot define the relationship of your water right to the water rights of these other users.

To make an accurate recommendation on your water right, I need additional documentation to describe the priority date and the extent of the original beneficial use. The enclosed pamphlet describes some sources that may be used to document your right. If an affidavit is used, it needs to clearly state that the person making the affidavit *personally* saw the beneficial use, and the earliest date they saw it. The more details the person can give, the better. Helpful details include anything the person remembers about the amount of water used, the number of acres, the general location, and circumstances that verify the date and details. As I review the documentation, my standard will be:

The documentation should tend to indicate that diversion works were in place and had adequate capacity to deliver the claimed amount of water. It should also tend to indicate that the claimed quantity of water was actually applied to the claimed place of use for the claimed beneficial use.

Please review this information and provide me with additional documentation. Later this summer I will contact you to do a field inspection of your system and place of use. Please call me if you have questions or concerns.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bryce A. Contor".

Bryce A. Contor
Senior Water Resource Agent

Log for claim A29-10280

Spatial Dynamics AMH

7/18/00

TR	SEC	QQ	Acres Claimed	Acres Found	COMMENT
10s33e	22	NESE	40	40	
10s33e	22	NWSE	40	40	
10s33e	22	SWSE	40	40	
10s33e	22	SESE	40	40	
10s33e	23	SWNW	40	40	
10s33e	23	NWSW	40	40	
10s33e	23	SWSW	40	40	
10s33e	28	SWSW	12	5.7	
10s33e	28	SESW	30	29	
10s33e	28	NESE	39	40	
10s33e	28	NWSE	15	15	
10s33e	28	SWSE	40	40	
10s33e	28	SESE	40	40	
10s33e	33	NENE	40	40	
10s33e	33	NWNE	40	40	
10s33e	33	SWNE	40	40	
10s33e	33	SENE	40	40	
10s33e	33	NENW	40	40	
10s33e	33	NWNW	38	39	
10s33e	33	SWNW	40	40	
10s33e	33	SENW	40	40	
Totals:			774	768.7	

AJ5809NP
No. A29-10280

IDAHO DEPARTMENT OF WATER RESOURCES
ADJUDICATION CLAIM PROFILE REPORT

DATE: 05/23/00
PAGE: 83

OWNER CODE	NAME & ADDRESS	PRIORITY DATE	WATER USE	USE PERIOD FROM TO	DIVERSION RATE	DIVERSION VOLUME
C	JUDY NEWPORT	07/24/1897	IRRIGATION	03-15 11-15	15.480 CFS	
C	JOHN NEWPORT					
	4798 BAILEY RD					
	ARBON ID 83212			TOTAL DIVERSION:	15.480 CFS	
	(208) 335-2281			CONSUMPTIVE USE:		2322.00 AFA

Water Source: KNOX CREEK

Tributary to: BANNOCK CREEK

Stage: DECREED

Point(s) of Diversion:

T10S R32E S36

NWSESE

POWER County

Place of use Legal Description for: IRRIGATION

				NE				NW				SW				SE																
T	R	S	:	Lt	Ac	Lt	Ac	Lt	Ac	Lt	Ac	Lt	Ac	Lt	Ac	Lt	Ac	Lt	Ac	:	SUM											
10S	33E	22	:															40	40	40	40	: 160.0										
10S	33E	23	:								40					40	40					: 120.0										
10S	33E	28	:											12	30			39	15	40	40	: 176.0										
10S	33E	33	:	40		40		40		40		40		38		40						: 318.0										
																				TOTAL ACRES												774.0

POU County: POWER

Other Water Rights with Same Point(s) of Diversion with Stage (Includes All Sources):
A29-10504 A29-10505 A29-10506 A29-10507

Remarks: GEN BASED UPON DECREE ISSUED IN CASE NO. 6428 I THE 6TH JUDICAIL DIST COURT, POWER COUNTY, JOHN & JUDY NEWPORT, ET AL VS. JOHN & JOY MCNABB ON MARCH 3, 1981. RIGHT WAS NOT FOUND RECORDED IN IDWR RECORDS AT TIME FILING WAS MADE.
*PLACE OF USE FOR THIS CLAIM WAS AMENDED FROM 96 ACRES TO 774 ACRES. ADDITIONAL ACREAGE PAID FOR UNDER RECEIPT #E022784.
DIVERSION RATE WAS ALSO AMENDED TO 1"/ACRE. GJT 11-21-96.

Dates: Exam Made Date:

Verified Date:

Objection Filed Date:

Misc: Water District Number:

Field Inspection Flag:

Presumption Flag:

Audit: 01/31/90 VERNER 08/01/94 THOMPSON 03/29/95 POST-STD 11/29/96 GTAYLOR
04/12/00 CVANDERM



State of Idaho
DEPARTMENT OF WATER RESOURCES

900 N. Skyline Dr., Idaho Falls, Idaho 83402-1718 - (208) 525-7161 - Fax (208) 525-7177

EASTERN REGION

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

November 21, 1996

JOHN OR JUDY NEWPORT
4798 BAILEY RD
ARBON ID 83212

Re: Amended Notice of Claim No. A29-10280.

Dear Mr. & Mrs. Newport:

Please find enclosed amended Notice of Claim No. A29-10280. The Notice was amended to reflect the changes as we discussed 11-20-96.

Please review the Notice for accuracy. If you agree with the claim, simply sign in the presence of a Notary Public and return to my attention with a check for \$678.00. The \$678.00 is for the additional 678 acres not paid for when the original claim was filed for 96 acres.

If you do not agree with any portion of the claim, make the necessary changes on the form, initial each change, and then return it to me as above.

Please do not hesitate to contact this office if you have any questions regarding this matter.

Sincerely,

Gregory J. Taylor
Sr. Water Agent, Adjudications

Enclosures: Notice of Claim No. A29-10280.

ASSIGNMENT OF WATER RIGHT

COMES NOW Kenton Fredrickson and Betty Fredrickson, husband and wife, and hereby transfer, grant and assign unto John Newport and Judy Newport, husband and wife, all their right, title and interest in and to the following described property:

11 1/2 shares of Bannock Valley Irrigation Co., which shares represent Seventeen per cent (17%) of the water arising and flowing from the North Fork of Knox Canyon Creek, which water right has a priority of July 24, 1897.

Said transfer is absolute and for good and valuable consideration and is effective the 9th day of March, 1981.

DATED this 22 day of Dec , 1989 .

Kenton G. Fredrickson
KENTON FREDRICKSON

Betty Fredrickson
BETTY FREDRICKSON

STATE OF IDAHO)
 SS
COUNTY OF Franklin

On this 22 day of December 1989 . before me, a notary public in and for said State, personally appeared KENTON FREDRICKSON and BETTY FREDRICKSON, known to me to be the persons whose names are subscribed to the within instrument, an acknowledged to me that they executed the same.

Gerald B. Fisher
Notary Public
Residing at: Clifton, Idaho
My Commission Expires 1-16-94

MICROFILMED
NOV 16 1992

P R E L I M I N A R Y
D E S I G N R E P O R T

JOB: John Newport
PROJECT: Gravity Sprinkler System Mainline
LOCATION: Knox Canyon Creek Power County, Idaho
AUTHORITY: PL-46 (PY-83 ACP)
ENGR. JOB CLASS: Class V Code 442

Summary: Knox Canyon Creek is a spring fed stream during irrigation season. These springs are located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 35 T 10 S R 32 E on the right fork of Knox Creek. Left Fork does not contribute irrigation water.

On an average water year Knox Creek loses a large part of it's flow in the reach of stream below the confluence of left and right Forks. The major water loss, according to Mr. Newport, occurs in the E $\frac{1}{2}$ of Section 36 and the West $\frac{1}{2}$ of Section 31 which is one-half mile to one mile downstream from left Fork.

No measurements are on file to support a valid estimate of water loss. Visual observations have noted water losses which varied from 30% to 100% of streamflow depending on the amount of water flowing.

Description of Project: 720 acres were proposed by Mr Newport for irrigation. Crop rotation specified is 50% alfalfa and 50% fall grain. Peak irrigation period is during July and would require 4138 GPM (9.2 cfs). Average GPM/Ac is 5.75.

Lands selected for irrigation are in two blocks. The upstream block includes the N $\frac{1}{2}$ Section 33 and the land in Section 28 south of Knox Creek, both units in T 10S R 33 E. This unit totals about 440 acres. The downstream unit includes the SE $\frac{1}{4}$ Section 22 and the South three forty acre units in the W $\frac{1}{2}$ W $\frac{1}{2}$ of Section 23 both units in T 10 S R 33 E. This unit totals about 280 acres.

The upstream unit is about 160 feet higher in elevation than the downstream unit.

Preliminary Design Objectives:

The primary objective of this preliminary design was to determine the amount of water necessary to fully irrigate 720 acres of alfalfa and grain. The flow required is 9.2 cfs which exceeds the normal July flow in Knox Creek. The normal July flow in Knox Creek is estimated to be 5 cfs.

A secondary objective was to determine the relative elevations along the proposed mainline route to determine static head and pipe pressure ratings. In this design the pipe inlet is located at the junction of left and right Forks. Mr. Newport says there is usually water lost to seepage below this point. Economically it may not be feasible to come this high up the creek, however.

MICROFILMED

NOV 16 1992

Basis for Preliminary Design:

This preliminary design was based on basic data supplied by Mr. Newport. SCS design criteria included standards 442 and 430 FF and the Idaho Irrigation Guide. Topographic data was taken from Bannock Peak and Pauline 7½ minute Quad sheets.

Preliminary Design Conclusions:

1. A gravity sprinkler system in Knox Canyon would provide ample pressure for irrigating alfalfa and grain.
2. The normal July flow in Knox Creek (5 cfs) will fully irrigate 390 acres of alfalfa and grain.
3. The diversion structure should be capable of passing 65 cfs flood flow as well as screening the pipeline design flow.
4. Pipe pressure rating shall be selected to meet static and dynamic operating conditions which exist depending on which acreage Mr. Newport chooses to irrigate.
5. Final design shall include all appurtenances required to protect the mainline from high pressure, air entrapment and physical hazards which exist along the mainline route.
6. Owner shall concur in location of mainline route.

Prepared by *Dale W. Selladen* Date 8-23-83
Civil Engineer

Concurred by *James R. Halmeier* Date 8/23/83
District Cons.

Concurred by _____ Date _____
Owner

MICROFILMED
NOV 16 1992

7-9-81

John Newport,

On June 9, 1981 measurements of water flow were taken in Knox Creek to try make a determination of water loss between to selected points.

The measurements were taken with a 3 foot Cipoletti weir.

The first site was taken at the forks, just above the culvert.

at this point the measurement was 3.7 cfs, however, due to water leakage around and under the weir the estimated water flow was 4.0 cfs.

The second site was just upstream from the old diversion structure in the stream, (approx. 2000' downstream).

The measured water flow at this point was 2.72 cfs. Very little leakage around the weir was apparent. The estimated flow at this point was 2.8 cfs.

Water loss between the two points was approximately 30%.

Clayton Erickson Soil Cons. Tech.

Law Offices
Lyle D. Eliassen



P.O. Box 168 or 202 Idaho Street
American Falls, Idaho 83211
(208) 226-5138 or (208) 226-5538

DO NOT FILM

IN THE DISTRICT COURT OF THE SIXTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF POWER

JOHN NEWPORT and JUDY NEWPORT,
HUSBAND AND WIFE, VERNAL BAILEY
and BLANCHE BAILEY, husband and wife,
KENTON FREDRICKSON and BETTY FREDRICKSON,
husband and wife, LEE NEWPORT and GINA
NEWPORT, husband and wife,

Plaintiff,s

vs

JOHN MC NABB and JOY MC NABB,
husband and wife,

Defendants.

Case No. 6428

JUDGMENT

THE ABOVE ENTITLED matter came on for hearing in April 30, 1980,
before the Honorable Arthur P. Oliver, District Judge, sitting without a jury;
plaintiffs were present and were represented by Lyle D. Eliassen, attorney at
law and defendants were present and were represented by Lamont Jones, attorney
at law; following plaintiff's evidence, the parties represented to the court
that a settlement had been reached; and based upon written stipulation filed with
the court, and good cause appearing therefore;

IT IS HEREBY ORDERED, ADJUDGED AND DECREED THAT:

1. That defendants John B. McNabb and Joy McNabb, their heirs,
successors and assigns, are the owners of and are entitled to, a water right con-
sisting of the continuous flow of 4.3 miner's inches of water from the mouth of
the main spring leaving Knox Canyon Creek located in the North Fork of Knox Canyon,
Power County, Idaho, the point of diversion being the SE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 35, Township
10 South, Range 32 E.B.M. .036 cfs

2. The said water right shall include the right to use said water
for domestic, stock water and irrigation purposes upon lands in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of
said Section 35 in the same manner as said water has been used in the past.

3. That such water shall, at all times, be diverted from the mouth
of said spring through a pipe not larger than 6 inches in diameter, which shall

then be reduced to a 1 3/4 inch diameter pipe, which shall allow no greater continuous flow than said 4.3 miner's inches, and said water right of defendant shall be of equal priority with the water rights of plaintiffs.

4. All the rest, residue and remainder of the water arising and flowing from the North Fork of Knox Canyon Creek is vested and quieted and decreed to belong to the plaintiffs herein in the following manner with a priority of July 24, 1897.

- a. John Newport and Judy Newport 64%
- b. Vernal Bailey and Blanche Bailey 20%
- c. Kenton Fredrickson and Betty Fredrickson 17%
- d. Lee Newport and Gina Newport 0%

5. Plaintiff shall have all rights to the early spring runoff water from the South Fork of Knox Canyon Creek and any water which shall enter the runoff North Fork of Knox Canyon Creek during the irrigation season.

6. Defendant shall have the right to any spring water arising in the South Fork of Knox Canyon Creek for stock watering purposes.

7. Plaintiffs herein, their heirs, successors and assigns, shall at all times have access, easement and right of way upon the existing unimproved road across the land of defendants through and within the canyon containing the North Fork of Knox Canyon Creek in order to keep, maintain and protect water rights of plaintiffs herein. Defendants herein shall not interfere with plaintiff's access therefor.

8. Each party shall bear their own costs.

THIS DECREE shall be binding upon the parties, their heirs, successors and assigns.

DATED this 9 day of March, 1981.

Arthur J. Oliver
DISTRICT JUDGE

JUDGMENT page 2

STATE OF IDAHO }
COUNTY OF POTTER } SS.
I, Helene Hals Clerk of the District Court
of Power County, Idaho do hereby certify that the
above and foregoing is a full, true and correct copy
of the original Judgment
as the same appears filed in this office.
In Witness Whereof I have hereunto set my hand
and affixed my official seal this 9 day of
March, 1981
Helene Hals
Clerk
By Maureen Y. Dickson

Idaho
K. Hasfurther 5-16-79

Newport Group Pipeline

American Falls F.O.

Preliminary Pipeline Design

1

GIVEN:

Arbon Valley Location

This project proposes that a gravity pipeline will convey water from Knox Canyon to be delivered to livestock troughs and cropland. There is a possible need for a recreation area water tap also.

Presently the Knox Canyon water travels through a seep area where much of the stream disappears. This pipeline would prevent this water loss.

The gravity pressure in the line would eliminate a diesel-powered pump on Newport's land at the lower end of the system. Cropland will be sprinkle-irrigated.

This pipeline would cross both private and public (BLM) lands — some of the needed easements have been obtained at this time from discussion with John Newport.

FIND:

Design the pipeline for estimating cost and feasibility of the project.

ASSUMED Design Criteria:

Use lengths and elevations from USGS 7.5' Quadrangle "Bannock Peak" and "Pauline"

John Newport — 280 crop acres

D.T. (Sod) Williams — 150 cattle; 1000 sheep

Kenton Frederickson (Newport operator) — 25 crop acres

Vernal Bailey — 40 acres non-cropland
(Possibly 20 acres of this to be
LDS Church recreation area)

Idaho

KWH

5-16-79

Pipeline Flow Requirements

Newport Group Pipeline

American Falls F.O.

2

Cropland

USE Idaho Irr. Guide, Climatic Area III

ASSUME 50% Alfalfa, 50% Grain; 65% Efficiency
4-ft Root Zone; 2.1 in/ft AWHC

Irr. Guide
Table XII c

July Monthly C.U. Grain — 5.04" 2.52
Alfalfa — 6.51" 3.26
Weighted 5.78"

Max. Net Irrigation = $4(2.1)(0.50) = 4.2"$

Check Peak Daily C.U. = $.034(5.78)^{1.09}(4.2)^{-0.09} = 0.202 \text{ in/day}$

Irrigation Frequency = $\frac{4.2}{.202} = 20.8 \text{ days max.}$

Total Crop Acres = $280 + 25 = 305 \text{ acres}$

operate
23 hrs/day

$$Q = \frac{453(305)(4.2)}{20.8(23)(0.65)} = \underline{1866 \text{ gpm}} \quad 6.12 \text{ gpm/acre}$$

Livestock

From Engineering Field Manual Table 12-2

Cattle — use 14 gal/head per day

Sheep — use 2 gal/head per day

1440 min/day

$$Q_{\text{cattle}} = \frac{150(14) \text{ gal/day}}{1440 \text{ min/day}} = 1.46 \text{ gpm}$$

$$Q_{\text{sheep}} = \frac{1000(2)}{1440} = 1.39 \text{ gpm}$$

$$Q = 1.46 + 1.39 = \underline{2.85 \text{ gpm}} \Rightarrow \text{USE } 4 \text{ gp}$$

Consider other water needs are negligible

$$\text{TOTAL } Q = 1866 + 4 = \underline{1870 \text{ gpm}} \quad \text{or } 4.16 \text{ c}$$

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